

Safety data sheet

Page: 1/64

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: 11.02.2022 Version: 2.0
Date previous version: 07.08.2020 Previous version: 1.0

Date / First version: 07.08.2020 Product: **Adipic Acid - G**

(ID no. 30042497/SDS_GEN_IT/EN)

Date of print 17.10.2025

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

1.1. Product identifier

Adipic Acid - G

Chemical name: Adipic acid CAS Number: 124-04-9

REACH registration number: 01-2119457561-38-0043, 01-2119457561-38-0006, 01-2119457561-38-0005, 01-2119457561-38-0111, 01-2119457561-38-0008, 01-2119457561-38-0009

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

Recommended use: for the production of homopolymerisates and copolymerisates, initial product for

chemical syntheses

Not recommended use: food additive(s)

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 Italia S.p.A. Via Marconato 8 20811 Cesano Mader

20811 Cesano Maderno (MB)

ITALY

Telephone: +39 0362 512-1

E-mail address: Sicurezzaprodotti.BASF-Italia@basf.com

1.4. Emergency telephone number

International emergency number:

to Regulation (EC) No 1907/2006.

Date / Revised: 11.02.2022 Version: 2.0
Date previous version: 07.08.2020 Previous version: 1.0

Date / First version: 07.08.2020 Product: **Adipic Acid - G**

(ID no. 30042497/SDS_GEN_IT/EN)

Date of print 17.10.2025

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]

Eye Dam./Irrit. 2 H319 Causes serious eye irritation.

According to BASF current knowledge and application of the criteria given in Annex I of Regulation (EC) No. 1272/2008, the following classification exceeding the classification given in Regulation (EC) No 1272/2008, Annex VI, Table 3.1 is required.

Eye Dam./Irrit. 1

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

2.2. Label elements

Globally Harmonized System, EU (GHS)

Pictogram:



Signal Word: Warning

Hazard Statement:

H319 Causes serious eye irritation.

Precautionary Statements (Prevention):
P280 Wear eye protection.

P264 Wash contaminated body parts thoroughly after handling.

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.

P337 + P313 If eye irritation persists: Get medical attention.

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

to Regulation (EC) No 1907/2006.

Date / Revised: 11.02.2022 Version: 2.0
Date previous version: 07.08.2020 Previous version: 1.0

Date / First version: 07.08.2020 Product: **Adipic Acid - G**

(ID no. 30042497/SDS_GEN_IT/EN)

Date of print 17.10.2025

Hazard determining component(s) for labelling: adipic acid

2.3. Other hazards

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

No specific dangers known, if the regulations/notes for storage and handling are considered.

SECTION 3: Composition/Information on Ingredients

3.1. Substances

Chemical nature

adipic acid

CAS Number: 124-04-9 EC-Number: 204-673-3 INDEX-Number: 607-144-00-9

Hazardous ingredients (GHS)

according to Regulation (EC) No. 1272/2008

adipic acid

Content (W/W): >= 75 % - <= 100 Eye Dam./Irrit. 2

H319

CAS Number: 124-04-9 EC-Number: 204-673-3

EC-Number: 204-673-3 <u>Differing classification according to current</u>
INDEX-Number: 607-144-00-9 knowledge and the criteria given in Annex I of

Regulation (EC) No. 1272/2008

Eye Dam./Irrit. 1

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. Avoid contact with the skin, eyes and clothing.

to Regulation (EC) No 1907/2006.

Date / Revised: 11.02.2022 Version: 2.0
Date previous version: 07.08.2020 Previous version: 1.0

Date / First version: 07.08.2020 Product: **Adipic Acid - G**

(ID no. 30042497/SDS_GEN_IT/EN)

Date of print 17.10.2025

If inhaled:

If difficulties occur after dust has been inhaled, remove to fresh air and seek medical attention.

On skin contact:

Wash thoroughly with soap and water

On contact with eyes:

Immediately 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.

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., (Further) symptoms and / or effects are not known so far

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:

water spray, dry powder, foam, carbon dioxide

5.2. Special hazards arising from the substance or mixture

Advice: No particular hazards known.

5.3. Advice for fire-fighters

Further information:

Collect contaminated extinguishing water separately, do not allow to reach sewage or effluent systems.

SECTION 6: Accidental Release Measures

6.1. Personal precautions, protective equipment and emergency procedures

Avoid dust formation. Sources of ignition should be kept well clear. Use breathing apparatus if exposed to vapours/dust/aerosol. Information regarding personal protective measures, see section 8.

6.2. Environmental precautions

Discharge into the environment must be avoided. Do not empty into drains. Retain and dispose of contaminated wash water.

to Regulation (EC) No 1907/2006.

Version: 2.0 Previous version: 1.0

Date / Revised: 11.02.2022
Date previous version: 07.08.2020
Date / First version: 07.08.2020
Product: Adipic Acid - G

(ID no. 30042497/SDS_GEN_IT/EN)

Date of print 17.10.2025

6.3. Methods and material for containment and cleaning up

For large amounts: Sweep/shovel up. Dispose of contaminated material as prescribed. For residues: Rinse away with water.

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. Avoid contact with skin and eyes. Wear suitable protective clothing and eye/face protection. Handle in accordance with good industrial hygiene and safety practice.

Protection against fire and explosion:

Avoid dust formation. The product is capable of dust explosion. Sources of ignition should be kept well clear. Take precautionary measures against static discharges.

Dust explosion class: Dust explosion class 2 (Kst-value 200 up to 300 bar m s-1).

7.2. Conditions for safe storage, including any incompatibilities

Segregate from alkalies and alkalizing substances.

Suitable materials for containers: Stainless steel 1.4401, Stainless steel 1.4301 (V2), Aluminium, Polyester resin, glass reinforced (Palatal A410), Paper/Fibreboard, High density polyethylene (HDPE), glass, Low density polyethylene (LDPE)

Further information on storage conditions: Containers should be stored tightly sealed in a dry place.

Storage stability:

Tends to cake.

7.3. Specific end use(s)

For the relevant identified use(s) listed in Section 1 the advice mentioned in this section 7 is to be observed.

SECTION 8: Exposure Controls/Personal Protection

8.1. Control parameters

Components with occupational exposure limits

124-04-9: adipic acid

TWA value 5 mg/m3 (OEL (IT)) Source of Limit value: ACGIH

to Regulation (EC) No 1907/2006.

Date / Revised: 11.02.2022 Version: 2.0
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Date / First version: 07.08.2020 Product: **Adipic Acid - G**

(ID no. 30042497/SDS_GEN_IT/EN)

Date of print 17.10.2025

PNEC

freshwater: 0,126 mg/l

marine water: 0,0126 mg/l

intermittent release: 0,46 mg/l

sediment (freshwater): 0,484 mg/kg

sediment (marine water): 0,0484 mg/kg

soil: 0,0228 mg/kg

STP: 59,1 mg/l

DNEL

worker

Long-term exposure- systemic effects, Inhalation: 74,1 mg/m3

consumer:

Long-term exposure- systemic effects, dermal: 7,5 mg/kg

worker:

Long-term exposure- systemic effects, dermal: 21 mg/kg

consumer:

Long-term exposure- systemic effects, Inhalation: 13 mg/m3

consumer:

Long-term exposure- systemic effects, oral: 7,5 mg/kg

8.2. Exposure controls

Personal protective equipment

Respiratory protection:

Breathing protection if breathable aerosols/dust are formed. Particle filter with low efficiency for solid particles (e.g. EN 143 or 149, Type P1or FFP1)

Hand protection:

Chemical resistant protective gloves (EN ISO 374-1)

butyl rubber (butyl) - 0.7 mm coating thickness

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

Eye protection:

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

to Regulation (EC) No 1907/2006.

Date / Revised: 11.02.2022 Version: 2.0
Date previous version: 07.08.2020 Previous version: 1.0

Date / First version: 07.08.2020 Product: **Adipic Acid - G**

(ID no. 30042497/SDS_GEN_IT/EN)

Date of print 17.10.2025

General safety and hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Take off immediately all contaminated clothing. At the end of the shift the skin should be cleaned and skin-care agents applied.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Form: crystalline Colour: white Odour: odourless

Odour threshold:

No data available.

pH value: 2,7

(23 g/l, 25 °C)

Melting point: 150,85 °C (Directive 92/69/EEC, A.1)

Boiling point: 337,5 °C

(1.013 hPa) Literature data.

Sublimation point:

No applicable information available.

Flash point: 196 °C (closed cup)

Evaporation rate:

The product is a non-volatile solid.

Flammability: not highly flammable (Directive 92/69/EEC, A.10)

Lower explosion limit:

No data available.

Upper explosion limit:

No data available.

Ignition temperature: 405 °C (DIN 51794)

Vapour pressure: 0,097 hPa (18,5 °C)

Literature data.

Density: 1,36 g/cm3

(25 °C)

Literature data.

Relative density: 1,36

(25 °C)

Literature data.

Relative vapour density (air):

No data available.

Solubility in water: Literature data.

23 g/l (25 °C)

Date / Revised: 11.02.2022 Version: 2.0
Date previous version: 07.08.2020 Previous version: 1.0

Date / First version: 07.08.2020 Product: **Adipic Acid - G**

(ID no. 30042497/SDS_GEN_IT/EN)

Date of print 17.10.2025

Solubility (qualitative) solvent(s): organic solvents

soluble

Partitioning coefficient n-octanol/water (log Kow): 0,093 (measured)

(25 °C; pH value: 3,3)

Self ignition: not self-igniting Test type: Spontaneous self-

ignition at room-temperature.

Temperature: > 400 °C Test type: Self-ignition at high

temperatures.

(Method: Directive 92/69/EEC,

(Directive 92/69/EEC, A.14)

A.16)

Thermal decomposition: No data available.

Viscosity, dynamic:

No data available.

Viscosity, kinematic:

No data available.

Explosion hazard: Product is not explosive, however a

dust explosion could result from an

air / dust mixture.

Fire promoting properties: Based on its structural properties

the product is not classified as

oxidizing.

9.2. Other information

Self heating ability: It is not a substance capable of

spontaneous heating.

Minimum ignition energy: 10 - 30 mJ (DIN EN 13821)

Bulk density: approx. 700 kg/m3

pKA: 4,43

(20 °C)

Adsorption/water - soil: KOC: 1,61; log KOC: 0,21 (calculated)

Surface tension:

Based on chemical structure, surface

activity is not to be expected.

Grain size distribution approx. 60 µm (D50, Volumetric Distribution, other

(measured))

particles $<= 4,19 \, \mu m$ 2,76 % particles $<= 10,48 \, \mu m$ 8,79 % particles <= 103,58 78,08 %

μm

Molar mass: 146,14 g/mol

SECTION 10: Stability and Reactivity

10.1. Reactivity

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

to Regulation (EC) No 1907/2006.

Date / Revised: 11.02.2022 Version: 2.0
Date previous version: 07.08.2020 Previous version: 1.0

Date / First version: 07.08.2020 Product: **Adipic Acid - G**

(ID no. 30042497/SDS_GEN_IT/EN)

Date of print 17.10.2025

Corrosion to metals: No corrosive effect on metal.

Formation of Remarks: Forms no flammable gases in the

flammable gases: presence of water.

10.2. Chemical stability

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

10.3. Possibility of hazardous reactions

Reacts with basic components to generate heat. Dust explosion hazard.

10.4. Conditions to avoid

Avoid dust formation. Avoid deposition of dust. See SDS section 7 - Handling and storage.

