

Safety data sheet

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BASF safety data sheet. This is a translation of the country-specific safety data sheet into a language other than that required by law. This document does not replace the safety data sheet provided according to Regulation (EC) No 1907/2006.

Date / Revised: 23.10.2023

Version: 2.0

Date previous version: 09.09.2022

Previous version: 1.0

Date / First version: 09.09.2022

Product: **Citral FG**

(ID no. 30035059/SDS_GEN_FR/EN)

Date of print 20.10.2025

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Citral FG

Chemical name: citral

INDEX-Number: 605-019-00-3

CAS Number: 5392-40-5

REACH registration number: 01-2119462829-23-0000, 01-2119462829-23-0013

1.2. Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses: Chemical, Chemical for detergents, Cosmetic and oral care chemical, flavoring substance

For the detailed identified uses of the product see appendix of the safety data sheet.

1.3. Details of the supplier of the safety data sheet

Company:

BASF SE
67056 Ludwigshafen
GERMANY

Contact address:

BASF France SAS
176, rue Montmartre
75002 PARIS
FRANCE

Telephone: +33 1 4964-5732

E-mail address: securite-produits.france@basf.com

1.4. Emergency telephone number

Tél.: 01 45 42 59 59 (APPEL D'URGENCE ORFILA)

Fax: 01 49 64 53 80 (heures de bureau)

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International emergency number (Numéro d'urgence international):
contact speaking the language of the calling country (contact parlant la langue du pays d'appel)
Telephone: +49 180 2273-112

SECTION 2: Hazards Identification

2.1. Classification of the substance or mixture

According to Regulation (EC) No 1272/2008 [CLP]

Skin Corr./Irrit. 2

H315 Causes skin irritation.

Eye Dam./Irrit. 2

H319 Causes serious eye irritation.

Skin Sens. 1

H317 May cause an allergic skin reaction.

For the classifications not written out in full in this section the full text can be found in section 16.

2.2. Label elements

According to Regulation (EC) No 1272/2008 [CLP]

Pictogram:



Signal Word:

Warning

Hazard Statement:

H319 Causes serious eye irritation.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

Precautionary Statements (Prevention):

P280 Wear protective gloves and eye protection or face protection.

P261 Avoid breathing mist or vapour or spray.

Precautionary Statements (Response):

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.

P333 + P313 If skin irritation or rash occurs: Get medical attention.

Precautionary Statements (Disposal):

P501 Dispose of contents and container to hazardous or special waste collection point.

2.3. Other hazards

According to Regulation (EC) No 1272/2008 [CLP]

When finely distributed on porose material, self-ignition is possible.

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The product does not contain a substance fulfilling the PBT (persistent/bioaccumulative/toxic) criteria or the vPvB (very persistent/very bioaccumulative) criteria. Product does not contain a substance above legal limits included in the list established in accordance with Article 59(1) of Regulation (EC) No 1907/2006 for having endocrine disrupting properties or is identified to have endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

SECTION 3: Composition/Information on Ingredients

3.1. Substances

Chemical nature

Isomer blend based on:

citral

CAS Number: 5392-40-5

EC-Number: 226-394-6

INDEX-Number: 605-019-00-3

Skin Corr./Irrit. 2

Eye Dam./Irrit. 2

Skin Sens. 1

H319, H315, H317

For the classifications not written out in full in this section, including the hazard classes and the hazard statements, the full text is listed in section 16.

3.2. Mixtures

Not applicable

SECTION 4: First-Aid Measures

4.1. Description of first aid measures

Remove contaminated clothing.

If inhaled:

Keep patient calm, remove to fresh air, seek medical attention.

On skin contact:

Wash thoroughly with soap and water

On contact with eyes:

Wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist.

On ingestion:

Immediately rinse mouth and then drink 200-300 ml of water, seek medical attention.

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4.2. Most important symptoms and effects, both acute and delayed

Symptoms: Information, i.e. additional information on symptoms and effects may be included in the GHS labeling phrases available in Section 2 and in the Toxicological assessments available in Section 11.

4.3. Indication of any immediate medical attention and special treatment needed

Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote.

SECTION 5: Fire-Fighting Measures

5.1. Extinguishing media

Suitable extinguishing media:

dry powder, foam, carbon dioxide, water spray

Unsuitable extinguishing media for safety reasons:

water jet

5.2. Special hazards arising from the substance or mixture

Endangering substances: carbon oxides, harmful vapours

Advice: The substances/groups of substances mentioned can be released in case of fire.

5.3. Advice for fire-fighters

Special protective equipment:

Wear a self-contained breathing apparatus.

Further information:

Collect contaminated extinguishing water separately, do not allow to reach sewage or effluent systems. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations. Cool endangered containers with water-spray.

SECTION 6: Accidental Release Measures

When finely distributed on porose material, self-ignition is possible. Soiled textiles/cleaning rags made of natural fibres (e.g. of pure wool or of pure cotton) are capable of ignition and should not be used and/or must be disposed of in a safe manner.

6.1. Personal precautions, protective equipment and emergency procedures

Use personal protective clothing. Information regarding personal protective measures, see section 8. Ensure adequate ventilation. Do not breathe vapour/spray. Avoid contact with the skin, eyes and clothing.

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6.2. Environmental precautions

Do not discharge into drains/surface waters/groundwater. Inform authorities in the event of product spillage to water courses or sewage systems.

6.3. Methods and material for containment and cleaning up

For small amounts: Pick up with suitable absorbent material. Do not use saw-dust or other combustible substances as an absorbant during cleanup.

For large amounts: Dike spillage. Pump off product.

Dispose of absorbed material in accordance with regulations. Mop up spills with non-flammable adsorbents (e.g. vermiculite, spill mats). Soiled textiles / cleaning rags / adsorbents and Silica are capable of self ignition and should be wetted with water and must be disposed of in a safe manner.

6.4. Reference to other sections

Information regarding exposure controls/personal protection and disposal considerations can be found in section 8 and 13.

SECTION 7: Handling and Storage

7.1. Precautions for safe handling

Ensure thorough ventilation of stores and work areas. Wear suitable protective clothing and eye/face protection. Avoid contact with the skin, eyes and clothing. Keep container tightly sealed.

Protection against fire and explosion:

Risk of self-ignition when a large surface area is produced due to fine dispersion. Soiled textiles / cleaning rags / adsorbents and Silica are capable of self ignition and should be wetted with water and must be disposed of in a safe manner. Avoid all sources of ignition: heat, sparks, open flame.

Take precautionary measures against static discharges.

7.2. Conditions for safe storage, including any incompatibilities

Further information on storage conditions: Keep container tightly closed in a cool, well-ventilated place. Protect from the effects of light.

7.3. Specific end use(s)

See exposure scenario(s) in the attachment to this safety data sheet.

SECTION 8: Exposure Controls/Personal Protection

8.1. Control parameters

Components with occupational exposure limits

No substance specific occupational exposure limits known.

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PNEC

freshwater: 0,00678 mg/l

marine water: 0,000678 mg/l

intermittent release: 0,0678 mg/l

sediment (freshwater): 0,125 mg/kg

sediment (marine water): 0,0125 mg/kg

soil: 0,0209 mg/kg

STP: 1,6 mg/l

DNEL

worker:

Long-term exposure- systemic effects, Inhalation: 9 mg/m³

worker:

Long-term exposure- systemic effects, dermal: 1,7 mg/kg

worker:

Long- and short-term exposure - local effects, dermal: 140 µg/cm³

consumer:

Long-term exposure- systemic effects, Inhalation: 2,7 mg/m³

consumer:

Long-term exposure- systemic effects, dermal: 1 mg/kg

consumer:

Long-term exposure- systemic effects, oral: 0,6 mg/kg

consumer:

Long- and short-term exposure - local effects, dermal: 140 µg/cm³

8.2. Exposure controls

Personal protective equipment

Respiratory protection:

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Wear respiratory protection if ventilation is inadequate. Gas filter for gases/vapours of organic compounds (boiling point >65 °C, e. g. EN 14387 Type A)

Consider the risk management measures as outlined in the exposure scenario.

Hand protection:

Suitable materials also with prolonged, direct contact (Recommended: Protective index 6, corresponding > 480 minutes of permeation time according to EN ISO 374-1):

butyl rubber (butyl) - 0.7 mm coating thickness

fluoroelastomer (FKM) - 0.7 mm coating thickness

Supplementary note: The specifications are based on tests, literature data and information of glove manufacturers or are derived from similar substances by analogy. Due to many conditions (e.g. temperature) it must be considered, that the practical usage of a chemical-protective glove in practice may be much shorter than the permeation time determined through testing.

Manufacturer's directions for use should be observed because of great diversity of types.

Consider the risk management measures as outlined in the exposure scenario.

Eye protection:

Safety glasses with side-shields (frame goggles) (e.g. EN 166)

Consider the risk management measures as outlined in the exposure scenario.

Body protection:

Body protection must be chosen depending on activity and possible exposure, e.g. apron, protecting boots, chemical-protection suit (according to EN 14605 in case of splashes or EN ISO 13982 in case of dust).

Consider the risk management measures as outlined in the exposure scenario.

General safety and hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Wearing of closed work clothing is required additionally to the stated personal protection equipment. Do not breathe vapour/spray. Avoid contact with the skin, eyes and clothing. Hands and/or face should be washed before breaks and at the end of the shift. No eating, drinking, smoking or tobacco use at the place of work. Store work clothing separately.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

State of matter: liquid

Form: liquid

Colour: colourless to yellowish

Odour: fruity

Odour threshold: < 100 ppm

glass transition temperature: -117 °C

(DSC (DIN 51007))

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| | | |
|---|--|--|
| Boiling point: | approx. 230 °C (1.013 hPa) The substance / product decomposes. | (other) |
| Flammability: | hardly combustible | (derived from flash point) |
| Lower explosion limit: | For liquids not relevant for classification and labelling., The lower explosion point may be 5 - 15 °C below the flash point. | |
| Upper explosion limit: | For liquids not relevant for classification and labelling. | |
| Flash point: | 98 °C Literature data. | (other) |
| Auto-ignition temperature: | 225 °C Literature data. | (DIN 51794) |
| Thermal decomposition: | Not a substance liable to self-decomposition according to UN transport regulations, class 4.1. No decomposition if stored and handled as prescribed/indicated. | |
| SADT: | > 75 °C Heat accumulation / Dewar 500 ml (SADT, UN-Test H.4, 28.4.4) | |
| pH value: | 7 | |
| Viscosity, kinematic: | moderately soluble 2,42 mm ² /s (20 °C) 1,67 mm ² /s (40 °C) | (OECD 114) (OECD 114) |
| Viscosity, dynamic: | 2,15 mPa.s (20 °C) 1,46 mPa.s (40 °C) | (calculated (from kinematic viscosity)) (calculated (from kinematic viscosity)) |
| Solubility in water: | moderately soluble 0,42 g/l (25 °C) | (other) |
| Partitioning coefficient n-octanol/water (log Kow): | 2,76 (25 °C) | (OECD Guideline 107) |
| Vapour pressure: | 0,046 hPa (20 °C) 0,071 hPa (25 °C) 1,003 hPa (59,29 °C) | (calculated) (calculated) (measured) |
| Relative density: | 0,89 (20 °C) Literature data. | (other) |
| Density: | 0,89 g/cm ³ (20 °C) Literature data. | |

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Relative vapour density (air): 5,24 (calculated)
(20 °C)
Heavier than air.

9.2. Other information

Information with regard to physical hazard classes

Explosives

Explosion hazard: Based on the chemical structure there is no indication of explosive properties.

Impact sensitivity: Based on the chemical structure there is no shock-sensitivity.

Oxidizing properties

Fire promoting properties: Based on its structural properties the product is not classified as oxidizing.

Pyrophoric properties

Self-ignition temperature: Test type: Spontaneous self-ignition at room-temperature.

Based on its structural properties the product is not classified as self-igniting.

Substances and mixtures, which emit flammable gases in contact with water

Formation of flammable gases: Forms no flammable gases in the presence of water.

Corrosion to metals

No corrosive effect on metal.

Other safety characteristics

pKA:

The substance does not dissociate.,
Study scientifically not justified.

Adsorption/water - soil: log KOC: 2,1 (calculated)

Surface tension:

Based on chemical structure, surface activity is not to be expected.

SAPT-Temperature:

Study scientifically not justified.

Evaporation rate:

Value can be approximated from Henry's Law Constant or vapor pressure.

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SECTION 10: Stability and Reactivity

10.1. Reactivity

No hazardous reactions if stored and handled as prescribed/indicated.

Corrosion to metals: No corrosive effect on metal.

Formation of Remarks:

flammable gases:

Forms no flammable gases in the presence of water.

10.2. Chemical stability

The product is stable if stored and handled as prescribed/indicated.

10.3. Possibility of hazardous reactions

Self-ignition is possible when finely distributed on flammable surfaces in the presence of air.

10.4. Conditions to avoid

Avoid all sources of ignition: heat, sparks, open flame. See SDS section 7 - Handling and storage.

10.5. Incompatible materials

Substances to avoid:

acids, bases

10.6. Hazardous decomposition products

Hazardous decomposition products:

No hazardous decomposition products if stored and handled as prescribed/indicated.

SECTION 11: Toxicological Information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity

Assessment of acute toxicity:

Of low toxicity after single ingestion. Of low toxicity after short-term skin contact.

Experimental/calculated data:

LD50 rat (oral): approx. 6.800 mg/kg (BASF-Test)

LD50 rat (dermal): > 2.000 mg/kg (BASF-Test)

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Irritation

Assessment of irritating effects:

Skin contact causes irritation. Eye contact causes irritation.

Experimental/calculated data:

Skin corrosion/irritation

rabbit: Irritant. (BASF-Test)

Serious eye damage/irritation

rabbit: Irritant. (BASF-Test)

Respiratory/Skin sensitization

Assessment of sensitization:

Caused skin sensitization in animal studies. Caused sensitization in humans.

Experimental/calculated data:

Guinea pig maximization test guinea pig: skin sensitizing

Germ cell mutagenicity

Assessment of mutagenicity:

The substance was not mutagenic in bacteria. In the majority of tests performed (mammalian cell culture) a mutagenic effect was not found. A mutagenic effect was also not observed in in-vivo assays.

Carcinogenicity

Assessment of carcinogenicity:

Results from a number of long-term carcinogenity studies are available. Taking into account all of the information, there is no indication that the substance itself is carcinogenic.

Reproductive toxicity

Assessment of reproduction toxicity:

The results of animal studies gave no indication of a fertility impairing effect.

Developmental toxicity

Assessment of teratogenicity:

Animal studies gave no indication of a developmental toxic effect at doses that were not toxic to the parental animals.

Specific target organ toxicity (single exposure)

Assessment of STOT single:

Based on available data, the classification criteria are not met.

Repeated dose toxicity and Specific target organ toxicity (repeated exposure)

Assessment of repeated dose toxicity:

Prolonged repeated exposure caused inflammable degenerative processes in the respiratory tract of rats. Causes irritating effects at esophagus and the gastro-intestinal tract.

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Aspiration hazard

No aspiration hazard expected.

Interactive effects

No data available.

11.2. Information on other hazards

Endocrine disrupting properties

The substance is not identified to have endocrine disrupting properties according to Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 nor is included in the Candidate List of substances of very high concern according to EU REACH Article 59 for having endocrine disrupting properties.

SECTION 12: Ecological Information

12.1. Toxicity

Assessment of aquatic toxicity:

Acutely toxic for aquatic organisms. Depending on local conditions and existing concentrations, disturbances in the biodegradation process of activated sludge are possible.

Toxicity to fish:

LC50 (96 h) 6,8 mg/l, *Leuciscus idus* (DIN 38412 Part 15, static)

The product has low solubility in the test medium. An aqueous solution prepared with solubilizers has been tested. The details of the toxic effect relate to the nominal concentration.

Aquatic invertebrates:

EC50 (48 h) approx. 7 mg/l, *Daphnia magna* (Directive 79/831/EEC, static)

The product has low solubility in the test medium. An aqueous solution prepared with solubilizers has been tested. The details of the toxic effect relate to the nominal concentration.

Aquatic plants:

EC50 (72 h) 103,8 mg/l (growth rate), *Scenedesmus subspicatus* (DIN 38412 Part 9, static)

The product has low solubility in the test medium. An aqueous solution prepared with solubilizers has been tested. The details of the toxic effect relate to the nominal concentration.

Microorganisms/Effect on activated sludge:

EC50 (30 min) 2.100 mg/l, *Pseudomonas putida* (DIN 38412 Part 27 (draft), aquatic)

The product has low solubility in the test medium. An aqueous solution prepared with solubilizers has been tested. The details of the toxic effect relate to the nominal concentration.

EC20 (30 min) approx. 68 mg/l, activated sludge, domestic (OECD Guideline 209, aquatic)

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Chronic toxicity to fish:
Study scientifically not justified.

Chronic toxicity to aquatic invertebrates:
Study scientifically not justified.

Assessment of terrestrial toxicity:
No data available concerning terrestrial toxicity.
Study scientifically not justified.

12.2. Persistence and degradability

Assessment biodegradation and elimination (H₂O):
Readily biodegradable (according to OECD criteria).

Elimination information:
92 % BOD of the ThOD (28 d) (OECD 301C; ISO 9408; 92/69/EEC, C.4-F) (aerobic, activated sludge, domestic)

> 90 % BOD of the ThOD (28 d) (OECD 301F; ISO 9408; 92/69/EEC, C.4-D) (aerobic, activated sludge, domestic)

Assessment of stability in water:
Substance is readily biodegradable, therefore hydrolysis is not expected to be relevant.
Study scientifically not justified.

12.3. Bioaccumulative potential

Assessment bioaccumulation potential:
Because of the n-octanol/water distribution coefficient (log Pow) accumulation in organisms is not to be expected.

12.4. Mobility in soil

Assessment transport between environmental compartments:
Volatility: The substance will slowly evaporate into the atmosphere from the water surface.
Adsorption in soil: Adsorption to solid soil phase is not expected.

12.5. Results of PBT and vPvB assessment

According to Annex XIII of Regulation (EC) No.1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH): The product does not fulfill the criteria for PBT

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(Persistent/bioaccumulative/toxic) and vPvB (very persistent/very bioaccumulative). Self classification

12.6. Endocrine disrupting properties

The substance is not identified to have endocrine disrupting properties according to Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 nor is included in the Candidate List of substances of very high concern according to EU REACH Article 59 for having endocrine disrupting properties.

12.7. Other adverse effects

The substance is not listed in Regulation (EC) 1005/2009 on substances that deplete the ozone layer.

SECTION 13: Disposal Considerations

13.1. Waste treatment methods

Observe national and local legal requirements.

SECTION 14: Transport Information

Land transport

ADR

| | |
|------------------------------|--|
| | Not classified as a dangerous good under transport regulations |
| UN number or ID number: | Not applicable |
| UN proper shipping name: | Not applicable |
| Transport hazard class(es): | Not applicable |
| Packing group: | Not applicable |
| Environmental hazards: | Not applicable |
| Special precautions for user | None known |

RID

| | |
|------------------------------|--|
| | Not classified as a dangerous good under transport regulations |
| UN number or ID number: | Not applicable |
| UN proper shipping name: | Not applicable |
| Transport hazard class(es): | Not applicable |
| Packing group: | Not applicable |
| Environmental hazards: | Not applicable |
| Special precautions for user | None known |

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Inland waterway transport

ADN

| | |
|-------------------------------|--|
| | Not classified as a dangerous good under transport regulations |
| UN number or ID number: | Not applicable |
| UN proper shipping name: | Not applicable |
| Transport hazard class(es): | Not applicable |
| Packing group: | Not applicable |
| Environmental hazards: | Not applicable |
| Special precautions for user: | None known |

Transport in inland waterway vessel

Not evaluated

Sea transport

IMDG

| | |
|-------------------------------|--|
| | Not classified as a dangerous good under transport regulations |
| UN number or ID number: | Not applicable |
| UN proper shipping name: | Not applicable |
| Transport hazard class(es): | Not applicable |
| Packing group: | Not applicable |
| Environmental hazards: | Not applicable |
| Special precautions for user: | None known |

Air transport

IATA/ICAO

| | |
|-------------------------------|--|
| | Not classified as a dangerous good under transport regulations |
| UN number or ID number: | Not applicable |
| UN proper shipping name: | Not applicable |
| Transport hazard class(es): | Not applicable |
| Packing group: | Not applicable |
| Environmental hazards: | Not applicable |
| Special precautions for user: | None known |

14.1. UN number or ID number

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See corresponding entries for "UN number or ID number" for the respective regulations in the tables above.

14.2. UN proper shipping name

See corresponding entries for "UN proper shipping name" for the respective regulations in the tables above.

14.3. Transport hazard class(es)

See corresponding entries for "Transport hazard class(es)" for the respective regulations in the tables above.

14.4. Packing group

See corresponding entries for "Packing group" for the respective regulations in the tables above.

14.5. Environmental hazards

See corresponding entries for "Environmental hazards" for the respective regulations in the tables above.

14.6. Special precautions for user

See corresponding entries for "Special precautions for user" for the respective regulations in the tables above.

14.7. Maritime transport in bulk according to IMO instruments

Maritime transport in bulk is not intended.

SECTION 15: Regulatory Information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Prohibitions, Restrictions and Authorizations

Annex XVII of Regulation (EC) No 1907/2006: Number on List: 3, 75

Directive 2012/18/EU - Control of Major Accident Hazards involving dangerous substances (EU):

Listed in above regulation: no

Occupational Disease Number in France (Code de la Sécurité Sociale, Art. L 461-1 à L 461-8): 84

If other regulatory information applies that is not already provided elsewhere in this safety data sheet, then it is described in this subsection.

15.2. Chemical Safety Assessment

Chemical Safety Assessment performed

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SECTION 16: Other Information

Assessment of the hazard classes according to UN GHS criteria (most recent version)

Aquatic Acute 2
Acute Tox. 5 (dermal)
Skin Corr./Irrit. 2
Eye Dam./Irrit. 2A
Acute Tox. 5 (oral)
Skin Sens. 1

Any other intended applications should be discussed with the manufacturer. Corresponding occupational protection measurements must be followed.

Full text of the classifications, including the hazard classes and the hazard statements, if mentioned in section 2 or 3:

| | |
|-------------------|--------------------------------------|
| Skin Corr./Irrit. | Skin corrosion/irritation |
| Eye Dam./Irrit. | Serious eye damage/eye irritation |
| Skin Sens. | Skin sensitization |
| H319 | Causes serious eye irritation. |
| H315 | Causes skin irritation. |
| H317 | May cause an allergic skin reaction. |

Abbreviations

ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road.
ADN = The European Agreement concerning the International Carriage of Dangerous Goods by Inland waterways. ATE = Acute Toxicity Estimates. CAO = Cargo Aircraft Only. CAS = Chemical Abstract Service. CLP = Classification, Labelling and Packaging of substances and mixtures. DIN = German national organization for standardization. DNEL = Derived No Effect Level. EC50 = Effective concentration median for 50% of the population. EC = European Community. EN = European Standards. IARC = International Agency for Research on Cancer. IATA = International Air Transport Association. IBC-Code = Intermediate Bulk Container code. IMDG = International Maritime Dangerous Goods Code. ISO = International Organization for Standardization. STEL = Short-Term Exposure Limit. LC50 = Lethal concentration median for 50% of the population. LD50 = Lethal dose median for 50% of the population. TLV = Threshold Limit Value. MARPOL = The International Convention for the Prevention of Pollution from Ships. NEN = Dutch Norm. NOEC = No Observed Effect Concentration. OEL = Occupational Exposure Limit. OECD = Organization for Economic Cooperation and Development. PBT = Persistent, Bioaccumulative and Toxic. PNEC = Predicted No Effect Level. PPM = Parts per million. RID = The European Agreement concerning the International Carriage of Dangerous Goods by Rail. TWA = Time Weight Average. UN-number = UN number at transport. vPvB = very Persistent and very Bioaccumulative.

