

Safety data sheet

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

1.1. Product identifier

Code:	20214#000
Product name	LUMOROL 52/P
Chemical name and synonym	Benzenesulfonic acid, C10-13-alkyl derivs., sodium salts (and) Sodium Laureth Sulfate (and) Cocamide DEA (and) Potassium Cocoate (and) Potassium Oleate (and) Cocamidopropyl Betaine (and) Alcohol C12-C14 ethoxylated propoxylated (and) Laureth-7 (and) Aqua

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

Intended use	Blend of anionic, non ionic and amphoteric surfactants, base for laundry detergents.
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1.3. Details of the supplier of the safety data sheet

Name	Zschimmer & Schwarz Italiana S.p.a.	
Full address	via A. Ariotto, 1/C	
District and Country	13038 Tricerro Italia	(VC)
	Tel. 0039 0161 808111	
	Fax 0039 0161 801002	
e-mail address of the competent person responsible for the Safety Data Sheet	e.merlo@zschimmer-schwarz.com	

1.4. Emergency telephone number

For urgent inquiries refer to	0039 0161 808111 / 0039 3316593305
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SECTION 2. Hazards identification.

2.1. Classification of the substance or mixture.

The product is classified as hazardous pursuant to the provisions set forth in EC Regulation 1272/2008 (CLP) (and subsequent amendments and supplements). The product thus requires a safety datasheet that complies with the provisions of EC Regulation 1907/2006 and subsequent amendments.

Any additional information concerning the risks for health and/or the environment are given in sections 11 and 12 of this sheet.

2.1.1. Regulation 1272/2008 (CLP) and following amendments and adjustments.

Hazard classification and indication:

Eye Dam. 1	H318
Skin Irrit. 2	H315
Aquatic Chronic 3	H412

2.1.2. 67/548/EEC and 1999/45/EC Directives and following amendments and adjustments.

Danger Symbols:	Xi
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R phrases:	38-41
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The full wording of the Risk (R) and hazard (H) phrases is given in section 16 of the sheet.

2.2. Label elements.

Hazard labelling pursuant to EC Regulation 1272/2008 (CLP) and subsequent amendments and supplements.

Hazard pictograms:



LUMOROL 52/P**SECTION 2. Hazards identification. ... / >>**

Signal words: Danger

Hazard statements:

H318 Causes serious eye damage.
H315 Causes skin irritation.
H412 Harmful to aquatic life with long lasting effects.

Precautionary statements:

P264 Wash skin and eyes thoroughly after handling.
P273 Avoid release to the environment.
P280 Wear protective gloves / protective clothing / eye protection / face protection.
P302+P352 IF ON SKIN: Wash with plenty of soap and water.

Contains: Sodium Laureth Sulfate
 Benzenesulfonic acid, C10-13-alkyl derivs., sodium salts

2.3. Other hazards.

Information not available.

SECTION 3. Composition/information on ingredients.**3.1. Substances.**

Information not relevant.

3.2. Mixtures.**Contains:**

Identification.	Conc. %.	Classification 67/548/EEC.	Classification 1272/2008 (CLP).
WATER			
CAS. 7732-18-5	65 - 85		
EC. 231-791-2			
INDEX. -			
Sodium Laureth Sulfate			
CAS. 9004-82-4	10 - 20	Xi R38, Xi R41	Eye Dam. 1 H318, Skin Irrit. 2 H315, Aquatic Chronic 3 H412
EC. -			
INDEX. -			
Reg. no. absent, polymer			
Benzenesulfonic acid, C10-13-alkyl derivs., sodium salts			
CAS. 68411-30-3	5 - 20	Xi R38, Xi R41	Acute Tox. 4 H302, Eye Dam. 1 H318, Skin Irrit. 2 H315, Aquatic Chronic 3 H412
EC. 270-115-0			
INDEX. -			
Reg. no. 01-2119489428-22-0037			
Cocamidopropyl Betaine			
CAS. 147170-44-3	1 - 2	Xi R41	Eye Dam. 1 H318, Aquatic Chronic 3 H412
EC. 931-333-8			
INDEX. -			
Reg. no. 01-2119489410-39-0001			
Potassium Cocoate			
CAS. 61789-30-8	1 - 2	Xi R36/38	Eye Irrit. 2 H319, Skin Irrit. 2 H315
EC. 263-049-9			
INDEX. -			
Reg. no. absent, annex V			
Potassium Oleate			
CAS. 143-18-0	1 - 2	Xi R36/38	Eye Irrit. 2 H319, Skin Irrit. 2 H315
EC. 205-590-5			
INDEX. -			
Reg. no. absent, annex V			
Amides, C8-18 (even numbered) and C18 (unsatd.),N,N-bis(hydroxyethyl)			
CAS. 68155-07-7	1 - 2	Xi R38, Xi R41	Eye Dam. 1 H318, Skin Irrit. 2 H315, Aquatic Chronic 2 H411
EC. 931-329-6			
INDEX. -			
Reg. no. 01-2119490100-53-0001			

