

Safety Data Sheet dated 14/11/2023, version 9.0 This version cancels and substitutes any previous version

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

1.1. Product identifier

Mixture identification:

Trade name: STARLUX

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

Recommended use:

Foam cleaner for A/C systems

1.3. Details of the supplier of the safety data sheet

Company:

ERRECÓM SPA

Via Industriale, 14

Corzano (BS) Italy

Tel. +39 030/9719096

Competent person responsible for the safety data sheet:

lab@errecom.it

1.4. Emergency telephone number

+39 02-6610-1029 Poison Control Center Niguarda Ca' Granda - Milano - ITALY

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

EC regulation criteria 1272/2008 (CLP)

Danger, Aerosols 1, Extremely flammable aerosol. Pressurized container: may burst if heated.

Adverse physicochemical, human health and environmental effects:

No other hazards

2.2. Label elements

Hazard pictograms:



Danger

Hazard statements:

H222, H229 Extremely flammable aerosol. Pressurized container: may burst if heated.

Precautionary statements:

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P211 Do not spray on an open flame or other ignition source.

P251 Do not pierce or burn, even after use.

P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122°F.

Special Provisions:

None

Special provisions according to Annex XVII of REACH and subsequent amendments:

None

2.3. Other hazards

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No PBT, vPvB or endocrine disruptor substances present in concentration >= 0.1% Other Hazards:

No other hazards

SECTION 3: Composition/information on ingredients

3.1. Substances

N.A.

3.2. Mixtures

Hazardous components within the meaning of the CLP regulation and related classification:

Qty	Name	Ident. Numb	er	Classification
>= 15% - < 20%	propane	Index number: CAS: EC: REACH No.:	601-003-00-5 74-98-6 200-827-9 01-21194869 44-21-XXXX	2.2/1 Flam. Gas 1 H220 2.5/L Press Gas (Liq.) H280
>= 5% - < 7%	butane	Index number: CAS: EC: REACH No.:	601-004-00-0 106-97-8 203-448-7 01-21194746 91-32-XXXX	2.2/1 Flam. Gas 1 H220 2.5/L Press Gas (Liq.) H280
>= 2.5% - < 5%	propan-2-ol	Index number: CAS: EC: REACH No.:	603-117-00-0 67-63-0 200-661-7 01-21194575 58-25-XXXX	2.6/2 Flam. Liq. 2 H225 3.3/2 Eye Irrit. 2 H319 3.8/3 STOT SE 3 H336
>= 2.5% - < 5%	isobutane	Index number: CAS: EC: REACH No.:	601-004-00-0 75-28-5 200-857-2 01-21194853 95-27-XXXX	2.2/1 Flam. Gas 1 H220 2.5/L Press Gas (Liq.) H280
>= 0.5% - < 1%	ethanol	Index number: CAS: EC: REACH No.:	603-002-00-5 64-17-5 200-578-6 01-21194576 10-43-XXXX	2.6/2 Flam. Liq. 2 H225 3.3/2 Eye Irrit. 2 H319
>= 0.25% - < 0.5%	Sodium N-lauroylsarcosinate	CAS: EC: REACH No.:	137-16-6 205-281-5 01-21195277 80-39-XXXX	3.1/2/Inhal Acute Tox. 2 H330 3.2/2 Skin Irrit. 2 H315 3.3/1 Eye Dam. 1 H318 Specific Concentration Limits: C >= 34,5%: Acute Tox. 2 H330 0% <= C < 34,5%: Acute Tox. 4 H332 C >= 30%: Skin Irrit. 2 H315 C >= 30%: Eye Dam. 1 H318 1% <= C < 30%: Eye Irrit. 2 H319



SECTION 4: First aid measures

4.1. Description of first aid measures

In case of skin contact:

Wash with plenty of water and soap.

Wash contaminated clothing before using them.

In case of eyes contact:

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

In case of Ingestion:

Do not under any circumstances induce vomiting. OBTAIN A MEDICAL EXAMINATION IMMEDIATELY.

In case of Inhalation:

Remove casualty to fresh air and keep warm and at rest.

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

No information available.

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

Treatment:

No information available.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

CO2 or Dry chemical fire extinguisher.

Extinguishing media which must not be used for safety reasons:

None in particular.