The data contained in this safety data sheet are based on our current knowledge and experience and describe the product only with regard to safety requirements. This safety data sheet is neither a Certificate of Analysis (CoA) nor technical data sheet and shall not be mistaken for a specification agreement. Identified uses in this safety data sheet do neither represent an agreement on the corresponding contractual quality of the substance/mixture nor a contractually designated use. It is the responsibility of the recipient of the product to ensure any proprietary rights and existing laws and legislation are observed.

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Annex: Exposure Scenarios

Index

1. Use as an intermediate, (use in industrial settings)
ERC6a; PROC2, PROC3, PROC8b, PROC9, PROC15
2. Compounding, (use in industrial settings)
ERC2; PROC1, PROC3, PROC5, PROC8a, PROC8b, PROC9, PROC15
3. Formulation, (use in industrial settings)
ERC2; PROC1, PROC3, PROC5, PROC8a, PROC8b, PROC9, PROC14, PROC15
4. Use in Cleaning Agents, (use in industrial settings)
ERC4; PROC1, PROC2, PROC4, PROC7, PROC8b, PROC10, PROC13
5. Use in Cleaning Agents, (use in professional settings)
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6. Use in/as Air care products, (consumer use)
ERC8a; PC3
7. Use in cosmetics, (consumer use)
ERC8a; PC28, PC39
8. Use in Cleaning Agents, (consumer use)
ERC8a, ERC8d; PC31, PC35
9. other consumer applications than fragrance, (consumer use)
ERC8a, ERC8d; PC8

1. Short title of exposure scenario

Use as an intermediate, (use in industrial settings)
ERC6a; PROC2, PROC3, PROC8b, PROC9, PROC15

Control of exposure and risk management measures

| Contributing exposure scenario | |
|--------------------------------|--|
| Use descriptors covered | ERC6a: Use of intermediate No assessment required - Industrial use as intermediate under strictly controlled conditions |
| Operational conditions | |
| Contributing exposure scenario | |

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| | |
|--------------------------------|---|
| Use descriptors covered | PROC2: Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions No assessment required - Industrial use as intermediate under strictly controlled conditions |
|--------------------------------|---|

| Contributing exposure scenario | |
|---------------------------------------|---|
| Use descriptors covered | PROC3: Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition No assessment required - Industrial use as intermediate under strictly controlled conditions |

| Contributing exposure scenario | |
|---------------------------------------|---|
| Use descriptors covered | PROC8b: Transfer of substance or mixture (charging and discharging) at dedicated facilities No assessment required - Industrial use as intermediate under strictly controlled conditions |

| Contributing exposure scenario | |
|---------------------------------------|---|
| Use descriptors covered | PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing). No assessment required - Industrial use as intermediate under strictly controlled conditions |

| Contributing exposure scenario | |
|---------------------------------------|---|
| Use descriptors covered | PROC15: Use a laboratory reagent. No assessment required - Industrial use as intermediate under strictly controlled conditions |

2. Short title of exposure scenario

Compounding, (use in industrial settings)

ERC2; PROC1, PROC3, PROC5, PROC8a, PROC8b, PROC9, PROC15

Control of exposure and risk management measures

| Contributing exposure scenario | |
|---------------------------------------|--------------------------------|
| Use descriptors covered | ERC2: Formulation into mixture |

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| Operational conditions | |
|--|---|
| Annual amount per site | 105.000 kg |
| Minimum emission days per year | 250 |
| Emission factor air | 2,5 % |
| Emission factor water | 0,2 % |
| Emission factor soil | 0 % |
| Receive Surf. Water (Flow Rate). | 18.000 m3/d |
| Dilution factor river | 10 |
| Dilution factor coast | 100 |
| Risk Management Measures | |
| Type of STP | Municipal STP |
| Assumed sewage treatment plant flow (m3/d) | 2.000 m3/d |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ECETOC TRA v3.0, Environment |
| Risk Characterization Ratio (RCR) | 0,758684 |
| | Risk from environmental exposure is driven by soil. |
| Maximum amount of safe use | 553,6 kg/d |
| Risk from environmental exposure is driven by soil. | |

| Contributing exposure scenario | |
|---|--|
| Use descriptors covered | PROC1: Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions. Use domain: industrial |
| Operational conditions | |
| Concentration of the substance | citral Content: >= 0 % - <= 100 % |
| Physical state | liquid |
| Vapour pressure of the substance during use | 4,6 Pa |
| Process temperature | 20 °C |
| Duration and Frequency of activity | 60 min 5 days per week |
| Indoor/Outdoor | Indoor |
| Risk Management Measures | |

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| | |
|---|---|
| Wear chemically resistant gloves in combination with 'basic' employee training. | Effectiveness: 90 % |
| Avoid skin contact. Ensure minimization of manual phases | |
| Use suitable eye protection., Wear chemically resistant gloves in combination with 'basic' employee training. | |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ECETOC TRA v3.0, Worker |
| | Worker - dermal, long-term - systemic |
| Exposure estimate | 0,0034 mg/kg bw/day |
| Risk Characterization Ratio (RCR) | 0,002017 |
| Assessment method | EASY TRA v4.2, ECETOC TRA v3.0, Worker |
| | Worker - dermal, long-term - local |
| Exposure estimate | 0,001 mg/cm ² /day |
| Risk Characterization Ratio (RCR) | 0,007143 |
| Assessment method | EASY TRA v4.2, ECETOC TRA v3.0, Worker |
| | Worker - inhalation, long-term - systemic |
| Exposure estimate | 0,0127 mg/m ³ |
| Risk Characterization Ratio (RCR) | 0,00141 |
| Guidance to Downstream Users | |
| For scaling see: http://www.ecetoc.org/tra | |

| | |
|---|---|
| Contributing exposure scenario | |
| Use descriptors covered | PROC3: Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition Use domain: industrial |
| Operational conditions | |
| Concentration of the substance | citral Content: >= 0 % - <= 100 % |
| Physical state | liquid |
| Vapour pressure of the substance during use | 4,6 Pa |
| Process temperature | 20 °C |
| Duration and Frequency of activity | 240 min 5 days per week |
| Indoor/Outdoor | Indoor |
| Risk Management Measures | |
| Local exhaust ventilation | Effectiveness: 90 % |
| Wear chemically resistant gloves in combination with 'basic' employee | Effectiveness: 90 % |

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| | |
|---|---|
| training. | |
| Avoid skin contact. Ensure minimization of manual phases | |
| Use suitable eye protection., Wear chemically resistant gloves in combination with 'basic' employee training. | |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ECETOC TRA v3.0, Worker |
| | Worker - dermal, long-term - systemic |
| Exposure estimate | 0,0686 mg/kg bw/day |
| Risk Characterization Ratio (RCR) | 0,040336 |
| Assessment method | EASY TRA v4.2, ECETOC TRA v3.0, Worker |
| | Worker - dermal, long-term - local |
| Exposure estimate | 0,02 mg/cm ² /day |
| Risk Characterization Ratio (RCR) | 0,142857 |
| Assessment method | EASY TRA v4.2, ECETOC TRA v3.0, Worker |
| | Worker - inhalation, long-term - systemic |
| Exposure estimate | 1,1418 mg/m ³ |
| Risk Characterization Ratio (RCR) | 0,126861 |
| Guidance to Downstream Users | |
| For scaling see: http://www.ecetoc.org/tra | |

| | |
|---|--|
| Contributing exposure scenario | |
| Use descriptors covered | PROC5: Mixing or blending in batch processes Use domain: industrial |
| Operational conditions | |
| Concentration of the substance | citral Content: >= 0 % - <= 100 % |
| Physical state | liquid |
| Vapour pressure of the substance during use | 4,6 Pa |
| Process temperature | 20 °C |
| Duration and Frequency of activity | 240 min 5 days per week |
| Indoor/Outdoor | Indoor |
| Risk Management Measures | |
| Local exhaust ventilation | Effectiveness: 90 % |
| Wear chemically resistant gloves in combination with 'basic' employee training. | Effectiveness: 90 % |
| Avoid skin contact. Ensure minimization of manual phases | |
| Use suitable eye protection., Wear chemically resistant gloves in | |

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| combination with 'basic' employee training. | |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, Workplace measurements |
| | Worker - dermal, long-term - systemic |
| Exposure estimate | 0,0691 mg/kg bw/day |
| Risk Characterization Ratio (RCR) | 0,040671 |
| Assessment method | EASY TRA v4.2, Workplace measurements |
| | Worker - dermal, long-term - local |
| Exposure estimate | 0,0101 mg/cm ² /day |
| Risk Characterization Ratio (RCR) | 0,072 |
| Assessment method | EASY TRA v4.2, ECETOC TRA v3.0, Worker |
| | Worker - inhalation, long-term - systemic |
| Exposure estimate | 1,9029 mg/m ³ |
| Risk Characterization Ratio (RCR) | 0,211435 |
| Guidance to Downstream Users | |
| For scaling see: http://www.ecetoc.org/tra | |

| | |
|---|--|
| Contributing exposure scenario | |
| Use descriptors covered | PROC5: Mixing or blending in batch processes Use domain: industrial |
| Operational conditions | |
| Concentration of the substance | citral Content: >= 0 % - <= 100 % |
| Physical state | liquid |
| Vapour pressure of the substance during use | 4,6 Pa |
| Process temperature | 20 °C |
| Duration and Frequency of activity | 240 min 5 days per week |
| Indoor/Outdoor | Indoor |
| Risk Management Measures | |
| Local exhaust ventilation | Effectiveness: 90 % |
| Wear chemically resistant gloves in combination with 'basic' employee training. | Effectiveness: 90 % |
| Avoid skin contact. Ensure minimization of manual phases | |
| Use suitable eye protection., Wear chemically resistant gloves in combination with 'basic' employee training. | |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, Workplace measurements |
| | Worker - dermal, long-term - systemic |

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| | |
|--|---|
| Exposure estimate | 0,0124 mg/kg bw/day |
| Risk Characterization Ratio (RCR) | 0,0073 |
| Assessment method | EASY TRA v4.2, Workplace measurements |
| | Worker - dermal, long-term - local |
| Exposure estimate | 0,0018 mg/cm ² /day |
| Risk Characterization Ratio (RCR) | 0,012929 |
| Assessment method | EASY TRA v4.2, ECETOC TRA v3.0, Worker |
| | Worker - inhalation, long-term - systemic |
| Exposure estimate | 1,9029 mg/m ³ |
| Risk Characterization Ratio (RCR) | 0,211435 |
| Guidance to Downstream Users | |
| For scaling see: http://www.ecetoc.org/tra | |

| | |
|---|---|
| Contributing exposure scenario | |
| Use descriptors covered | PROC8a: Transfer of substance or mixture (charging and discharging) at non-dedicated facilities Use domain: industrial |
| Operational conditions | |
| Concentration of the substance | citral Content: >= 0 % - <= 25 % |
| Physical state | liquid |
| Vapour pressure of the substance during use | 4,6 Pa |
| Process temperature | 20 °C |
| Duration and Frequency of activity | 240 min 5 days per week |
| Indoor/Outdoor | Indoor |
| Risk Management Measures | |
| Local exhaust ventilation | Effectiveness: 90 % |
| Wear chemically resistant gloves in combination with 'basic' employee training. | Effectiveness: 90 % |
| Avoid skin contact. Ensure minimization of manual phases | |
| Use suitable eye protection., Wear chemically resistant gloves in combination with 'basic' employee training. | |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ECETOC TRA v3.0, worker, modified version, The concentration of the substance has been considered using a linear approach. |
| | Worker - dermal, long-term - systemic |
| Exposure estimate | 0,3429 mg/kg bw/day |
| Risk Characterization Ratio (RCR) | 0,201681 |

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| | |
|---|---|
| Assessment method | EASY TRA v4.2, ECETOC TRA v3.0, worker, modified version, The concentration of the substance has been considered using a linear approach. |
| | Worker - dermal, long-term - local |
| Exposure estimate | 0,025 mg/cm ² /day |
| Risk Characterization Ratio (RCR) | 0,178571 |
| Assessment method | EASY TRA v4.2, ECETOC TRA v3.0, worker, modified version, The concentration of the substance has been considered using a linear approach. |
| | Worker - inhalation, long-term - systemic |
| Exposure estimate | 0,9515 mg/m ³ |
| Risk Characterization Ratio (RCR) | 0,105718 |
| Guidance to Downstream Users | |
| For scaling see: http://www.ecetoc.org/tra Please note that a modified version has been used (see exposure estimates) | |

| | |
|---|---|
| Contributing exposure scenario | |
| Use descriptors covered | PROC8b: Transfer of substance or mixture (charging and discharging) at dedicated facilities Use domain: industrial |
| Operational conditions | |
| Concentration of the substance | citral Content: >= 0 % - <= 100 % |
| Physical state | liquid |
| Vapour pressure of the substance during use | 4,6 Pa |
| Process temperature | 20 °C |
| Duration and Frequency of activity | 60 min 5 days per week |
| Indoor/Outdoor | Indoor |
| Risk Management Measures | |
| Local exhaust ventilation | Effectiveness: 95 % |
| Wear chemically resistant gloves in combination with 'basic' employee training. | Effectiveness: 90 % |
| Avoid skin contact. Ensure minimization of manual phases | |
| Use suitable eye protection., Wear chemically resistant gloves in combination with 'basic' employee training. | |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ECETOC TRA v3.0, Worker |
| | Worker - dermal, long-term - systemic |
| Exposure estimate | 1,3714 mg/kg bw/day |

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| | |
|--|---|
| Risk Characterization Ratio (RCR) | 0,806723 |
| Assessment method | EASY TRA v4.2, ECETOC TRA v3.0, Worker |
| | Worker - dermal, long-term - local |
| Exposure estimate | 0,1 mg/cm ² /day |
| Risk Characterization Ratio (RCR) | 0,714286 |
| Assessment method | EASY TRA v4.2, ECETOC TRA v3.0, Worker |
| | Worker - inhalation, long-term - systemic |
| Exposure estimate | 0,3172 mg/m ³ |
| Risk Characterization Ratio (RCR) | 0,035239 |
| Guidance to Downstream Users | |
| For scaling see: http://www.ecetoc.org/tra | |

| | |
|---|---|
| Contributing exposure scenario | |
| Use descriptors covered | PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing). Use domain: industrial |
| Operational conditions | |
| Concentration of the substance | citral Content: >= 0 % - <= 25 % |
| Physical state | liquid |
| Vapour pressure of the substance during use | 4,6 Pa |
| Process temperature | 20 °C |
| Duration and Frequency of activity | 60 min 5 days per week |
| Indoor/Outdoor | Indoor |
| Risk Management Measures | |
| Wear chemically resistant gloves in combination with 'basic' employee training. | Effectiveness: 90 % |
| Avoid skin contact. Ensure minimization of manual phases | |
| Use suitable eye protection., Wear chemically resistant gloves in combination with 'basic' employee training. | |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ECETOC TRA v3.0, worker, modified version, The concentration of the substance has been considered using a linear approach. |
| | Worker - dermal, long-term - systemic |
| Exposure estimate | 0,1714 mg/kg bw/day |
| Risk Characterization Ratio (RCR) | 0,10084 |
| Assessment method | EASY TRA v4.2, ECETOC TRA v3.0, worker, modified version, The concentration of the substance has been |

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| | |
|---|---|
| | considered using a linear approach. |
| | Worker - dermal, long-term - local |
| Exposure estimate | 0,025 mg/cm ² /day |
| Risk Characterization Ratio (RCR) | 0,178571 |
| Assessment method | EASY TRA v4.2, ECETOC TRA v3.0, worker, modified version, The concentration of the substance has been considered using a linear approach. |
| | Worker - inhalation, long-term - systemic |
| Exposure estimate | 1,5858 mg/m ³ |
| Risk Characterization Ratio (RCR) | 0,176196 |
| Guidance to Downstream Users | |
| For scaling see: http://www.ecetoc.org/tra Please note that a modified version has been used (see exposure estimates) | |

| | |
|---|---|
| Contributing exposure scenario | |
| Use descriptors covered | PROC15: Use a laboratory reagent. Use domain: industrial |
| Operational conditions | |
| Concentration of the substance | citral Content: >= 0 % - <= 100 % |
| Physical state | liquid |
| Vapour pressure of the substance during use | 4,6 Pa |
| Process temperature | 20 °C |
| Duration and Frequency of activity | 15 min 5 days per week |
| Indoor/Outdoor | Indoor |
| Risk Management Measures | |
| Wear chemically resistant gloves in combination with 'basic' employee training. | Effectiveness: 90 % |
| Avoid skin contact. Ensure minimization of manual phases | |
| Use suitable eye protection., Wear chemically resistant gloves in combination with 'basic' employee training. | |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ECETOC TRA v3.0, Worker |
| | Worker - dermal, long-term - systemic |
| Exposure estimate | 0,0343 mg/kg bw/day |
| Risk Characterization Ratio (RCR) | 0,020168 |
| Assessment method | EASY TRA v4.2, ECETOC TRA v3.0, Worker |
| | Worker - dermal, long-term - local |
| Exposure estimate | 0,01 mg/cm ² /day |

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(ID no. 30035059/SDS_GEN_FR/EN)

Date of print 20.10.2025

| | |
|--|---|
| Risk Characterization Ratio (RCR) | 0,071429 |
| Assessment method | EASY TRA v4.2, ECETOC TRA v3.0, Worker |
| | Worker - inhalation, long-term - systemic |
| Exposure estimate | 3,1715 mg/m ³ |
| Risk Characterization Ratio (RCR) | 0,352392 |
| Guidance to Downstream Users | |
| For scaling see: http://www.ecetoc.org/tra | |

3. Short title of exposure scenario

Formulation, (use in industrial settings)

ERC2; PROC1, PROC3, PROC5, PROC8a, PROC8b, PROC9, PROC14, PROC15

Control of exposure and risk management measures

| | |
|---|---|
| Contributing exposure scenario | |
| Use descriptors covered | AISE SPERC 2.1.a.v2: AISE SPERC 2.1.a.v2 |
| Operational conditions | |
| Annual amount used in the EU | 405.000 kg |
| Minimum emission days per year | 250 |
| Emission factor air | 0 % |
| Emission factor water | 0,01 % |
| Emission factor soil | 0 % |
| Receive Surf. Water (Flow Rate). | 18.000 m3/d |
| Dilution factor river | 10 |
| Dilution factor coast | 100 |
| Risk Management Measures | |
| Wastewater treatment measures considered suitable are, e.g. | Precipitation, Coagulation, Must be eliminated from water by chemical flocculation. |
| Type of STP | Municipal STP |
| Assumed sewage treatment plant flow (m3/d) | 2.000 m3/d |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ECETOC TRA v3.0, Environment |
| Risk Characterization Ratio (RCR) | 0,15352 |
| | Risk from environmental exposure is driven by freshwater. |
| Maximum amount of safe use | 10.552,4 |

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| | |
|---|------|
| | kg/d |
| Risk from environmental exposure is driven by freshwater. | |

| Contributing exposure scenario | |
|---|---|
| Use descriptors covered | AISE SPERC 2.1.b.v2: AISE SPERC 2.1.b.v2 |
| Operational conditions | |
| Annual amount used in the EU | 162.000 kg |
| Minimum emission days per year | 250 |
| Emission factor air | 0 % |
| Emission factor water | 0,1 % |
| Emission factor soil | 0 % |
| Receive Surf. Water (Flow Rate). | 18.000 m3/d |
| Dilution factor river | 10 |
| Dilution factor coast | 100 |
| Risk Management Measures | |
| Wastewater treatment measures considered suitable are, e.g. | Precipitation, Coagulation, Must be eliminated from water by chemical flocculation. |
| Type of STP | Municipal STP |
| Assumed sewage treatment plant flow (m3/d) | 2.000 m3/d |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ECETOC TRA v3.0, Environment |
| Risk Characterization Ratio (RCR) | 0,572208 |
| | Risk from environmental exposure is driven by soil. |
| Maximum amount of safe use | 1.132,5 kg/d |
| Risk from environmental exposure is driven by soil. | |

| Contributing exposure scenario | |
|---------------------------------------|--|
| Use descriptors covered | AISE SPERC 2.1.c.v2: AISE SPERC 2.1.c.v2 |
| Operational conditions | |
| Annual amount used in the EU | 126.000 kg |
| Minimum emission days per year | 250 |
| Emission factor air | 0 % |

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|---|---|
| Emission factor water | 0,2 % |
| Emission factor soil | 0 % |
| Receive Surf. Water (Flow Rate). | 18.000 m3/d |
| Dilution factor river | 10 |
| Dilution factor coast | 100 |
| Risk Management Measures | |
| Wastewater treatment measures considered suitable are, e.g. | Precipitation, Coagulation, Must be eliminated from water by chemical flocculation. |
| Type of STP | Municipal STP |
| Assumed sewage treatment plant flow (m3/d) | 2.000 m3/d |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ECETOC TRA v3.0, Environment |
| Risk Characterization Ratio (RCR) | 0,793612 |
| | Risk from environmental exposure is driven by soil. |
| Maximum amount of safe use | 567 kg/d |
| Risk from environmental exposure is driven by soil. | |

| | |
|---|--|
| Contributing exposure scenario | |
| Use descriptors covered | AISE SPERC 2.1.j.v2: AISE SPERC 2.1.j.v2 |
| Operational conditions | |
| Annual amount used in the EU | 117.000 kg |
| Minimum emission days per year | 250 |
| Emission factor air | 0 % |
| Emission factor water | 0,1 % |
| Emission factor soil | 0 % |
| Receive Surf. Water (Flow Rate). | 18.000 m3/d |
| Dilution factor river | 10 |
| Dilution factor coast | 100 |
| Risk Management Measures | |
| Wastewater treatment measures considered suitable are, e.g. | Nanofiltration (NR), |

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| | Ultrafiltration (UF) or Reverse Osmosis (OR), Coagulation, Must be eliminated from water by chemical flocculation. |
| Type of STP | Municipal STP |
| Assumed sewage treatment plant flow (m3/d) | 2.000 m3/d |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ECETOC TRA v3.0, Environment |
| Risk Characterization Ratio (RCR) | 0,414063 |
| | Risk from environmental exposure is driven by soil. |
| Maximum amount of safe use | 1.130,3 kg/d |
| Risk from environmental exposure is driven by soil. | |

| | |
|---|---|
| Contributing exposure scenario | |
| Use descriptors covered | AISE SPERC 2.1.k.v2: AISE SPERC 2.1.k.v2 |
| Operational conditions | |
| Annual amount used in the EU | 63.000 kg |
| Minimum emission days per year | 250 |
| Emission factor air | 0 % |
| Emission factor water | 0,2 % |
| Emission factor soil | 0 % |
| Receive Surf. Water (Flow Rate). | 18.000 m3/d |
| Dilution factor river | 10 |
| Dilution factor coast | 100 |
| Risk Management Measures | |
| Wastewater treatment measures considered suitable are, e.g. | Nanofiltration (NR), Ultrafiltration (UF) or Reverse Osmosis (OR), Coagulation, Must be eliminated from water by chemical flocculation. |
| Type of STP | Municipal STP |
| Assumed sewage treatment plant flow (m3/d) | 2.000 m3/d |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ECETOC TRA v3.0, Environment |
| Risk Characterization Ratio (RCR) | 0,445692 |
| | Risk from environmental exposure is driven by soil. |
| Maximum amount of safe use | 565,4 |