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SECTION 3. Composition/information on ingredients. ... / >>

Alcohol C12-C14 ethoxylated propoxylated

CAS. 68439-51-0 1 - 5

EC. absent, polymer

INDEX. -

Reg. no. absent, polymer

Laureth-7; Alcohols, C9-11-iso-, C10-rich, ethoxylated

CAS. 78330-20-8 1 - 3 Xn R22, Xi R41

Acute Tox. 4 H302, Eye Dam. 1 H318

EC. absent, polymer

INDEX. -

Reg. no. absent, polymer

Note: Upper limit is not included into the range.

The full wording of the Risk (R) and hazard (H) phrases is given in section 16 of the sheet.

T+ = Very Toxic(T+), T = Toxic(T), Xn = Harmful(Xn), C = Corrosive(C), Xi = Irritant(Xi), O = Oxidizing(O), E = Explosive(E), F+ = Extremely Flammable(F+), F = Highly Flammable(F),
N = Dangerous for the Environment(N)

SECTION 4. First aid measures.

4.1. Description of first aid measures.

EYES: Remove contact lenses, if present. Wash immediately with plenty of water for at least 15 minutes, opening the eyelids fully. If problem persists, seek medical advice.

SKIN: Remove contaminated clothing. Rinse skin with a shower immediately. Get medical advice/attention immediately. Wash contaminated clothing before using it again.

INHALATION: Remove to open air. If the subject stops breathing, administer artificial respiration. Get medical advice/attention immediately.

INGESTION: Get medical advice/attention immediately. Do not induce vomiting. Do not administer anything not explicitly authorised by a doctor.

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

For symptoms and effects caused by the contained substances, see chap. 11.

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

Information not available.

SECTION 5. Firefighting measures.

5.1. Extinguishing media.**SUITABLE EXTINGUISHING EQUIPMENT**

Extinguishing substances are: carbon dioxide and chemical powder. For product loss or leakage that has not caught fire, water spray can be used to disperse flammable vapours and protect those trying to stem the leak.

UNSUITABLE EXTINGUISHING EQUIPMENT

Do not use jets of water.

Water is not effective for putting out fires but can be used to cool containers exposed to flames to prevent explosions.

5.2. Special hazards arising from the substance or mixture.**HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE**

If large quantities of the product are involved in a fire, they can make it considerably worse. Do not breathe combustion products.

5.3. Advice for firefighters.**GENERAL INFORMATION**

In the case of fire, use jets of water to cool the containers to prevent the risk of explosions (product decomposition and excess pressure) and the development of substances potentially hazardous for health. Always wear full fire prevention gear. Remove all containers containing the product from the fire, if it is safe to do so.

SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS

Normal fire fighting clothing i.e. fire kit (BS EN 469), gloves (BS EN 659) and boots (HO specification A29 and A30) in combination with self-contained open circuit positive pressure compressed air breathing apparatus (BS EN 137).

SECTION 6. Accidental release measures.

6.1. Personal precautions, protective equipment and emergency procedures.

Block the leakage if there is no hazard.

Wear suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing. These indications apply for both processing staff and those involved in emergency procedures.