5.2. Special hazards arising from the substance or mixture

Do not inhale explosion and combustion gases.

Burning produces heavy smoke.

5.3. Advice for firefighters

Use suitable breathing apparatus.

Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

Move undamaged containers from immediate hazard area if it can be done safely.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non emergency personnel:

Wear personal protection equipment.

Remove all sources of ignition.

Remove persons to safety.

See protective measures under point 7 and 8.

For emergency responders:

Wear personal protection equipment.

6.2. Environmental precautions

Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.

Retain contaminated washing water and dispose it.

In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

Suitable material for taking up: absorbing material, organic, sand

6.3. Methods and material for containment and cleaning up

Wash with plenty of water.

6.4. Reference to other sections

See also section 8 and 13



SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid contact with skin and eyes, inhalation of vapours and mists.

Don't use empty container before they have been cleaned.

Before making transfer operations, assure that there aren't any incompatible material residuals in the containers.

Advice on general occupational hygiene:

Contamined clothing should be changed before entering eating areas.

Do not eat or drink while working.

See also section 8 for recommended protective equipment.

7.2. Conditions for safe storage, including any incompatibilities

Store at below 20 °C. Keep away from unguarded flame and heat sources. Avoid direct exposure to sunlight.

Keep away from food, drink and feed.

Incompatible materials:

See subsection 10.5

Instructions as regards storage premises:

Cool and adequately ventilated.

7.3. Specific end use(s)

Information not available.

SECTION 8: Exposure controls/personal protection

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8.1. Control parameters
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propane - CAS: 74-98-6

ACGIH - Notes: (D, EX) - Asphyxia

butane - CAS: 106-97-8

ACGIH - STEL: 1000 ppm - Notes: (EX) - CNS impair

propan-2-ol - CAS: 67-63-0

ACGIH - TWA(8h): 492 mg/m3, 200 ppm - STEL(15min): 983 mg/m3, 400 ppm

EU - TWA(8h): 200 ppm - STEL(15min): 400 ppm

isobutane - CAS: 75-28-5

ACGIH - STEL: 1000 ppm - Notes: (EX) - CNS impair

ethanol - CAS: 64-17-5

ACGIH - STEL(15min): 1884 mg/m3, 1000 ppm

EU - TWA(8h): 1000 ppm - Notes: A3

DNEL Exposure Limit Values

propan-2-ol - CAS: 67-63-0

Consumer: 26 mg/kg - Exposure: Human Oral - Frequency: Long Term, systemic

effects

Worker Industry: 500 mg/m³ - Consumer: 89 mg/m³ - Exposure: Human Inhalation -

Frequency: Long Term, systemic effects

Worker Industry: 888 mg/kg - Consumer: 319 mg/kg - Exposure: Human Dermal -

Frequency: Long Term, systemic effects

ethanol - CAS: 64-17-5

Worker Industry: 1900 mg/m³ - Exposure: Human Inhalation - Frequency: Short Term,

local effects

Worker Industry: 950 mg/m³ - Consumer: 114 mg/m³ - Exposure: Human Inhalation -

Frequency: Long Term, systemic effects

Worker Industry: 343 mg/kg - Consumer: 206 mg/kg - Exposure: Human Dermal -

Frequency: Long Term, systemic effects

Consumer: 87 mg/kg - Exposure: Human Oral - Frequency: Long Term, systemic

effects

Sodium N-lauroylsarcosinate - CAS: 137-16-6



Worker Professional: 70.53 mg/m³ - Consumer: 17.39 mg/m³ - Exposure: Human

Inhalation - Frequency: Long Term, systemic effects

Worker Professional: 20 mg/kg - Consumer: 10 mg/kg - Exposure: Human Dermal -

Frequency: Long Term, systemic effects

Consumer: 10 mg/kg - Exposure: Human Oral - Frequency: Long Term, systemic

effects

PNEC Exposure Limit Values

propan-2-ol - CAS: 67-63-0

Target: Fresh Water - Value: 140.9 mg/L Target: Marine water - Value: 140.9 mg/L

Target: Freshwater sediments - Value: 552 mg/kg Target: Aquatic, periodic release - Value: 140.9 mg/L