10.5. Incompatible materials

Substances to avoid: alkaline reactive substances

10.6. Hazardous decomposition products

Thermal decomposition products:

No hazardous decomposition products if stored and handled as prescribed/indicated., Incomplete combustion results in formation of toxic gases, containing mainly carbon monoxide and carbon dioxide.

SECTION 11: Toxicological Information

11.1. Information on toxicological effects

Acute toxicity

Assessment of acute toxicity:

Virtually nontoxic after a single ingestion. Virtually nontoxic by inhalation. Virtually nontoxic after a single skin contact.

Experimental/calculated data:

LD50 rat (oral): approx. 5.560 mg/kg (BASF-Test)

LC50 rat (by inhalation): > 7,7 mg/l 4 h (BASF-Test)

An aerosol was tested.

LD50 rabbit (dermal): > 7.940 mg/kg (other)

Irritation

Assessment of irritating effects:

Not irritating to the skin. May cause severe damage to the eyes.

to Regulation (EC) No 1907/2006.

Version: 2.0 Previous version: 1.0

Date / Revised: 11.02.2022 Date previous version: 07.08.2020 Date / First version: 07.08.2020

Product: Adipic Acid - G

(ID no. 30042497/SDS_GEN_IT/EN)

Date of print 17.10.2025

Experimental/calculated data: Skin corrosion/irritation

rabbit: non-irritant (BASF-Test)

Serious eye damage/irritation

rabbit: irreversible damage (OECD Guideline 405)

Respiratory/Skin sensitization

Assessment of sensitization:

Skin sensitizing effects were not observed in animal studies. A sensitizing effect on particularly sensitive individuals cannot be excluded.

Experimental/calculated data: guinea pig: Non-sensitizing. (other)

Germ cell mutagenicity

Assessment of mutagenicity:

The substance was not mutagenic in mammalian cell culture. No mutagenic effect was found in various tests with microorganisms and mammals.

Carcinogenicity

Assessment of carcinogenicity:

In long-term animal studies in which the substance was given in high concentrations by feed, a carcinogenic effect was not observed.

Reproductive toxicity

Assessment of reproduction toxicity:

No effects have been reported in reproductive organs in long term animal studies.

Developmental toxicity

Assessment of teratogenicity:

No indications of a developmental toxic / teratogenic effect were seen in animal studies.

Specific target organ toxicity (single exposure)

Assessment of STOT single:

Causes temporary irritation of the respiratory tract.

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

Assessment of repeated dose toxicity:

to Regulation (EC) No 1907/2006.

Version: 2.0 Previous version: 1.0

Date / Revised: 11.02.2022 Date previous version: 07.08.2020 Date / First version: 07.08.2020

(ID no. 30042497/SDS_GEN_IT/EN)

Date of print 17.10.2025

Repeated oral uptake of the substance did not cause substance-related effects.

Aspiration hazard

Product: Adipic Acid - G

No aspiration hazard expected.

SECTION 12: Ecological Information

12.1. Toxicity

Assessment of aquatic toxicity:

Acutely harmful for aquatic organisms. The inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations.

Toxicity to fish:

LC0 (96 h) >= 1.000 mg/l, Brachydanio rerio (other, static) Nominal values (confirmed by concentration control analytics)

Aquatic invertebrates:

LC50 (48 h) 46 mg/l, Daphnia magna (OECD Guideline 202, part 1)

Nominal concentration.

Aquatic plants:

EC50 (72 h) 64,5 mg/l (growth rate), Pseudokirchneriella subcapitata (OECD Guideline 201, static) Nominal concentration.

No observed effect concentration (72 h) 40,6 mg/l (growth rate), Pseudokirchneriella subcapitata (OECD Guideline 201, static)

Nominal concentration.

Microorganisms/Effect on activated sludge:

EC50 (3 h) > 100 mg/l, activated sludge (OECD Guideline 209, aerobic)

Chronic toxicity to fish:

Study scientifically not justified.

Chronic toxicity to aquatic invertebrates:

No observed effect concentration (21 d) 6,3 mg/l, Daphnia magna (OECD Guideline 211) Nominal concentration.

Assessment of terrestrial toxicity:

No data available.

Study scientifically not justified.

12.2. Persistence and degradability

Assessment biodegradation and elimination (H2O):

to Regulation (EC) No 1907/2006. Date / Revised: 11.02.2022

Version: 2.0 Previous version: 1.0

Date previous version: 07.08.2020 Date / First version: 07.08.2020 Product: **Adipic Acid - G**

(ID no. 30042497/SDS_GEN_IT/EN)

Date of print 17.10.2025

Readily biodegradable (according to OECD criteria).

Elimination information:

83 % BOD of the ThOD (30 d) (OECD 301D; EEC 92/69, C.4-E) (aerobic, domestic sewage) Literature data.

Assessment of stability in water:

According to structural properties, hydrolysis is not expected/probable.

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.

Bioaccumulation potential:

Bioconcentration factor (BCF): 3,16 (calculated) Accumulation in organisms is not to be expected.

12.4. Mobility in soil

Assessment transport between environmental compartments:

Volatility: The substance will not 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 (Persistent/bioaccumulative/toxic) and vPvB (very persistent/very bioaccumulative). Self classification

12.6. Other adverse effects

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

12.7. Additional information

Other ecotoxicological advice:

Do not release untreated into natural waters.

SECTION 13: Disposal Considerations

13.1. Waste treatment methods

Incinerate in suitable incineration plant, observing local authority regulations.

to Regulation (EC) No 1907/2006.

Date / Revised: 11.02.2022 Version: 2.0
Date previous version: 07.08.2020 Previous version: 1.0

Date / First version: 07.08.2020 Product: **Adipic Acid - G**

(ID no. 30042497/SDS_GEN_IT/EN)

Date of print 17.10.2025

Contaminated packaging:

Uncleaned empties should be disposed of in the same manner as the contents.

SECTION 14: Transport Information

Land transport

ADR

Not classified as a dangerous good under transport regulations

UN number or ID number:
UN proper shipping name:
Transport hazard class(es):
Packing group:
Environmental hazards:
Special precautions for

Not applicable
Not applicable
Not applicable
Not applicable
Not applicable

user

RID

Not classified as a dangerous good under transport regulations

UN number or ID number:
UN proper shipping name:
Transport hazard class(es):
Packing group:
Environmental hazards:
Special precautions for

Not applicable
Not applicable
Not applicable
Not applicable
Not applicable

user

Inland waterway transport

ADN

Not classified as a dangerous good under transport regulations

UN number or ID number:
UN proper shipping name:
Transport hazard class(es):
Packing group:
Environmental hazards:
Special precautions for

Not applicable
Not applicable
Not applicable
Not applicable
Not applicable
Not applicable

user:

Transport in inland waterway vessel

Not evaluated

to Regulation (EC) No 1907/2006.

Date / Revised: 11.02.2022 Version: 2.0
Date previous version: 07.08.2020 Previous version: 1.0

Date / First version: 07.08.2020 Product: **Adipic Acid - G**

(ID no. 30042497/SDS_GEN_IT/EN)

Date of print 17.10.2025

Sea transport

IMDG

Not classified as a dangerous good under transport regulations

UN number or ID number:
UN proper shipping name:
Transport hazard class(es):
Packing group:
Environmental hazards:
Special precautions for

Not applicable
Not applicable
Not applicable
Not applicable
Not applicable
Not applicable

user

Air transport

IATA/ICAO

Not classified as a dangerous good under transport regulations

UN number or ID number:
UN proper shipping name:
Transport hazard class(es):
Packing group:
Environmental hazards:
Special precautions for

Not applicable
Not applicable
Not applicable
Not applicable
Not applicable
Not applicable

user

14.1. UN number or ID number

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.

to Regulation (EC) No 1907/2006. Date / Revised: 11.02.2022

Version: 2.0 Previous version: 1.0

Date previous version: 07.08.2020 Date / First version: 07.08.2020 Product: **Adipic Acid - G**

(ID no. 30042497/SDS_GEN_IT/EN)

Date of print 17.10.2025

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: 75

Directive 2012/18/EU - Control of Major Accident Hazards involving dangerous substances (EU): Listed in above regulation: no

Regulations (Italy): 1) 1272/2008/CE Regulation and subsequent amendments; 2) 2012/18/EU Directive (Seveso III) and Legislative Decree 105/2015; 3) Legislative Decree 81/2008 and Legislative Decree 152/2006.

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

SECTION 16: Other Information

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

Eye Dam./Irrit. 1 Aquatic Acute 3

Regulations (Italy): 1) 1272/2008/CE Regulation and subsequent amendments; 2) 2012/18/EU Directive (Seveso III) and Legislative Decree 105/2015; 3) Legislative Decree 81/2008 and Legislative Decree 152/2006.

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

Eye Dam./Irrit. Serious eye damage/eye irritation Causes serious eye irritation.

Date / Revised: 11.02.2022 Version: 2.0
Date previous version: 07.08.2020 Previous version: 1.0

Date / First version: 07.08.2020 Product: **Adipic Acid - G**

(ID no. 30042497/SDS_GEN_IT/EN)

Date of print 17.10.2025

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.

Vertical lines in the left hand margin indicate an amendment from the previous version.

Date / Revised: 11.02.2022 Version: 2.0
Date previous version: 07.08.2020 Previous version: 1.0

Date / First version: 07.08.2020 Product: **Adipic Acid - G**

(ID no. 30042497/SDS_GEN_IT/EN)

Date of print 17.10.2025

Annex: Exposure Scenarios

Index

1. Formulation

ERC2; PROC1, PROC2, PROC3, PROC4, PROC5, PROC7, PROC8a, PROC8b, PROC9, PROC10, PROC13

2. Use in/as Formulation

ERC6b; PROC1, PROC2, PROC3, PROC4, PROC5, PROC7, PROC8a, PROC8b, PROC9, PROC10, PROC13

- **3.** Use as an intermediate, Use as Monomer ERC6a, ERC6c, ERC6d; PROC1, PROC2, PROC3, PROC4, PROC8a, PROC8b, PROC9
- **4.** Production of Machine dish washing products (tablets) ERC5; PROC2, PROC5, PROC8a, PROC13, PROC14
- **5.** Use in Flue Gas Desulphurization ERC6b; PROC16
- 6. Use as laboratory reagent/agent

ERC8a, ERC8b; PROC15

- **7.** Use in/as Laundry agents, (use in professional settings) ERC8a; PROC8b, PROC9
- **8.** Use of Machine dish washing products ERC8a, ERC11a; PC35

* * * * * * * * * * * * * * * *

1. Short title of exposure scenario

Formulation

ERC2; PROC1, PROC2, PROC3, PROC4, PROC5, PROC7, PROC8a, PROC8b, PROC9, PROC10, PROC13

Control of exposure and risk management measures

Contributing exposure scenario	
Use descriptors covered	ERC2: Formulation of preparations
Operational conditions	
Annual amount per site	251.000 kg
Minimum emission days per year	100
Emission factor air	0,05 %

to Regulation (EC) No 1907/2006.

Date / Revised: 11.02.2022 Version: 2.0
Date previous version: 07.08.2020 Previous version: 1.0

Date / First version: 07.08.2020 Product: **Adipic Acid - G**

(ID no. 30042497/SDS_GEN_IT/EN)

Emission factor water	0,08 %	
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)	0,031516	
	Risk from environmental ex	xposure is driven by soil.
	79.643,3	
Maximum amount of safe use	kg/d	
Risk from environmental exposure is driven by soil.		