LUMOROL 52/P**SECTION 6. Accidental release measures. ... / >>****6.2. Environmental precautions.**

The product must not penetrate into the sewer system or come into contact with surface water or ground water.

6.3. Methods and material for containment and cleaning up.

Collect the leaked product into a suitable container. Evaluate the compatibility of the container to be used, by checking section 10.

Absorb the remainder with inert absorbent material.

Make sure the leakage site is well aired. Check incompatibility for container material in section 7. Contaminated material should be disposed of in compliance with the provisions set forth in point 13.

6.4. Reference to other sections.

Any information on personal protection and disposal is given in sections 8 and 13.

SECTION 7. Handling and storage.**7.1. Precautions for safe handling.**

Keep away from heat, sparks and naked flames; do not smoke or use matches or lighters. Without adequate ventilation, vapours may accumulate at ground level and, if ignited, catch fire even at a distance, with the danger of backfire. Avoid bunching of electrostatic charges. Do not eat, drink or smoke during use. Remove any contaminated clothes and personal protective equipment before entering places in which people eat. Avoid leakage of the product into the environment.

7.2. Conditions for safe storage, including any incompatibilities.

Store only in the original container. Store in a well ventilated place, keep far away from sources of heat, naked flames and sparks and other sources of ignition. Keep containers away from any incompatible materials, see section 10 for details.

7.3. Specific end use(s).

Information not available.

SECTION 8. Exposure controls/personal protection.

Respiratory protection: in case of formation of vapours/dusts: Particle filter P2 - Hand protection: gloves made of chloroprene (CR, e.g. Neoprene): Minimum break-through time of the glove: 480 min, Glove strength: 0.6 mm; gloves made of nitril (NBR): Minimum break-through time of the glove: 480 min, Glove strength: 0,4 mm; gloves made of butyl (IIR): Minimum break-through time of the glove: 480 min, Glove strength: 0,3 mm - Eye protection: goggles or face shield if necessary - Skin and body protection: light protective clothing

8.1. Control parameters.

Regulatory References:
United Kingdom

Éire
OEL EU

TLV-ACGIH

EH40/2005 Workplace exposure limits. Containing the list of workplace exposure limits for use with the Control of Substances Hazardous to Health Regulations (as amended). Code of Practice Chemical Agent Regulations 2011. Directive 2009/161/EU; Directive 2006/15/EC; Directive 2004/37/EC; Directive 2000/39/EC. ACGIH 2012

LUMOROL 52/P**SECTION 8. Exposure controls/personal protection. ... / >>****Amides, C8-18 (even numbered) and C18 (unsatd.),N,N-bis(hydroxyethyl)****Predicted no-effect concentration - PNEC.**

Normal value for the terrestrial compartment	0,104	mg/kg/d
Normal value in fresh water	0,007	mg/l
Normal value for water, intermittent release	0,03	mg/l
Normal value in marine water	0,0007	mg/l
Normal value for fresh water sediment	NEA	
Normal value for marine water sediment	0,22	mg/kg/d
Normal value of STP microorganisms	0,83	g/l

Health - Derived no-effect level - DNEL / DMEL

Route of exposure	Effects on consumers.				Effects on workers			
	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral.	NPI	NPI	NPI	6,25 mg/kg				
Inhalation.	NPI	NPI	NPI	21,7 mg/m3	NPI	NPI	NPI	73,4 mg/m3
Skin.	NPI	NPI	0,056 mg/kg	2,5 mg/kg	NPI	NPI	0,09 mg/kg	4,16 mg/kg

Cocamidopropyl Betaine**Predicted no-effect concentration - PNEC.**

Normal value for the terrestrial compartment	0,314	mg/kg
Normal value in fresh water	0,031	mg/l
Normal value in marine water	0,0031	mg/l
Normal value for fresh water sediment	1,67	mg/kg
Normal value for marine water sediment	0,167	mg/kg
Normal value of STP microorganisms	912	mg/l

Health - Derived no-effect level - DNEL / DMEL

Route of exposure	Effects on consumers.				Effects on workers			
	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral.			VND	2,5 mg/kg				
Inhalation.			VND	4,348 mg/m3			VND	17,632 mg/m3
Skin.			VND	5 mg/kg			VND	10 mg/kg

Legend:

(C) = CEILING ; INHAL = Inhalable Fraction ; RESP = Respirable Fraction ; THORA = Thoracic Fraction.