Target: Microorganisms in sewage treatments - Value: 2251 mg/L

Target: Food chain - Value: 160 mg/kg Target: Soil (agricultural) - Value: 28 mg/kg

ethanol - CAS: 64-17-5

Target: Fresh Water - Value: 0.96 mg/L Target: Marine water - Value: 0.79 mg/L

Target: Freshwater sediments - Value: 36 mg/kg Target: Marine water sediments - Value: 2.9 mg/kg Target: Aquatic, periodic release - Value: 2.75 mg/L

Target: Microorganisms in sewage treatments - Value: 580 mg/L

Target: Secondary poisoning - Value: 0.72 mg/kg Target: Soil (agricultural) - Value: 0.63 mg/kg

Sodium N-lauroylsarcosinate - CAS: 137-16-6
Target: Fresh Water - Value: 0.009 mg/L

Target: Fresh water, intermittent - Value: 0.089 mg/L

Target: Marine water - Value: 0.001 mg/L

Target: Marine water, intermittent - Value: 0.009 mg/L Target: Freshwater sediments - Value: 0.064 mg/kg Target: Marine water sediments - Value: 0.006 mg/kg

Target: Microorganisms in sewage treatments - Value: 3 mg/L

Target: Soil (agricultural) - Value: 0.008 mg/kg

8.2. Exposure controls

Eye protection:

Tightly fitting safety goggles.

Protection for skin:

No special precaution must be adopted for normal use.

Protection for hands:

Not needed for normal use.

Respiratory protection:

Not needed for normal use.

Thermal Hazards:

None

Environmental exposure controls:

None

Appropriate engineering controls:

. None

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Properties	Value	Method:	Notes:
Physical state:	Liquid		
Colour:	Colourless		



Odour:	characteristic perfumed			
Melting point/freezing point:	N.A.			
Boiling point or initial boiling point and boiling range:	N.A.			
Flammability:	N.A.			
Lower and upper explosion limit:	N.A.			
Flash point:	N.A.			
Auto-ignition temperature:	N.A.			
Decomposition	N.A.			
temperature:				
pH:	9.5			
Kinematic viscosity:	N.A.			
Solubility in water:	partial			
Solubility in oil:	partial			
Partition coefficient	N.A.			
n-octanol/water (log value):				
Vapour pressure:	N.A.			
Density and/or relative	0.82 g/mL	ASTM-D4052		
density:	(+20°C/+68°F			
)			
Relative vapour density:	N.A.			
Particle characteristics:				
Particle size:	N.A.			

9.2. Other information

No other relevant information

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under normal conditions

10.2. Chemical stability

Stable under normal conditions

10.3. Possibility of hazardous reactions

None

10.4. Conditions to avoid

Stable under normal conditions.

10.5. Incompatible materials

Strong oxidizing agents.

10.6. Hazardous decomposition products

When heated or in the event of fire may release gases and vapors potentially dangerous to health.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008 Toxicological information of the product:

a) acute toxicity

Not classified

Based on available data, the classification criteria are not met

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b) skin corrosion/irritation

Not classified

Based on available data, the classification criteria are not met

c) serious eye damage/irritation

Not classified

Based on available data, the classification criteria are not met d) respiratory or skin sensitisation

Not classified

Based on available data, the classification criteria are not met

e) germ cell mutagenicity

Not classified

Based on available data, the classification criteria are not met

f) carcinogenicity

Not classified

Based on available data, the classification criteria are not met

g) reproductive toxicity

Not classified

Based on available data, the classification criteria are not met

h) STOT-single exposure

Not classified

Based on available data, the classification criteria are not met

i) STOT-repeated exposure

Not classified

Based on available data, the classification criteria are not met

j) aspiration hazard

Not classified

Based on available data, the classification criteria are not met

Toxicological information of the main substances found in the product:

propan-2-ol - CAS: 67-63-0

a) acute toxicity:

Test: LD50 - Route: Oral - Species: Rat 5840 mg/kg

Test: LD50 - Route: Skin - Species: Rabbit 13900 mg/kg

Test: LC50 - Route: Inhalation Vapour - Species: Rat > 25000 mg/L - Duration: 4h

Test: LD50 - Route: Skin - Species: Rabbit 6290 mg/kg

g) reproductive toxicity:

Test: NOAEL - Route: Oral - Species: Rabbit 480 mg/kg

ethanol - CAS: 64-17-5

a) acute toxicity:

Test: LD50 - Route: Oral - Species: Rat = 10470 mg/kg - Notes: OCSE 401

Test: LC50 - Route: Inhalation Vapour - Species: Rat = 117 mg/L - Duration: 4h -

Notes: OCSE 403

g) reproductive toxicity:

Test: NOAEL - Route: Oral - Species: Rat > 20000 ppm - Notes: OCSE 414 (phoetal development)

Sodium N-lauroylsarcosinate - CAS: 137-16-6

a) acute toxicity:

Test: LC50 - Route: Inhalation - Species: Rat > 1-5 mg/L - Duration: 4h - Source: OECD Test Guideline 403 - Notes: Test substance: 35% Remarks: Harmful by inhalation

Test: LC50 - Route: Inhalation - Species: Rat > 0.05-0.5 mg/L - Duration: 4h - Source: OECD Test Guideline 403 - Notes: Test substance: 100% Remarks: Toxic by inhalation.

Test: LD50 - Route: Oral - Species: Rat > 5000 mg/kg - Source: OECD Test Guideline 401

b) skin corrosion/irritation:



Test: Skin Irritant - Route: Skin - Species: Rabbit Negative - Duration: 4h - Source: OECD Test Guideline 404 - Notes: Test substance: 30%

c) serious eye damage/irritation:

Test: Eye Irritant - Species: Rabbit Positive - Source: OECD Test Guideline 405 - Notes: Test substance: 30%

d) respiratory or skin sensitisation:

Test: Skin Sensitization - Route: Skin - Species: Guinea pig Negative - Source: Dir. 67/548/CEE, Annex V, B.6. - Notes: Test substance: 30%

e) germ cell mutagenicity:

Test: Genotoxicity - Species: Salmonella Typhimurium Negative

g) reproductive toxicity:

Test: NOAEL - Species: Rat > 250 mg/kg/day - Source: OCSE 414 - Notes: Developmental toxicity

i) STOT-repeated exposure:

Test: NOAEL - Route: Oral - Species: Rat 30 mg/kg - Source: Dir. 67/548/CEE, Annex V, B.7. - Notes: Exposure Time: 90 days Number of expositions: 1x /day

11.2. Information on other hazards

Endocrine disrupting properties:

No endocrine disruptor substances present in concentration >= 0.1%

SECTION 12: Ecological information

12.1. Toxicity

Adopt good working practices, so that the product is not released into the environment.

Not classified for environmental hazards

Based on available data, the classification criteria are not met propan-2-ol

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish > 100 mg/L - Duration h: 96 - Notes: Species:

Pimephales promelas

Endpoint: LC50 - Species: Daphnia > 10000 mg/L - Duration h: 24

Endpoint: EC50 - Species: Algae 1800 mg/L - Duration h: 168 - Notes: Species:

Scenedesmus quadricauda

ethanol

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish = 14200 mg/L - Duration h: 96 - Notes: Species:

Pimephales promelas

Endpoint: EC50 - Species: Daphnia > 12300 mg/L - Duration h: 48 - Notes: Species:

Daphnia magna

Endpoint: EC50 - Species: Algae > 275 mg/L - Duration h: 72 - Notes: Species:

Chlorella vulgaris

Endpoint: EC50 - Species: Daphnia = 5012 mg/L - Duration h: 48 - Notes: Species:

Ceriodaphnia dubia

Endpoint: EC50 - Species: Algae 4432 mg/L - Duration h: 168 - Notes: Species: lemna qibba

b) Aquatic chronic toxicity:

Endpoint: NOEC - Species: Daphnia 9.6 mg/L - Duration h: 216 - Notes: Species:

Daphnia magna

Sodium N-lauroylsarcosinate

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish 32.1 mg/L - Duration h: 96 - Notes: OECD Test Guideline 203 Species: Danio rerio (zebra fish) semi-static Test substance: 30% Endpoint: EC50 - Species: Daphnia 8.91 mg/L - Duration h: 48 - Notes: OECD Test Guideline 202 Species: Daphnia magna (water flea) static Test substance: 30%



e) Plant toxicity:

Endpoint: ErC50 - Species: Algae 79 mg/L - Duration h: 72 - Notes: OECD Test Guideline 201 Species: Desmodesmus subspicatus (green algae) static Test

substance: 30%

Endpoint: EbC50 - Species: Algae 39 mg/L - Duration h: 72 - Notes: OECD Test Guideline 201 Species: Desmodesmus subspicatus (green algae) static Test

substance: 30%

Endpoint: NOEC - Species: Algae 9.2 mg/L - Duration h: 72 - Notes: OECD TG 201.