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| | |
|---|------|
| | kg/d |
| Risk from environmental exposure is driven by soil. | |

| | |
|---|---|
| Contributing exposure scenario | |
| Use descriptors covered | AISE SPERC 2.1.I.v2: AISE SPERC 2.1.I.v2 |
| Operational conditions | |
| Annual amount used in the EU | 63.000 kg |
| Minimum emission days per year | 250 |
| Emission factor air | 0 % |
| Emission factor water | 0,4 % |
| Emission factor soil | 0 % |
| Receive Surf. Water (Flow Rate). | 18.000 m3/d |
| Dilution factor river | 10 |
| Dilution factor coast | 100 |
| Risk Management Measures | |
| Wastewater treatment measures considered suitable are, e.g. | Nanofiltration (NR), Ultrafiltration (UF) or Reverse Osmosis (OR), Coagulation, Must be eliminated from water by chemical flocculation. |
| Type of STP | Municipal STP |
| Assumed sewage treatment plant flow (m3/d) | 2.000 m3/d |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ECETOC TRA v3.0, Environment |
| Risk Characterization Ratio (RCR) | 0,888499 |
| | Risk from environmental exposure is driven by soil. |
| Maximum amount of safe use | 283,6 kg/d |
| Risk from environmental exposure is driven by soil. | |

| | |
|---------------------------------------|--------------------------------|
| Contributing exposure scenario | |
| Use descriptors covered | ERC2: Formulation into mixture |
| Operational conditions | |
| Annual amount used in the EU | 180.000 kg |
| Minimum emission days per year | 250 |

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| | |
|---|---|
| Emission factor air | 0 % |
| Emission factor water | 0 % |
| Emission factor soil | 0,01 % |
| Receive Surf. Water (Flow Rate). | 18.000 m3/d |
| Dilution factor river | 10 |
| Dilution factor coast | 100 |
| Risk Management Measures | |
| Type of STP | Municipal STP |
| Assumed sewage treatment plant flow (m3/d) | 2.000 m3/d |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ECETOC TRA v3.0, Environment |
| Risk Characterization Ratio (RCR) | 0,060068 |
| | Risk from environmental exposure is driven by freshwater. |
| Maximum amount of safe use | 11.986,3 kg/d |
| Risk from environmental exposure is driven by freshwater. | |

| | |
|--|--------------------------------|
| Contributing exposure scenario | |
| Use descriptors covered | ERC2: Formulation into mixture |
| Operational conditions | |
| Annual amount per site | 12.000 kg |
| Minimum emission days per year | 250 |
| Emission factor air | 0 % |
| Emission factor water | 2 % |
| Emission factor soil | 0 % |
| Receive Surf. Water (Flow Rate). | 18.000 m3/d |
| Dilution factor river | 10 |
| Dilution factor coast | 100 |
| Risk Management Measures | |
| Type of STP | Municipal STP |
| Assumed sewage treatment plant flow (m3/d) | 2.000 m3/d |

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| Exposure estimate and reference to its source | |
|--|---|
| Assessment method | EASY TRA v4.2, ECETOC TRA v3.0, Environment |
| Risk Characterization Ratio (RCR) | 0,846327 |
| | Risk from environmental exposure is driven by soil. |
| Maximum amount of safe use | 56,7 kg/d |
| | Risk from environmental exposure is driven by soil. |

| Contributing exposure scenario | |
|---|--|
| Use descriptors covered | PROC1: Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions. Use domain: industrial |
| Operational conditions | |
| Concentration of the substance | citral Content: $\geq 0\%$ - $\leq 25\%$ |
| Physical state | liquid |
| Vapour pressure of the substance during use | 4,6 Pa |
| Process temperature | 20 °C |
| Duration and Frequency of activity | 60 min 5 days per week |
| Indoor/Outdoor | Indoor |
| Risk Management Measures | |
| Wear chemically resistant gloves in combination with 'basic' employee training. | Effectiveness: 90 % |
| Avoid skin contact. Ensure minimization of manual phases | |
| Use suitable eye protection., Wear chemically resistant gloves in combination with 'basic' employee training. | |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ECETOC TRA v3.0, worker, modified version, The concentration of the substance has been considered using a linear approach. |
| | Worker - dermal, long-term - systemic |
| Exposure estimate | 0,0009 mg/kg bw/day |
| Risk Characterization Ratio (RCR) | 0,000504 |
| Assessment method | EASY TRA v4.2, ECETOC TRA v3.0, worker, modified version, The concentration of the substance has been considered using a linear approach. |
| | Worker - dermal, long-term - local |

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| | |
|---|---|
| Exposure estimate | 0,0003 mg/cm ² /day |
| Risk Characterization Ratio (RCR) | 0,001786 |
| Assessment method | EASY TRA v4.2, ECETOC TRA v3.0, worker, modified version, The concentration of the substance has been considered using a linear approach. |
| | Worker - inhalation, long-term - systemic |
| Exposure estimate | 0,0032 mg/m ³ |
| Risk Characterization Ratio (RCR) | 0,000352 |
| Guidance to Downstream Users | |
| For scaling see: http://www.ecetoc.org/tra Please note that a modified version has been used (see exposure estimates) | |

| | |
|---|---|
| Contributing exposure scenario | |
| Use descriptors covered | PROC3: Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition Use domain: industrial |
| Operational conditions | |
| Concentration of the substance | citral Content: >= 0 % - <= 25 % |
| Physical state | liquid |
| Vapour pressure of the substance during use | 4,6 Pa |
| Process temperature | 20 °C |
| Duration and Frequency of activity | 240 min 5 days per week |
| Indoor/Outdoor | Indoor |
| Risk Management Measures | |
| Wear chemically resistant gloves in combination with 'basic' employee training. | Effectiveness: 90 % |
| Avoid skin contact. Ensure minimization of manual phases | |
| Use suitable eye protection., Wear chemically resistant gloves in combination with 'basic' employee training. | |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ECETOC TRA v3.0, worker, modified version, The concentration of the substance has been considered using a linear approach. |
| | Worker - dermal, long-term - systemic |
| Exposure estimate | 0,0171 mg/kg bw/day |
| Risk Characterization Ratio (RCR) | 0,010084 |

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| | |
|---|---|
| Assessment method | EASY TRA v4.2, ECETOC TRA v3.0, worker, modified version, The concentration of the substance has been considered using a linear approach. |
| | Worker - dermal, long-term - local |
| Exposure estimate | 0,005 mg/cm ² /day |
| Risk Characterization Ratio (RCR) | 0,035714 |
| Assessment method | EASY TRA v4.2, ECETOC TRA v3.0, worker, modified version, The concentration of the substance has been considered using a linear approach. |
| | Worker - inhalation, long-term - systemic |
| Exposure estimate | 2,8544 mg/m ³ |
| Risk Characterization Ratio (RCR) | 0,317153 |
| Guidance to Downstream Users | |
| For scaling see: http://www.ecetoc.org/tra Please note that a modified version has been used (see exposure estimates) | |

| | |
|---|---|
| Contributing exposure scenario | |
| Use descriptors covered | PROC5: Mixing or blending in batch processes Use domain: industrial |
| Operational conditions | |
| Concentration of the substance | citral Content: >= 0 % - <= 25 % |
| Physical state | liquid |
| Vapour pressure of the substance during use | 4,6 Pa |
| Process temperature | 20 °C |
| Duration and Frequency of activity | 240 min 5 days per week |
| Indoor/Outdoor | Indoor |
| Risk Management Measures | |
| Wear chemically resistant gloves in combination with 'basic' employee training. | Effectiveness: 90 % |
| Avoid skin contact. Ensure minimization of manual phases | |
| Use suitable eye protection., Wear chemically resistant gloves in combination with 'basic' employee training. | |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ECETOC TRA v3.0, worker, modified version, The concentration of the substance has been considered using a linear approach. |
| | Worker - dermal, long-term - systemic |
| Exposure estimate | 0,3429 mg/kg bw/day |

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| | |
|---|---|
| Risk Characterization Ratio (RCR) | 0,201681 |
| Assessment method | EASY TRA v4.2, ECETOC TRA v3.0, worker, modified version, The concentration of the substance has been considered using a linear approach. |
| | Worker - dermal, long-term - local |
| Exposure estimate | 0,05 mg/cm ² /day |
| Risk Characterization Ratio (RCR) | 0,357143 |
| Assessment method | EASY TRA v4.2, ECETOC TRA v3.0, worker, modified version, The concentration of the substance has been considered using a linear approach. |
| | Worker - inhalation, long-term - systemic |
| Exposure estimate | 4,7573 mg/m ³ |
| Risk Characterization Ratio (RCR) | 0,528588 |
| Guidance to Downstream Users | |
| For scaling see: http://www.ecetoc.org/tra Please note that a modified version has been used (see exposure estimates) | |

| | |
|--|---|
| Contributing exposure scenario | |
| Use descriptors covered | PROC8a: Transfer of substance or mixture (charging and discharging) at non-dedicated facilities Use domain: industrial |
| Operational conditions | |
| Concentration of the substance | citral Content: >= 0 % - <= 1 % |
| Physical state | liquid |
| Vapour pressure of the substance during use | 4,6 Pa |
| Process temperature | 20 °C |
| Duration and Frequency of activity | 240 min 5 days per week |
| Indoor/Outdoor | Indoor |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ECETOC TRA v3.0, worker, modified version, The concentration of the substance has been considered using a linear approach. |
| | Worker - dermal, long-term - systemic |
| Exposure estimate | 0,1371 mg/kg bw/day |
| Risk Characterization Ratio (RCR) | 0,080672 |
| Assessment method | EASY TRA v4.2, ECETOC TRA v3.0, worker, modified version, The concentration of the substance has been considered using a linear approach. |
| | Worker - dermal, long-term - local |
| Exposure estimate | 0,01 mg/cm ² /day |
| Risk Characterization Ratio (RCR) | 0,071429 |
| Assessment method | EASY TRA v4.2, ECETOC TRA v3.0, worker, modified |

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| | version, The concentration of the substance has been considered using a linear approach. |
| | Worker - inhalation, long-term - systemic |
| Exposure estimate | 0,3806 mg/m ³ |
| Risk Characterization Ratio (RCR) | 0,042287 |
| Guidance to Downstream Users | |
| For scaling see: http://www.ecetoc.org/tra Please note that a modified version has been used (see exposure estimates) | |

| | |
|---|---|
| Contributing exposure scenario | |
| Use descriptors covered | PROC8b: Transfer of substance or mixture (charging and discharging) at dedicated facilities Use domain: industrial |
| Operational conditions | |
| Concentration of the substance | citral Content: >= 0 % - <= 25 % |
| Physical state | liquid |
| Vapour pressure of the substance during use | 4,6 Pa |
| Process temperature | 20 °C |
| Duration and Frequency of activity | 60 min 5 days per week |
| Indoor/Outdoor | Indoor |
| Risk Management Measures | |
| Wear chemically resistant gloves in combination with 'basic' employee training. | Effectiveness: 90 % |
| Avoid skin contact. Ensure minimization of manual phases | |
| Use suitable eye protection., Wear chemically resistant gloves in combination with 'basic' employee training. | |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ECETOC TRA v3.0, worker, modified version, The concentration of the substance has been considered using a linear approach. |
| | Worker - dermal, long-term - systemic |
| Exposure estimate | 0,3429 mg/kg bw/day |
| Risk Characterization Ratio (RCR) | 0,201681 |
| Assessment method | EASY TRA v4.2, ECETOC TRA v3.0, worker, modified version, The concentration of the substance has been considered using a linear approach. |
| | Worker - dermal, long-term - local |
| Exposure estimate | 0,025 mg/cm ² /day |

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|---|---|
| Risk Characterization Ratio (RCR) | 0,178571 |
| Assessment method | EASY TRA v4.2, ECETOC TRA v3.0, worker, modified version, The concentration of the substance has been considered using a linear approach. |
| | Worker - inhalation, long-term - systemic |
| Exposure estimate | 1,5858 mg/m ³ |
| Risk Characterization Ratio (RCR) | 0,176196 |
| Guidance to Downstream Users | |
| For scaling see: http://www.ecetoc.org/tra Please note that a modified version has been used (see exposure estimates) | |

| | |
|--|---|
| Contributing exposure scenario | |
| Use descriptors covered | PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing). Use domain: industrial |
| Operational conditions | |
| Concentration of the substance | citral Content: >= 0 % - <= 1 % |
| Physical state | liquid |
| Vapour pressure of the substance during use | 4,6 Pa |
| Process temperature | 20 °C |
| Duration and Frequency of activity | 60 min 5 days per week |
| Indoor/Outdoor | Indoor |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ECETOC TRA v3.0, worker, modified version, The concentration of the substance has been considered using a linear approach. |
| | Worker - dermal, long-term - systemic |
| Exposure estimate | 0,0686 mg/kg bw/day |
| Risk Characterization Ratio (RCR) | 0,040336 |
| Assessment method | EASY TRA v4.2, ECETOC TRA v3.0, worker, modified version, The concentration of the substance has been considered using a linear approach. |
| | Worker - dermal, long-term - local |
| Exposure estimate | 0,01 mg/cm ² /day |
| Risk Characterization Ratio (RCR) | 0,071429 |
| Assessment method | EASY TRA v4.2, ECETOC TRA v3.0, worker, modified version, The concentration of the substance has been considered using a linear approach. |
| | Worker - inhalation, long-term - systemic |
| Exposure estimate | 0,0634 mg/m ³ |
| Risk Characterization Ratio (RCR) | 0,007048 |
| Guidance to Downstream Users | |

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| Contributing exposure scenario | |
|---|---|
| Use descriptors covered | PROC14: Tableting, compression, extrusion, pelletisation, granulation Use domain: industrial |
| Operational conditions | |
| Concentration of the substance | citral Content: $\geq 0\%$ - $\leq 1\%$ |
| Physical state | liquid |
| Vapour pressure of the substance during use | 4,6 Pa |
| Process temperature | 20 °C |
| Duration and Frequency of activity | 480 min 5 days per week |
| Indoor/Outdoor | Indoor |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ECETOC TRA v3.0, worker, modified version, The concentration of the substance has been considered using a linear approach. |
| | Worker - dermal, long-term - systemic |
| Exposure estimate | 0,0343 mg/kg bw/day |
| Risk Characterization Ratio (RCR) | 0,020168 |
| Assessment method | EASY TRA v4.2, ECETOC TRA v3.0, worker, modified version, The concentration of the substance has been considered using a linear approach. |
| | Worker - dermal, long-term - local |
| Exposure estimate | 0,005 mg/cm ² /day |
| Risk Characterization Ratio (RCR) | 0,035714 |
| Assessment method | EASY TRA v4.2, ECETOC TRA v3.0, worker, modified version, The concentration of the substance has been considered using a linear approach. |
| | Worker - inhalation, long-term - systemic |
| Exposure estimate | 0,3172 mg/m ³ |
| Risk Characterization Ratio (RCR) | 0,035239 |
| Guidance to Downstream Users | |
| For scaling see: http://www.ecetoc.org/tra Please note that a modified version has been used (see exposure estimates) | |

| Contributing exposure scenario | |
|---------------------------------------|---|
| Use descriptors covered | PROC15: Use a laboratory reagent. Use domain: industrial |
| Operational conditions | |

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Product: **Citral FG**

(ID no. 30035059/SDS_GEN_FR/EN)

Date of print 20.10.2025

| | |
|---|---|
| Concentration of the substance | citral Content: $\geq 0\%$ - $\leq 25\%$ |
| Physical state | liquid |
| Vapour pressure of the substance during use | 4,6 Pa |
| Process temperature | 20 °C |
| Duration and Frequency of activity | 15 min 5 days per week |
| Indoor/Outdoor | Indoor |
| Risk Management Measures | |
| Wear chemically resistant gloves in combination with 'basic' employee training. | Effectiveness: 90 % |
| Avoid skin contact. Ensure minimization of manual phases | |
| Use suitable eye protection., Wear chemically resistant gloves in combination with 'basic' employee training. | |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ECETOC TRA v3.0, worker, modified version, The concentration of the substance has been considered using a linear approach. |
| | Worker - dermal, long-term - systemic |
| Exposure estimate | 0,0086 mg/kg bw/day |
| Risk Characterization Ratio (RCR) | 0,005042 |
| Assessment method | EASY TRA v4.2, ECETOC TRA v3.0, worker, modified version, The concentration of the substance has been considered using a linear approach. |
| | Worker - dermal, long-term - local |
| Exposure estimate | 0,0025 mg/cm ² /day |
| Risk Characterization Ratio (RCR) | 0,017857 |
| Assessment method | EASY TRA v4.2, ECETOC TRA v3.0, worker, modified version, The concentration of the substance has been considered using a linear approach. |
| | Worker - inhalation, long-term - systemic |
| Exposure estimate | 0,7929 mg/m ³ |
| Risk Characterization Ratio (RCR) | 0,088098 |
| Guidance to Downstream Users | |
| For scaling see: http://www.ecetoc.org/tra Please note that a modified version has been used (see exposure estimates) | |

4. Short title of exposure scenario

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Product: **Citral FG**

(ID no. 30035059/SDS_GEN_FR/EN)

Date of print 20.10.2025

Use in Cleaning Agents, (use in industrial settings)
ERC4; PROC1, PROC2, PROC4, PROC7, PROC8b, PROC10, PROC13

Control of exposure and risk management measures

| Contributing exposure scenario | |
|--------------------------------|---|
| Use descriptors covered | ERC4: Use of non-reactive processing aid at industrial site (no inclusion into or onto article) |
| Operational conditions | |

| Contributing exposure scenario | |
|---|--|
| Use descriptors covered | PROC1: Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions. Use domain: industrial |
| Operational conditions | |
| Concentration of the substance | citral Content: $\geq 0\%$ - $\leq 1,1999\%$ |
| Physical state | liquid |
| Vapour pressure of the substance during use | 4,6 Pa |
| Process temperature | 20 °C |
| Duration and Frequency of activity | 480 min 5 days per week |
| Indoor/Outdoor | Indoor |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ECETOC TRA v3.0, worker, modified version, The concentration of the substance has been considered using a linear approach. |
| | Worker - dermal, long-term - systemic |
| Exposure estimate | 0,0004 mg/kg bw/day |
| Risk Characterization Ratio (RCR) | 0,000242 |
| Assessment method | EASY TRA v4.2, ECETOC TRA v3.0, worker, modified version, The concentration of the substance has been considered using a linear approach. |
| | Worker - inhalation, long-term - systemic |
| Exposure estimate | 0,0008 mg/m ³ |
| Risk Characterization Ratio (RCR) | 0,000085 |
| Guidance to Downstream Users | |
| For scaling see: http://www.ecetoc.org/tra Please note that a modified version has been used (see exposure estimates) | |

| Contributing exposure scenario | |
|--------------------------------|--|
| Use descriptors covered | PROC2: Chemical production or refinery in closed |

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Product: **Citral FG**

(ID no. 30035059/SDS_GEN_FR/EN)

Date of print 20.10.2025

| | |
|---|---|
| | continuous process with occasional controlled exposure or processes with equivalent containment conditions Use domain: industrial |
| Operational conditions | |
| Concentration of the substance | citral Content: $\geq 0\%$ - $\leq 1,1999\%$ |
| Physical state | liquid |
| Vapour pressure of the substance during use | 4,6 Pa |
| Process temperature | 20 °C |
| Duration and Frequency of activity | 480 min 5 days per week |
| Indoor/Outdoor | Indoor |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ECETOC TRA v3.0, worker, modified version, The concentration of the substance has been considered using a linear approach. |
| | Worker - dermal, long-term - systemic |
| Exposure estimate | 0,0165 mg/kg bw/day |
| Risk Characterization Ratio (RCR) | 0,009681 |
| Assessment method | EASY TRA v4.2, ECETOC TRA v3.0, worker, modified version, The concentration of the substance has been considered using a linear approach. |
| | Worker - inhalation, long-term - systemic |
| Exposure estimate | 0,0761 mg/m ³ |
| Risk Characterization Ratio (RCR) | 0,008457 |
| Guidance to Downstream Users | |
| For scaling see: http://www.ecetoc.org/tra Please note that a modified version has been used (see exposure estimates) | |

| | |
|---|--|
| Contributing exposure scenario | |
| Use descriptors covered | PROC4: Chemical production where opportunity for exposure arises Use domain: industrial |
| Operational conditions | |
| Concentration of the substance | citral Content: $\geq 0\%$ - $\leq 1,1999\%$ |
| Physical state | liquid |
| Vapour pressure of the substance during use | 4,6 Pa |
| Process temperature | 20 °C |
| Duration and Frequency of activity | 480 min 5 days per week |

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Product: **Citral FG**

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Date of print 20.10.2025

| | |
|---|---|
| Indoor/Outdoor | Indoor |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ECETOC TRA v3.0, worker, modified version, The concentration of the substance has been considered using a linear approach. |
| | Worker - dermal, long-term - systemic |
| Exposure estimate | 0,0823 mg/kg bw/day |
| Risk Characterization Ratio (RCR) | 0,048403 |
| Assessment method | EASY TRA v4.2, ECETOC TRA v3.0, worker, modified version, The concentration of the substance has been considered using a linear approach. |
| | Worker - inhalation, long-term - systemic |
| Exposure estimate | 0,3806 mg/m ³ |
| Risk Characterization Ratio (RCR) | 0,042287 |
| Guidance to Downstream Users | |
| For scaling see: http://www.ecetoc.org/tra Please note that a modified version has been used (see exposure estimates) | |

| | |
|--|---|
| Contributing exposure scenario | |
| Use descriptors covered | PROC7: Industrial spraying Use domain: industrial |
| Operational conditions | |
| Concentration of the substance | citral Content: >= 0 % - <= 1,1999 % |
| Physical state | liquid |
| Vapour pressure of the substance during use | 4,6 Pa |
| Process temperature | 20 °C |
| Duration and Frequency of activity | 60 min 5 days per week |
| Indoor/Outdoor | Outdoor |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ECETOC TRA v3.0, worker, modified version, The concentration of the substance has been considered using a linear approach. |
| | Worker - dermal, long-term - systemic |
| Exposure estimate | 0,5143 mg/kg bw/day |
| Risk Characterization Ratio (RCR) | 0,302521 |
| Assessment method | EASY TRA v4.2, ECETOC TRA v3.0, worker, modified version, The concentration of the substance has been considered using a linear approach. |
| | Worker - dermal, long-term - local |
| Exposure estimate | 0,024 mg/cm ² /day |
| Risk Characterization Ratio (RCR) | 0,171429 |

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Product: **Citral FG**

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| | |
|---|---|
| Assessment method | EASY TRA v4.2, Workplace measurements |
| | Worker - inhalation, long-term - systemic |
| Exposure estimate | 0,06 mg/m ³ |
| Risk Characterization Ratio (RCR) | 0,006667 |
| Guidance to Downstream Users | |
| For scaling see: http://www.ecetoc.org/tra Please note that a modified version has been used (see exposure estimates) | |

| | |
|---|---|
| Contributing exposure scenario | |
| Use descriptors covered | PROC7: Industrial spraying Use domain: industrial |
| Operational conditions | |
| Concentration of the substance | citral Content: >= 0 % - <= 1,1999 % |
| Physical state | liquid |
| Vapour pressure of the substance during use | 4,6 Pa |
| Process temperature | 20 °C |
| Duration and Frequency of activity | 480 min 5 days per week |
| Indoor/Outdoor | Indoor |
| Risk Management Measures | |
| Local exhaust ventilation | Effectiveness: 95 % |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ECETOC TRA v3.0, worker, modified version, The concentration of the substance has been considered using a linear approach. |
| | Worker - dermal, long-term - systemic |
| Exposure estimate | 0,5143 mg/kg bw/day |
| Risk Characterization Ratio (RCR) | 0,302521 |
| Assessment method | EASY TRA v4.2, ECETOC TRA v3.0, worker, modified version, The concentration of the substance has been considered using a linear approach. |
| | Worker - dermal, long-term - local |
| Exposure estimate | 0,024 mg/cm ² /day |
| Risk Characterization Ratio (RCR) | 0,171429 |
| Assessment method | EASY TRA v4.2, Workplace measurements |
| | Worker - inhalation, long-term - systemic |
| Exposure estimate | 0,12 mg/m ³ |
| Risk Characterization Ratio (RCR) | 0,013333 |
| Guidance to Downstream Users | |
| For scaling see: http://www.ecetoc.org/tra Please note that a modified version has been used (see exposure estimates) | |

| |
|---------------------------------------|
| Contributing exposure scenario |
|---------------------------------------|