VND = hazard identified but no DNEL/PNEC available ; NEA = no exposure expected ; NPI = no hazard identified.

8.2. Exposure controls.

As the use of adequate technical equipment must always take priority over personal protective equipment, make sure that the workplace is well aired through effective local aspiration.

When choosing personal protective equipment, ask your chemical substance supplier for advice.

Personal protective equipment must be CE marked, showing that it complies with applicable standards.

Provide an emergency shower with face and eye wash station.

HAND PROTECTION

Protect hands with category III work gloves (see standard EN 374).

The following should be considered when choosing work glove material: compatibility, degradation, failure time and permeability.

The work gloves' resistance to chemical agents should be checked before use, as it can be unpredictable. The gloves' wear time depends on the duration and type of use.

SKIN PROTECTION

Wear category II professional long-sleeved overalls and safety footwear (see Directive 89/686/EEC and standard EN ISO 20344). Wash body with soap and water after removing protective clothing.

EYE PROTECTION

Wear a hood visor or protective visor combined with airtight goggles (see standard EN 166).

RESPIRATORY PROTECTION

If the threshold value (e.g. TLV-TWA) is exceeded for the substance or one of the substances present in the product, use a mask with a type B filter whose class (1, 2 or 3) must be chosen according to the limit of use concentration. (see standard EN 14387). In the

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presence of gases or vapours of various kinds and/or gases or vapours containing particulate (aerosol sprays, fumes, mists, etc.) combined filters are required.

Respiratory protection devices must be used if the technical measures adopted are not suitable for restricting the worker's exposure to the threshold values considered. The protection provided by masks is in any case limited.

If the substance considered is odourless or its olfactory threshold is higher than the corresponding TLV-TWA and in the case of an emergency, wear open-circuit compressed air breathing apparatus (in compliance with standard EN 137) or external air-intake breathing apparatus (in compliance with standard EN 138). For a correct choice of respiratory protection device, see standard EN 529.

SECTION 9. Physical and chemical properties.**9.1. Information on basic physical and chemical properties.**

Appearance	viscous liquid
Colour	yellow to amber
Odour	characteristic
Odour threshold.	characteristic
pH.	8.0 - 10.0 (sol. 10%, 20°C)
Melting point / freezing point.	Not available.
Initial boiling point.	> 100 °C.
Boiling range.	Not available.
Flash point.	> 100 °C.
Evaporation Rate	Not available.
Flammability of solids and gases	not flammable
Lower inflammability limit.	Not available.
Upper inflammability limit.	Not available.
Lower explosive limit.	Not available.
Upper explosive limit.	Not available.
Vapour pressure.	Not available.
Vapour density	Not available.
Relative density.	1,052 g/ml (20°C)
Solubility	partially soluble
Partition coefficient: n-octanol/water	Not available.
Auto-ignition temperature.	Not available.
Decomposition temperature.	Not available.
Viscosity	Not available.
Explosive properties	Non explosive
Oxidising properties	Non oxidant

9.2. Other information.

Information not available.

SECTION 10. Stability and reactivity.**10.1. Reactivity.**

There are no particular risks of reaction with other substances in normal conditions of use.

10.2. Chemical stability.

The product is stable in normal conditions of use and storage.

10.3. Possibility of hazardous reactions.

No hazardous reactions are foreseeable in normal conditions of use and storage.

10.4. Conditions to avoid.

None in particular. However the usual precautions used for chemical products should be respected.

It can react with strong oxidants.

10.5. Incompatible materials.

Information not available.

10.6. Hazardous decomposition products.

Information not available.