Contributing exposure scenario		
Use descriptors covered	PROC1: Use in closed process, no likelihood of exposure. Use domain: industrial	
Operational conditions		
Concentration of the substance	adipic acid Content: >= 0 % - <= 5 %	
Physical state	liquid	
Vapour pressure of the substance during use	39,959549 Pa	
Process temperature	40 °C	
Duration and Frequency of activity	480 min 5 days per week	
Indoor/Outdoor	Indoor	
	Operation is carried out at ambient or elevated temperatures	
Risk Management Measures		
Provide a good standard of general ventilation (not less than 3 - 5 air changes per hour)	Effectiveness: 30 %	
Exposure estimate and reference to		
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker	
	Worker - dermal, long-term - systemic	

to Regulation (EC) No 1907/2006.

Date / Revised: 11.02.2022 Version: 2.0
Date previous version: 07.08.2020 Previous version: 1.0

Date / First version: 07.08.2020 Product: **Adipic Acid - G**

(ID no. 30042497/SDS_GEN_IT/EN)

Exposure estimate	0,0069 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,000327
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	0,0085 mg/m³
Risk Characterization Ratio (RCR)	0,000115
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org	/tra

Contributing exposure scenario	
Use descriptors covered	PROC2: Use in closed, continuous process with occasional controlled exposure. Use domain: industrial
Operational conditions	
Concentration of the substance	adipic acid Content: >= 0 % - <= 5 %
Physical state	liquid
Vapour pressure of the substance during use	39,959549 Pa
Process temperature	40 °C
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
	Operation is carried out at ambient or elevated temperatures
Risk Management Measures	
Wear suitable respiratory protection.	Effectiveness: 90 %
Provide a good standard of general ventilation (not less than 3 - 5 air changes per hour)	Effectiveness: 30 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Avoid contact with eyes.	
In case of potential exposure:, Use suitable eye protection.	
Exposure estimate and reference to	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic
Exposure estimate	0,0549 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,002612
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	0,0852 mg/m ³
Risk Characterization Ratio (RCR)	0,00115
Guidance to Downstream Users	

to Regulation (EC) No 1907/2006.

Date / Revised: 11.02.2022 Version: 2.0
Date previous version: 07.08.2020 Previous version: 1.0

Date / First version: 07.08.2020 Product: **Adipic Acid - G**

(ID no. 30042497/SDS_GEN_IT/EN)

Date of print 17.10.2025

For scaling see: http://www.ecetoc.org/tra

Contributing exposure scenario	
	PROC3: Use in closed batch process (synthesis or
Use descriptors covered	formulation).
•	Use domain: industrial
Operational conditions	
	adipic acid
Concentration of the substance	Content: >= 0 % - <= 5 %
Physical state	liquid
Vapour pressure of the substance during use	39,959549 Pa
Process temperature	40 °C
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
	Operation is carried out at ambient or elevated
	temperatures
Risk Management Measures	
Wear suitable respiratory protection.	Effectiveness: 90 %
Provide a good standard of general	
ventilation (not less than 3 - 5 air	Effectiveness: 30 %
changes per hour)	
Use suitable chemically resistant	Effectiveness: 80 %
gloves.	
Avoid contact with eyes.	
In case of potential exposure:, Use	
suitable eye protection.	
Exposure estimate and reference to	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic
Exposure estimate	0,0274 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,001306
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	0,2557 mg/m³
Risk Characterization Ratio (RCR)	0,003451
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org	/tra

Contributing exposure scenario	
Use descriptors covered	PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises. Use domain: industrial

to Regulation (EC) No 1907/2006.

Date / Revised: 11.02.2022 Version: 2.0
Date previous version: 07.08.2020 Previous version: 1.0

Date / First version: 07.08.2020 Product: **Adipic Acid - G**

(ID no. 30042497/SDS_GEN_IT/EN)

Operational conditions		
	adipic acid	
Concentration of the substance	Content: >= 0 % - <= 5 %	
Physical state	liquid	
Vapour pressure of the substance	39,959549 Pa	
during use	40.00	
Process temperature	40 °C	
Duration and Frequency of activity	60 min 5 days per week	
Indoor/Outdoor	Indoor	
	Operation is carried out at ambient or elevated	
	temperatures	
Risk Management Measures		
Wear suitable respiratory protection.	Effectiveness: 90 %	
Provide a good standard of general		
ventilation (not less than 3 - 5 air	Effectiveness: 30 %	
changes per hour)		
Use suitable chemically resistant	Effectiveness: 80 %	
gloves.	211001101001.00 //	
Avoid contact with eyes.		
In case of potential exposure:, Use		
suitable eye protection.		
Exposure estimate and reference to		
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker	
	Worker - dermal, long-term - systemic	
Exposure estimate	0,2743 mg/kg bw/day	
Risk Characterization Ratio (RCR)	0,013061	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker	
	Worker - inhalation, long-term - systemic	
Exposure estimate	0,0852 mg/m³	
Risk Characterization Ratio (RCR)	0,00115	
Guidance to Downstream Users		
For scaling see: http://www.ecetoc.org/t	tra	

Contributing exposure scenario	
Use descriptors covered	PROC5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact). Use domain: industrial
Operational conditions	
Concentration of the substance	adipic acid Content: >= 0 % - <= 5 %
Physical state	liquid
Vapour pressure of the substance	39,959549 Pa

to Regulation (EC) No 1907/2006.

Date / Revised: 11.02.2022 Version: 2.0
Date previous version: 07.08.2020 Previous version: 1.0

Date / First version: 07.08.2020 Product: **Adipic Acid - G**

(ID no. 30042497/SDS_GEN_IT/EN)

during use	
Process temperature	40 °C
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
	Operation is carried out at ambient or elevated temperatures
Risk Management Measures	
Wear suitable respiratory protection.	Effectiveness: 90 %
Provide a good standard of general ventilation (not less than 3 - 5 air changes per hour)	Effectiveness: 30 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Avoid contact with eyes.	
In case of potential exposure:, Use suitable eye protection.	
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	0,5486 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,026122
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	0,4262 mg/m ³
Risk Characterization Ratio (RCR)	0,005752
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/	tra

Contributing exposure scenario	
Use descriptors covered	PROC7: Industrial spraying Use domain: industrial
Operational conditions	
Concentration of the substance	adipic acid Content: >= 0 % - <= 50 %
Physical state	liquid
Vapour pressure of the substance during use	39,959549 Pa
Process temperature	40 °C
Duration and Frequency of activity	60 min 5 days per week
Indoor/Outdoor	Indoor
	Operation is carried out at ambient or elevated
	temperatures

to Regulation (EC) No 1907/2006.

Date / Revised: 11.02.2022 Version: 2.0
Date previous version: 07.08.2020 Previous version: 1.0

Date / First version: 07.08.2020 Product: **Adipic Acid - G**

(ID no. 30042497/SDS_GEN_IT/EN)

Risk Management Measures	
Local exhaust ventilation	Effectiveness: 95 %
Wear suitable respiratory protection.	Effectiveness: 90 %
Provide a good standard of general	
ventilation (not less than 3 - 5 air	Effectiveness: 30 %
changes per hour)	
Use suitable chemically resistant	Effectiveness: 80 %
gloves.	Effectiveness, ou %
Avoid contact with eyes.	
In case of potential exposure:, Use	
suitable eye protection.	
Exposure estimate and reference to	its source
•	EASY TRA v4.2, ECETOC TRA v3.0, worker, modified
Assessment method	version, The concentration of the substance has been
	considered using a linear approach.
	Worker - dermal, long-term - systemic
Exposure estimate	4,2857 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,204082
	EASY TRA v4.2, ECETOC TRA v3.0, worker, modified
Assessment method	version, The concentration of the substance has been
	considered using a linear approach.
	Worker - inhalation, long-term - systemic
Exposure estimate	0,2131 mg/m ³
Risk Characterization Ratio (RCR)	0,002876
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/	/tra Please note that a modified version has been used (see
exposure estimates)	<u> </u>

Contributing exposure scenario	
Use descriptors covered	PROC8a: Transfer of substance or preparation (charging/discharging) from/to ves-sels/large containers at non-dedicated facilities Use domain: industrial
Operational conditions	
Concentration of the substance	adipic acid Content: >= 0 % - <= 5 %
Physical state	liquid
Vapour pressure of the substance during use	39,959549 Pa
Process temperature	40 °C
Duration and Frequency of activity	60 min 5 days per week
Indoor/Outdoor	Indoor
	Operation is carried out at ambient or elevated temperatures

to Regulation (EC) No 1907/2006.

Date / Revised: 11.02.2022 Version: 2.0
Date previous version: 07.08.2020 Previous version: 1.0

Date / First version: 07.08.2020 Product: **Adipic Acid - G**

(ID no. 30042497/SDS_GEN_IT/EN)

Risk Management Measures		
Wear suitable respiratory protection.	Effectiveness: 90 %	
Provide a good standard of general		
ventilation (not less than 3 - 5 air	Effectiveness: 30 %	
changes per hour)		
Use suitable chemically resistant	Effectiveness: 80 %	
gloves.	Lifectiveness. 60 76	
Avoid contact with eyes.		
In case of potential exposure:, Use		
suitable eye protection.		
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	0,5486 mg/kg bw/day	
Risk Characterization Ratio (RCR)	0,026122	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker	
	Worker - inhalation, long-term - systemic	
Exposure estimate	0,1705 mg/m ³	
Risk Characterization Ratio (RCR)	0,002301	
Guidance to Downstream Users		
For scaling see: http://www.ecetoc.org/tra		

Contributing exposure scenario	
Use descriptors covered	PROC8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities Use domain: industrial
Operational conditions	
Concentration of the substance	adipic acid Content: >= 0 % - <= 5 %
Physical state	liquid
Vapour pressure of the substance during use	39,959549 Pa
Process temperature	40 °C
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
	Operation is carried out at ambient or elevated temperatures
Risk Management Measures	
Wear suitable respiratory protection.	Effectiveness: 90 %
Provide a good standard of general ventilation (not less than 3 - 5 air changes per hour)	Effectiveness: 30 %
Use suitable chemically resistant	Effectiveness: 80 %

to Regulation (EC) No 1907/2006.

Date / Revised: 11.02.2022 Version: 2.0
Date previous version: 07.08.2020 Previous version: 1.0

Date / First version: 07.08.2020 Product: **Adipic Acid - G**

(ID no. 30042497/SDS_GEN_IT/EN)

gloves.	
Avoid contact with eyes.	
In case of potential exposure:, Use	
suitable eye protection.	
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	0,5486 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,026122
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	0,4262 mg/m³
Risk Characterization Ratio (RCR)	0,005752
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	adipic acid Content: >= 0 % - <= 5 %	
Physical state	liquid	
Vapour pressure of the substance during use	39,959549 Pa	
Process temperature	40 °C	
Duration and Frequency of activity	60 min 5 days per week	
Indoor/Outdoor	Indoor	
	Operation is carried out at ambient or elevated temperatures	
Risk Management Measures		
Wear suitable respiratory protection.	Effectiveness: 90 %	
Provide a good standard of general ventilation (not less than 3 - 5 air changes per hour)	Effectiveness: 30 %	
Use suitable chemically resistant gloves.	Effectiveness: 80 %	
Avoid contact with eyes.		
In case of potential exposure:, Use		
suitable eye protection.	<u></u>	
Exposure estimate and reference to		
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker	
	Worker - dermal, long-term - systemic	

to Regulation (EC) No 1907/2006.