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| | |
|---|---|
| Use descriptors covered | PROC7: Industrial spraying Use domain: industrial |
| Operational conditions | |
| Concentration of the substance | citral Content: $\geq 0\%$ - $\leq 1,1999\%$ |
| Physical state | liquid |
| Vapour pressure of the substance during use | 4,6 Pa |
| Process temperature | 20 °C |
| Duration and Frequency of activity | 480 min 5 days per week |
| Indoor/Outdoor | Indoor |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ECETOC TRA v3.0, worker, modified version, The concentration of the substance has been considered using a linear approach. |
| | Worker - dermal, long-term - systemic |
| Exposure estimate | 0,5143 mg/kg bw/day |
| Risk Characterization Ratio (RCR) | 0,302521 |
| Assessment method | EASY TRA v4.2, ECETOC TRA v3.0, worker, modified version, The concentration of the substance has been considered using a linear approach. |
| | Worker - dermal, long-term - local |
| Exposure estimate | 0,024 mg/cm ² /day |
| Risk Characterization Ratio (RCR) | 0,171429 |
| Assessment method | EASY TRA v4.2, Workplace measurements |
| | Worker - inhalation, long-term - systemic |
| Exposure estimate | 0,29 mg/m ³ |
| Risk Characterization Ratio (RCR) | 0,032222 |
| Guidance to Downstream Users | |
| For scaling see: http://www.ecetoc.org/tra Please note that a modified version has been used (see exposure estimates) | |

| | |
|---|--|
| Contributing exposure scenario | |
| Use descriptors covered | PROC7: Industrial spraying Use domain: industrial |
| Operational conditions | |
| Concentration of the substance | citral Content: $\geq 0\%$ - $\leq 1,1999\%$ |
| Physical state | liquid |
| Vapour pressure of the substance during use | 4,6 Pa |
| Process temperature | 20 °C |

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| | |
|---|---|
| Duration and Frequency of activity | 480 min 5 days per week |
| Indoor/Outdoor | Outdoor |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ECETOC TRA v3.0, worker, modified version, The concentration of the substance has been considered using a linear approach. |
| | Worker - dermal, long-term - systemic |
| Exposure estimate | 0,5143 mg/kg bw/day |
| Risk Characterization Ratio (RCR) | 0,302521 |
| Assessment method | EASY TRA v4.2, ECETOC TRA v3.0, worker, modified version, The concentration of the substance has been considered using a linear approach. |
| | Worker - dermal, long-term - local |
| Exposure estimate | 0,024 mg/cm ² /day |
| Risk Characterization Ratio (RCR) | 0,171429 |
| Assessment method | EASY TRA v4.2, Workplace measurements |
| | Worker - inhalation, long-term - systemic |
| Exposure estimate | 0,09 mg/m ³ |
| Risk Characterization Ratio (RCR) | 0,01 |
| Guidance to Downstream Users | |
| For scaling see: http://www.ecetoc.org/tra Please note that a modified version has been used (see exposure estimates) | |

| | |
|--|---|
| Contributing exposure scenario | |
| Use descriptors covered | PROC8b: Transfer of substance or mixture (charging and discharging) at dedicated facilities Use domain: industrial |
| Operational conditions | |
| Concentration of the substance | citral Content: >= 0 % - <= 1,999 % |
| Physical state | liquid |
| Vapour pressure of the substance during use | 4,6 Pa |
| Process temperature | 20 °C |
| Duration and Frequency of activity | 60 min 5 days per week |
| Indoor/Outdoor | Indoor |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ECETOC TRA v3.0, worker, modified version, The concentration of the substance has been considered using a linear approach. |
| | Worker - dermal, long-term - systemic |
| Exposure estimate | 0,1646 mg/kg bw/day |

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Product: **Citral FG**

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Date of print 20.10.2025

| | |
|---|---|
| Risk Characterization Ratio (RCR) | 0,096807 |
| Assessment method | EASY TRA v4.2, ECETOC TRA v3.0, worker, modified version, The concentration of the substance has been considered using a linear approach. |
| | Worker - inhalation, long-term - systemic |
| Exposure estimate | 0,0761 mg/m ³ |
| Risk Characterization Ratio (RCR) | 0,008457 |
| Guidance to Downstream Users | |
| For scaling see: http://www.ecetoc.org/tra Please note that a modified version has been used (see exposure estimates) | |

| | |
|---|---|
| Contributing exposure scenario | |
| Use descriptors covered | PROC10: Roller application or brushing Use domain: industrial |
| Operational conditions | |
| Concentration of the substance | citral Content: >= 0 % - <= 1,1999 % |
| Physical state | liquid |
| Vapour pressure of the substance during use | 4,6 Pa |
| Process temperature | 20 °C |
| Duration and Frequency of activity | 480 min 5 days per week |
| Indoor/Outdoor | Outdoor |
| Risk Management Measures | |
| Wear chemically resistant gloves in combination with 'basic' employee training. | Effectiveness: 90 % |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ECETOC TRA v3.0, worker, modified version, The concentration of the substance has been considered using a linear approach. |
| | Worker - dermal, long-term - systemic |
| Exposure estimate | 0,0329 mg/kg bw/day |
| Risk Characterization Ratio (RCR) | 0,019361 |
| Assessment method | EASY TRA v4.2, ECETOC TRA v3.0, worker, modified version, The concentration of the substance has been considered using a linear approach. |
| | Worker - inhalation, long-term - systemic |
| Exposure estimate | 0,5328 mg/m ³ |
| Risk Characterization Ratio (RCR) | 0,059202 |
| Guidance to Downstream Users | |
| For scaling see: http://www.ecetoc.org/tra Please note that a modified version has been used (see exposure estimates) | |

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Date of print 20.10.2025

| | |
|---|---|
| Contributing exposure scenario | |
| Use descriptors covered | PROC13: Treatment of articles by dipping and pouring. Use domain: industrial |
| Operational conditions | |
| Concentration of the substance | citral Content: $\geq 0\%$ - $\leq 1,1999\%$ |
| Physical state | liquid |
| Vapour pressure of the substance during use | 4,6 Pa |
| Process temperature | 20 °C |
| Duration and Frequency of activity | 480 min 5 days per week |
| Indoor/Outdoor | Indoor |
| Risk Management Measures | |
| Local exhaust ventilation | Effectiveness: 90 % |
| Wear chemically resistant gloves in combination with 'basic' employee training. | Effectiveness: 90 % |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ECETOC TRA v3.0, worker, modified version, The concentration of the substance has been considered using a linear approach. |
| | Worker - dermal, long-term - systemic |
| Exposure estimate | 0,0165 mg/kg bw/day |
| Risk Characterization Ratio (RCR) | 0,009681 |
| Assessment method | EASY TRA v4.2, ECETOC TRA v3.0, worker, modified version, The concentration of the substance has been considered using a linear approach. |
| | Worker - inhalation, long-term - systemic |
| Exposure estimate | 0,0761 mg/m ³ |
| Risk Characterization Ratio (RCR) | 0,008457 |
| Guidance to Downstream Users | |
| For scaling see: http://www.ecetoc.org/tra Please note that a modified version has been used (see exposure estimates) | |

5. Short title of exposure scenario

Use in Cleaning Agents, (use in professional settings)

ERC8a, ERC8d; PROC1, PROC2, PROC4, PROC8a, PROC8b, PROC10, PROC11, PROC13

Control of exposure and risk management measures

| |
|---------------------------------------|
| Contributing exposure scenario |
|---------------------------------------|

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Product: **Citral FG**

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Date of print 20.10.2025

| | | |
|--|--|--|
| Use descriptors covered | ERC8a: Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor) | |
| Operational conditions | | |
| Annual amount used in the EU | 900.000 kg | |
| Minimum emission days per year | 365 | |
| Emission factor air | 100 % | |
| Emission factor water | 100 % | |
| Emission factor soil | 0 % | |
| Receive Surf. Water (Flow Rate). | 18.000 m3/d | |
| Dilution factor river | 10 | |
| Dilution factor coast | 100 | |
| Risk Management Measures | | |
| Type of STP | Municipal STP | |
| Assumed sewage treatment plant flow (m3/d) | 2.000 m3/d | |
| Exposure estimate and reference to its source | | |
| Assessment method | EASY TRA v4.2, ECETOC TRA v3.0, Environment | |
| Risk Characterization Ratio (RCR) | 0,436161 | |
| | Risk from environmental exposure is driven by soil. | |
| Maximum amount of safe use | 1,1 kg/d | |
| Risk from environmental exposure is driven by soil. | | |

| | |
|----------------------------------|---|
| Contributing exposure scenario | |
| Use descriptors covered | ERC8d: Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor) |
| Operational conditions | |
| Annual amount used in the EU | 900.000 kg |
| Minimum emission days per year | 365 |
| Emission factor air | 100 % |
| Emission factor water | 100 % |
| Emission factor soil | 20 % |
| Receive Surf. Water (Flow Rate). | 18.000 m3/d |

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Product: **Citral FG**

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| | |
|--|---|
| Dilution factor river | 10 |
| Dilution factor coast | 100 |
| Risk Management Measures | |
| Type of STP | Municipal STP |
| Assumed sewage treatment plant flow (m3/d) | 2.000 m3/d |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ECETOC TRA v3.0, Environment |
| Risk Characterization Ratio (RCR) | 0,436161 |
| | Risk from environmental exposure is driven by soil. |
| Maximum amount of safe use | 1,1 kg/d |
| Risk from environmental exposure is driven by soil. | |

| | |
|--|--|
| Contributing exposure scenario | |
| Use descriptors covered | PROC1: Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions. Use domain: professional |
| Operational conditions | |
| Concentration of the substance | citral Content: $\geq 0\%$ - $\leq 1,1999\%$ |
| Physical state | liquid |
| Vapour pressure of the substance during use | 4,6 Pa |
| Process temperature | 20 °C |
| Duration and Frequency of activity | 480 min 5 days per week |
| Indoor/Outdoor | Indoor |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ECETOC TRA v3.0, worker, modified version, The concentration of the substance has been considered using a linear approach. |
| | Worker - dermal, long-term - systemic |
| Exposure estimate | 0,0004 mg/kg bw/day |
| Risk Characterization Ratio (RCR) | 0,000242 |
| Assessment method | EASY TRA v4.2, ECETOC TRA v3.0, worker, modified version, The concentration of the substance has been considered using a linear approach. |
| | Worker - inhalation, long-term - systemic |
| Exposure estimate | 0,0008 mg/m ³ |
| Risk Characterization Ratio (RCR) | 0,000085 |

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Guidance to Downstream Users

For scaling see: <http://www.ecetoc.org/tra> Please note that a modified version has been used (see exposure estimates)

Contributing exposure scenario

| | |
|--------------------------------|---|
| Use descriptors covered | PROC2: Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions Use domain: professional |
|--------------------------------|---|

Operational conditions

| | |
|---|---|
| Concentration of the substance | citral Content: $\geq 0\%$ - $\leq 1,1999\%$ |
| Physical state | liquid |
| Vapour pressure of the substance during use | 4,6 Pa |
| Process temperature | 20 °C |
| Duration and Frequency of activity | 480 min 5 days per week |
| Indoor/Outdoor | Indoor |

Exposure estimate and reference to its source

| | |
|-----------------------------------|---|
| Assessment method | EASY TRA v4.2, ECETOC TRA v3.0, worker, modified version, The concentration of the substance has been considered using a linear approach. |
| | Worker - dermal, long-term - systemic |
| Exposure estimate | 0,0165 mg/kg bw/day |
| Risk Characterization Ratio (RCR) | 0,009681 |
| Assessment method | EASY TRA v4.2, ECETOC TRA v3.0, worker, modified version, The concentration of the substance has been considered using a linear approach. |
| | Worker - inhalation, long-term - systemic |
| Exposure estimate | 0,3806 mg/m ³ |
| Risk Characterization Ratio (RCR) | 0,042287 |

Guidance to Downstream Users

For scaling see: <http://www.ecetoc.org/tra> Please note that a modified version has been used (see exposure estimates)

Contributing exposure scenario

| | |
|--------------------------------|--|
| Use descriptors covered | PROC4: Chemical production where opportunity for exposure arises Use domain: professional |
|--------------------------------|--|

Operational conditions

| | |
|--------------------------------|---|
| Concentration of the substance | citral Content: $\geq 0\%$ - $\leq 1,1999\%$ |
|--------------------------------|---|

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Product: **Citral FG**

(ID no. 30035059/SDS_GEN_FR/EN)

Date of print 20.10.2025

| | |
|---|---|
| Physical state | liquid |
| Vapour pressure of the substance during use | 4,6 Pa |
| Process temperature | 20 °C |
| Duration and Frequency of activity | 480 min 5 days per week |
| Indoor/Outdoor | Indoor |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ECETOC TRA v3.0, worker, modified version, The concentration of the substance has been considered using a linear approach. |
| | Worker - dermal, long-term - systemic |
| Exposure estimate | 0,0823 mg/kg bw/day |
| Risk Characterization Ratio (RCR) | 0,048403 |
| Assessment method | EASY TRA v4.2, ECETOC TRA v3.0, worker, modified version, The concentration of the substance has been considered using a linear approach. |
| | Worker - inhalation, long-term - systemic |
| Exposure estimate | 0,7612 mg/m ³ |
| Risk Characterization Ratio (RCR) | 0,084574 |
| Guidance to Downstream Users | |
| For scaling see: http://www.ecetoc.org/tra Please note that a modified version has been used (see exposure estimates) | |

| | |
|--|---|
| Contributing exposure scenario | |
| Use descriptors covered | PROC8a: Transfer of substance or mixture (charging and discharging) at non-dedicated facilities Use domain: professional |
| Operational conditions | |
| Concentration of the substance | citral Content: >= 0 % - <= 1,1999 % |
| Physical state | liquid |
| Vapour pressure of the substance during use | 4,6 Pa |
| Process temperature | 20 °C |
| Duration and Frequency of activity | 60 min 5 days per week |
| Indoor/Outdoor | Indoor |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ECETOC TRA v3.0, worker, modified version, The concentration of the substance has been considered using a linear approach. |
| | Worker - dermal, long-term - systemic |
| Exposure estimate | 0,1646 mg/kg bw/day |

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Product: **Citral FG**

(ID no. 30035059/SDS_GEN_FR/EN)

Date of print 20.10.2025

| | |
|---|---|
| Risk Characterization Ratio (RCR) | 0,096807 |
| Assessment method | EASY TRA v4.2, ECETOC TRA v3.0, worker, modified version, The concentration of the substance has been considered using a linear approach. |
| | Worker - inhalation, long-term - systemic |
| Exposure estimate | 0,3806 mg/m ³ |
| Risk Characterization Ratio (RCR) | 0,042287 |
| Guidance to Downstream Users | |
| For scaling see: http://www.ecetoc.org/tra Please note that a modified version has been used (see exposure estimates) | |

| | |
|---|---|
| Contributing exposure scenario | |
| Use descriptors covered | PROC8b: Transfer of substance or mixture (charging and discharging) at dedicated facilities Use domain: professional |
| Operational conditions | |
| Concentration of the substance | citral Content: >= 0 % - <= 1,1999 % |
| Physical state | liquid |
| Vapour pressure of the substance during use | 4,6 Pa |
| Process temperature | 20 °C |
| Duration and Frequency of activity | 60 min 5 days per week |
| Indoor/Outdoor | Indoor |
| Risk Management Measures | |
| Wear chemically resistant gloves in combination with 'basic' employee training. | Effectiveness: 90 % |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ECETOC TRA v3.0, worker, modified version, The concentration of the substance has been considered using a linear approach. |
| | Worker - dermal, long-term - systemic |
| Exposure estimate | 0,0165 mg/kg bw/day |
| Risk Characterization Ratio (RCR) | 0,009681 |
| Assessment method | EASY TRA v4.2, ECETOC TRA v3.0, worker, modified version, The concentration of the substance has been considered using a linear approach. |
| | Worker - inhalation, long-term - systemic |
| Exposure estimate | 0,1522 mg/m ³ |
| Risk Characterization Ratio (RCR) | 0,016915 |
| Guidance to Downstream Users | |
| For scaling see: http://www.ecetoc.org/tra Please note that a modified version has been used (see exposure estimates) | |

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| Contributing exposure scenario | |
|---|---|
| Use descriptors covered | PROC10: Roller application or brushing Use domain: professional |
| Operational conditions | |
| Concentration of the substance | citral Content: $\geq 0\%$ - $\leq 1,1999\%$ |
| Physical state | liquid |
| Vapour pressure of the substance during use | 4,6 Pa |
| Process temperature | 20 °C |
| Duration and Frequency of activity | 480 min 5 days per week |
| Indoor/Outdoor | Indoor |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ECETOC TRA v3.0, worker, modified version, The concentration of the substance has been considered using a linear approach. |
| | Worker - dermal, long-term - systemic |
| Exposure estimate | 0,3291 mg/kg bw/day |
| Risk Characterization Ratio (RCR) | 0,193613 |
| Assessment method | EASY TRA v4.2, ECETOC TRA v3.0, worker, modified version, The concentration of the substance has been considered using a linear approach. |
| | Worker - inhalation, long-term - systemic |
| Exposure estimate | 1,9029 mg/m ³ |
| Risk Characterization Ratio (RCR) | 0,211435 |
| Guidance to Downstream Users | |
| For scaling see: http://www.ecetoc.org/tra Please note that a modified version has been used (see exposure estimates) | |

| Contributing exposure scenario | |
|---|---|
| Use descriptors covered | PROC11: Non industrial spraying Use domain: professional |
| Operational conditions | |
| Concentration of the substance | citral Content: $\geq 0\%$ - $\leq 1,1999\%$ |
| Physical state | liquid |
| Vapour pressure of the substance during use | 4,6 Pa |
| Process temperature | 20 °C |
| Duration and Frequency of activity | 60 min 5 days per week |

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| | |
|---|---|
| Indoor/Outdoor | Indoor |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ECETOC TRA v3.0, worker, modified version, The concentration of the substance has been considered using a linear approach. |
| | Worker - dermal, long-term - systemic |
| Exposure estimate | 1,2857 mg/kg bw/day |
| Risk Characterization Ratio (RCR) | 0,756302 |
| Assessment method | EASY TRA v4.2, ECETOC TRA v3.0, worker, modified version, The concentration of the substance has been considered using a linear approach. |
| | Worker - dermal, long-term - local |
| Exposure estimate | 0,06 mg/cm ² /day |
| Risk Characterization Ratio (RCR) | 0,428571 |
| Assessment method | EASY TRA v4.2, Workplace measurements |
| | Worker - inhalation, long-term - systemic |
| Exposure estimate | 0,18 mg/m ³ |
| Risk Characterization Ratio (RCR) | 0,02 |
| Guidance to Downstream Users | |
| For scaling see: http://www.ecetoc.org/tra Please note that a modified version has been used (see exposure estimates) | |

| | |
|--|---|
| Contributing exposure scenario | |
| Use descriptors covered | PROC11: Non industrial spraying Use domain: professional |
| Operational conditions | |
| Concentration of the substance | citral Content: >= 0 % - <= 1,1999 % |
| Physical state | liquid |
| Vapour pressure of the substance during use | 4,6 Pa |
| Process temperature | 20 °C |
| Duration and Frequency of activity | 60 min 5 days per week |
| Indoor/Outdoor | Outdoor |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ECETOC TRA v3.0, worker, modified version, The concentration of the substance has been considered using a linear approach. |
| | Worker - dermal, long-term - systemic |
| Exposure estimate | 1,2857 mg/kg bw/day |
| Risk Characterization Ratio (RCR) | 0,756302 |
| Assessment method | EASY TRA v4.2, ECETOC TRA v3.0, worker, modified version, The concentration of the substance has been |

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| | |
|---|---|
| | considered using a linear approach. |
| | Worker - dermal, long-term - local |
| Exposure estimate | 0,06 mg/cm ² /day |
| Risk Characterization Ratio (RCR) | 0,428571 |
| Assessment method | EASY TRA v4.2, Workplace measurements |
| | Worker - inhalation, long-term - systemic |
| Exposure estimate | 0,06 mg/m ³ |
| Risk Characterization Ratio (RCR) | 0,006667 |
| Guidance to Downstream Users | |
| For scaling see: http://www.ecetoc.org/tra Please note that a modified version has been used (see exposure estimates) | |

| | |
|---|---|
| Contributing exposure scenario | |
| Use descriptors covered | PROC11: Non industrial spraying Use domain: professional |
| Operational conditions | |
| Concentration of the substance | citral Content: >= 0 % - <= 1,1999 % |
| Physical state | liquid |
| Vapour pressure of the substance during use | 4,6 Pa |
| Process temperature | 20 °C |
| Duration and Frequency of activity | 480 min 5 days per week |
| Indoor/Outdoor | Indoor |
| Risk Management Measures | |
| Wear chemically resistant gloves in combination with 'basic' employee training. | Effectiveness: 90 % |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ECETOC TRA v3.0, worker, modified version, The concentration of the substance has been considered using a linear approach. |
| | Worker - dermal, long-term - systemic |
| Exposure estimate | 0,1286 mg/kg bw/day |
| Risk Characterization Ratio (RCR) | 0,07563 |
| Assessment method | EASY TRA v4.2, ECETOC TRA v3.0, worker, modified version, The concentration of the substance has been considered using a linear approach. |
| | Worker - dermal, long-term - local |
| Exposure estimate | 0,006 mg/cm ² /day |
| Risk Characterization Ratio (RCR) | 0,042857 |
| Assessment method | EASY TRA v4.2, Workplace measurements |
| | Worker - inhalation, long-term - systemic |
| Exposure estimate | 0,29 mg/m ³ |

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| | |
|---|----------|
| Risk Characterization Ratio (RCR) | 0,032222 |
| Guidance to Downstream Users | |
| For scaling see: http://www.ecetoc.org/tra Please note that a modified version has been used (see exposure estimates) | |

| | |
|---|---|
| Contributing exposure scenario | |
| Use descriptors covered | PROC13: Treatment of articles by dipping and pouring. Use domain: professional |
| Operational conditions | |
| Concentration of the substance | citral Content: $\geq 0\%$ - $\leq 1,1999\%$ |
| Physical state | liquid |
| Vapour pressure of the substance during use | 4,6 Pa |
| Process temperature | 20 °C |
| Duration and Frequency of activity | 60 min 5 days per week |
| Indoor/Outdoor | Indoor |
| Risk Management Measures | |
| Wear chemically resistant gloves in combination with 'basic' employee training. | Effectiveness: 90 % |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ECETOC TRA v3.0, worker, modified version, The concentration of the substance has been considered using a linear approach. |
| | Worker - dermal, long-term - systemic |
| Exposure estimate | 0,0165 mg/kg bw/day |
| Risk Characterization Ratio (RCR) | 0,009681 |
| Assessment method | EASY TRA v4.2, ECETOC TRA v3.0, worker, modified version, The concentration of the substance has been considered using a linear approach. |
| | Worker - inhalation, long-term - systemic |
| Exposure estimate | 0,1522 mg/m ³ |
| Risk Characterization Ratio (RCR) | 0,016915 |
| Guidance to Downstream Users | |
| For scaling see: http://www.ecetoc.org/tra Please note that a modified version has been used (see exposure estimates) | |

6. Short title of exposure scenario

Use in/as Air care products, (consumer use)