Species: Desmodesums subspicatus

12.2. Persistence and degradability

propan-2-ol - CAS: 67-63-0

Biodegradability: Readily biodegradable

ethanol - CAS: 64-17-5

Biodegradability: Readily biodegradable - Test: Solubility in water - Notes: 1000 -

10000 mg/L

Sodium N-lauroylsarcosinate - CAS: 137-16-6

Biodegradability: Readily biodegradable - Duration: 28 d - %: 82 - Notes: ISO 14593

Method: Directive 67/548/EEC Annex V, C.4.B.

12.3. Bioaccumulative potential

propan-2-ol - CAS: 67-63-0

Bioaccumulation: Not bioaccumulative - Test: Kow - Partition coefficient 0.05

ethanol - CAS: 64-17-5

Bioaccumulation: Not bioaccumulative - Test: Kow - Partition coefficient -0.35

12.4. Mobility in soil

N.A.

12.5. Results of PBT and vPvB assessment

vPvB Substances: None - PBT Substances: None

12.6. Endocrine disrupting properties

No endocrine disruptor substances present in concentration >= 0.1%

12.7. Other adverse effects

None

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Recover, if possible. Send to authorised disposal plants or for incineration under controlled conditions. In so doing, comply with the local and national regulations currently in force.

SECTION 14: Transport information

14.1. UN number or ID number

ADR-UN number: 1950 IATA-Un number: 1950 IMDG-Un number: 1950

14.2. UN proper shipping name

ADR-Shipping Name: AEROSOLS, flammable AEROSOLS, flammable

IMDG-Shipping Name: AEROSOLS

14.3. Transport hazard class(es)

ADR-Class: 2
ADR-Label: 2.1
IATA-Class: 2.1
IMDG-Class: 2.1

14.4. Packing group

14.5. Environmental hazards

IMDG-EMS: F-D, S-U



14.6. Special precautions for user

ADR-Transport category (Tunnel restriction code): D

IATA-Passenger Aircraft: Y203 IATA-Cargo Aircraft: Y203 IMDG-Shipping Name: AEROSOLS

14.7. Maritime transport in bulk according to IMO instruments

NΑ

SECTION 15: Regulatory information

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

Dir. 98/24/EC (Risks related to chemical agents at work)

Dir. 2000/39/EC (Occupational exposure limit values)

Regulation (EC) n. 1907/2006 (REACH) Regulation (EC) n. 1272/2008 (CLP)

Regulation (EC) n. 790/2009 (ATP 1 CLP) and (EU) n. 758/2013

Regulation (EU) n. 2020/878

Regulation (EU) n. 286/2011 (ATP 2 CLP)

Regulation (EU) n. 618/2012 (ATP 3 CLP)

Regulation (EU) n. 487/2013 (ATP 4 CLP)

Regulation (EU) n. 944/2013 (ATP 5 CLP)

Regulation (EU) n. 605/2014 (ATP 6 CLP)

Regulation (EU) n. 2015/1221 (ATP 7 CLP)

Regulation (EU) n. 2016/918 (ATP 8 CLP)

Regulation (EU) n. 2016/1179 (ATP 9 CLP)

Regulation (EU) n. 2017/776 (ATP 10 CLP)

Regulation (EU) n. 2018/669 (ATP 11 CLP)

Regulation (EU) n. 2018/1480 (ATP 13 CLP)

Regulation (EU) n. 2019/521 (ATP 12 CLP)

Regulation (EU) n. 2020/217 (ATP 14 CLP)

Regulation (EU) n. 2020/1182 (ATP 15 CLP)

Regulation (EU) n. 2021/643 (ATP 16 CLP)

Regulation (EU) n. 2021/849 (ATP 17 CLP)

Regulation (EU) n. 2022/692 (ATP 18 CLP)

Restrictions related to the product or the substances contained according to Annex XVII Regulation (EC) 1907/2006 (REACH) and subsequent modifications:

Restrictions related to the product:

Restriction 3

Restriction 40

Restrictions related to the substances contained:

Restriction 75

Where applicable, refer to the following regulatory provisions:

Directive 2012/18/EU (Seveso III)

Regulation (EC) nr 648/2004 (detergents).