Date / Revised: 11.02.2022 Version: 2.0
Date previous version: 07.08.2020 Previous version: 1.0

Date / First version: 07.08.2020 Product: **Adipic Acid - G**

(ID no. 30042497/SDS_GEN_IT/EN)

Exposure estimate	0,2743 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,013061
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	0,0852 mg/m³
Risk Characterization Ratio (RCR)	0,00115
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org	/tra

Contributing exposure scenario		
Continuating exposure scenario	PROC10: Roller application or brushing	
Use descriptors covered	Use domain: industrial	
Operational conditions		
	adipic acid	
Concentration of the substance	Content: >= 0 % - <= 5 %	
Physical state	liquid	
Vapour pressure of the substance during use	39,959549 Pa	
Process temperature	40 °C	
Duration and Frequency of activity	60 min 5 days per week	
Indoor/Outdoor	Indoor	
	Operation is carried out at ambient or elevated temperatures	
Risk Management Measures		
Wear suitable respiratory protection.	Effectiveness: 90 %	
Provide a good standard of general ventilation (not less than 3 - 5 air changes per hour)	Effectiveness: 30 %	
Use suitable chemically resistant gloves.	Effectiveness: 80 %	
Avoid contact with eyes.		
In case of potential exposure:, Use suitable eye protection.		
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	1,0971 mg/kg bw/day	
Risk Characterization Ratio (RCR)	0,052245	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker	
	Worker - inhalation, long-term - systemic	
Exposure estimate	0,1705 mg/m³	
Risk Characterization Ratio (RCR)	0,002301	
Guidance to Downstream Users	li.	
For scaling see: http://www.ecetoc.org	/tra	

to Regulation (EC) No 1907/2006.

Date / Revised: 11.02.2022 Version: 2.0
Date previous version: 07.08.2020 Previous version: 1.0

Date / First version: 07.08.2020 Product: **Adipic Acid - G**

(ID no. 30042497/SDS_GEN_IT/EN)

Date of print 17.10.2025

Contributing exposure scenario		
Use descriptors covered	PROC13: Treatment of articles by dipping and pouring. Use domain: industrial	
Operational conditions		
Concentration of the substance	adipic acid Content: >= 0 % - <= 5 %	
Physical state	liquid	
Vapour pressure of the substance during use	39,959549 Pa	
Process temperature	40 °C	
Duration and Frequency of activity	60 min 5 days per week	
Indoor/Outdoor	Indoor	
	Operation is carried out at ambient or elevated temperatures	
Risk Management Measures		
Wear suitable respiratory protection.	Effectiveness: 90 %	
Provide a good standard of general ventilation (not less than 3 - 5 air changes per hour)	Effectiveness: 30 %	
Use suitable chemically resistant gloves.	Effectiveness: 80 %	
Avoid contact with eyes.		
In case of potential exposure:, Use suitable eye protection.		
Exposure estimate and reference to		
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker	
	Worker - dermal, long-term - systemic	
Exposure estimate	0,5486 mg/kg bw/day	
Risk Characterization Ratio (RCR)	0,026122	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker	
Evaceure estimate	Worker - inhalation, long-term - systemic	
Exposure estimate	0,1705 mg/m³	
Risk Characterization Ratio (RCR) Guidance to Downstream Users	0,002301	
For scaling see: http://www.ecetoc.org/	/tra	
. c. ccaming cool intpi/intribootoolorg/	***	

2. Short title of exposure scenario

Use in/as Formulation

ERC6b; PROC1, PROC2, PROC3, PROC4, PROC5, PROC7, PROC8a, PROC8b, PROC9, PROC10, PROC13

to Regulation (EC) No 1907/2006.

Date / Revised: 11.02.2022 Version: 2.0
Date previous version: 07.08.2020 Previous version: 1.0

Date / First version: 07.08.2020 Product: **Adipic Acid - G**

(ID no. 30042497/SDS_GEN_IT/EN)

Date of print 17.10.2025

Control of exposure and risk management measures

Contributing exposure scenario			
Use descriptors covered	ERC6b: Industrial use of reactive processing aids		
Operational conditions	<u> </u>		
Annual amount per site	251.000 kg		
Minimum emission days per year	20		
Emission factor air	0,002 %		
Emission factor water	0,2 %		
Emission factor soil	0,025 %		
Receive Surf. Water (Flow Rate).	18.000 m3/d		
Dilution factor river	10		
Dilution factor coast	100		
Risk Management Measures	<u> </u>		
Type of 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)	0,078449		
	Risk from environmental ex	xposure is driven by soil.	
	159.977		
Maximum amount of safe use	kg/d		
Risk from environmental exposure is	driven by soil.		

Contributing exposure scenario	
Use descriptors covered	PROC1: Use in closed process, no likelihood of exposure. Use domain: industrial
Operational conditions	
	adipic acid
Concentration of the substance	Content: >= 0 % - <= 5 %
Physical state	liquid
Vapour pressure of the substance during use	39,959549 Pa
Process temperature	40 °C
Duration and Frequency of activity	480 min 5 days per week

to Regulation (EC) No 1907/2006.

Date / Revised: 11.02.2022 Version: 2.0
Date previous version: 07.08.2020 Previous version: 1.0

Date / First version: 07.08.2020 Product: **Adipic Acid - G**

(ID no. 30042497/SDS_GEN_IT/EN)

Indoor/Outdoor	Indoor	
	Operation is carried out at ambient or elevated	
	temperatures	
Risk Management Measures		
Provide a good standard of general		
ventilation (not less than 3 - 5 air	Effectiveness: 30 %	
changes per hour)		
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	0,0069 mg/kg bw/day	
Risk Characterization Ratio (RCR)	0,000327	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker	
	Worker - inhalation, long-term - systemic	
Exposure estimate	0,0085 mg/m³	
Risk Characterization Ratio (RCR)	0,000115	
Guidance to Downstream Users		
For scaling see: http://www.ecetoc.org/tra		

Contributing exposure scenario	
Use descriptors covered	PROC2: Use in closed, continuous process with occasional controlled exposure. Use domain: industrial
Operational conditions	
Concentration of the substance	adipic acid Content: >= 0 % - <= 5 %
Physical state	liquid
Vapour pressure of the substance during use	39,959549 Pa
Process temperature	40 °C
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
	Operation is carried out at ambient or elevated temperatures
Risk Management Measures	
Wear suitable respiratory protection.	Effectiveness: 90 %
Provide a good standard of general ventilation (not less than 3 - 5 air changes per hour)	Effectiveness: 30 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Avoid contact with eyes.	
In case of potential exposure:, Use	

to Regulation (EC) No 1907/2006.

Date / Revised: 11.02.2022 Version: 2.0
Date previous version: 07.08.2020 Previous version: 1.0

Date / First version: 07.08.2020 Product: **Adipic Acid - G**

(ID no. 30042497/SDS_GEN_IT/EN)

suitable eye protection.		
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	0,0549 mg/kg bw/day	
Risk Characterization Ratio (RCR)	0,002612	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker	
	Worker - inhalation, long-term - systemic	
Exposure estimate	0,0852 mg/m ³	
Risk Characterization Ratio (RCR)	0,00115	
Guidance to Downstream Users		
For scaling see: http://www.ecetoc.org	/tra	

Contributing exposure scenario	
Use descriptors covered	PROC3: Use in closed batch process (synthesis or formulation). Use domain: industrial
Operational conditions	
Concentration of the substance	adipic acid Content: >= 0 % - <= 5 %
Physical state	liquid
Vapour pressure of the substance during use	39,959549 Pa
Process temperature	40 °C
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
	Operation is carried out at ambient or elevated temperatures
Risk Management Measures	
Wear suitable respiratory protection.	Effectiveness: 90 %
Provide a good standard of general ventilation (not less than 3 - 5 air changes per hour)	Effectiveness: 30 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Avoid contact with eyes.	
In case of potential exposure:, Use suitable eye protection.	
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	0,0274 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,001306
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker

to Regulation (EC) No 1907/2006.

Date / Revised: 11.02.2022 Version: 2.0
Date previous version: 07.08.2020 Previous version: 1.0

Date / First version: 07.08.2020 Product: **Adipic Acid - G**

(ID no. 30042497/SDS_GEN_IT/EN)

Date of print 17.10.2025

	Worker - inhalation, long-term - systemic	
Exposure estimate	0,2557 mg/m³	
Risk Characterization Ratio (RCR)	0,003451	
Guidance to Downstream Users		
For scaling see: http://www.ecetoc.org/tra		

Contributing exposure scenario		
Use descriptors covered	PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises. Use domain: industrial	
Operational conditions		
Concentration of the substance	adipic acid Content: >= 0 % - <= 5 %	
Physical state	liquid	
Vapour pressure of the substance during use	39,959549 Pa	
Process temperature	40 °C	
Duration and Frequency of activity	60 min 5 days per week	
Indoor/Outdoor	Indoor	
	Operation is carried out at ambient or elevated temperatures	
Risk Management Measures		
Wear suitable respiratory protection.	Effectiveness: 90 %	
Provide a good standard of general ventilation (not less than 3 - 5 air changes per hour)	Effectiveness: 30 %	
Use suitable chemically resistant gloves.	Effectiveness: 80 %	
Avoid contact with eyes.		
In case of potential exposure:, Use suitable eye protection.		
Exposure estimate and reference to i		
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker	
	Worker - dermal, long-term - systemic	
Exposure estimate	0,2743 mg/kg bw/day	
Risk Characterization Ratio (RCR)	0,013061	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker	
Evnosura astimata	Worker - inhalation, long-term - systemic 0,0852 mg/m³	
Exposure estimate Risk Characterization Ratio (RCR)	0,00115	
Guidance to Downstream Users	[0,00113	
For scaling see: http://www.ecetoc.org/t	ra	

Contributing exposure scenario

to Regulation (EC) No 1907/2006.

Date / Revised: 11.02.2022 Version: 2.0
Date previous version: 07.08.2020 Previous version: 1.0
Date / First version: 07.08.2020

Product: Adipic Acid - G

(ID no. 30042497/SDS_GEN_IT/EN)

Use descriptors covered	PROC5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact). Use domain: industrial
Operational conditions	
Concentration of the substance	adipic acid Content: >= 0 % - <= 5 %
Physical state	liquid
Vapour pressure of the substance during use	39,959549 Pa
Process temperature	40 °C
Duration and Frequency of activity	60 min 5 days per week
Indoor/Outdoor	Indoor
	Operation is carried out at ambient or elevated temperatures
Risk Management Measures	
Local exhaust ventilation	Effectiveness: 90 %
Wear suitable respiratory protection.	Effectiveness: 90 %
Provide a good standard of general ventilation (not less than 3 - 5 air changes per hour)	Effectiveness: 30 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Avoid contact with eyes.	
In case of potential exposure:, Use suitable eye protection.	
Exposure estimate and reference to	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic
Exposure estimate	0,5486 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,026122
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	0,0085 mg/m³
Risk Characterization Ratio (RCR)	0,000115
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/	tra

Contributing exposure scenario	
	PROC7: Industrial spraying
Use descriptors covered	Use domain: industrial
Operational conditions	
Concentration of the substance	adipic acid

to Regulation (EC) No 1907/2006.