ERC8a; PC3

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Product: **Citral FG**

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Control of exposure and risk management measures

| Contributing exposure scenario | |
|---|--|
| Use descriptors covered | ERC8a: Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor) |
| Operational conditions | |
| Annual amount used in the EU | 900.000 kg |
| Minimum emission days per year | 365 |
| Emission factor air | 100 % |
| Emission factor water | 100 % |
| Emission factor soil | 0 % |
| Receive Surf. Water (Flow Rate). | 18.000 m3/d |
| Dilution factor river | 10 |
| Dilution factor coast | 100 |
| Risk Management Measures | |
| Type of STP | Municipal STP |
| Assumed sewage treatment plant flow (m3/d) | 2.000 m3/d |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ECETOC TRA v3.0, Environment |
| Risk Characterization Ratio (RCR) | 0,436161 |
| | Risk from environmental exposure is driven by soil. |
| Maximum amount of safe use | 1,1 kg/d |
| Risk from environmental exposure is driven by soil. | |

| Contributing exposure scenario | |
|---|------------------------------------|
| Use descriptors covered | PC3: Air care products. |
| Operational conditions | |
| Concentration of the substance | citral Content: >= 0 % - <= 9 % |
| Vapour pressure of the substance during use | 4,6 Pa |
| Process temperature | 20 °C |
| Duration and Frequency of activity | Exposure duration: 480 min |

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| | |
|--|---|
| | Relevant for inhalative exposure estimates |
| Duration and Frequency of activity | 150 uses per year |
| Room size | 16 m ³ |
| Ventilation rate per hour | 1 |
| body weight | 65 kg |
| Spray duration | 28800 sec |
| Risk Management Measures | |
| Consumer Measures | Ensure spraying away from persons. |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ConsExpo v4.1, Inhalation model: Exposure to spray/dust |
| | Consumer - inhalation, long-term - systemic |
| Exposure estimate | 0,0385 mg/m ³ |
| Risk Characterization Ratio (RCR) | 0,014247 |
| | The exposure calculation is based on the mean concentration on the day of exposure. |
| Guidance to Downstream Users | |
| For scaling see: http://www.rivm.nl/en/healthanddisease/productsafety/ConsExpo.jsp | |

| | |
|---|--|
| Contributing exposure scenario | |
| Use descriptors covered | PC3: Air care products. |
| Operational conditions | |
| Concentration of the substance | citral Content: >= 0 % - <= 0,45 % |
| Vapour pressure of the substance during use | 4,6 Pa |
| Process temperature | 20 °C |
| Duration and Frequency of activity | Exposure duration: 240 min Relevant for inhalative exposure estimates |
| Duration and Frequency of activity | 90 uses per year |
| Room size | 58 m ³ |
| Ventilation rate per hour | 0,5 |
| body weight | 65 kg |
| Uptake fraction dermal | 100 % |
| Spray duration | 19,8 sec |
| Contact rate | 269 mg/min |
| Release duration | 0,33 min |
| | Relevant for dermal exposure estimates |
| Risk Management Measures | |
| Consumer Measures | Ensure spraying away from persons. |

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| Exposure estimate and reference to its source | |
|--|--|
| Assessment method | EASY TRA v4.2, ConsExpo v4.1, Dermal model: constant application rate, Uptake model: Uptake fraction |
| | Consumer - dermal, long-term - systemic |
| Exposure estimate | 0,0015 mg/kg bw/day |
| Risk Characterization Ratio (RCR) | 0,001515 |
| | The calculation is based on the internal chronic dose. |
| Assessment method | EASY TRA v4.2, ConsExpo v4.1, Inhalation model: Exposure to spray/dust |
| | Consumer - inhalation, long-term - systemic |
| Exposure estimate | 0,0018 mg/m ³ |
| Risk Characterization Ratio (RCR) | 0,000677 |
| | The exposure calculation is based on the mean concentration on the day of exposure. |
| Guidance to Downstream Users | |
| For scaling see: http://www.rivm.nl/en/healthanddisease/productsafety/ConsExpo.jsp | |

| Contributing exposure scenario | |
|--|---|
| Use descriptors covered | PC3: Air care products. |
| Operational conditions | |
| Concentration of the substance | citral Content: >= 0 % - <= 0,45 % |
| Vapour pressure of the substance during use | 4,6 Pa |
| Process temperature | 20 °C |
| body weight | 65 kg |
| Contact rate | 269 mg/min |
| Release duration | 0,33 min |
| | Relevant for dermal exposure estimates |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ConsExpo v4.1, Dermal model: constant application rate |
| | Consumer - dermal, short-term - local |
| Exposure estimate | 0,0001 mg/cm ² /day |
| Risk Characterization Ratio (RCR) | 0,000163 |
| | The calculation is based on the external dose. |
| Guidance to Downstream Users | |
| For scaling see: http://www.rivm.nl/en/healthanddisease/productsafety/ConsExpo.jsp | |

| Contributing exposure scenario | |
|---------------------------------------|-------------------------|
| Use descriptors covered | PC3: Air care products. |
| Operational conditions | |
| Concentration of the substance | citral |

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| | |
|--|--|
| | Content: $\geq 0 \%$ - $\leq 0,45 \%$ |
| Vapour pressure of the substance during use | 4,6 Pa |
| Process temperature | 20 °C |
| Duration and Frequency of activity | 90 uses per year |
| Duration and Frequency of activity | Exposure duration: 60 min Relevant for oral exposure estimates |
| Duration and Frequency of activity | 90 uses per year |
| body weight | 8,69 kg |
| Uptake fraction dermal | 100 % |
| Uptake fraction oral | 100 % |
| Transfer coefficient | 1,666667 cm ² /s |
| Dislodgeable amount | 0,000082 g/cm ² |
| Contact time | 3600 sec |
| Rubbed surface | 22 m ² |
| Ingestion rate | 0,003688 mg/min |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ConsExpo v4.1, Dermal model: rubbing off, Uptake model: Uptake fraction |
| | Consumer - dermal, long-term - systemic |
| Exposure estimate | 0,0628 mg/kg bw/day |
| Risk Characterization Ratio (RCR) | 0,062821 |
| | The calculation is based on the internal chronic dose. |
| Assessment method | EASY TRA v4.2, ConsExpo v4.1, Oral model: constant rate, Uptake model: Uptake fraction |
| | Consumer - oral, long-term - systemic |
| Exposure estimate | 0,0001 mg/kg bw/day |
| Risk Characterization Ratio (RCR) | 0,000047 |
| | The calculation is based on the internal chronic dose. |
| Guidance to Downstream Users | |
| For scaling see: http://www.rivm.nl/en/healthandddisease/productsafety/ConsExpo.jsp | |

| | |
|---|---|
| Contributing exposure scenario | |
| Use descriptors covered | PC3: Air care products. |
| Operational conditions | |
| Concentration of the substance | citral Content: $\geq 0 \%$ - $\leq 0,45 \%$ |
| Vapour pressure of the substance during use | 4,6 Pa |

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| | |
|--|---|
| Process temperature | 20 °C |
| body weight | 8,69 kg |
| Transfer coefficient | 1,666667 cm ² /s |
| Dislodgeable amount | 0,000082 g/cm ² |
| Contact time | 3600 sec |
| Rubbed surface | 22 m ² |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ConsExpo v4.1, Dermal model: rubbing off |
| | Consumer - dermal, short-term - local |
| Exposure estimate | 0,0005 mg/cm ² /day |
| Risk Characterization Ratio (RCR) | 0,003295 |
| | The calculation is based on the external dose. |
| Guidance to Downstream Users | |
| For scaling see: http://www.rivm.nl/en/healthanddisease/productsafety/ConsExpo.jsp | |

| | |
|---|--|
| Contributing exposure scenario | |
| Use descriptors covered | PC3: Air care products. Other products of this category do either not exceed a concentration of 0.1% for this substance or exposure estimations are covered by the calculations made for this product category. In accordance to Article 14 (2b) of the REACH Regulation (EC) No 1907/2006, exposure estimation and risk characterisation does not need to be performed if the concentration of the substance in a preparation is less than 0,1% weight by weight (w/w) and if the substance meets the criteria in Annex XIII to this Regulation. |
| Operational conditions | |
| Vapour pressure of the substance during use | 4,6 Pa |
| Process temperature | 20 °C |

7. Short title of exposure scenario

Use in cosmetics, (consumer use)

ERC8a; PC28, PC39

Control of exposure and risk management measures

| | |
|---------------------------------------|--|
| Contributing exposure scenario | |
| Use descriptors covered | ERC8a: Widespread use of non-reactive processing aid |

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| | |
|--|---|
| | (no inclusion into or onto article, indoor) |
| Operational conditions | |
| Annual amount used in the EU | 900.000 kg |
| Minimum emission days per year | 365 |
| Emission factor air | 100 % |
| Emission factor water | 100 % |
| Emission factor soil | 0 % |
| Receive Surf. Water (Flow Rate). | 18.000 m3/d |
| Dilution factor river | 10 |
| Dilution factor coast | 100 |
| Risk Management Measures | |
| Type of STP | Municipal STP |
| Assumed sewage treatment plant flow (m3/d) | 2.000 m3/d |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ECETOC TRA v3.0, Environment |
| Risk Characterization Ratio (RCR) | 0,436161 |
| | Risk from environmental exposure is driven by soil. |
| Maximum amount of safe use | 1,1 kg/d |
| Risk from environmental exposure is driven by soil. | |

| | |
|---|--|
| Contributing exposure scenario | |
| Use descriptors covered | PC28: Perfumes, Fragrances. In accordance to the Article 14 (5b) of the REACH Regulation (EC) No 1907/2006, exposure estimation and risk characterisation needs not to be performed for end uses in cosmetic products within the scope of Directive EC 1223/2009. |
| Operational conditions | |
| Vapour pressure of the substance during use | 4,6 Pa |
| Process temperature | 20 °C |

| | |
|---------------------------------------|---|
| Contributing exposure scenario | |
| Use descriptors covered | PC39: Cosmetics, personal care products. In accordance to the Article 14 (5b) of the REACH |

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Date / Revised: 23.10.2023

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Date / First version: 09.09.2022

Product: **Citral FG**

(ID no. 30035059/SDS_GEN_FR/EN)

Date of print 20.10.2025

| | |
|---|---|
| | Regulation (EC) No 1907/2006, exposure estimation and risk characterisation needs not to be performed for end uses in cosmetic products within the scope of Directive EC 1223/2009. |
| Operational conditions | |
| Vapour pressure of the substance during use | 4,6 Pa |
| Process temperature | 20 °C |

8. Short title of exposure scenario

Use in Cleaning Agents, (consumer use)

ERC8a, ERC8d; PC31, PC35

Control of exposure and risk management measures

| | |
|--|--|
| Contributing exposure scenario | |
| Use descriptors covered | ERC8a: Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor) |
| Operational conditions | |
| Annual amount used in the EU | 900.000 kg |
| Minimum emission days per year | 365 |
| Emission factor air | 100 % |
| Emission factor water | 100 % |
| Emission factor soil | 0 % |
| Receive Surf. Water (Flow Rate). | 18.000 m3/d |
| Dilution factor river | 10 |
| Dilution factor coast | 100 |
| Risk Management Measures | |
| Type of STP | Municipal STP |
| Assumed sewage treatment plant flow (m3/d) | 2.000 m3/d |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ECETOC TRA v3.0, Environment |
| Risk Characterization Ratio (RCR) | 0,436161 |
| Risk from environmental exposure is driven by soil. | |

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| | |
|---|-------------|
| Maximum amount of safe use | 1,1 kg/d |
| Risk from environmental exposure is driven by soil. | |

| Contributing exposure scenario | |
|--|---|
| Use descriptors covered | ERC8d: Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor) |
| Operational conditions | |
| Annual amount used in the EU | 900.000 kg |
| Minimum emission days per year | 365 |
| Emission factor air | 100 % |
| Emission factor water | 100 % |
| Emission factor soil | 20 % |
| Receive Surf. Water (Flow Rate). | 18.000 m3/d |
| Dilution factor river | 10 |
| Dilution factor coast | 100 |
| Risk Management Measures | |
| Type of STP | Municipal STP |
| Assumed sewage treatment plant flow (m3/d) | 2.000 m3/d |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ECETOC TRA v3.0, Environment |
| Risk Characterization Ratio (RCR) | 0,436161 |
| | Risk from environmental exposure is driven by soil. |
| Maximum amount of safe use | 1,1 kg/d |
| Risk from environmental exposure is driven by soil. | |

| Contributing exposure scenario | |
|---|---------------------------------------|
| Use descriptors covered | PC31: Polishes and Wax Blends. |
| Operational conditions | |
| Concentration of the substance | citral Content: >= 0 % - <= 0,16 % |
| Vapour pressure of the substance during use | 4,6 Pa |
| Process temperature | 20 °C |

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Product: **Citral FG**

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Date of print 20.10.2025

| | |
|--|--|
| Duration and Frequency of activity | 26 uses per year |
| body weight | 65 kg |
| Uptake fraction dermal | 100 % |
| | Amount per use 0,1 g Relevant for dermal exposure estimates |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ConsExpo v4.1, Dermal model: instant application, Uptake model: Uptake fraction |
| | Consumer - dermal, long-term - systemic |
| Exposure estimate | 0,0002 mg/kg bw/day |
| Risk Characterization Ratio (RCR) | 0,000175 |
| | The calculation is based on the internal chronic dose. |
| Guidance to Downstream Users | |
| For scaling see: http://www.rivm.nl/en/healthanddisease/productsafety/ConsExpo.jsp | |

| | |
|--|---|
| Contributing exposure scenario | |
| Use descriptors covered | PC31: Polishes and Wax Blends. |
| Operational conditions | |
| Concentration of the substance | citral Content: $\geq 0\%$ - $\leq 0,16\%$ |
| Vapour pressure of the substance during use | 4,6 Pa |
| Process temperature | 20 °C |
| body weight | 65 kg |
| | Amount per use 0,1 g Relevant for dermal exposure estimates |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ConsExpo v4.1, Dermal model: instant application |
| | Consumer - dermal, short-term - local |
| Exposure estimate | 0,0007 mg/cm ² /day |
| Risk Characterization Ratio (RCR) | 0,005316 |
| | The calculation is based on the external dose. |
| Guidance to Downstream Users | |
| For scaling see: http://www.rivm.nl/en/healthanddisease/productsafety/ConsExpo.jsp | |

| | |
|---------------------------------------|--------------------------------|
| Contributing exposure scenario | |
| Use descriptors covered | PC31: Polishes and Wax Blends. |
| Operational conditions | |

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Product: **Citral FG**

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Date of print 20.10.2025

| | |
|--|--|
| Concentration of the substance | citral Content: $\geq 0\%$ - $\leq 0,16\%$ |
| Vapour pressure of the substance during use | 4,6 Pa |
| Process temperature | 20 °C |
| Duration and Frequency of activity | Exposure duration: 5 min Relevant for inhalative exposure estimates |
| Duration and Frequency of activity | 8 uses per year |
| Room size | 34 m ³ |
| Ventilation rate per hour | 1,5 |
| body weight | 65 kg |
| Uptake fraction dermal | 100 % |
| Spray duration | 72 sec |
| Contact rate | 100 mg/min |
| Release duration | 1,2 min |
| | Relevant for dermal exposure estimates |
| Risk Management Measures | |
| Consumer Measures | Ensure spraying away from persons. |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ConsExpo v4.1, Dermal model: constant application rate, Uptake model: Uptake fraction |
| | Consumer - dermal, long-term - systemic |
| Exposure estimate | 0,0001 mg/kg bw/day |
| Risk Characterization Ratio (RCR) | 0,000065 |
| | The calculation is based on the internal chronic dose. |
| Assessment method | EASY TRA v4.2, ConsExpo v4.1, Inhalation model: Exposure to spray/dust |
| | Consumer - inhalation, long-term - systemic |
| Exposure estimate | 0,0011 mg/m ³ |
| Risk Characterization Ratio (RCR) | 0,000416 |
| | The exposure calculation is based on the mean concentration on the day of exposure. |
| Guidance to Downstream Users | |
| For scaling see: http://www.rivm.nl/en/healthandddisease/productsafety/ConsExpo.jsp | |
| Contributing exposure scenario | |
| Use descriptors covered | PC31: Polishes and Wax Blends. |
| Operational conditions | |
| Concentration of the substance | citral Content: $\geq 0\%$ - $\leq 0,16\%$ |
| Vapour pressure of the substance | 4,6 Pa |

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Product: **Citral FG**

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Date of print 20.10.2025

| | |
|--|---|
| during use | |
| Process temperature | 20 °C |
| body weight | 65 kg |
| Contact rate | 100 mg/min |
| Release duration | 1,2 min |
| | Relevant for dermal exposure estimates |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ConsExpo v4.1, Dermal model: constant application rate |
| | Consumer - dermal, short-term - local |
| Exposure estimate | 0,0001 mg/cm ² /day |
| Risk Characterization Ratio (RCR) | 0,000659 |
| | The calculation is based on the external dose. |
| Guidance to Downstream Users | |
| For scaling see: http://www.rivm.nl/en/healthanddisease/productsafety/ConsExpo.jsp | |

| | |
|---|--|
| Contributing exposure scenario | |
| Use descriptors covered | PC31: Polishes and Wax Blends. |
| Operational conditions | |
| Concentration of the substance | citral Content: >= 0 % - <= 0,16 % |
| Vapour pressure of the substance during use | 4,6 Pa |
| Process temperature | 20 °C |
| Duration and Frequency of activity | Exposure duration: 90 min Relevant for inhalative exposure estimates |
| Duration and Frequency of activity | Application duration: 90 min Relevant for inhalative exposure estimates |
| Duration and Frequency of activity | 2 uses per year |
| Room size | 58 m ³ |
| Ventilation rate per hour | 0,5 |
| Temperature (Application) | 21 °C |
| body weight | 65 kg |
| Uptake fraction dermal | 100 % |
| | Amount per use 5,5 g Relevant for dermal exposure estimates |
| Release area | 220000 cm ² |
| | Release area increases over time |
| Release duration | 90 min |
| | Relevant for inhalative exposure estimates |

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| Exposure estimate and reference to its source | |
|--|--|
| Assessment method | EASY TRA v4.2, ConsExpo v4.1, Dermal model: instant application, Uptake model: Uptake fraction |
| | Consumer - dermal, long-term - systemic |
| Exposure estimate | 0,0007 mg/kg bw/day |
| Risk Characterization Ratio (RCR) | 0,000742 |
| | The calculation is based on the internal chronic dose. |
| Assessment method | EASY TRA v4.2, ConsExpo v4.1, Inhalation model: exposure to vapour - evaporation |
| | Consumer - inhalation, long-term - systemic |
| Exposure estimate | 0,0041 mg/m ³ |
| Risk Characterization Ratio (RCR) | 0,001529 |
| | The exposure calculation is based on the mean concentration on the day of exposure. |
| Guidance to Downstream Users | |
| For scaling see: http://www.rivm.nl/en/healthandddisease/productsafety/ConsExpo.jsp | |

| Contributing exposure scenario | |
|--|---|
| Use descriptors covered | PC31: Polishes and Wax Blends. |
| Operational conditions | |
| Concentration of the substance | citral Content: >= 0 % - <= 0,16 % |
| Vapour pressure of the substance during use | 4,6 Pa |
| Process temperature | 20 °C |
| body weight | 65 kg |
| | Amount per use 5,5 g Relevant for dermal exposure estimates |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ConsExpo v4.1, Dermal model: instant application |
| | Consumer - dermal, short-term - local |
| Exposure estimate | 0,0205 mg/cm ² /day |
| Risk Characterization Ratio (RCR) | 0,146179 |
| | The calculation is based on the external dose. |
| Guidance to Downstream Users | |
| For scaling see: http://www.rivm.nl/en/healthandddisease/productsafety/ConsExpo.jsp | |

| Contributing exposure scenario | |
|---------------------------------------|---------------------------------------|
| Use descriptors covered | PC31: Polishes and Wax Blends. |
| Operational conditions | |
| Concentration of the substance | citral Content: >= 0 % - <= 0,16 % |

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Date of print 20.10.2025

| | |
|--|--|
| Vapour pressure of the substance during use | 4,6 Pa |
| Process temperature | 20 °C |
| Duration and Frequency of activity | Exposure duration: 240 min Relevant for inhalative exposure estimates |
| Duration and Frequency of activity | Application duration: 90 min Relevant for inhalative exposure estimates |
| Duration and Frequency of activity | 1 uses per year |
| Room size | 58 m3 |
| Ventilation rate per hour | 0,5 |
| Temperature (Application) | 21 °C |
| body weight | 65 kg |
| Uptake fraction dermal | 100 % |
| | Amount per use 5,5 g Relevant for dermal exposure estimates |
| Release area | 220000 cm ² |
| | Release area increases over time |
| Release duration | 90 min |
| | Relevant for inhalative exposure estimates |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ConsExpo v4.1, Dermal model: instant application, Uptake model: Uptake fraction |
| | Consumer - dermal, long-term - systemic |
| Exposure estimate | 0,0004 mg/kg bw/day |
| Risk Characterization Ratio (RCR) | 0,000371 |
| | The calculation is based on the internal chronic dose. |
| Assessment method | EASY TRA v4.2, ConsExpo v4.1, Inhalation model: exposure to vapour - evaporation |
| | Consumer - inhalation, long-term - systemic |
| Exposure estimate | 0,1349 mg/m ³ |
| Risk Characterization Ratio (RCR) | 0,049967 |
| | The exposure calculation is based on the mean concentration on the day of exposure. |
| Guidance to Downstream Users | |
| For scaling see: http://www.rivm.nl/en/healthandddisease/productsafety/ConsExpo.jsp | |
| Contributing exposure scenario | |
| Use descriptors covered | PC31: Polishes and Wax Blends. |
| Operational conditions | |
| Concentration of the substance | citral Content: >= 0 % - <= 0,16 % |

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| | |
|--|---|
| Vapour pressure of the substance during use | 4,6 Pa |
| Process temperature | 20 °C |
| body weight | 65 kg |
| | Amount per use 5,5 g Relevant for dermal exposure estimates |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ConsExpo v4.1, Dermal model: instant application |
| | Consumer - dermal, short-term - local |
| Exposure estimate | 0,0205 mg/cm ² /day |
| Risk Characterization Ratio (RCR) | 0,146179 |
| | The calculation is based on the external dose. |
| Guidance to Downstream Users | |
| For scaling see: http://www.rivm.nl/en/healthanddisease/productsafety/ConsExpo.jsp | |

| | |
|--|--|
| Contributing exposure scenario | |
| Use descriptors covered | PC31: Polishes and Wax Blends. |
| Operational conditions | |
| Concentration of the substance | citral Content: >= 0 % - <= 0,16 % |
| Vapour pressure of the substance during use | 4,6 Pa |
| Process temperature | 20 °C |
| Duration and Frequency of activity | Exposure duration: 240 min Relevant for inhalative exposure estimates |
| Duration and Frequency of activity | 1 uses per year |
| Room size | 58 m ³ |
| Ventilation rate per hour | 0,5 |
| body weight | 65 kg |
| Uptake fraction dermal | 100 % |
| Spray duration | 180 sec |
| Contact rate | 100 mg/min |
| Release duration | 3 min |
| | Relevant for dermal exposure estimates |
| Risk Management Measures | |
| Consumer Measures | Ensure spraying away from persons. |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ConsExpo v4.1, Dermal model: constant application rate, Uptake model: Uptake fraction |