SECTION 11. Toxicological information.**11.1. Information on toxicological effects.**

In the absence of experimental data for the product itself, health hazards are evaluated according to the properties of the substances it contains, using the criteria specified in the applicable regulation for classification.

LUMOROL 52/P**SECTION 11. Toxicological information. ... / >>**

It is therefore necessary to take into account the concentration of the individual hazardous substances indicated in section 3, to evaluate the toxicological effects of exposure to the product.

This product may cause serious ocular lesions, cornea opacity, iris lesions, irreversible eye coloration.

Acute effects: contact with skin may cause: irritation, erythema, edema, dryness and chapped skin. Vapour inhalation may slightly irritate the upper respiratory tract. Ingestion may cause health disorders, including stomach pain and sting, nausea and sickness.

Irritant effect on skin (rabbit, OECD 404): no primary but slight irritant effect - Irritant effect on eyes (rabbit, OECD 405): risk of serious damage to eyes - Sensitization: non sensitizing in the maximum-dose test on guinea pigs - Additional information: no experimental evidence on genotoxicity in vitro/vivo

Irritant to eyes and skin (as it is); Not mutagenic (Ames test); Not sensitizing for skin and respiratory tract; Not cancerogenetic; Not toxic for reproductivity; Not STOT for single and repeated exposure; No aspiration hazard. Specific data are not used as not available

Irritant to eye and skin (as it is); Not mutagenic (Ames test); Not sensitizing.

Irritant to eyes and skin.

Not irritant to eye and skin (as it is); Not mutagenic (Ames test); Not sensitizing.

Non irritant to skin (rabbit); Irritant to eye (rabbit); Not sensitizing (Maximisation test, guinea pig); None mutagenic effect (in vitro test)

Cocamidopropyl Betaine

LD50 (Oral). > 6000 mg/kg Rat (OECD 401)

LD50 (Dermal). > 2000 mg/kg Rat (OECD 402)

Potassium Cocoate

LD50 (Oral). > 2000 mg/kg Rat

Potassium Oleate

LD50 (Oral). > 2000 mg/kg Rat

Amides, C8-18 (even numbered) and C18 (unsatd.), N,N-bis(hydroxyethyl)

LD50 (Oral). > 2000 mg/kg Rats (OECD 401)

LD50 (Dermal). > 2000 mg/kg Rabbits

Sodium Laureth Sulfate

LD50 (Oral). > 2000 mg/kg Rat

Benzenesulfonic acid, C10-13-alkyl derivs., sodium salts

LD50 (Oral). > 2000 mg/kg

Alcohol C12-C14 ethoxylated propoxylated

LD50 (Oral). > 2000 mg/kg Rat

Laureth-7; Alcohols, C9-11-iso-, C10-rich, ethoxylated

LD50 (Oral). > 300 mg/kg Rat

LD50 (Dermal). > 2000 mg/kg Rabbit

Irritant to eye and skin (as it is); Not mutagenic (Ames test); Not sensitizing.

SECTION 12. Ecological information.

This product is dangerous for the environment and the aquatic organisms. In the long term, it have negative effects on aquatic environment.

12.1. Toxicity.

EC0 (16h) > 8000 mg/l (Pseudomonas sp., ISO 10712)

COD value: 2184 mgO₂/g - BOD value: 435 mgO₂/g after 5 d.

Cocamidopropyl Betaine

LC50 - for Fish. 3 mg/l/96h Fathead minnow (OECD 203)

EC50 - for Crustacea. 5 mg/l/48h Daphnia (OECD 202)

EC50 - for Algae / Aquatic Plants. 15,6 mg/l/72h Desmodesmus subspicatus (OECD 201)

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SECTION 12. Ecological information. ... / >>