Date / Revised: 11.02.2022 Version: 2.0
Date previous version: 07.08.2020 Previous version: 1.0

Date / First version: 07.08.2020 Product: **Adipic Acid - G**

(ID no. 30042497/SDS_GEN_IT/EN)

	Content: >= 0 % - <= 50 %
Physical state	liquid
Vapour pressure of the substance during use	39,959549 Pa
Process temperature	40 °C
Duration and Frequency of activity	60 min 5 days per week
Indoor/Outdoor	Indoor
	Operation is carried out at ambient or elevated temperatures
Risk Management Measures	
Local exhaust ventilation	Effectiveness: 95 %
Wear suitable respiratory protection.	Effectiveness: 90 %
Provide a good standard of general ventilation (not less than 3 - 5 air changes per hour)	Effectiveness: 30 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Avoid contact with eyes.	
In case of potential exposure:, Use	
suitable eye protection.	
Exposure estimate and reference to	
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	4,2857 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,204082
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	0,2131 mg/m³
Risk Characterization Ratio (RCR)	0,002876
Guidance to Downstream Users	
	tra Please note that a modified version has been used (see
exposure estimates)	

Contributing exposure scenario	
Use descriptors covered	PROC8a: Transfer of substance or preparation (charging/discharging) from/to ves-sels/large containers at non-dedicated facilities Use domain: industrial
Operational conditions	
Concentration of the substance	adipic acid

to Regulation (EC) No 1907/2006.

Date / Revised: 11.02.2022 Version: 2.0
Date previous version: 07.08.2020 Previous version: 1.0

Date / First version: 07.08.2020 Product: **Adipic Acid - G**

(ID no. 30042497/SDS_GEN_IT/EN)

	Content: >= 0 % - <= 5 %
Physical state	liquid
Vapour pressure of the substance during use	39,959549 Pa
Process temperature	40 °C
Duration and Frequency of activity	60 min 5 days per week
Indoor/Outdoor	Indoor
	Operation is carried out at ambient or elevated temperatures
Risk Management Measures	
Wear suitable respiratory protection.	Effectiveness: 90 %
Provide a good standard of general ventilation (not less than 3 - 5 air changes per hour)	Effectiveness: 30 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Avoid contact with eyes.	
In case of potential exposure:, Use suitable eye protection.	
Exposure estimate and reference to it	ts source
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic
Exposure estimate	0,5486 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,026122
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	0,1705 mg/m³
Risk Characterization Ratio (RCR)	0,002301
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/t	ra

Contributing exposure scenario		
Use descriptors covered	PROC8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities Use domain: industrial	
Operational conditions		
Concentration of the substance	adipic acid Content: >= 0 % - <= 5 %	
Physical state	liquid	
Vapour pressure of the substance during use	39,959549 Pa	
Process temperature	40 °C	

to Regulation (EC) No 1907/2006.

Date / Revised: 11.02.2022 Version: 2.0
Date previous version: 07.08.2020 Previous version: 1.0

Date / First version: 07.08.2020 Product: **Adipic Acid - G**

(ID no. 30042497/SDS_GEN_IT/EN)

Duration and Frequency of activity	60 min 5 days per week
Indoor/Outdoor	Indoor
	Operation is carried out at ambient or elevated
	temperatures
Risk Management Measures	
Wear suitable respiratory protection.	Effectiveness: 90 %
Provide a good standard of general ventilation (not less than 3 - 5 air changes per hour)	Effectiveness: 30 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Avoid contact with eyes.	
In case of potential exposure:, Use	
suitable eye protection.	
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	0,5486 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,026122
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	0,0852 mg/m ³
Risk Characterization Ratio (RCR)	0,00115
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/t	ra

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	adipic acid Content: >= 0 % - <= 5 %
Physical state	liquid
Vapour pressure of the substance during use	39,959549 Pa
Process temperature	40 °C
Duration and Frequency of activity	60 min 5 days per week
Indoor/Outdoor	Indoor
	Operation is carried out at ambient or elevated temperatures
Risk Management Measures	

to Regulation (EC) No 1907/2006.

Date / Revised: 11.02.2022 Version: 2.0
Date previous version: 07.08.2020 Previous version: 1.0

Date / First version: 07.08.2020 Product: **Adipic Acid - G**

(ID no. 30042497/SDS_GEN_IT/EN)

Wear suitable respiratory protection.	Effectiveness: 90 %
Provide a good standard of general	
ventilation (not less than 3 - 5 air	Effectiveness: 30 %
changes per hour)	
Use suitable chemically resistant	Effectiveness: 80 %
gloves.	Lifectiveriess. 60 76
Avoid contact with eyes.	
In case of potential exposure:, Use	
suitable eye protection.	
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	0,2743 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,013061
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	0,0852 mg/m ³
Risk Characterization Ratio (RCR)	0,00115
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

Contributing exposure scenario	
Contributing exposure scenario	DDOC10: Pollor application or brushing
Llas descriptors severed	PROC10: Roller application or brushing Use domain: industrial
Use descriptors covered	Ose domain. industrial
Operational conditions	
	adipic acid
Concentration of the substance	Content: >= 0 % - <= 5 %
Physical state	liquid
Vapour pressure of the substance	39,959549 Pa
during use	
Process temperature	40 °C
- Toodoo tomporataro	
Duration and Frequency of activity	60 min 5 days per week
Indoor/Outdoor	Indoor
	Operation is carried out at ambient or elevated
	temperatures
Risk Management Measures	
Wear suitable respiratory protection.	Effectiveness: 90 %
Provide a good standard of general	
ventilation (not less than 3 - 5 air	Effectiveness: 30 %
changes per hour)	
Use suitable chemically resistant	Effectiveness: 80 %
gloves.	
Avoid contact with eyes.	
In case of potential exposure:, Use	

to Regulation (EC) No 1907/2006.

Date / Revised: 11.02.2022 Version: 2.0
Date previous version: 07.08.2020 Previous version: 1.0

Date / First version: 07.08.2020 Product: **Adipic Acid - G**

(ID no. 30042497/SDS_GEN_IT/EN)

suitable eye protection.		
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	1,0971 mg/kg bw/day	
Risk Characterization Ratio (RCR)	0,052245	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker	
	Worker - inhalation, long-term - systemic	
Exposure estimate	0,1705 mg/m³	
Risk Characterization Ratio (RCR)	0,002301	
Guidance to Downstream Users		
For scaling see: http://www.ecetoc.org/tra		

Contributing exposure scenario		
Use descriptors covered	PROC13: Treatment of articles by dipping and pouring. Use domain: industrial	
Operational conditions	1	
Concentration of the substance	adipic acid Content: >= 0 % - <= 5 %	
Physical state	liquid	
Vapour pressure of the substance during use	39,959549 Pa	
Process temperature	40 °C	
Duration and Frequency of activity	60 min 5 days per week	
Indoor/Outdoor	Indoor	
	Operation is carried out at ambient or elevated temperatures	
Risk Management Measures		
Wear suitable respiratory protection.	Effectiveness: 90 %	
Provide a good standard of general ventilation (not less than 3 - 5 air changes per hour)	Effectiveness: 30 %	
Use suitable chemically resistant gloves.	Effectiveness: 80 %	
Avoid contact with eyes.		
In case of potential exposure:, Use suitable eye protection.		
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	0,5486 mg/kg bw/day	
Risk Characterization Ratio (RCR)	0,026122	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker	
	Worker - inhalation, long-term - systemic	

to Regulation (EC) No 1907/2006.

Date / Revised: 11.02.2022 Version: 2.0
Date previous version: 07.08.2020 Previous version: 1.0

Date / First version: 07.08.2020 Product: **Adipic Acid - G**

(ID no. 30042497/SDS_GEN_IT/EN)

Date of print 17.10.2025

Exposure estimate	0,1705 mg/m³	
Risk Characterization Ratio (RCR)	0,002301	
Guidance to Downstream Users		
For scaling see: http://www.ecetoc.org/tra		

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3. Short title of exposure scenario

Use as an intermediate, Use as Monomer ERC6a, ERC6c, ERC6d; PROC1, PROC2, PROC3, PROC4, PROC8a, PROC8b, PROC9

Control of exposure and risk management measures

Contributing exposure scenario		
Use descriptors covered	ERC6a: Industrial use resulting in manufacture of another substance (use of intermediates)	
Operational conditions		
Annual amount per site	75.330.000 kg	
Minimum emission days per year	300	
Emission factor air	0,4 ppm	
Emission factor water	8 ppm	
Emission factor soil	0,1 %	
	Values provided in per mil	I
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
		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)	0,094447	
	Risk from environmental exposure is driven by soil.	
Maximum amount of safe use	2.658,6 t/d	
Risk from environmental exposure is d	riven by soil.	

Contributing exposure scenario

to Regulation (EC) No 1907/2006.

Date / Revised: 11.02.2022 Version: 2.0
Date previous version: 07.08.2020 Previous version: 1.0

Date / First version: 07.08.2020 Product: **Adipic Acid - G**

(ID no. 30042497/SDS_GEN_IT/EN)

Use descriptors covered	ERC6c: Industrial use of m thermoplastics	nonomers for manufacture of	
Operational conditions			
Annual amount per site	75.330.000 kg		
Minimum emission days per year	300	300	
Emission factor air	0,4 ppm		
Emission factor water	8 ppm		
Emission factor soil	0 %		
	Values provided in per mill		
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)	0,094447		
	Risk from environmental exposure is driven by soil.		
	2.658,6		
Maximum amount of safe use	t/d		
Risk from environmental exposure is dr	iven by soil.		

Contributing exposure scenario		
Use descriptors covered	ERC6d: Industrial use of process regulators for polymerisation processes in production of resins, rubbers, polymers	
Operational conditions		
Annual amount used in the EU	75.330.000 kg	
Minimum emission days per year	300	
Emission factor air	0,4 ppm	
Emission factor water	2 ppm	
Emission factor soil	0,025 %	

to Regulation (EC) No 1907/2006.

Date / Revised: 11.02.2022 Version: 2.0
Date previous version: 07.08.2020 Previous version: 1.0

Date / First version: 07.08.2020 Product: **Adipic Acid - G**

(ID no. 30042497/SDS_GEN_IT/EN)

	Values provided in per mill	
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)	0,023682	
, ,	Risk from environmental exposure is driven by soil.	
	10.602,9	
Maximum amount of safe use	t/d	
Risk from environmental exposure is driven by soil.		

Contributing exposure scenario		
Use descriptors covered	PROC1: Use in closed process, no likelihood of exposure. Use domain: industrial	
Operational conditions		
Concentration of the substance	adipic acid Content: >= 0 % - <= 100 %	
Physical state	liquid	
Vapour pressure of the substance during use	39,959549 Pa	
Process temperature	40 °C	
Duration and Frequency of activity	480 min 5 days per week	
Indoor/Outdoor	Indoor	
	Operation is carried out at ambient or elevated temperatures	
Risk Management Measures		
Provide a good standard of general ventilation (not less than 3 - 5 air changes per hour)	Effectiveness: 30 %	
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)	0,001633	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker	

to Regulation (EC) No 1907/2006.