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| | |
|--|---|
| | Consumer - dermal, long-term - systemic |
| Exposure estimate | 0,0001 mg/kg bw/day |
| Risk Characterization Ratio (RCR) | 0,00002 |
| | The calculation is based on the internal chronic dose. |
| Assessment method | EASY TRA v4.2, ConsExpo v4.1, Inhalation model: Exposure to spray/dust |
| | Consumer - inhalation, long-term - systemic |
| Exposure estimate | 0,0072 mg/m ³ |
| Risk Characterization Ratio (RCR) | 0,002649 |
| | The exposure calculation is based on the mean concentration on the day of exposure. |
| Guidance to Downstream Users | |
| For scaling see: http://www.rivm.nl/en/healthandddisease/productsafety/ConsExpo.jsp | |

| | |
|--|---|
| Contributing exposure scenario | |
| Use descriptors covered | PC31: Polishes and Wax Blends. |
| Operational conditions | |
| Concentration of the substance | citral Content: >= 0 % - <= 0,16 % |
| Vapour pressure of the substance during use | 4,6 Pa |
| Process temperature | 20 °C |
| body weight | 65 kg |
| Contact rate | 100 mg/min |
| Release duration | 3 min |
| | Relevant for dermal exposure estimates |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ConsExpo v4.1, Dermal model: constant application rate |
| | Consumer - dermal, short-term - local |
| Exposure estimate | 0,0002 mg/cm ² /day |
| Risk Characterization Ratio (RCR) | 0,001646 |
| | The calculation is based on the external dose. |
| Guidance to Downstream Users | |
| For scaling see: http://www.rivm.nl/en/healthandddisease/productsafety/ConsExpo.jsp | |

| | |
|---------------------------------------|---|
| Contributing exposure scenario | |
| Use descriptors covered | PC31: Polishes and Wax Blends. Other products of this category do either not exceed a concentration of 0.1% for this substance or exposure estimations are covered by the calculations made for this product category. In accordance to Article 14 (2b) of the REACH Regulation (EC) No 1907/2006, exposure estimation and risk characterisation does not need to be |

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| | |
|---|---|
| | performed if the concentration of the substance in a preparation is less than 0,1% weight by weight (w/w) and if the substance meets the criteria in Annex XIII to this Regulation. |
| Operational conditions | |
| Vapour pressure of the substance during use | 4,6 Pa |
| Process temperature | 20 °C |

| | |
|--|--|
| Contributing exposure scenario | |
| Use descriptors covered | PC35: Washing and Cleaning Products (including solvent based products). |
| Operational conditions | |
| Concentration of the substance | citral Content: $\geq 0\%$ - $\leq 0,16\%$ |
| Vapour pressure of the substance during use | 4,6 Pa |
| Process temperature | 20 °C |
| Duration and Frequency of activity | Exposure duration: 0,75 min Relevant for inhalative exposure estimates |
| Duration and Frequency of activity | Application duration: 0,3 min Relevant for inhalative exposure estimates |
| Duration and Frequency of activity | 365 uses per year |
| Room size | 1 m ³ |
| Ventilation rate per hour | 2 |
| Temperature (Application) | 21 °C |
| body weight | 65 kg |
| Uptake fraction dermal | 100 % |
| | Amount per use 0,01 g Relevant for dermal exposure estimates |
| Release area | 20 cm ² |
| | Release area is constant |
| Release duration | 0,3 min |
| | Relevant for inhalative exposure estimates |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ConsExpo v4.1, Dermal model: instant application, Uptake model: Uptake fraction |
| | Consumer - dermal, long-term - systemic |
| Exposure estimate | 0,0002 mg/kg bw/day |
| Risk Characterization Ratio (RCR) | 0,000246 |

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| | |
|--|---|
| | The calculation is based on the internal chronic dose. |
| Assessment method | EASY TRA v4.2, ConsExpo v4.1, Inhalation model: exposure to vapour - evaporation |
| | Consumer - inhalation, long-term - systemic |
| Exposure estimate | 0,0001 mg/m ³ |
| Risk Characterization Ratio (RCR) | 0,000036 |
| | The exposure calculation is based on the mean concentration on the day of exposure. |
| Guidance to Downstream Users | |
| For scaling see: http://www.rivm.nl/en/healthanddisease/productsafety/ConsExpo.jsp | |

| | |
|--|---|
| Contributing exposure scenario | |
| Use descriptors covered | PC35: Washing and Cleaning Products (including solvent based products). |
| Operational conditions | |
| Concentration of the substance | citral Content: >= 0 % - <= 0,16 % |
| Vapour pressure of the substance during use | 4,6 Pa |
| Process temperature | 20 °C |
| body weight | 65 kg |
| | Amount per use 0,01 g Relevant for dermal exposure estimates |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ConsExpo v4.1, Dermal model: instant application |
| | Consumer - dermal, short-term - local |
| Exposure estimate | 0,0001 mg/cm ² /day |
| Risk Characterization Ratio (RCR) | 0,000532 |
| | The calculation is based on the external dose. |
| Guidance to Downstream Users | |
| For scaling see: http://www.rivm.nl/en/healthanddisease/productsafety/ConsExpo.jsp | |

| | |
|---|---|
| Contributing exposure scenario | |
| Use descriptors covered | PC35: Washing and Cleaning Products (including solvent based products). |
| Operational conditions | |
| Concentration of the substance | citral Content: >= 0 % - <= 0,16 % |
| Vapour pressure of the substance during use | 4,6 Pa |
| Process temperature | 20 °C |

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| | |
|--|--|
| Duration and Frequency of activity | 365 uses per year |
| body weight | 65 kg |
| Skin contact factor | 80 % |
| Uptake fraction dermal | 100 % |
| Leachable fraction | 0,000005 % |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ConsExpo v4.1, Dermal model: migration, Uptake model: Uptake fraction |
| | Consumer - dermal, long-term - systemic |
| Exposure estimate | 0,0006 mg/kg bw/day |
| Risk Characterization Ratio (RCR) | 0,000615 |
| | The calculation is based on the internal chronic dose. |
| Guidance to Downstream Users | |
| For scaling see: http://www.rivm.nl/en/healthanddisease/productsafety/ConsExpo.jsp | |

| | |
|--|---|
| Contributing exposure scenario | |
| Use descriptors covered | PC35: Washing and Cleaning Products (including solvent based products). |
| Operational conditions | |
| Concentration of the substance | citral Content: $\geq 0 \%$ - $\leq 0,16 \%$ |
| Vapour pressure of the substance during use | 4,6 Pa |
| Process temperature | 20 °C |
| body weight | 65 kg |
| Skin contact factor | 80 % |
| Leachable fraction | 0,000005 % |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ConsExpo v4.1, Dermal model: migration |
| | Consumer - dermal, short-term - local |
| Exposure estimate | 0,0001 mg/cm ² /day |
| Risk Characterization Ratio (RCR) | 0,00002 |
| | The calculation is based on the external dose. |
| Guidance to Downstream Users | |
| For scaling see: http://www.rivm.nl/en/healthanddisease/productsafety/ConsExpo.jsp | |

| | |
|---------------------------------------|--|
| Contributing exposure scenario | |
| Use descriptors covered | PC35: Washing and Cleaning Products (including solvent |

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Version: 2.0

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Previous version: 1.0

Date / First version: 09.09.2022

Product: **Citral FG**

(ID no. 30035059/SDS_GEN_FR/EN)

Date of print 20.10.2025

| | |
|--|--|
| | based products). |
| Operational conditions | |
| Concentration of the substance | citral Content: $\geq 0\%$ - $\leq 0,4799\%$ |
| Vapour pressure of the substance during use | 4,6 Pa |
| Process temperature | 20 °C |
| Duration and Frequency of activity | Exposure duration: 3 min Relevant for inhalative exposure estimates |
| Duration and Frequency of activity | Application duration: 2 min Relevant for inhalative exposure estimates |
| Duration and Frequency of activity | 260 uses per year |
| Room size | 2,5 m ³ |
| Ventilation rate per hour | 2 |
| Temperature (Application) | 21 °C |
| body weight | 65 kg |
| Uptake fraction dermal | 100 % |
| | Amount per use 2,2 g Relevant for dermal exposure estimates |
| Release area | 750 cm ² |
| | Release area is constant |
| Release duration | 2 min |
| | Relevant for inhalative exposure estimates |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ConsExpo v4.1, Dermal model: instant application, Uptake model: Uptake fraction |
| | Consumer - dermal, long-term - systemic |
| Exposure estimate | 0,1157 mg/kg bw/day |
| Risk Characterization Ratio (RCR) | 0,115726 |
| | The calculation is based on the internal chronic dose. |
| Assessment method | EASY TRA v4.2, ConsExpo v4.1, Inhalation model: exposure to vapour - evaporation |
| | Consumer - inhalation, long-term - systemic |
| Exposure estimate | 0,0006 mg/m ³ |
| Risk Characterization Ratio (RCR) | 0,00022 |
| | The exposure calculation is based on the mean concentration on the day of exposure. |
| Guidance to Downstream Users | |
| For scaling see: http://www.rivm.nl/en/healthandddisease/productsafety/ConsExpo.jsp | |
| Contributing exposure scenario | |
| Use descriptors covered | PC35: Washing and Cleaning Products (including solvent |

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Product: **Citral FG**

(ID no. 30035059/SDS_GEN_FR/EN)

Date of print 20.10.2025

| | |
|--|---|
| | based products). |
| Operational conditions | |
| Concentration of the substance | citral Content: $\geq 0\%$ - $\leq 0,4799\%$ |
| Vapour pressure of the substance during use | 4,6 Pa |
| Process temperature | 20 °C |
| body weight | 65 kg |
| | Amount per use 2,2 g Relevant for dermal exposure estimates |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ConsExpo v4.1, Dermal model: instant application |
| | Consumer - dermal, short-term - local |
| Exposure estimate | 0,0491 mg/cm ² /day |
| Risk Characterization Ratio (RCR) | 0,350831 |
| | The calculation is based on the external dose. |
| Guidance to Downstream Users | |
| For scaling see: http://www.rivm.nl/en/healthanddisease/productsafety/ConsExpo.jsp | |

| | |
|---|---|
| Contributing exposure scenario | |
| Use descriptors covered | PC35: Washing and Cleaning Products (including solvent based products). |
| Operational conditions | |
| Concentration of the substance | citral Content: $\geq 0\%$ - $\leq 0,4799\%$ |
| Vapour pressure of the substance during use | 4,6 Pa |
| Process temperature | 20 °C |
| Duration and Frequency of activity | Exposure duration: 3 min Relevant for inhalative exposure estimates |
| Duration and Frequency of activity | Application duration: 2 min Relevant for inhalative exposure estimates |
| Duration and Frequency of activity | 120 uses per year |
| Room size | 2,5 m ³ |
| Ventilation rate per hour | 2 |
| Temperature (Application) | 21 °C |
| body weight | 65 kg |
| Uptake fraction dermal | 100 % |

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| | |
|--|--|
| | Amount per use 2,2 g Relevant for dermal exposure estimates |
| Release area | 750 cm ² |
| | Release area is constant |
| Release duration | 2 min |
| | Relevant for inhalative exposure estimates |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ConsExpo v4.1, Dermal model: instant application, Uptake model: Uptake fraction |
| | Consumer - dermal, long-term - systemic |
| Exposure estimate | 0,0534 mg/kg bw/day |
| Risk Characterization Ratio (RCR) | 0,053412 |
| | The calculation is based on the internal chronic dose. |
| Assessment method | EASY TRA v4.2, ConsExpo v4.1, Inhalation model: exposure to vapour - evaporation |
| | Consumer - inhalation, long-term - systemic |
| Exposure estimate | 0,0006 mg/m ³ |
| Risk Characterization Ratio (RCR) | 0,00022 |
| | The exposure calculation is based on the mean concentration on the day of exposure. |
| Guidance to Downstream Users | |
| For scaling see: http://www.rivm.nl/en/healthanddisease/productsafety/ConsExpo.jsp | |

| | |
|--|---|
| Contributing exposure scenario | |
| Use descriptors covered | PC35: Washing and Cleaning Products (including solvent based products). |
| Operational conditions | |
| Concentration of the substance | citral Content: >= 0 % - <= 0,4799 % |
| Vapour pressure of the substance during use | 4,6 Pa |
| Process temperature | 20 °C |
| body weight | 65 kg |
| | Amount per use 2,2 g Relevant for dermal exposure estimates |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ConsExpo v4.1, Dermal model: instant application |
| | Consumer - dermal, short-term - local |
| Exposure estimate | 0,0491 mg/cm ² /day |
| Risk Characterization Ratio (RCR) | 0,350831 |
| | The calculation is based on the external dose. |
| Guidance to Downstream Users | |

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For scaling see: <http://www.rivm.nl/en/healthandddisease/productsafety/ConsExpo.jsp>

| Contributing exposure scenario | |
|--|---|
| Use descriptors covered | PC35: Washing and Cleaning Products (including solvent based products). |
| Operational conditions | |
| Concentration of the substance | citral Content: $\geq 0\%$ - $\leq 0,4799\%$ |
| Vapour pressure of the substance during use | 4,6 Pa |
| Process temperature | 20 °C |
| Duration and Frequency of activity | Exposure duration: 24 h Relevant for inhalative exposure estimates |
| Duration and Frequency of activity | 365 uses per year |
| body weight | 65 kg |
| Release duration | 86400 min |
| | Relevant for inhalative exposure estimates |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ConsExpo v4.1, Inhalation model: exposure to vapour - constant rate |
| | Consumer - inhalation, long-term - systemic |
| Exposure estimate | 0,0457 mg/m ³ |
| Risk Characterization Ratio (RCR) | 0,016924 |
| | The exposure calculation is based on the mean concentration on the day of exposure. |
| Guidance to Downstream Users | |
| For scaling see: http://www.rivm.nl/en/healthandddisease/productsafety/ConsExpo.jsp | |

| Contributing exposure scenario | |
|---|---|
| Use descriptors covered | PC35: Washing and Cleaning Products (including solvent based products). |
| Operational conditions | |
| Concentration of the substance | citral Content: $\geq 0\%$ - $\leq 0,4799\%$ |
| Vapour pressure of the substance during use | 4,6 Pa |
| Process temperature | 20 °C |
| Duration and Frequency of activity | Exposure duration: 24 h Relevant for inhalative exposure estimates |
| Duration and Frequency of activity | 365 uses per year |

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| | |
|--|---|
| body weight | 65 kg |
| Release duration | 43200 min |
| | Relevant for inhalative exposure estimates |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ConsExpo v4.1, Inhalation model: exposure to vapour - constant rate |
| | Consumer - inhalation, long-term - systemic |
| Exposure estimate | 0,0392 mg/m ³ |
| Risk Characterization Ratio (RCR) | 0,014506 |
| | The exposure calculation is based on the mean concentration on the day of exposure. |
| Guidance to Downstream Users | |
| For scaling see: http://www.rivm.nl/en/healthanddisease/productsafety/ConsExpo.jsp | |

| | |
|--|---|
| Contributing exposure scenario | |
| Use descriptors covered | PC35: Washing and Cleaning Products (including solvent based products). |
| Operational conditions | |
| Concentration of the substance | citral Content: >= 0 % - <= 0,16 % |
| Vapour pressure of the substance during use | 4,6 Pa |
| Process temperature | 20 °C |
| Duration and Frequency of activity | Exposure duration: 0,75 min Relevant for inhalative exposure estimates |
| Duration and Frequency of activity | Application duration: 0,3 min Relevant for inhalative exposure estimates |
| Duration and Frequency of activity | 104 uses per year |
| Room size | 1 m ³ |
| Ventilation rate per hour | 0,5 |
| Temperature (Application) | 21 °C |
| body weight | 65 kg |
| Uptake fraction dermal | 100 % |
| | Amount per use 0,01 g Relevant for dermal exposure estimates |
| Release area | 20 cm ² |
| | Release area is constant |
| Release duration | 0,3 min |
| | Relevant for inhalative exposure estimates |
| Exposure estimate and reference to its source | |

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| | |
|--|--|
| Assessment method | EASY TRA v4.2, ConsExpo v4.1, Dermal model: instant application, Uptake model: Uptake fraction |
| | Consumer - dermal, long-term - systemic |
| Exposure estimate | 0,0001 mg/kg bw/day |
| Risk Characterization Ratio (RCR) | 0,00007 |
| | The calculation is based on the internal chronic dose. |
| Assessment method | EASY TRA v4.2, ConsExpo v4.1, Inhalation model: exposure to vapour - evaporation |
| | Consumer - inhalation, long-term - systemic |
| Exposure estimate | 0,0001 mg/m ³ |
| Risk Characterization Ratio (RCR) | 0,000001 |
| | The exposure calculation is based on the mean concentration on the day of exposure. |
| Guidance to Downstream Users | |
| For scaling see: http://www.rivm.nl/en/healthanddisease/productsafety/ConsExpo.jsp | |

| | |
|--|---|
| Contributing exposure scenario | |
| Use descriptors covered | PC35: Washing and Cleaning Products (including solvent based products). |
| Operational conditions | |
| Concentration of the substance | citral Content: >= 0 % - <= 0,16 % |
| Vapour pressure of the substance during use | 4,6 Pa |
| Process temperature | 20 °C |
| body weight | 65 kg |
| | Amount per use 0,01 g Relevant for dermal exposure estimates |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ConsExpo v4.1, Dermal model: instant application |
| | Consumer - dermal, short-term - local |
| Exposure estimate | 0,0001 mg/cm ² /day |
| Risk Characterization Ratio (RCR) | 0,000532 |
| | The calculation is based on the external dose. |
| Guidance to Downstream Users | |
| For scaling see: http://www.rivm.nl/en/healthanddisease/productsafety/ConsExpo.jsp | |

| | |
|---------------------------------------|---|
| Contributing exposure scenario | |
| Use descriptors covered | PC35: Washing and Cleaning Products (including solvent based products). |
| Operational conditions | |
| Concentration of the substance | citral |

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| | |
|--|--|
| | Content: $\geq 0\%$ - $\leq 0,16\%$ |
| Vapour pressure of the substance during use | 4,6 Pa |
| Process temperature | 20 °C |
| Duration and Frequency of activity | Exposure duration: 240 min Relevant for inhalative exposure estimates |
| Duration and Frequency of activity | Application duration: 20 min Relevant for inhalative exposure estimates |
| Duration and Frequency of activity | 104 uses per year |
| Room size | 58 m ³ |
| Ventilation rate per hour | 0,5 |
| Temperature (Application) | 21 °C |
| body weight | 65 kg |
| Uptake fraction dermal | 100 % |
| | Amount per use 19 g Relevant for dermal exposure estimates |
| Release area | 100000 cm ² |
| | Release area increases over time |
| Release duration | 20 min |
| | Relevant for inhalative exposure estimates |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ConsExpo v4.1, Dermal model: instant application, Uptake model: Uptake fraction |
| | Consumer - dermal, long-term - systemic |
| Exposure estimate | 0,1333 mg/kg bw/day |
| Risk Characterization Ratio (RCR) | 0,13326 |
| | The calculation is based on the internal chronic dose. |
| Assessment method | EASY TRA v4.2, ConsExpo v4.1, Inhalation model: exposure to vapour - evaporation |
| | Consumer - inhalation, long-term - systemic |
| Exposure estimate | 0,009 mg/m ³ |
| Risk Characterization Ratio (RCR) | 0,003346 |
| | The exposure calculation is based on the mean concentration on the day of exposure. |
| Guidance to Downstream Users | |
| For scaling see: http://www.rivm.nl/en/healthandddisease/productsafety/ConsExpo.jsp | |
| Contributing exposure scenario | |
| Use descriptors covered | PC35: Washing and Cleaning Products (including solvent based products). |
| Operational conditions | |
| Concentration of the substance | citral |

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| | |
|--|---|
| | Content: $\geq 0\%$ - $\leq 0,16\%$ |
| Vapour pressure of the substance during use | 4,6 Pa |
| Process temperature | 20 °C |
| body weight | 65 kg |
| | Amount per use 19 g Relevant for dermal exposure estimates |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ConsExpo v4.1, Dermal model: instant application |
| | Consumer - dermal, short-term - local |
| Exposure estimate | 0,016 mg/cm ² /day |
| Risk Characterization Ratio (RCR) | 0,114286 |
| | The calculation is based on the external dose. |
| Guidance to Downstream Users | |
| For scaling see: http://www.rivm.nl/en/healthanddisease/productsafety/ConsExpo.jsp | |

| | |
|---|---|
| Contributing exposure scenario | |
| Use descriptors covered | PC35: Washing and Cleaning Products (including solvent based products). |
| Operational conditions | |
| Concentration of the substance | citral Content: $\geq 0\%$ - $\leq 0,16\%$ |
| Vapour pressure of the substance during use | 4,6 Pa |
| Process temperature | 20 °C |
| Duration and Frequency of activity | Exposure duration: 0,75 min Relevant for inhalative exposure estimates |
| Duration and Frequency of activity | Application duration: 0,3 min Relevant for inhalative exposure estimates |
| Duration and Frequency of activity | 4 uses per year |
| Room size | 1 m ³ |
| Ventilation rate per hour | 2 |
| Temperature (Application) | 21 °C |
| body weight | 65 kg |
| Uptake fraction dermal | 100 % |
| | Amount per use 0,01 g Relevant for dermal exposure estimates |
| Release area | 20 cm ² |

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| | |
|--|--|
| | Release area is constant |
| Release duration | 0,3 min |
| | Relevant for inhalative exposure estimates |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ConsExpo v4.1, Dermal model: instant application, Uptake model: Uptake fraction |
| | Consumer - dermal, long-term - systemic |
| Exposure estimate | 0,0001 mg/kg bw/day |
| Risk Characterization Ratio (RCR) | 0,000003 |
| | The calculation is based on the internal chronic dose. |
| Assessment method | EASY TRA v4.2, ConsExpo v4.1, Inhalation model: exposure to vapour - evaporation |
| | Consumer - inhalation, long-term - systemic |
| Exposure estimate | 0,0001 mg/m ³ |
| Risk Characterization Ratio (RCR) | 0,000001 |
| | The exposure calculation is based on the mean concentration on the day of exposure. |
| Guidance to Downstream Users | |
| For scaling see: http://www.rivm.nl/en/healthanddisease/productsafety/ConsExpo.jsp | |

| | |
|--|---|
| Contributing exposure scenario | |
| Use descriptors covered | PC35: Washing and Cleaning Products (including solvent based products). |
| Operational conditions | |
| Concentration of the substance | citral Content: >= 0 % - <= 0,16 % |
| Vapour pressure of the substance during use | 4,6 Pa |
| Process temperature | 20 °C |
| body weight | 65 kg |
| | Amount per use 0,01 g Relevant for dermal exposure estimates |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ConsExpo v4.1, Dermal model: instant application |
| | Consumer - dermal, short-term - local |
| Exposure estimate | 0,0001 mg/cm ² /day |
| Risk Characterization Ratio (RCR) | 0,000532 |
| | The calculation is based on the external dose. |
| Guidance to Downstream Users | |
| For scaling see: http://www.rivm.nl/en/healthanddisease/productsafety/ConsExpo.jsp | |

| | |
|---------------------------------------|--|
| Contributing exposure scenario | |
| Use descriptors covered | PC35: Washing and Cleaning Products (including solvent |

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| | |
|--|--|
| | based products). |
| Operational conditions | |
| Concentration of the substance | citral Content: $\geq 0\%$ - $\leq 0,16\%$ |
| Vapour pressure of the substance during use | 4,6 Pa |
| Process temperature | 20 °C |
| Duration and Frequency of activity | Exposure duration: 25 min Relevant for inhalative exposure estimates |
| Duration and Frequency of activity | Application duration: 20 min Relevant for inhalative exposure estimates |
| Duration and Frequency of activity | 4 uses per year |
| Room size | 10 m ³ |
| Ventilation rate per hour | 2 |
| Temperature (Application) | 21 °C |
| body weight | 65 kg |
| Uptake fraction dermal | 100 % |
| | Amount per use 19 g Relevant for dermal exposure estimates |
| Release area | 64000 cm ² |
| | Release area increases over time |
| Release duration | 20 min |
| | Relevant for inhalative exposure estimates |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ConsExpo v4.1, Dermal model: instant application, Uptake model: Uptake fraction |
| | Consumer - dermal, long-term - systemic |
| Exposure estimate | 0,0051 mg/kg bw/day |
| Risk Characterization Ratio (RCR) | 0,005125 |
| | The calculation is based on the internal chronic dose. |
| Assessment method | EASY TRA v4.2, ConsExpo v4.1, Inhalation model: exposure to vapour - evaporation |
| | Consumer - inhalation, long-term - systemic |
| Exposure estimate | 0,0009 mg/m ³ |
| Risk Characterization Ratio (RCR) | 0,000348 |
| | The exposure calculation is based on the mean concentration on the day of exposure. |
| Guidance to Downstream Users | |
| For scaling see: http://www.rivm.nl/en/healthandddisease/productsafety/ConsExpo.jsp | |
| Contributing exposure scenario | |
| Use descriptors covered | PC35: Washing and Cleaning Products (including solvent |