Dir. 2004/42/EC (VOC directive)

Provisions related to directive EU 2012/18 (Seveso III):

Seveso III category according to Annex 1, part 1

Product belongs to category: P3a

15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out for the mixture.

SECTION 16: Other information



Full text of phrases referred to in Section 3:

H220 Extremely flammable gas.

H280 Contains gas under pressure; may explode if heated.

H225 Highly flammable liquid and vapour.

H319 Causes serious eye irritation.

H336 May cause drowsiness or dizziness.

H330 Fatal if inhaled.

H315 Causes skin irritation.

H318 Causes serious eye damage.

H332 Harmful if inhaled.

Hazard class and hazard category	Code	Description
Flam. Gas 1	2.2/1	Flammable gas, Category 1
Aerosols 1	2.3/1	Aerosol, Category 1
Press Gas (Liq.)	2.5/L	Gases under pressure (Liquefied gas)
Flam. Liq. 2	2.6/2	Flammable liquid, Category 2
Acute Tox. 2	3.1/2/Inhal	Acute toxicity (inhalation), Category 2
Acute Tox. 4	3.1/4/Inhal	Acute toxicity (inhalation), Category 4
Skin Irrit. 2	3.2/2	Skin irritation, Category 2
Eye Dam. 1	3.3/1	Serious eye damage, Category 1
Eye Irrit. 2	3.3/2	Eye irritation, Category 2
STOT SE 3	3.8/3	Specific target organ toxicity - single exposure, Category 3

Paragraphs modified from the previous revision:

SECTION 3: Composition/information on ingredients

SECTION 8: Exposure controls/personal protection

SECTION 9: Physical and chemical properties

SECTION 11: Toxicological information

SECTION 12: Ecological information

SECTION 14: Transport information

SECTION 15: Regulatory information

SECTION 16: Other information

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Classification according to Regulation (EC) Nr. 1272/2008	Classification procedure
Aerosols 1, H222, H229	On basis of test data

This document was prepared by a competent person who has received appropriate training. Main bibliographic sources:

ECDIN - Environmental Chemicals Data and Information Network - Joint Research Centre, Commission of the European Communities

SAX's DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS - Eight Edition - Van Nostrand Reinold

The information contained herein is based on our state of knowledge at the above-specified date. It refers solely to the product indicated and constitutes no guarantee of particular quality.

It is the duty of the user to ensure that this information is appropriate and complete with respect to the specific use intended.

This MSDS cancels and replaces any preceding release.



ADR: European Agreement concerning the International Carriage of

Dangerous Goods by Road.

ATE: Acute Toxicity Estimate

ATEmix: Acute toxicity Estimate (Mixtures)

CAS: Chemical Abstracts Service (division of the American Chemical

Society).

CLP: Classification, Labeling, Packaging.

DNEL: Derived No Effect Level.

EINECS: European Inventory of Existing Commercial Chemical Substances.

GefStoffVO: Ordinance on Hazardous Substances, Germany.

GHS: Globally Harmonized System of Classification and Labeling of

Chemicals.

IATA: International Air Transport Association.

IATA-DGR: Dangerous Goods Regulation by the "International Air Transport

Association" (IATA).

ICAO: International Civil Aviation Organization.

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization"

(ICAO).

IMDG: International Maritime Code for Dangerous Goods.
INCI: International Nomenclature of Cosmetic Ingredients.

KSt: Explosion coefficient.

LC50: Lethal concentration, for 50 percent of test population.

LD50: Lethal dose, for 50 percent of test population.

PNEC: Predicted No Effect Concentration.

RID: Regulation Concerning the International Transport of Dangerous Goods

by Rail.

STEL: Short Term Exposure limit.
STOT: Specific Target Organ Toxicity.
TLV: Threshold Limiting Value.
TWA: Time-weighted average
WGK: German Water Hazard Class.