Date / Revised: 11.02.2022 Version: 2.0
Date previous version: 07.08.2020 Previous version: 1.0

Date / First version: 07.08.2020 Product: **Adipic Acid - G**

(ID no. 30042497/SDS_GEN_IT/EN)

Date of print 17.10.2025

	Worker - inhalation, long-term - systemic	
Exposure estimate	0,0426 mg/m³	
Risk Characterization Ratio (RCR)	0,000575	
Guidance to Downstream Users		
For scaling see: http://www.ecetoc.org/tra		

Contributing exposure scenario	
Use descriptors covered	PROC2: Use in closed, continuous process with occasional controlled exposure. Use domain: industrial
Operational conditions	<u> </u>
Concentration of the substance	adipic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	39,959549 Pa
Process temperature	40 °C
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
	Operation is carried out at ambient or elevated temperatures
Risk Management Measures	
Wear suitable respiratory protection.	Effectiveness: 90 %
Provide a good standard of general ventilation (not less than 3 - 5 air changes per hour)	Effectiveness: 30 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Avoid contact with eyes.	
In case of potential exposure:, Use suitable eye protection.	
Exposure estimate and reference to	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic
Exposure estimate	0,2743 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,013061
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker Worker - inhalation, long-term - systemic
Exposure estimate	0,4262 mg/m ³
Risk Characterization Ratio (RCR)	0,005752
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org	/tra

Contributing exposure scenario

to Regulation (EC) No 1907/2006.

Date / Revised: 11.02.2022 Version: 2.0
Date previous version: 07.08.2020 Previous version: 1.0

Date / First version: 07.08.2020 Product: **Adipic Acid - G**

(ID no. 30042497/SDS_GEN_IT/EN)

Use descriptors covered	PROC3: Use in closed batch process (synthesis or formulation). Use domain: industrial
Operational conditions	
Concentration of the substance	adipic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	39,959549 Pa
Process temperature	40 °C
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
	Operation is carried out at ambient or elevated temperatures
Risk Management Measures	
Wear suitable respiratory protection.	Effectiveness: 90 %
Provide a good standard of general ventilation (not less than 3 - 5 air changes per hour)	Effectiveness: 30 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Avoid contact with eyes.	
In case of potential exposure:, Use suitable eye protection.	
Exposure estimate and reference to	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic
Exposure estimate	0,1371 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,006531
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
Evacure estimate	Worker - inhalation, long-term - systemic
Exposure estimate	1,2787 mg/m³ 0,017257
Risk Characterization Ratio (RCR) Guidance to Downstream Users	0,017237
For scaling see: http://www.ecetoc.org/	tra
. 5. 55aming 555. http://www.sociob.org/	

Contributing exposure scenario	
Use descriptors covered	PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises. Use domain: industrial
Operational conditions	
Concentration of the substance	adipic acid Content: >= 0 % - <= 100 %

to Regulation (EC) No 1907/2006.

Date / Revised: 11.02.2022 Version: 2.0
Date previous version: 07.08.2020 Previous version: 1.0

Date / First version: 07.08.2020 Product: **Adipic Acid - G**

(ID no. 30042497/SDS_GEN_IT/EN)

Physical state	liquid	
Vapour pressure of the substance during use	39,959549 Pa	
Process temperature	40 °C	
Duration and Frequency of activity	60 min 5 days per week	
Indoor/Outdoor	Indoor	
	Operation is carried out at ambient or elevated temperatures	
Risk Management Measures		
Wear suitable respiratory protection.	Effectiveness: 90 %	
Provide a good standard of general		
ventilation (not less than 3 - 5 air	Effectiveness: 30 %	
changes per hour)		
Use suitable chemically resistant	Effectiveness: 80 %	
gloves.		
Avoid contact with eyes.		
In case of potential exposure:, Use		
suitable eye protection.	## A A A A A A A A A A A A A A A A A A	
Exposure estimate and reference to a Assessment method		
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker Worker - dermal, long-term - systemic	
Exposure estimate	1,3714 mg/kg bw/day	
Risk Characterization Ratio (RCR)	0,065306	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker	
7.00000ment metrod	Worker - inhalation, long-term - systemic	
Exposure estimate	0,4262 mg/m ³	
Risk Characterization Ratio (RCR)	0.005752	
Guidance to Downstream Users	1 -1	
For scaling see: http://www.ecetoc.org/t	ra	

Contributing exposure scenario		
Use descriptors covered	PROC8a: Transfer of substance or preparation (charging/discharging) from/to ves-sels/large containers at non-dedicated facilities Use domain: industrial	
Operational conditions		
Concentration of the substance	adipic acid Content: >= 0 % - <= 100 %	
Physical state	Solid, low dustiness	
Vapour pressure of the substance during use	39,959549 Pa	
Process temperature	40 °C	

to Regulation (EC) No 1907/2006.

Date / Revised: 11.02.2022 Version: 2.0
Date previous version: 07.08.2020 Previous version: 1.0

Date / First version: 07.08.2020 Product: **Adipic Acid - G**

(ID no. 30042497/SDS_GEN_IT/EN)

Duration and Frequency of activity	480 min 5 days per week	
Indoor/Outdoor	Indoor	
	Operation is carried out at ambient or elevated temperatures	
Risk Management Measures		
Wear suitable respiratory protection.	Effectiveness: 90 %	
Provide a good standard of general ventilation (not less than 3 - 5 air changes per hour)	Effectiveness: 30 %	
Use suitable chemically resistant gloves.	Effectiveness: 80 %	
Avoid contact with eyes.		
In case of potential exposure:, Use		
suitable eye protection.		
Exposure estimate and reference to it	ts source	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker	
	Worker - dermal, long-term - systemic	
Exposure estimate	2,7429 mg/kg bw/day	
Risk Characterization Ratio (RCR)	0,130612	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker	
	Worker - inhalation, long-term - systemic	
Exposure estimate	0,035 mg/m³	
Risk Characterization Ratio (RCR)	0,000472	
Guidance to Downstream Users		
For scaling see: http://www.ecetoc.org/t	ra	

Contributing exposure scenario		
Use descriptors covered	PROC8a: Transfer of substance or preparation (charging/discharging) from/to ves-sels/large containers at non-dedicated facilities Use domain: industrial	
Operational conditions		
Concentration of the substance	adipic acid Content: >= 0 % - <= 100 %	
Physical state	liquid	
Vapour pressure of the substance during use	39,959549 Pa	
Process temperature	40 °C	
Duration and Frequency of activity	15 min 5 days per week	
Indoor/Outdoor	Indoor	
	Operation is carried out at ambient or elevated temperatures	
Risk Management Measures		

to Regulation (EC) No 1907/2006.

Date / Revised: 11.02.2022 Version: 2.0
Date previous version: 07.08.2020 Previous version: 1.0

Date / First version: 07.08.2020 Product: **Adipic Acid - G**

(ID no. 30042497/SDS_GEN_IT/EN)

Wear suitable respiratory protection.	Effectiveness: 90 %	
Provide a good standard of general		
ventilation (not less than 3 - 5 air	Effectiveness: 30 %	
changes per hour)		
Use suitable chemically resistant	Effectiveness: 80 %	
gloves.	LifeCliveriess. 00 70	
Avoid contact with eyes.		
In case of potential exposure:, Use		
suitable eye protection.		
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	2,7429 mg/kg bw/day	
Risk Characterization Ratio (RCR)	0,130612	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker	
	Worker - inhalation, long-term - systemic	
Exposure estimate	0,4262 mg/m³	
Risk Characterization Ratio (RCR)	0,005752	
Guidance to Downstream Users		
For scaling see: http://www.ecetoc.org/t	ra	

Contributing exposure scenario		
Use descriptors covered	PROC8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities Use domain: industrial	
Operational conditions		
Concentration of the substance	adipic acid Content: >= 0 % - <= 100 %	
Physical state	Solid, low dustiness	
Vapour pressure of the substance during use	39,959549 Pa	
Process temperature	40 °C	
Duration and Frequency of activity	480 min 5 days per week	
Indoor/Outdoor	Indoor	
	Operation is carried out at ambient or elevated temperatures	
Risk Management Measures		
Wear suitable respiratory protection.	Effectiveness: 90 %	
Provide a good standard of general ventilation (not less than 3 - 5 air changes per hour)	Effectiveness: 30 %	
Use suitable chemically resistant gloves.	Effectiveness: 80 %	

to Regulation (EC) No 1907/2006.

Date / Revised: 11.02.2022 Version: 2.0
Date previous version: 07.08.2020 Previous version: 1.0

Date / First version: 07.08.2020 Product: **Adipic Acid - G**

(ID no. 30042497/SDS_GEN_IT/EN)

Avoid contact with eyes.		
In case of potential exposure:, Use		
suitable eye protection.		
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	2,7429 mg/kg bw/day	
Risk Characterization Ratio (RCR)	0,130612	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker	
	Worker - inhalation, long-term - systemic	
Exposure estimate	0,007 mg/m ³	
Risk Characterization Ratio (RCR)	0,000094	
Guidance to Downstream Users		
For scaling see: http://www.ecetoc.org/t	ra	

Contributing exposure scenario		
Use descriptors covered	PROC8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities Use domain: industrial	
Operational conditions		
Concentration of the substance	adipic acid Content: >= 0 % - <= 100 %	
Physical state	liquid	
Vapour pressure of the substance during use	39,959549 Pa	
Process temperature	40 °C	
Duration and Frequency of activity	60 min 5 days per week	
Indoor/Outdoor	Indoor	
	Operation is carried out at ambient or elevated temperatures	
Risk Management Measures		
Wear suitable respiratory protection.	Effectiveness: 90 %	
Provide a good standard of general ventilation (not less than 3 - 5 air changes per hour)	Effectiveness: 30 %	
Use suitable chemically resistant gloves.	Effectiveness: 80 %	
Avoid contact with eyes.		
In case of potential exposure:, Use suitable eye protection.		
Exposure estimate and reference to	its source	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker	
	Worker - dermal, long-term - systemic	

to Regulation (EC) No 1907/2006.

Date / Revised: 11.02.2022 Version: 2.0
Date previous version: 07.08.2020 Previous version: 1.0

Date / First version: 07.08.2020 Product: **Adipic Acid - G**

(ID no. 30042497/SDS_GEN_IT/EN)

Exposure estimate	2,7429 mg/kg bw/day	
Risk Characterization Ratio (RCR)	0,130612	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker	
	Worker - inhalation, long-term - systemic	
Exposure estimate	0,4262 mg/m ³	
Risk Characterization Ratio (RCR)	0,005752	
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	adipic acid Content: >= 0 % - <= 100 %	
Physical state	Solid, low dustiness	
Vapour pressure of the substance during use	39,959549 Pa	
Process temperature	40 °C	
Duration and Frequency of activity	480 min 5 days per week	
Indoor/Outdoor	Indoor	
	Operation is carried out at ambient or elevated temperatures	
Risk Management Measures		
Wear suitable respiratory protection.	Effectiveness: 90 %	
Provide a good standard of general ventilation (not less than 3 - 5 air changes per hour)	Effectiveness: 30 %	
Use suitable chemically resistant gloves.	Effectiveness: 80 %	
Avoid contact with eyes.		
In case of potential exposure:, Use suitable eye protection.		
Exposure estimate and reference to		
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker	
	Worker - dermal, long-term - systemic	
Exposure estimate	1,3714 mg/kg bw/day	
Risk Characterization Ratio (RCR)	0,065306	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker	
	Worker - inhalation, long-term - systemic	
Exposure estimate	0,007 mg/m³	
Risk Characterization Ratio (RCR)	0,000094	
Guidance to Downstream Users		

to Regulation (EC) No 1907/2006.