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| | |
|--|---|
| | based products). |
| Operational conditions | |
| Concentration of the substance | citral Content: $\geq 0\%$ - $\leq 0,16\%$ |
| Vapour pressure of the substance during use | 4,6 Pa |
| Process temperature | 20 °C |
| body weight | 65 kg |
| | Amount per use 19 g Relevant for dermal exposure estimates |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ConsExpo v4.1, Dermal model: instant application |
| | Consumer - dermal, short-term - local |
| Exposure estimate | 0,016 mg/cm ² /day |
| Risk Characterization Ratio (RCR) | 0,114286 |
| | The calculation is based on the external dose. |
| Guidance to Downstream Users | |
| For scaling see: http://www.rivm.nl/en/healthanddisease/productsafety/ConsExpo.jsp | |

| | |
|---|---|
| Contributing exposure scenario | |
| Use descriptors covered | PC35: Washing and Cleaning Products (including solvent based products). |
| Operational conditions | |
| Concentration of the substance | citral Content: $\geq 0\%$ - $\leq 0,4\%$ |
| Vapour pressure of the substance during use | 4,6 Pa |
| Process temperature | 20 °C |
| Duration and Frequency of activity | Exposure duration: 60 min Relevant for inhalative exposure estimates |
| Duration and Frequency of activity | 365 uses per year |
| Room size | 15 m ³ |
| Ventilation rate per hour | 2,5 |
| body weight | 65 kg |
| Uptake fraction dermal | 100 % |
| Spray duration | 24,6 sec |
| Contact rate | 46 mg/min |

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| | |
|--|--|
| Release duration | 0,41 min |
| | Relevant for dermal exposure estimates |
| Risk Management Measures | |
| Consumer Measures | Ensure spraying away from persons. |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ConsExpo v4.1, Dermal model: constant application rate, Uptake model: Uptake fraction |
| | Consumer - dermal, long-term - systemic |
| Exposure estimate | 0,0012 mg/kg bw/day |
| Risk Characterization Ratio (RCR) | 0,001161 |
| | The calculation is based on the internal chronic dose. |
| Assessment method | EASY TRA v4.2, ConsExpo v4.1, Inhalation model: Exposure to spray/dust |
| | Consumer - inhalation, long-term - systemic |
| Exposure estimate | 0,0004 mg/m ³ |
| Risk Characterization Ratio (RCR) | 0,000153 |
| | The exposure calculation is based on the mean concentration on the day of exposure. |
| Guidance to Downstream Users | |
| For scaling see: http://www.rivm.nl/en/healthandddisease/productsafety/ConsExpo.jsp | |

| | |
|--|---|
| Contributing exposure scenario | |
| Use descriptors covered | PC35: Washing and Cleaning Products (including solvent based products). |
| Operational conditions | |
| Concentration of the substance | citral Content: >= 0 % - <= 0,4 % |
| Vapour pressure of the substance during use | 4,6 Pa |
| Process temperature | 20 °C |
| body weight | 65 kg |
| Contact rate | 46 mg/min |
| Release duration | 0,41 min |
| | Relevant for dermal exposure estimates |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ConsExpo v4.1, Dermal model: constant application rate |
| | Consumer - dermal, short-term - local |
| Exposure estimate | 0,0001 mg/cm ² /day |
| Risk Characterization Ratio (RCR) | 0,000259 |
| | The calculation is based on the external dose. |
| Guidance to Downstream Users | |
| For scaling see: http://www.rivm.nl/en/healthandddisease/productsafety/ConsExpo.jsp | |

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Date / Revised: 23.10.2023

Version: 2.0

Date previous version: 09.09.2022

Previous version: 1.0

Date / First version: 09.09.2022

Product: **Citral FG**

(ID no. 30035059/SDS_GEN_FR/EN)

Date of print 20.10.2025

| | |
|--|--|
| Contributing exposure scenario | |
| Use descriptors covered | PC35: Washing and Cleaning Products (including solvent based products). |
| Operational conditions | |
| Concentration of the substance | citral Content: $\geq 0\%$ - $\leq 0,4\%$ |
| Vapour pressure of the substance during use | 4,6 Pa |
| Process temperature | 20 °C |
| Duration and Frequency of activity | Exposure duration: 60 min Relevant for inhalative exposure estimates |
| Duration and Frequency of activity | Application duration: 10 min Relevant for inhalative exposure estimates |
| Duration and Frequency of activity | 365 uses per year |
| Room size | 15 m ³ |
| Ventilation rate per hour | 2,5 |
| Temperature (Application) | 21 °C |
| body weight | 65 kg |
| Uptake fraction dermal | 100 % |
| | Amount per use 0,16 g Relevant for dermal exposure estimates |
| Release area | 17100 cm ² |
| | Release area is constant |
| Release duration | 10 min |
| | Relevant for inhalative exposure estimates |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ConsExpo v4.1, Dermal model: instant application, Uptake model: Uptake fraction |
| | Consumer - dermal, long-term - systemic |
| Exposure estimate | 0,0098 mg/kg bw/day |
| Risk Characterization Ratio (RCR) | 0,009846 |
| | The calculation is based on the internal chronic dose. |
| Assessment method | EASY TRA v4.2, ConsExpo v4.1, Inhalation model: exposure to vapour - evaporation |
| | Consumer - inhalation, long-term - systemic |
| Exposure estimate | 0,0146 mg/m ³ |
| Risk Characterization Ratio (RCR) | 0,005424 |
| | The exposure calculation is based on the mean concentration on the day of exposure. |
| Guidance to Downstream Users | |
| For scaling see: http://www.rivm.nl/en/healthandddisease/productsafety/ConsExpo.jsp | |

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Date / First version: 09.09.2022

Product: **Citral FG**

(ID no. 30035059/SDS_GEN_FR/EN)

Date of print 20.10.2025

| Contributing exposure scenario | |
|--|---|
| Use descriptors covered | PC35: Washing and Cleaning Products (including solvent based products). |
| Operational conditions | |
| Concentration of the substance | citral Content: $\geq 0\%$ - $\leq 0,4\%$ |
| Vapour pressure of the substance during use | 4,6 Pa |
| Process temperature | 20 °C |
| body weight | 65 kg |
| | Amount per use 0,16 g Relevant for dermal exposure estimates |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ConsExpo v4.1, Dermal model: instant application |
| | Consumer - dermal, short-term - local |
| Exposure estimate | 0,003 mg/cm ² /day |
| Risk Characterization Ratio (RCR) | 0,021262 |
| | The calculation is based on the external dose. |
| Guidance to Downstream Users | |
| For scaling see: http://www.rivm.nl/en/healthanddisease/productsafety/ConsExpo.jsp | |

| Contributing exposure scenario | |
|---|---|
| Use descriptors covered | PC35: Washing and Cleaning Products (including solvent based products). |
| Operational conditions | |
| Concentration of the substance | citral Content: $\geq 0\%$ - $\leq 0,16\%$ |
| Vapour pressure of the substance during use | 4,6 Pa |
| Process temperature | 20 °C |
| Duration and Frequency of activity | Exposure duration: 25 min Relevant for inhalative exposure estimates |
| Duration and Frequency of activity | 52 uses per year |
| Room size | 10 m ³ |
| Ventilation rate per hour | 2 |
| body weight | 65 kg |
| Uptake fraction dermal | 100 % |

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Product: **Citral FG**

(ID no. 30035059/SDS_GEN_FR/EN)

Date of print 20.10.2025

| | |
|--|--|
| Spray duration | 90 sec |
| Contact rate | 46 mg/min |
| Release duration | 1,5 min |
| | Relevant for dermal exposure estimates |
| Risk Management Measures | |
| Consumer Measures | Ensure spraying away from persons. |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ConsExpo v4.1, Dermal model: constant application rate, Uptake model: Uptake fraction |
| | Consumer - dermal, long-term - systemic |
| Exposure estimate | 0,0002 mg/kg bw/day |
| Risk Characterization Ratio (RCR) | 0,000242 |
| | The calculation is based on the internal chronic dose. |
| Assessment method | EASY TRA v4.2, ConsExpo v4.1, Inhalation model: Exposure to spray/dust |
| | Consumer - inhalation, long-term - systemic |
| Exposure estimate | 0,0021 mg/m ³ |
| Risk Characterization Ratio (RCR) | 0,000792 |
| | The exposure calculation is based on the mean concentration on the day of exposure. |
| Guidance to Downstream Users | |
| For scaling see: http://www.rivm.nl/en/healthanddisease/productsafety/ConsExpo.jsp | |

| | |
|--|---|
| Contributing exposure scenario | |
| Use descriptors covered | PC35: Washing and Cleaning Products (including solvent based products). |
| Operational conditions | |
| Concentration of the substance | citral Content: >= 0 % - <= 0,16 % |
| Vapour pressure of the substance during use | 4,6 Pa |
| Process temperature | 20 °C |
| body weight | 65 kg |
| Contact rate | 46 mg/min |
| Release duration | 1,5 min |
| | Relevant for dermal exposure estimates |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ConsExpo v4.1, Dermal model: constant application rate |
| | Consumer - dermal, short-term - local |
| Exposure estimate | 0,0001 mg/cm ² /day |
| Risk Characterization Ratio (RCR) | 0,000379 |
| | The calculation is based on the external dose. |
| Guidance to Downstream Users | |

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Date of print 20.10.2025

For scaling see: <http://www.rivm.nl/en/healthanddisease/productsafety/ConsExpo.jsp>

| Contributing exposure scenario | |
|--|--|
| Use descriptors covered | PC35: Washing and Cleaning Products (including solvent based products). |
| Operational conditions | |
| Concentration of the substance | citral Content: $\geq 0\%$ - $\leq 0,16\%$ |
| Vapour pressure of the substance during use | 4,6 Pa |
| Process temperature | 20 °C |
| Duration and Frequency of activity | Exposure duration: 25 min Relevant for inhalative exposure estimates |
| Duration and Frequency of activity | Application duration: 20 min Relevant for inhalative exposure estimates |
| Duration and Frequency of activity | 52 uses per year |
| Room size | 10 m ³ |
| Ventilation rate per hour | 2 |
| Temperature (Application) | 21 °C |
| body weight | 65 kg |
| Uptake fraction dermal | 100 % |
| | Amount per use 0,3 g Relevant for dermal exposure estimates |
| Release area | 64000 cm ² |
| | Release area is constant |
| Release duration | 20 min |
| | Relevant for inhalative exposure estimates |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ConsExpo v4.1, Dermal model: instant application, Uptake model: Uptake fraction |
| | Consumer - dermal, long-term - systemic |
| Exposure estimate | 0,0011 mg/kg bw/day |
| Risk Characterization Ratio (RCR) | 0,001052 |
| | The calculation is based on the internal chronic dose. |
| Assessment method | EASY TRA v4.2, ConsExpo v4.1, Inhalation model: exposure to vapour - evaporation |
| | Consumer - inhalation, long-term - systemic |
| Exposure estimate | 0,0413 mg/m ³ |
| Risk Characterization Ratio (RCR) | 0,015304 |
| | The exposure calculation is based on the mean concentration on the day of exposure. |
| Guidance to Downstream Users | |

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(ID no. 30035059/SDS_GEN_FR/EN)

Date of print 20.10.2025

For scaling see: <http://www.rivm.nl/en/healthanddisease/productsafety/ConsExpo.jsp>

| Contributing exposure scenario | |
|--|---|
| Use descriptors covered | PC35: Washing and Cleaning Products (including solvent based products). |
| Operational conditions | |
| Concentration of the substance | citral Content: $\geq 0\%$ - $\leq 0,16\%$ |
| Vapour pressure of the substance during use | 4,6 Pa |
| Process temperature | 20 °C |
| body weight | 65 kg |
| | Amount per use 0,3 g Relevant for dermal exposure estimates |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ConsExpo v4.1, Dermal model: instant application |
| | Consumer - dermal, short-term - local |
| Exposure estimate | 0,0022 mg/cm ² /day |
| Risk Characterization Ratio (RCR) | 0,015947 |
| | The calculation is based on the external dose. |
| Guidance to Downstream Users | |
| For scaling see: http://www.rivm.nl/en/healthanddisease/productsafety/ConsExpo.jsp | |

| Contributing exposure scenario | |
|---|---|
| Use descriptors covered | PC35: Washing and Cleaning Products (including solvent based products). |
| Operational conditions | |
| Concentration of the substance | citral Content: $\geq 0\%$ - $\leq 0,16\%$ |
| Vapour pressure of the substance during use | 4,6 Pa |
| Process temperature | 20 °C |
| Duration and Frequency of activity | Exposure duration: 60 min Relevant for inhalative exposure estimates |
| Duration and Frequency of activity | 26 uses per year |
| Room size | 15 m ³ |
| Ventilation rate per hour | 2,5 |
| body weight | 65 kg |

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Product: **Citral FG**

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Date of print 20.10.2025

| | |
|--|--|
| Uptake fraction dermal | 100 % |
| Spray duration | 30 sec |
| Contact rate | 46 mg/min |
| Release duration | 0,5 min |
| | Relevant for dermal exposure estimates |
| Risk Management Measures | |
| Consumer Measures | Ensure spraying away from persons. |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ConsExpo v4.1, Dermal model: constant application rate, Uptake model: Uptake fraction |
| | Consumer - dermal, long-term - systemic |
| Exposure estimate | 0,0001 mg/kg bw/day |
| Risk Characterization Ratio (RCR) | 0,00004 |
| | The calculation is based on the internal chronic dose. |
| Assessment method | EASY TRA v4.2, ConsExpo v4.1, Inhalation model: Exposure to spray/dust |
| | Consumer - inhalation, long-term - systemic |
| Exposure estimate | 0,0002 mg/m ³ |
| Risk Characterization Ratio (RCR) | 0,000075 |
| | The exposure calculation is based on the mean concentration on the day of exposure. |
| Guidance to Downstream Users | |
| For scaling see: http://www.rivm.nl/en/healthanddisease/productsafety/ConsExpo.jsp | |

| | |
|--|---|
| Contributing exposure scenario | |
| Use descriptors covered | PC35: Washing and Cleaning Products (including solvent based products). |
| Operational conditions | |
| Concentration of the substance | citral Content: >= 0 % - <= 0,16 % |
| Vapour pressure of the substance during use | 4,6 Pa |
| Process temperature | 20 °C |
| body weight | 65 kg |
| Contact rate | 46 mg/min |
| Release duration | 0,5 min |
| | Relevant for dermal exposure estimates |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ConsExpo v4.1, Dermal model: constant application rate |
| | Consumer - dermal, short-term - local |
| Exposure estimate | 0,0001 mg/cm ² /day |
| Risk Characterization Ratio (RCR) | 0,000126 |

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Product: **Citral FG**

(ID no. 30035059/SDS_GEN_FR/EN)

Date of print 20.10.2025

| | |
|--|--|
| | The calculation is based on the external dose. |
| Guidance to Downstream Users | |
| For scaling see: http://www.rivm.nl/en/healthandddisease/productsafety/ConsExpo.jsp | |

| | |
|--|--|
| Contributing exposure scenario | |
| Use descriptors covered | PC35: Washing and Cleaning Products (including solvent based products). |
| Operational conditions | |
| Concentration of the substance | citral Content: $\geq 0\%$ - $\leq 0,16\%$ |
| Vapour pressure of the substance during use | 4,6 Pa |
| Process temperature | 20 °C |
| Duration and Frequency of activity | 26 uses per year |
| body weight | 65 kg |
| Uptake fraction dermal | 100 % |
| | Amount per use 0,2 g Relevant for dermal exposure estimates |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ConsExpo v4.1, Dermal model: instant application, Uptake model: Uptake fraction |
| | Consumer - dermal, long-term - systemic |
| Exposure estimate | 0,0004 mg/kg bw/day |
| Risk Characterization Ratio (RCR) | 0,000351 |
| | The calculation is based on the internal chronic dose. |
| Guidance to Downstream Users | |
| For scaling see: http://www.rivm.nl/en/healthandddisease/productsafety/ConsExpo.jsp | |

| | |
|---|---|
| Contributing exposure scenario | |
| Use descriptors covered | PC35: Washing and Cleaning Products (including solvent based products). |
| Operational conditions | |
| Concentration of the substance | citral Content: $\geq 0\%$ - $\leq 0,16\%$ |
| Vapour pressure of the substance during use | 4,6 Pa |
| Process temperature | 20 °C |
| body weight | 65 kg |

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Date of print 20.10.2025

| | |
|--|---|
| | Amount per use 0,2 g Relevant for dermal exposure estimates |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ConsExpo v4.1, Dermal model: instant application |
| | Consumer - dermal, short-term - local |
| Exposure estimate | 0,0007 mg/cm ² /day |
| Risk Characterization Ratio (RCR) | 0,005316 |
| | The calculation is based on the external dose. |
| Guidance to Downstream Users | |
| For scaling see: http://www.rivm.nl/en/healthanddisease/productsafety/ConsExpo.jsp | |

| | |
|--|--|
| Contributing exposure scenario | |
| Use descriptors covered | PC35: Washing and Cleaning Products (including solvent based products). |
| Operational conditions | |
| Concentration of the substance | citral Content: >= 0 % - <= 0,16 % |
| Vapour pressure of the substance during use | 4,6 Pa |
| Process temperature | 20 °C |
| Duration and Frequency of activity | Exposure duration: 0,75 min Relevant for inhalative exposure estimates |
| Duration and Frequency of activity | Application duration: 0,3 min Relevant for inhalative exposure estimates |
| Duration and Frequency of activity | < 1 uses per year |
| Room size | 1 m ³ |
| Ventilation rate per hour | 0,5 |
| Temperature (Application) | 21 °C |
| body weight | 65 kg |
| Uptake fraction dermal | 100 % |
| | Amount per use 0,01 g Relevant for dermal exposure estimates |
| Release area | 20 cm ² |
| | Release area is constant |
| Release duration | 0,3 min |
| | Relevant for inhalative exposure estimates |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ConsExpo v4.1, Dermal model: instant application, Uptake model: Uptake fraction |
| | Consumer - dermal, long-term - systemic |
| Exposure estimate | 0,0001 mg/kg bw/day |

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Product: **Citral FG**

(ID no. 30035059/SDS_GEN_FR/EN)

Date of print 20.10.2025

| | |
|--|---|
| Risk Characterization Ratio (RCR) | 0,000001 |
| | The calculation is based on the internal chronic dose. |
| Assessment method | EASY TRA v4.2, ConsExpo v4.1, Inhalation model: exposure to vapour - evaporation |
| | Consumer - inhalation, long-term - systemic |
| Exposure estimate | 0,0001 mg/m ³ |
| Risk Characterization Ratio (RCR) | 0,000015 |
| | The exposure calculation is based on the mean concentration on the day of exposure. |
| Guidance to Downstream Users | |
| For scaling see: http://www.rivm.nl/en/healthanddisease/productsafety/ConsExpo.jsp | |

| | |
|--|---|
| Contributing exposure scenario | |
| Use descriptors covered | PC35: Washing and Cleaning Products (including solvent based products). |
| Operational conditions | |
| Concentration of the substance | citral Content: >= 0 % - <= 0,16 % |
| Vapour pressure of the substance during use | 4,6 Pa |
| Process temperature | 20 °C |
| body weight | 65 kg |
| | Amount per use 0,01 g Relevant for dermal exposure estimates |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ConsExpo v4.1, Dermal model: instant application |
| | Consumer - dermal, short-term - local |
| Exposure estimate | 0,0001 mg/cm ² /day |
| Risk Characterization Ratio (RCR) | 0,000532 |
| | The calculation is based on the external dose. |
| Guidance to Downstream Users | |
| For scaling see: http://www.rivm.nl/en/healthanddisease/productsafety/ConsExpo.jsp | |

| | |
|---|---|
| Contributing exposure scenario | |
| Use descriptors covered | PC35: Washing and Cleaning Products (including solvent based products). |
| Operational conditions | |
| Concentration of the substance | citral Content: >= 0 % - <= 0,16 % |
| Vapour pressure of the substance during use | 4,6 Pa |

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(ID no. 30035059/SDS_GEN_FR/EN)

Date of print 20.10.2025

| | |
|--|--|
| Process temperature | 20 °C |
| Duration and Frequency of activity | Exposure duration: 110 min Relevant for inhalative exposure estimates |
| Duration and Frequency of activity | Application duration: 110 min Relevant for inhalative exposure estimates |
| Duration and Frequency of activity | < 1 uses per year |
| Room size | 58 m3 |
| Ventilation rate per hour | 0,5 |
| Temperature (Application) | 21 °C |
| body weight | 65 kg |
| Uptake fraction dermal | 100 % |
| | Amount per use 27 g Relevant for dermal exposure estimates |
| Release area | 220000 cm ² |
| | Release area increases over time |
| Release duration | 110 min |
| | Relevant for inhalative exposure estimates |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ConsExpo v4.1, Dermal model: instant application, Uptake model: Uptake fraction |
| | Consumer - dermal, long-term - systemic |
| Exposure estimate | 0,0009 mg/kg bw/day |
| Risk Characterization Ratio (RCR) | 0,00091 |
| | The calculation is based on the internal chronic dose. |
| Assessment method | EASY TRA v4.2, ConsExpo v4.1, Inhalation model: exposure to vapour - evaporation |
| | Consumer - inhalation, long-term - systemic |
| Exposure estimate | 0,0041 mg/m ³ |
| Risk Characterization Ratio (RCR) | 0,00153 |
| | The exposure calculation is based on the mean concentration on the day of exposure. |
| Guidance to Downstream Users | |
| For scaling see: http://www.rivm.nl/en/healthanddisease/productsafety/ConsExpo.jsp | |

| | |
|---|---|
| Contributing exposure scenario | |
| Use descriptors covered | PC35: Washing and Cleaning Products (including solvent based products). |
| Operational conditions | |
| Concentration of the substance | citral Content: >= 0 % - <= 0,16 % |
| Vapour pressure of the substance during use | 4,6 Pa |

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| | |
|--|---|
| Process temperature | 20 °C |
| body weight | 65 kg |
| | Amount per use 27 g Relevant for dermal exposure estimates |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ConsExpo v4.1, Dermal model: instant application |
| | Consumer - dermal, short-term - local |
| Exposure estimate | 0,0502 mg/cm ² /day |
| Risk Characterization Ratio (RCR) | 0,358804 |
| | The calculation is based on the external dose. |
| Guidance to Downstream Users | |
| For scaling see: http://www.rivm.nl/en/healthanddisease/productsafety/ConsExpo.jsp | |

| | |
|--|--|
| Contributing exposure scenario | |
| Use descriptors covered | PC35: Washing and Cleaning Products (including solvent based products). |
| Operational conditions | |
| Concentration of the substance | citral Content: >= 0 % - <= 0,16 % |
| Vapour pressure of the substance during use | 4,6 Pa |
| Process temperature | 20 °C |
| Duration and Frequency of activity | Exposure duration: 22 min Relevant for inhalative exposure estimates |
| Duration and Frequency of activity | < 1 uses per year |
| Room size | 58 m ³ |
| Ventilation rate per hour | 0,5 |
| body weight | 65 kg |
| Uptake fraction dermal | 100 % |
| Spray duration | 1320 sec |
| Contact rate | 5 mg/min |
| Release duration | 22 min |
| | Relevant for dermal exposure estimates |
| Risk Management Measures | |
| Consumer Measures | Ensure spraying away from persons. |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ConsExpo v4.1, Dermal model: constant application rate, Uptake model: Uptake fraction |
| | Consumer - dermal, long-term - systemic |