Potassium Cocoate						
LC50 - for Fish.			> 1 mg/l/96h Fish			
EC50 - for Crustacea.			> 1 mg/l/48h Daphnia and Algae			
Potassium Oleate						
LC50 - for Fish.			> 1 mg/l/96h Fish			
EC50 - for Crustacea.			> 1 mg/l/48h Daphnia and Algae			
Amides,	C8-18	(even	numbered)	and	C18	(unsatd.),N,N-bis(hydroxyethyl)
LC50 - for Fish.			> 2 mg/l Oncorhynchus mykiss			
EC50 - for Crustacea.			0,07 mg/l Daphnia Magna			
EC50 - for Algae / Aquatic Plants.			> 3,9 mg/l Scenedesmus subspicatus			
Sodium Laureth Sulfate						
LC50 - for Fish.			7,1 mg/l/96h Brachydanio rerio			
EC50 - for Crustacea.			7,7 mg/l/48h Daphnia			
EC50 - for Algae / Aquatic Plants.			12 mg/l/72h Scenedesmus subspicatus			
Benzenesulfonic	acid,		C10-13-alkyl	derivs.,	sodium	salts
LC50 - for Fish.			> 1 mg/l/96h Fish			
EC50 - for Crustacea.			> 1 mg/l/48h Daphnia and Algae			
Alcohol C12-C14 ethoxylated propoxylated						
EC50 - for Crustacea.			1,1 mg/l/48h Daphnia			
Laureth-7; Alcohols, C9-11-iso-, C10-rich, ethoxylated						
LC50 - for Fish.			> 5 mg/l Cyprinus carpio (OECD TG 203)			
EC50 - for Crustacea.			> 5 mg/l Daphnia magna (OECD TG 202)			
EC50 - for Algae / Aquatic Plants.			> 1 mg/l Desmodesmus subspicatus (OECD TG 201)			

12.2. Persistence and degradability.

87% after 28 d (ISO 14953); This surfactant complies with the biodegradability criteria as laid down in Regulation (EC) No. 648/2004 on detergents. Data to support this assertion are held at the disposal of the competent authorities of the Member States and will be made available to them, at their direct request or at the request of a detergent manufacturer.

This surfactant complies with the biodegradability criteria as laid down in Regulation (EC) No. 648/2004 on detergents. Data to support this assertion are held at the disposal of the competent authorities of the Member States and will be made available to them, at their direct request or at the request of a detergent manufacturer.

Readily biodegradable (according to CE 648/2004).

This surfactant complies with the biodegradability criteria as laid down in Regulation (EC) No. 648/2004 on detergents. Data to support this assertion are held at the disposal of the competent authorities of the Member States and will be made available to them, at their direct request or at the request of a detergent manufacturer.

Readily biodegradable (according to CE 648/2004).

Readily biodegradable according to CE 648/2004.

Readily biodegradable (according to CE 648/2004).

> 60%, 28 d (OECD TG 301 B); Readily biodegradable (according to CE 648/2004).

12.3. Bioaccumulative potential.

No bioaccumulation

No bioaccumulo.

No bioaccumulo.

No bioaccumulo.

No bioaccumulo.

No biaccumulo.

No bioaccumulo.

No bioaccumulo

12.4. Mobility in soil.

None mobility in soil

Not mobile

Light mobility on soil

12.5. Results of PBT and vPvB assessment.

No PBT/vPvB

No PBT/vPvB.

No PBT/vPvB.

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SECTION 12. Ecological information. ... / >>

No PBT/vPvB.
No PBT/vPvB.
No PBT/vPvB.
No PBT/vPvB.
No PTB/vPvB

12.6. Other adverse effects.

No other adverse effects
None

SECTION 13. Disposal considerations.

13.1. Waste treatment methods.

Reuse, when possible. Product residues should be considered special hazardous waste. The hazard level of waste containing this product should be evaluated according to applicable regulations.
Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations.
Avoid littering. Do not contaminate soil, sewers and waterways.
CONTAMINATED PACKAGING
Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.

SECTION 14. Transport information.

The product is not dangerous under current provisions of the Code of International Carriage of Dangerous Goods by Road (ADR) and by Rail (RID), of the International Maritime Dangerous Goods Code (IMDG), and of the International Air Transport Association (IATA) regulations.

SECTION 15. Regulatory information.

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

Seveso category. None.

Restrictions relating to the product or contained substances pursuant to Annex XVII to EC Regulation 1907/2006.

Product.

Point. 3

Substances in Candidate List (Art. 59 REACH).