Date / Revised: 11.02.2022 Version: 2.0
Date previous version: 07.08.2020 Previous version: 1.0

Date / First version: 07.08.2020 Product: **Adipic Acid - G**

(ID no. 30042497/SDS_GEN_IT/EN)

Date of print 17.10.2025

For scaling see: http://www.ecetoc.org/tra

Contributing exposure scenario		
PROC9: Transfer of substance or preparation into sn		
Use descriptors covered	containers (dedicated filling line, including weighing).	
osc accomptors covered	Use domain: industrial	
Operational conditions		
Operational conditions	adipic acid	
Concentration of the substance	Content: >= 0 % - <= 100 %	
Concentration of the Substance	Content. >= 0 /0 <= 100 /0	
Physical state	liquid	
Vapour pressure of the substance	39,959549 Pa	
during use		
Process temperature	40 °C	
<u>'</u>	60 min 5 days per week	
Duration and Frequency of activity	oo miii o dayo por wook	
Indoor/Outdoor	Indoor	
	Operation is carried out at ambient or elevated	
	temperatures	
Risk Management Measures		
Wear suitable respiratory protection.	Effectiveness: 90 %	
Provide a good standard of general		
ventilation (not less than 3 - 5 air	Effectiveness: 30 %	
changes per hour)		
Use suitable chemically resistant	Effectiveness: 80 %	
gloves. Avoid contact with eyes.		
In case of potential exposure:, Use		
suitable eye protection.		
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	
Risk Characterization Ratio (RCR)	0,065306	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker	
	Worker - inhalation, long-term - systemic	
Exposure estimate	0,4262 mg/m³	
Risk Characterization Ratio (RCR)	0,005752	
Guidance to Downstream Users		
For scaling see: http://www.ecetoc.org/t	ra	

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4. Short title of exposure scenario

Production of Machine dish washing products (tablets)

to Regulation (EC) No 1907/2006.

Date / Revised: 11.02.2022 Version: 2.0
Date previous version: 07.08.2020 Previous version: 1.0

Date / First version: 07.08.2020 Product: **Adipic Acid - G**

(ID no. 30042497/SDS_GEN_IT/EN)

Date of print 17.10.2025

ERC5; PROC2, PROC5, PROC8a, PROC13, PROC14

Control of exposure and risk management measures

Contributing exposure scenario			
Use descriptors covered	ERC5: Industrial use resulting in inclusion into or onto a matrix		
Operational conditions			
Annual amount per site	2.430.000 kg	2.430.000 kg	
Minimum emission days per year	100	100	
Emission factor air	2 ppm	2 ppm	
Emission factor water	0,004 %		
Emission factor soil	1 % Values provided in per mill		
Receive Surf. Water (Flow Rate).	18.000 m3/d		
Dilution factor river	10	10	
Dilution factor coast	100	100	
Risk Management Measures			
Type of STP		Municipal STP	
Assumed sewage treatment plant flow		2.000 m3/d	
Exposure estimate and reference to			
Assessment method		TOC TRA v3.0, Environment	
Risk Characterization Ratio (RCR)	0,015216		
	Risk from environment	al exposure is driven by soil.	
	1.597		
Maximum amount of safe use	t/d		
Risk from environmental exposure is	driven by soil.		

Contributing exposure scenario	
Use descriptors covered	PROC2: Use in closed, continuous process with occasional controlled exposure. Use domain: industrial
Operational conditions	
	adipic acid
Concentration of the substance	Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance	39,959549 Pa

to Regulation (EC) No 1907/2006.

Date / Revised: 11.02.2022 Version: 2.0
Date previous version: 07.08.2020 Previous version: 1.0

Date / First version: 07.08.2020 Product: **Adipic Acid - G**

(ID no. 30042497/SDS_GEN_IT/EN)

during use	
Process temperature	40 °C
Duration and Frequency of activity	240 min 5 days per week
Indoor/Outdoor	Indoor
	Operation is carried out at ambient or elevated temperatures
Risk Management Measures	
Wear suitable respiratory protection.	Effectiveness: 90 %
Provide a good standard of general ventilation (not less than 3 - 5 air changes per hour)	Effectiveness: 30 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Avoid contact with eyes.	
In case of potential exposure:, Use suitable eye protection.	
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	0,2743 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,013061
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	0,2557 mg/m ³
Risk Characterization Ratio (RCR)	0,003451
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 for formulation of preparations and articles (multistage and/or significant contact). Use domain: industrial
Operational conditions	
Concentration of the substance	adipic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	39,959549 Pa
Process temperature	40 °C
Duration and Frequency of activity	60 min 5 days per week
Indoor/Outdoor	Indoor

to Regulation (EC) No 1907/2006.

Date / Revised: 11.02.2022 Version: 2.0
Date previous version: 07.08.2020 Previous version: 1.0

Date / First version: 07.08.2020 Product: **Adipic Acid - G**

(ID no. 30042497/SDS_GEN_IT/EN)

	Operation is carried out at ambient or elevated temperatures	
Risk Management Measures		
Wear suitable respiratory protection.	Effectiveness: 90 %	
Provide a good standard of general ventilation (not less than 3 - 5 air changes per hour)	Effectiveness: 30 %	
Use suitable chemically resistant gloves.	Effectiveness: 80 %	
Avoid contact with eyes.		
In case of potential exposure:, Use		
suitable eye protection.		
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	2,7429 mg/kg bw/day	
Risk Characterization Ratio (RCR)	0,130612	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker	
	Worker - inhalation, long-term - systemic	
Exposure estimate	0,4262 mg/m ³	
Risk Characterization Ratio (RCR)	0,005752	
Guidance to Downstream Users		
For scaling see: http://www.ecetoc.org/	ra	

Contributing exposure scenario		
Use descriptors covered	PROC8a: Transfer of substance or preparation (charging/discharging) from/to ves-sels/large containers a non-dedicated facilities Use domain: industrial	
Operational conditions		
Concentration of the substance	adipic acid Content: >= 0 % - <= 100 %	
Physical state	liquid	
Vapour pressure of the substance during use	39,959549 Pa	
Process temperature	40 °C	
Duration and Frequency of activity	15 min 5 days per week	
Indoor/Outdoor	Indoor	
	Operation is carried out at ambient or elevated temperatures	
Risk Management Measures		
Wear suitable respiratory protection.	Effectiveness: 90 %	
Provide a good standard of general ventilation (not less than 3 - 5 air	Effectiveness: 30 %	

to Regulation (EC) No 1907/2006.

Date / Revised: 11.02.2022 Version: 2.0
Date previous version: 07.08.2020 Previous version: 1.0

Date / First version: 07.08.2020 Product: **Adipic Acid - G**

(ID no. 30042497/SDS_GEN_IT/EN)

changes per hour)	
Use suitable chemically resistant	Effectiveness: 80 %
gloves.	Lifectiveriess. 00 /0
Avoid contact with eyes.	
In case of potential exposure:, Use	
suitable eye protection.	
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	2,7429 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,130612
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	0,4262 mg/m ³
Risk Characterization Ratio (RCR)	0,005752
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/t	ra

Contributing exposure scenario	
Use descriptors covered	PROC13: Treatment of articles by dipping and pouring. Use domain: industrial
Operational conditions	1
Concentration of the substance	adipic acid Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	39,959549 Pa
Process temperature	40 °C
Duration and Frequency of activity	15 min 5 days per week
Indoor/Outdoor	Indoor
	Operation is carried out at ambient or elevated temperatures
Risk Management Measures	
Wear suitable respiratory protection.	Effectiveness: 90 %
Provide a good standard of general ventilation (not less than 3 - 5 air changes per hour)	Effectiveness: 30 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Avoid contact with eyes.	
In case of potential exposure:, Use	
suitable eye protection.	
Exposure estimate and reference to	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker

to Regulation (EC) No 1907/2006.

Date / Revised: 11.02.2022 Version: 2.0
Date previous version: 07.08.2020 Previous version: 1.0

Date / First version: 07.08.2020 Product: **Adipic Acid - G**

(ID no. 30042497/SDS_GEN_IT/EN)

	Worker - dermal, long-term - systemic
Exposure estimate	2,7429 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,130612
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	0,4262 mg/m³
Risk Characterization Ratio (RCR)	0,005752
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/	'tra

Contributing exposure scenario		
Use descriptors covered	PROC14: Production of preparations or articles by tabletting, compression, extrusion, pelettisation. Use domain: industrial	
Operational conditions		
Concentration of the substance	adipic acid Content: >= 0 % - <= 100 %	
Physical state	Solid, low dustiness	
Vapour pressure of the substance during use	39,959549 Pa	
Process temperature	40 °C	
Duration and Frequency of activity	480 min 5 days per week	
Indoor/Outdoor	Indoor	
	Operation is carried out at ambient or elevated temperatures	
Risk Management Measures		
Wear suitable respiratory protection.	Effectiveness: 90 %	
Provide a good standard of general ventilation (not less than 3 - 5 air changes per hour)	Effectiveness: 30 %	
Use suitable chemically resistant gloves.	Effectiveness: 80 %	
Avoid contact with eyes.		
In case of potential exposure:, Use suitable eye protection.		
Exposure estimate and reference to		
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker	
	Worker - dermal, long-term - systemic	
Exposure estimate	0,6857 mg/kg bw/day	
Risk Characterization Ratio (RCR)	0,032653	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker	
Evanceura actionata	Worker - inhalation, long-term - systemic	
Exposure estimate	0,007 mg/m³	
Risk Characterization Ratio (RCR)	0,000094	

to Regulation (EC) No 1907/2006.

Date / Revised: 11.02.2022 Version: 2.0
Date previous version: 07.08.2020 Previous version: 1.0

Date / First version: 07.08.2020 Product: **Adipic Acid - G**

(ID no. 30042497/SDS_GEN_IT/EN)

Date of print 17.10.2025

Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

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5. Short title of exposure scenario

Use in Flue Gas Desulphurization

ERC6b; PROC16

Control of exposure and risk management measures

Contributing exposure scenario		
Use descriptors covered	ERC6b: Industrial use of re	active processing aids
Operational conditions		
Annual amount per site	540.000 kg	
Minimum emission days per year	20	
Emission factor air	0,002 %	
Emission factor water	0,2 %	
Emission factor soil	0,025 %	
Receive Surf. Water (Flow Rate).	18.000 m3/d	
Dilution factor river	10	
Dilution factor coast	100	
Risk Management Measures		
Type of STP		
Assumed sewage treatment plant flow (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)	0,168903	
	Risk from environmental exposure is driven by soil.	
	159.855,5	
Maximum amount of safe use	kg/d	
Risk from environmental exposure is dri	ven by soil.	

Contributing exposure scenario	
Use descriptors covered	PROC16: Using material as fuel sources, limited exposure to unburned product to be expected. Use domain: industrial

to Regulation (EC) No 1907/2006.