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Product: **Citral FG**

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| | |
|--|---|
| Exposure estimate | 0,0001 mg/kg bw/day |
| Risk Characterization Ratio (RCR) | 0,000004 |
| | The calculation is based on the internal chronic dose. |
| Assessment method | EASY TRA v4.2, ConsExpo v4.1, Inhalation model: Exposure to spray/dust |
| | Consumer - inhalation, long-term - systemic |
| Exposure estimate | 0,0085 mg/m ³ |
| Risk Characterization Ratio (RCR) | 0,003148 |
| | The exposure calculation is based on the mean concentration on the day of exposure. |
| Guidance to Downstream Users | |
| For scaling see: http://www.rivm.nl/en/healthanddisease/productsafety/ConsExpo.jsp | |

| | |
|--|---|
| Contributing exposure scenario | |
| Use descriptors covered | PC35: Washing and Cleaning Products (including solvent based products). |
| Operational conditions | |
| Concentration of the substance | citral Content: >= 0 % - <= 0,16 % |
| Vapour pressure of the substance during use | 4,6 Pa |
| Process temperature | 20 °C |
| body weight | 65 kg |
| Contact rate | 5 mg/min |
| Release duration | 22 min |
| | Relevant for dermal exposure estimates |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ConsExpo v4.1, Dermal model: constant application rate |
| | Consumer - dermal, short-term - local |
| Exposure estimate | 0,0001 mg/cm ² /day |
| Risk Characterization Ratio (RCR) | 0,000604 |
| | The calculation is based on the external dose. |
| Guidance to Downstream Users | |
| For scaling see: http://www.rivm.nl/en/healthanddisease/productsafety/ConsExpo.jsp | |

| | |
|---------------------------------------|---|
| Contributing exposure scenario | |
| Use descriptors covered | PC35: Washing and Cleaning Products (including solvent based products). |
| Operational conditions | |
| Concentration of the substance | citral Content: >= 0 % - <= 0,16 % |

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Date previous version: 09.09.2022

Previous version: 1.0

Date / First version: 09.09.2022

Product: **Citral FG**

(ID no. 30035059/SDS_GEN_FR/EN)

Date of print 20.10.2025

| | |
|--|--|
| Vapour pressure of the substance during use | 4,6 Pa |
| Process temperature | 20 °C |
| Duration and Frequency of activity | 14 uses per year |
| Duration and Frequency of activity | 14 uses per year |
| body weight | 8,69 kg |
| Uptake fraction dermal | 100 % |
| Uptake fraction oral | 100 % |
| | Amount ingested 0,288 mg Relevant for oral exposure estimates |
| Transfer coefficient | 1,666667 cm ² /s |
| Dislodgeable amount | 0,0003 g/cm ² |
| Contact time | 3600 sec |
| Rubbed surface | 22 m ² |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ConsExpo v4.1, Dermal model: rubbing off, Uptake model: Uptake fraction |
| | Consumer - dermal, long-term - systemic |
| Exposure estimate | 0,0127 mg/kg bw/day |
| Risk Characterization Ratio (RCR) | 0,012712 |
| | The calculation is based on the internal chronic dose. |
| Assessment method | EASY TRA v4.2, ConsExpo v4.1, Oral model: direct intake, Uptake model: Uptake fraction |
| | Consumer - oral, long-term - systemic |
| Exposure estimate | 0,0001 mg/kg bw/day |
| Risk Characterization Ratio (RCR) | 0,000003 |
| | The calculation is based on the internal chronic dose. |
| Guidance to Downstream Users | |
| For scaling see: http://www.rivm.nl/en/healthanddisease/productsafety/ConsExpo.jsp | |

| | |
|---|---|
| Contributing exposure scenario | |
| Use descriptors covered | PC35: Washing and Cleaning Products (including solvent based products). |
| Operational conditions | |
| Concentration of the substance | citral Content: >= 0 % - <= 0,16 % |
| Vapour pressure of the substance during use | 4,6 Pa |
| Process temperature | 20 °C |

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Product: **Citral FG**

(ID no. 30035059/SDS_GEN_FR/EN)

Date of print 20.10.2025

| | |
|--|---|
| body weight | 8,69 kg |
| Transfer coefficient | 1,666667 cm ² /s |
| Dislodgeable amount | 0,0003 g/cm ² |
| Contact time | 3600 sec |
| Rubbed surface | 22 m ² |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ConsExpo v4.1, Dermal model: rubbing off |
| | Consumer - dermal, short-term - local |
| Exposure estimate | 0,0006 mg/cm ² /day |
| Risk Characterization Ratio (RCR) | 0,004286 |
| | The calculation is based on the external dose. |
| Guidance to Downstream Users | |
| For scaling see: http://www.rivm.nl/en/healthanddisease/productsafety/ConsExpo.jsp | |

| | |
|--|--|
| Contributing exposure scenario | |
| Use descriptors covered | PC35: Washing and Cleaning Products (including solvent based products). |
| Operational conditions | |
| Concentration of the substance | citral Content: >= 0 % - <= 0,16 % |
| Vapour pressure of the substance during use | 4,6 Pa |
| Process temperature | 20 °C |
| Duration and Frequency of activity | 10 uses per year |
| body weight | 65 kg |
| Uptake fraction dermal | 100 % |
| | Amount per use 0,07 g Relevant for dermal exposure estimates |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ConsExpo v4.1, Dermal model: instant application, Uptake model: Uptake fraction |
| | Consumer - dermal, long-term - systemic |
| Exposure estimate | 0,0001 mg/kg bw/day |
| Risk Characterization Ratio (RCR) | 0,000047 |
| | The calculation is based on the internal chronic dose. |
| Guidance to Downstream Users | |
| For scaling see: http://www.rivm.nl/en/healthanddisease/productsafety/ConsExpo.jsp | |

| | |
|---------------------------------------|--|
| Contributing exposure scenario | |
| Use descriptors covered | PC35: Washing and Cleaning Products (including solvent |

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| | |
|--|---|
| | based products). |
| Operational conditions | |
| Concentration of the substance | citral Content: $\geq 0\%$ - $\leq 0,16\%$ |
| Vapour pressure of the substance during use | 4,6 Pa |
| Process temperature | 20 °C |
| body weight | 65 kg |
| | Amount per use 0,07 g Relevant for dermal exposure estimates |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ConsExpo v4.1, Dermal model: instant application |
| | Consumer - dermal, short-term - local |
| Exposure estimate | 0,0005 mg/cm ² /day |
| Risk Characterization Ratio (RCR) | 0,003721 |
| | The calculation is based on the external dose. |
| Guidance to Downstream Users | |
| For scaling see: http://www.rivm.nl/en/healthanddisease/productsafety/ConsExpo.jsp | |

| | |
|---|---|
| Contributing exposure scenario | |
| Use descriptors covered | PC35: Washing and Cleaning Products (including solvent based products). |
| Operational conditions | |
| Concentration of the substance | citral Content: $\geq 0\%$ - $\leq 0,16\%$ |
| Vapour pressure of the substance during use | 4,6 Pa |
| Process temperature | 20 °C |
| Duration and Frequency of activity | Exposure duration: 60 min Relevant for inhalative exposure estimates |
| Duration and Frequency of activity | Application duration: 2 min Relevant for inhalative exposure estimates |
| Duration and Frequency of activity | 365 uses per year |
| Room size | 20 m ³ |
| Ventilation rate per hour | 0,6 |
| Temperature (Application) | 21 °C |
| body weight | 65 kg |
| Uptake fraction dermal | 100 % |

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| | |
|--|--|
| | Amount per use 0,047 g Relevant for dermal exposure estimates |
| Release area | 20000 cm ² |
| | Release area increases over time |
| Release duration | 2 min |
| | Relevant for inhalative exposure estimates |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ConsExpo v4.1, Dermal model: instant application, Uptake model: Uptake fraction |
| | Consumer - dermal, long-term - systemic |
| Exposure estimate | 0,0012 mg/kg bw/day |
| Risk Characterization Ratio (RCR) | 0,001157 |
| | The calculation is based on the internal chronic dose. |
| Assessment method | EASY TRA v4.2, ConsExpo v4.1, Inhalation model: exposure to vapour - evaporation |
| | Consumer - inhalation, long-term - systemic |
| Exposure estimate | 0,0027 mg/m ³ |
| Risk Characterization Ratio (RCR) | 0,001018 |
| | The exposure calculation is based on the mean concentration on the day of exposure. |
| Guidance to Downstream Users | |
| For scaling see: http://www.rivm.nl/en/healthanddisease/productsafety/ConsExpo.jsp | |

| | |
|--|---|
| Contributing exposure scenario | |
| Use descriptors covered | PC35: Washing and Cleaning Products (including solvent based products). |
| Operational conditions | |
| Concentration of the substance | citral Content: >= 0 % - <= 0,16 % |
| Vapour pressure of the substance during use | 4,6 Pa |
| Process temperature | 20 °C |
| body weight | 65 kg |
| | Amount per use 0,047 g Relevant for dermal exposure estimates |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ConsExpo v4.1, Dermal model: instant application |
| | Consumer - dermal, short-term - local |
| Exposure estimate | 0,0003 mg/cm ² /day |
| Risk Characterization Ratio (RCR) | 0,002498 |
| | The calculation is based on the external dose. |
| Guidance to Downstream Users | |

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For scaling see: <http://www.rivm.nl/en/healthanddisease/productsafety/ConsExpo.jsp>

| Contributing exposure scenario | |
|---|--|
| Use descriptors covered | PC35: Washing and Cleaning Products (including solvent based products). Other products of this category do either not exceed a concentration of 0.1% for this substance or exposure estimations are covered by the calculations made for this product category. In accordance to Article 14 (2b) of the REACH Regulation (EC) No 1907/2006, exposure estimation and risk characterisation does not need to be performed if the concentration of the substance in a preparation is less than 0,1% weight by weight (w/w) and if the substance meets the criteria in Annex XIII to this Regulation. |
| Operational conditions | |
| Vapour pressure of the substance during use | 4,6 Pa |
| Process temperature | 20 °C |

9. Short title of exposure scenario

other consumer applications than fragrance, (consumer use)

ERC8a, ERC8d; PC8

Control of exposure and risk management measures

| Contributing exposure scenario | |
|---------------------------------------|--|
| Use descriptors covered | ERC8a: Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor) |
| Operational conditions | |
| Annual amount used in the EU | 900.000 kg |
| Minimum emission days per year | 365 |
| Emission factor air | 100 % |
| Emission factor water | 100 % |
| Emission factor soil | 0 % |
| Receive Surf. Water (Flow Rate). | 18.000 m3/d |

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| | |
|--|---|
| Dilution factor river | 10 |
| Dilution factor coast | 100 |
| Risk Management Measures | |
| Type of STP | Municipal STP |
| Assumed sewage treatment plant flow (m3/d) | 2.000 m3/d |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ECETOC TRA v3.0, Environment |
| Risk Characterization Ratio (RCR) | 0,436161 |
| | Risk from environmental exposure is driven by soil. |
| Maximum amount of safe use | 1,1 kg/d |
| Risk from environmental exposure is driven by soil. | |

| | |
|--|---|
| Contributing exposure scenario | |
| Use descriptors covered | ERC8d: Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor) |
| Operational conditions | |
| Annual amount used in the EU | 900.000 kg |
| Minimum emission days per year | 365 |
| Emission factor air | 100 % |
| Emission factor water | 100 % |
| Emission factor soil | 20 % |
| Receive Surf. Water (Flow Rate). | 18.000 m3/d |
| Dilution factor river | 10 |
| Dilution factor coast | 100 |
| Risk Management Measures | |
| Type of STP | Municipal STP |
| Assumed sewage treatment plant flow (m3/d) | 2.000 m3/d |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ECETOC TRA v3.0, Environment |
| Risk Characterization Ratio (RCR) | 0,436161 |
| | Risk from environmental exposure is driven by soil. |
| Maximum amount of safe use | 1,1 kg/d |
| Risk from environmental exposure is driven by soil. | |

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| | |
|--|--|
| Contributing exposure scenario | |
| Use descriptors covered | PC8: Biocidal Products. |
| Operational conditions | |
| Concentration of the substance | citral Content: $\geq 0\%$ - $\leq 0,1\%$ |
| Vapour pressure of the substance during use | 4,6 Pa |
| Process temperature | 20 °C |
| Duration and Frequency of activity | 54 uses per year |
| Duration and Frequency of activity | Exposure duration: 180 min Relevant for oral exposure estimates |
| Duration and Frequency of activity | 54 uses per year |
| body weight | 65 kg |
| Uptake fraction dermal | 100 % |
| Uptake fraction oral | 100 % |
| | Amount per use 6 g Relevant for dermal exposure estimates |
| Ingestion rate | 0,00133 mg/min |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ConsExpo v4.1, Dermal model: instant application, Uptake model: Uptake fraction |
| | Consumer - dermal, long-term - systemic |
| Exposure estimate | 0,0137 mg/kg bw/day |
| Risk Characterization Ratio (RCR) | 0,013656 |
| | The calculation is based on the internal chronic dose. |
| Assessment method | EASY TRA v4.2, ConsExpo v4.1, Oral model: constant rate, Uptake model: Uptake fraction |
| | Consumer - oral, long-term - systemic |
| Exposure estimate | 0,0001 mg/kg bw/day |
| Risk Characterization Ratio (RCR) | 0,000001 |
| | The calculation is based on the internal chronic dose. |
| Guidance to Downstream Users | |
| For scaling see: http://www.rivm.nl/en/healthandddisease/productsafety/ConsExpo.jsp | |

| | |
|---------------------------------------|-------------------------|
| Contributing exposure scenario | |
| Use descriptors covered | PC8: Biocidal Products. |
| Operational conditions | |
| Concentration of the substance | citral |

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| | |
|--|---|
| | Content: $\geq 0\%$ - $\leq 0,1\%$ |
| Vapour pressure of the substance during use | 4,6 Pa |
| Process temperature | 20 °C |
| body weight | 65 kg |
| | Amount per use 6 g Relevant for dermal exposure estimates |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ConsExpo v4.1, Dermal model: instant application |
| | Consumer - dermal, short-term - local |
| Exposure estimate | 0,0003 mg/cm ² /day |
| Risk Characterization Ratio (RCR) | 0,002449 |
| | The calculation is based on the external dose. |
| Guidance to Downstream Users | |
| For scaling see: http://www.rivm.nl/en/healthanddisease/productsafety/ConsExpo.jsp | |

| | |
|--|--|
| Contributing exposure scenario | |
| Use descriptors covered | PC8: Biocidal Products. |
| Operational conditions | |
| Concentration of the substance | citral Content: $\geq 0\%$ - $\leq 0,1\%$ |
| Vapour pressure of the substance during use | 4,6 Pa |
| Process temperature | 20 °C |
| Duration and Frequency of activity | 54 uses per year |
| Duration and Frequency of activity | Exposure duration: 180 min Relevant for oral exposure estimates |
| Duration and Frequency of activity | 54 uses per year |
| body weight | 8,69 kg |
| Uptake fraction dermal | 100 % |
| Uptake fraction oral | 100 % |
| | Amount per use 1,5 g Relevant for dermal exposure estimates |
| Ingestion rate | 0,00083 mg/min |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ConsExpo v4.1, Dermal model: instant |

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| | |
|--|--|
| | application, Uptake model: Uptake fraction |
| | Consumer - dermal, long-term - systemic |
| Exposure estimate | 0,0255 mg/kg bw/day |
| Risk Characterization Ratio (RCR) | 0,025537 |
| | The calculation is based on the internal chronic dose. |
| Assessment method | EASY TRA v4.2, ConsExpo v4.1, Oral model: constant rate, Uptake model: Uptake fraction |
| | Consumer - oral, long-term - systemic |
| Exposure estimate | 0,0001 mg/kg bw/day |
| Risk Characterization Ratio (RCR) | 0,000004 |
| | The calculation is based on the internal chronic dose. |
| Guidance to Downstream Users | |
| For scaling see: http://www.rivm.nl/en/healthandddisease/productsafety/ConsExpo.jsp | |

| | |
|--|---|
| Contributing exposure scenario | |
| Use descriptors covered | PC8: Biocidal Products. |
| Operational conditions | |
| Concentration of the substance | citral Content: $\geq 0\%$ - $\leq 0,1\%$ |
| Vapour pressure of the substance during use | 4,6 Pa |
| Process temperature | 20 °C |
| body weight | 8,69 kg |
| | Amount per use 1,5 g Relevant for dermal exposure estimates |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ConsExpo v4.1, Dermal model: instant application |
| | Consumer - dermal, short-term - local |
| Exposure estimate | 0,0003 mg/cm ² /day |
| Risk Characterization Ratio (RCR) | 0,002232 |
| | The calculation is based on the external dose. |
| Guidance to Downstream Users | |
| For scaling see: http://www.rivm.nl/en/healthandddisease/productsafety/ConsExpo.jsp | |

| | |
|---|--|
| Contributing exposure scenario | |
| Use descriptors covered | PC8: Biocidal Products. |
| Operational conditions | |
| Concentration of the substance | citral Content: $\geq 0\%$ - $\leq 5\%$ |
| Vapour pressure of the substance during use | 4,6 Pa |

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| | |
|--|--|
| Process temperature | 20 °C |
| Duration and Frequency of activity | Exposure duration: 240 min Relevant for inhalative exposure estimates |
| Duration and Frequency of activity | 90 uses per year |
| Room size | 58 m ³ |
| Ventilation rate per hour | 0,5 |
| body weight | 65 kg |
| Uptake fraction dermal | 100 % |
| Spray duration | 19,8 sec |
| Contact rate | 269 mg/min |
| Release duration | 0,33 min |
| | Relevant for dermal exposure estimates |
| Risk Management Measures | |
| Consumer Measures | Ensure spraying away from persons. |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ConsExpo v4.1, Dermal model: constant application rate, Uptake model: Uptake fraction |
| | Consumer - dermal, long-term - systemic |
| Exposure estimate | 0,0168 mg/kg bw/day |
| Risk Characterization Ratio (RCR) | 0,016837 |
| | The calculation is based on the internal chronic dose. |
| Assessment method | EASY TRA v4.2, ConsExpo v4.1, Inhalation model: Exposure to spray/dust |
| | Consumer - inhalation, long-term - systemic |
| Exposure estimate | 0,0203 mg/m ³ |
| Risk Characterization Ratio (RCR) | 0,007517 |
| | The exposure calculation is based on the mean concentration on the day of exposure. |
| Guidance to Downstream Users | |
| For scaling see: http://www.rivm.nl/en/healthanddisease/productsafety/ConsExpo.jsp | |

| | |
|---|------------------------------------|
| Contributing exposure scenario | |
| Use descriptors covered | PC8: Biocidal Products. |
| Operational conditions | |
| Concentration of the substance | citral Content: >= 0 % - <= 5 % |
| Vapour pressure of the substance during use | 4,6 Pa |
| Process temperature | 20 °C |
| body weight | 65 kg |

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| | |
|--|---|
| Contact rate | 269 mg/min |
| Release duration | 0,33 min |
| | Relevant for dermal exposure estimates |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ConsExpo v4.1, Dermal model: constant application rate |
| | Consumer - dermal, short-term - local |
| Exposure estimate | 0,0003 mg/cm ² /day |
| Risk Characterization Ratio (RCR) | 0,001812 |
| | The calculation is based on the external dose. |
| Guidance to Downstream Users | |
| For scaling see: http://www.rivm.nl/en/healthandddisease/productsafety/ConsExpo.jsp | |

| | |
|--|--|
| Contributing exposure scenario | |
| Use descriptors covered | PC8: Biocidal Products. |
| Operational conditions | |
| Concentration of the substance | citral Content: >= 0 % - <= 5 % |
| Vapour pressure of the substance during use | 4,6 Pa |
| Process temperature | 20 °C |
| Duration and Frequency of activity | 90 uses per year |
| Duration and Frequency of activity | Exposure duration: 60 min Relevant for oral exposure estimates |
| Duration and Frequency of activity | 90 uses per year |
| body weight | 8,69 kg |
| Uptake fraction dermal | 100 % |
| Uptake fraction oral | 100 % |
| Transfer coefficient | 1,666667 cm ² /s |
| Dislodgeable amount | 0,000082 g/cm ² |
| Contact time | 3600 sec |
| Rubbed surface | 22 m ² |
| Ingestion rate | 0,041 mg/min |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ConsExpo v4.1, Dermal model: rubbing off, Uptake model: Uptake fraction |
| | Consumer - dermal, long-term - systemic |
| Exposure estimate | 0,698 mg/kg bw/day |
| Risk Characterization Ratio (RCR) | 0,698015 |
| | The calculation is based on the internal chronic dose. |

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| | |
|--|--|
| Assessment method | EASY TRA v4.2, ConsExpo v4.1, Oral model: constant rate, Uptake model: Uptake fraction |
| | Consumer - oral, long-term - systemic |
| Exposure estimate | 0,0035 mg/kg bw/day |
| Risk Characterization Ratio (RCR) | 0,005817 |
| | The calculation is based on the internal chronic dose. |
| Guidance to Downstream Users | |
| For scaling see: http://www.rivm.nl/en/healthanddisease/productsafety/ConsExpo.jsp | |

| | |
|--|---|
| Contributing exposure scenario | |
| Use descriptors covered | PC8: Biocidal Products. |
| Operational conditions | |
| Concentration of the substance | citral Content: $\geq 0\%$ - $\leq 5\%$ |
| Vapour pressure of the substance during use | 4,6 Pa |
| Process temperature | 20 °C |
| body weight | 8,69 kg |
| Transfer coefficient | 1,666667 cm ² /s |
| Dislodgeable amount | 0,000082 g/cm ² |
| Contact time | 3600 sec |
| Rubbed surface | 22 m ² |
| Exposure estimate and reference to its source | |
| Assessment method | EASY TRA v4.2, ConsExpo v4.1, Dermal model: rubbing off |
| | Consumer - dermal, short-term - local |
| Exposure estimate | 0,0051 mg/cm ² /day |
| Risk Characterization Ratio (RCR) | 0,036607 |
| | The calculation is based on the external dose. |
| Guidance to Downstream Users | |
| For scaling see: http://www.rivm.nl/en/healthanddisease/productsafety/ConsExpo.jsp | |

| | |
|---------------------------------------|--|
| Contributing exposure scenario | |
| Use descriptors covered | PC8: Biocidal Products. Other products of this category do either not exceed a concentration of 0.1% for this substance or exposure estimations are covered by the calculations made for this product category. In accordance to Article 14 (2b) of the REACH Regulation (EC) No 1907/2006, exposure estimation and risk characterisation does not need to be performed if the concentration of the substance in a preparation is less than 0,1% weight by weight (w/w) and if the substance meets the criteria in Annex XIII to this Regulation. |

BASF safety data sheet. This is a translation of the country-specific safety data sheet into a language other than that required by law. This document does not replace the safety data sheet provided according to Regulation (EC) No 1907/2006.

Date / Revised: 23.10.2023

Version: 2.0

Date previous version: 09.09.2022

Previous version: 1.0

Date / First version: 09.09.2022

Product: **Citral FG**

(ID no. 30035059/SDS_GEN_FR/EN)

Date of print 20.10.2025

| | |
|---|--------|
| <i>Operational conditions</i> | |
| Vapour pressure of the substance during use | 4,6 Pa |
| Process temperature | 20 °C |