None.

Substances subject to authorisation (Annex XIV REACH).

None.

Substances subject to exportation reporting pursuant to (EC) Reg. 649/2012:

None.

Substances subject to the Rotterdam Convention:

None.

Substances subject to the Stockholm Convention:

None.

Healthcare controls.

Workers exposed to this chemical agent must not undergo health checks, provided that available risk-assessment data prove that the risks related to the workers' health and safety are modest and that the 98/24/EC directive is respected.

SECTION 16. Other information.

Text of hazard (H) indications mentioned in section 2-3 of the sheet:

Acute Tox. 4	Acute toxicity, category 4
Eye Dam. 1	Serious eye damage, category 1
Eye Irrit. 2	Eye irritation, category 2
Skin Irrit. 2	Skin irritation, category 2
Aquatic Chronic 2	Hazardous to the aquatic environment, chronic toxicity, category 2
Aquatic Chronic 3	Hazardous to the aquatic environment, chronic toxicity, category 3
H302	Harmful if swallowed.

LUMOROL 52/P**SECTION 16. Other information. ... / >>**

H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H315	Causes skin irritation.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

Text of risk (R) phrases mentioned in section 2-3 of the sheet:

R22	HARMFUL IF SWALLOWED.
R36/38	IRRITATING TO EYES AND SKIN.
R38	IRRITATING TO SKIN.
R41	RISK OF SERIOUS DAMAGE TO EYES.

LEGEND:

- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- CAS NUMBER: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)
- CE NUMBER: Identifier in ESIS (European archive of existing substances)
- CLP: EC Regulation 1272/2008
- DNEL: Derived No Effect Level
- EmS: Emergency Schedule
- GHS: Globally Harmonized System of classification and labeling of chemicals
- IATA DGR: International Air Transport Association Dangerous Goods Regulation
- IC50: Immobilization Concentration 50%
- IMDG: International Maritime Code for dangerous goods
- IMO: International Maritime Organization
- INDEX NUMBER: Identifier in Annex VI of CLP
- LC50: Lethal Concentration 50%
- LD50: Lethal dose 50%
- OEL: Occupational Exposure Level
- PBT: Persistent bioaccumulative and toxic as REACH Regulation
- PEC: Predicted environmental Concentration
- PEL: Predicted exposure level
- PNEC: Predicted no effect concentration
- REACH: EC Regulation 1907/2006
- RID: Regulation concerning the international transport of dangerous goods by train
- TLV: Threshold Limit Value
- TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure.
- TWA STEL: Short-term exposure limit
- TWA: Time-weighted average exposure limit
- VOC: Volatile organic Compounds
- vPvB: Very Persistent and very Bioaccumulative as for REACH Regulation
- WGK: Water hazard classes (German).

GENERAL BIBLIOGRAPHY

1. Directive 1999/45/EC and following amendments
2. Directive 67/548/EEC and following amendments and adjustments
3. Regulation (EC) 1907/2006 (REACH) of the European Parliament
4. Regulation (EC) 1272/2008 (CLP) of the European Parliament
5. Regulation (EC) 790/2009 (I Atp. CLP) of the European Parliament
6. Regulation (EC) 453/2010 of the European Parliament
7. Regulation (EC) 286/2011 (II Atp. CLP) of the European Parliament
8. Regulation (EC) 618/2012 (III Atp. CLP) of the European Parliament
9. The Merck Index. - 10th Edition
10. Handling Chemical Safety
11. NIOSH - Registry of Toxic Effects of Chemical Substances
12. INRS - Fiche Toxicologique (toxicological sheet)
13. Patty - Industrial Hygiene and Toxicology
14. N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition
15. ECHA website

Note for users:

LUMOROL 52/P**SECTION 16. Other information. ... / >>**

The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the suitability and thoroughness of provided information according to each specific use of the product.

This document must not be regarded as a guarantee on any specific product property.

The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses.

Provide appointed staff with adequate training on how to use chemical products.

Changes to previous review:

The following sections were modified:

01 / 03 / 11 / 12.