Date / Revised: 11.02.2022 Version: 2.0
Date previous version: 07.08.2020 Previous version: 1.0

Date / First version: 07.08.2020 Product: **Adipic Acid - G**

(ID no. 30042497/SDS_GEN_IT/EN)

Date of print 17.10.2025

Operational conditions	
	adipic acid
Concentration of the substance	Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	39,959549 Pa
Process temperature	40 °C
Duration and Frequency of activity	60 min 5 days per week
Indoor/Outdoor	Indoor
	Operation is carried out at ambient or elevated temperatures
Risk Management Measures	
Wear suitable respiratory protection.	Effectiveness: 90 %
Provide a good standard of general	
ventilation (not less than 3 - 5 air	Effectiveness: 30 %
changes per hour)	
Use suitable chemically resistant	Effectiveness: 80 %
gloves.	Elicotiverioss. 60 70
Avoid contact with eyes.	
In case of potential exposure:, Use	
suitable eye protection.	
Exposure estimate and reference to	
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)	0,003265
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
-	Worker - inhalation, long-term - systemic
Exposure estimate	0,0852 mg/m³
Risk Characterization Ratio (RCR)	0,00115
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/	tra

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6. Short title of exposure scenario

Use as laboratory reagent/agent ERC8a, ERC8b; PROC15

Control of exposure and risk management measures

Contributing exposure scenario	
Use descriptors covered	ERC8a: Wide dispersive indoor use of processing aids in open systems

to Regulation (EC) No 1907/2006.

Date / Revised: 11.02.2022 Version: 2.0
Date previous version: 07.08.2020 Previous version: 1.0

Date / First version: 07.08.2020 Product: **Adipic Acid - G**

(ID no. 30042497/SDS_GEN_IT/EN)

Operational conditions		
Annual amount used in the EU	1.000 kg	
Minimum emission days per year	365	
Emission factor air	1 %	
Emission factor water	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		
Type of STP		Municipal STP
Assumed sewage treatment plant flow (Assumed sewage treatment plant flow (m3/d) 2.000	
Exposure estimate and reference to it	its source	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Environment	
Risk Characterization Ratio (RCR)	0,006264	
	Risk from environmental exposure is driven by soil.	
	0,874819	
Maximum amount of safe use	kg/d	
Risk from environmental exposure is driven by soil.		

Contributing exposure scenario	
Use descriptors covered	ERC8b: Wide dispersive indoor use of reactive substances in open systems
Operational conditions	
Annual amount used in the EU	1.000 kg
Minimum emission days per year	365
Emission factor air	0,001 %
Emission factor water	0,08 %
Emission factor soil	0 %
Receive Surf. Water (Flow Rate).	18.000 m3/d
Dilution factor river	10

to Regulation (EC) No 1907/2006.

Date / Revised: 11.02.2022 Version: 2.0
Date previous version: 07.08.2020 Previous version: 1.0

Date / First version: 07.08.2020 Product: **Adipic Acid - G**

(ID no. 30042497/SDS_GEN_IT/EN)

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)	0,000428	
	Risk from environmental ex	xposure is driven by freshwater
	sediment.	
	12,8	
Maximum amount of safe use	kg/d	
Risk from environmental exposure is driven by freshwater sediment.		

Contributing exposure scenario	
Contributing exposure scenario	DDOC45. Has a laboratory reagant
Hee deceriators covered	PROC15: Use a laboratory reagent.
Use descriptors covered	Use domain: professional
Operational conditions	
	adipic acid
Concentration of the substance	Content: >= 0 % - <= 100 %
Physical state	Solid, low dustiness
Vapour pressure of the substance	39,959549 Pa
during use	
Process temperature	40 °C
1 Tocess temperature	
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
	Operation is carried out at ambient or elevated
	temperatures
Risk Management Measures	
Local exhaust ventilation	Effectiveness: 80 %
Use suitable chemically resistant	Effectiveness: 80 %
gloves.	Effectiveness. 00 70
Provide a good standard of general	
ventilation (not less than 3 - 5 air	Effectiveness: 30 %
changes per hour)	
Avoid contact with eyes.	
In case of potential exposure:, Use	
suitable eye protection.	ita assuras
Exposure estimate and reference to	
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
Exposure estimate	Worker - dermal, long-term - systemic
Exposure estimate	0,0686 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,003265

to Regulation (EC) No 1907/2006.

Date / Revised: 11.02.2022 Version: 2.0
Date previous version: 07.08.2020 Previous version: 1.0

Date / First version: 07.08.2020 Product: **Adipic Acid - G**

(ID no. 30042497/SDS_GEN_IT/EN)

Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker	
	Worker - inhalation, long-term - systemic	
Exposure estimate	0,014 mg/m³	
Risk Characterization Ratio (RCR)	0,000189	
Guidance to Downstream Users		
For scaling see: http://www.ecetoc.org/tra		

Contailenting company constraint	
Contributing exposure scenario	
Han decodintons accounted	PROC15: Use a laboratory reagent.
Use descriptors covered	Use domain: professional
Operational conditions	
	adipic acid
Concentration of the substance	Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance	39,959549 Pa
during use	
Process temperature	40 °C
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
	Operation is carried out at ambient or elevated
	temperatures
Risk Management Measures	
Local exhaust ventilation	Effectiveness: 80 %
Use suitable chemically resistant	Effectiveness: 80 %
gloves.	Lifectiveriess. 60 70
Provide a good standard of general	
ventilation (not less than 3 - 5 air	Effectiveness: 30 %
changes per hour)	
Avoid contact with eyes.	
In case of potential exposure:, Use	
suitable eye protection.	
Exposure estimate and reference to	
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)	0,003265
Assessment method	EASY TRA v4.2, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	4,2625 mg/m³
Risk Characterization Ratio (RCR)	0,057523
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org	y/tra

to Regulation (EC) No 1907/2006.

Date / Revised: 11.02.2022 Version: 2.0
Date previous version: 07.08.2020 Previous version: 1.0

Date / First version: 07.08.2020 Product: **Adipic Acid - G**

(ID no. 30042497/SDS_GEN_IT/EN)

Date of print 17.10.2025

7. Short title of exposure scenario
Use in/as Laundry agents, (use in professional settings)

ERC8a; PROC8b, PROC9

Control of exposure and risk management measures

Contributing exposure scenario			
Use descriptors covered	ERC8a: Wide dispersive i open systems	ndoor use of processing aids in	
Operational conditions			
Annual amount used in the EU	100 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		2.000 m3/d	
Exposure estimate and reference to	its source		
Assessment method	EASY TRA v4.2, ECETO	EASY TRA v4.2, ECETOC TRA v3.0, Environment	
Risk Characterization Ratio (RCR)	0,015651		
	Risk from environmental e	exposure is driven by soil.	
	0,035011		
Maximum amount of safe use	kg/d		
Risk from environmental exposure is o	driven by soil.		

Contributing exposure scenario	
Use descriptors covered	PROC8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities Use domain: professional
Operational conditions	
Concentration of the substance	adipic acid

to Regulation (EC) No 1907/2006.

Date / Revised: 11.02.2022 Version: 2.0
Date previous version: 07.08.2020 Previous version: 1.0

Date / First version: 07.08.2020 Product: **Adipic Acid - G**

(ID no. 30042497/SDS_GEN_IT/EN)

	Content: >= 0 % - <= 13 %
Physical state	Solid, low dustiness
Vapour pressure of the substance during use	39,959549 Pa
Process temperature	40 °C
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
	Operation is carried out at ambient or elevated temperatures
Risk Management Measures	
Wear suitable respiratory protection.	Effectiveness: 90 %
Provide a good standard of general ventilation (not less than 3 - 5 air	Effectiveness: 30 %
changes per hour)	
Use suitable chemically resistant	Effectiveness: 80 %
gloves.	
Avoid contact with eyes.	
In case of potential exposure:, Use suitable eye protection.	
Exposure estimate and reference to	
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	0,3566 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,01698
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	0,0045 mg/m³
Risk Characterization Ratio (RCR)	0,00061
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org exposure estimates)	/tra Please note that a modified version has been used (see

Contributing exposure scenario	
Use descriptors covered	PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing). Use domain: professional
Operational conditions	
	adipic acid
Concentration of the substance	Content: >= 0 % - <= 13 %

to Regulation (EC) No 1907/2006.

Date / Revised: 11.02.2022 Version: 2.0
Date previous version: 07.08.2020 Previous version: 1.0

Date / First version: 07.08.2020 Product: **Adipic Acid - G**

(ID no. 30042497/SDS_GEN_IT/EN)

Date of print 17.10.2025

Physical state	Solid, low dustiness
Vapour pressure of the substance	39,959549 Pa
during use	
Process temperature	40 °C
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
	Operation is carried out at ambient or elevated temperatures
Risk Management Measures	
Wear suitable respiratory protection.	Effectiveness: 90 %
Provide a good standard of general ventilation (not less than 3 - 5 air changes per hour)	Effectiveness: 30 %
Use suitable chemically resistant gloves.	Effectiveness: 80 %
Avoid contact with eyes.	
In case of potential exposure:, Use	
suitable eye protection.	
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.
Evaceure estimate	Worker - dermal, long-term - systemic
Exposure estimate Risk Characterization Ratio (RCR)	0,1783 mg/kg bw/day 0,00849
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	0,0045 mg/m ³
Exposure estimate Risk Characterization Ratio (RCR)	0,00061
Guidance to Downstream Users	0,000001
	/tra Places note that a modified varsion has been used /see
exposure estimates)	/tra Please note that a modified version has been used (see
exposure estimates)	

8. Short title of exposure scenario

Use of Machine dish washing products ERC8a, ERC11a; PC35

Control of exposure and risk management measures

Contributing exposure scenario	
Use descriptors covered	ERC8a: Wide dispersive indoor use of processing aids in
	open systems

to Regulation (EC) No 1907/2006.

Date / Revised: 11.02.2022 Version: 2.0
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Operational conditions		
Annual amount used in the EU	450 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		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)	0,057794	
	Risk from environmental exposure is driven by soil.	
	0,042665	
Maximum amount of safe use	kg/d	
Risk from environmental exposure is driven by soil.		

Contributing exposure scenario		
Use descriptors covered	ERC11a: Wide dispersive indoor use of long-life articles and materials with low release	
Operational conditions		
Annual amount used in the EU	450 kg	
Minimum emission days per year	365	
Emission factor air	0,05 %	
Emission factor water	0,05 %	
Emission factor soil	0 %	
Receive Surf. Water (Flow Rate).	18.000 m3/d	
Dilution factor river	10	

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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)	0,000359	
	Risk from environmental e	xposure is driven by freshwater
	sediment.	
	6,9	
Maximum amount of safe use	kg/d	
Risk from environmental exposure is driven by freshwater sediment.		

Contributing exposure scenario	
Use descriptors covered	PC35: Washing and Cleaning Products (including solvent based products).
Operational conditions	
Concentration of the substance	adipic acid Content: >= 0 % - <= 13 %
Vapour pressure of the substance during use	9,7 Pa
Duration and Frequency of activity	Exposure duration: 6 min 365 uses per year
Indoor/Outdoor	Indoor
Exposed skin area	Two fingertips (2 cm²)
Uptake fraction dermal	100 %
	Amount per use 20 g Relevant for inhalative exposure
	estimates
Exposure estimate and reference to	
Assessment method	EASY TRA v4.2, Other consideration (non-standard tool)
	Consumer - dermal, long-term - systemic
Exposure estimate	2,76 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,368
Assessment method	EASY TRA v4.2, Other consideration (non-standard tool)
	Consumer - inhalation, long-term - systemic
Exposure estimate	0,0001 mg/m³
Risk Characterization Ratio (RCR)	0,000001
Assessment method	EASY TRA v4.2, Other consideration (non-standard tool)
	Consumer - oral, long-term - systemic
Exposure estimate	0,0001 mg/kg bw/day
Risk Characterization Ratio (RCR)	0,000001
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Page: 64/64

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.

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For scaling see: http://www.ecetoc.org	n/tro
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