Safety Data Sheet
STARLUX

Safety Data Sheet dated 10/3/2020, version 8
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:
ERRECOM 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
vPvB Substances: None - PBT Substances: None

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. Number	Classification
>= 15% - < 20%	propane	Index number: 601-003-00-5 CAS: 74-98-6 EC: 200-827-9 REACH No.: 01-21194869 44-21-XXXX	2.2/1 Flam. Gas 1 H220 2.5 Press. Gas H280
>= 5% - < 7%	butane	Index number: 601-004-00-0 CAS: 106-97-8 EC: 203-448-7 REACH No.: 01-21194746 91-32-XXXX	2.2/1 Flam. Gas 1 H220 2.5 Press. Gas H280
>= 2.5% - < 5%	propan-2-ol	Index number: 603-117-00-0 CAS: 67-63-0 EC: 200-661-7 REACH No.: 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: 601-004-00-0 CAS: 75-28-5 EC: 200-857-2 REACH No.: 01-21194853 95-27-XXXX	2.2/1 Flam. Gas 1 H220 2.5 Press. Gas H280
>= 0.5% - < 1%	ethanol	Index number: 603-002-00-5 CAS: 64-17-5 EC: 200-578-6 REACH No.: 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: 137-16-6 EC: 205-281-5 REACH No.: 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

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
Wear personal protection equipment.
Remove all sources of ignition.
Remove persons to safety.
See protective measures under point 7 and 8.
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:
None in particular.
Store containers away from any incompatible materials, checking section 10.
Instructions as regards storage premises:
Cool and adequately ventilated.
7.3. Specific end use(s)
Information not available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters
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): 200 ppm - STEL: 400 ppm - Notes: A4, BEI - Eye and URT irr, CNS impair
AGW - TWA(8h): 500 mg/m3, 200 ppm - STEL(15min): 1000 mg/m3, 400 ppm
MAK - TWA(8h): 500 mg/m3, 200 ppm - STEL(15min): 1000 mg/m3, 400 ppm
VLA - TWA(8h): 500 mg/m3, 200 ppm - STEL(15min): 1000 mg/m3, 400 ppm
VLEP - STEL(15min): 980 mg/m3, 400 ppm
WEL - TWA(8h): 999 mg/m3, 400 ppm - STEL(15min): 1250 mg/m3, 500 ppm
TLV - TWA(8h): 980 mg/m3, 400 ppm - STEL(15min): 1225 mg/m3, 500 ppm
NDS - TWA(8h): 900 mg/m3 - STEL(15min): 1200 mg/m3
NPHV - TWA(8h): 500 mg/m3, 200 ppm - STEL(15min): 1000 mg/m3
MV - TWA(8h): 500 mg/m3, 200 ppm
GVI - TWA(8h): 999 mg/m3, 400 ppm - STEL(15min): 1250 mg/m3, 500 ppm
isobutane - CAS: 75-28-5
ACGIH - STEL: 1000 ppm - Notes: (EX) - CNS impair
ethanol - CAS: 64-17-5
ACGIH - STEL: 1000 ppm - Notes: A3 - URT irr
AGW - TWA(8h): 960 mg/m3, 500 ppm - STEL(15min): 1920 mg/m3, 1000 ppm
MAK - TWA(8h): 960 mg/m3, 500 ppm - STEL(15min): 1920 mg/m3, 1000 ppm
VLA - STEL(15min): 1910 mg/m3, 1000 ppm
VLEP - TWA(8h): 1900 mg/m3, 1000 ppm - STEL(15min): 9500 mg/m3, 5000 ppm
WEL - TWA(8h): 1920 mg/m3, 1000 ppm
TLV - TWA(8h): 1900 mg/m3, 1000 ppm
GVI - TWA(8h): 1900 mg/m3, 1000 ppm
NDS - TWA(8h): 1900 mg/m3
NPHV - TWA(8h): 960 mg/m3, 500 ppm - STEL(15min): 1920 mg/m3
DNEL Exposure Limit Values
N.A.
PNEC Exposure Limit Values
N.A.
8.2. Exposure controls
Eye protection:
Not needed for normal use. Anyway, operate according good working practices.
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

Appearance and colour:	liquid colorless
Odour:	characteristic perfumed
Odour threshold:	N.A.
pH:	N.A.
Melting point / freezing point:	N.A.
Initial boiling point and boiling range:	N.A.
Solid/gas flammability:	N.A.
Upper/lower flammability or explosive limits:	N.A.
Vapour density:	N.A.
Flash point:	0 ° C
Evaporation rate:	N.A.
Vapour pressure:	N.A.
Density:	0.82 g/mL (+20°C/+68°F)
Solubility in water:	partial
Solubility in oil:	soluble
Partition coefficient (n-octanol/water):	N.A.
Auto-ignition temperature:	N.A.
Decomposition temperature:	N.A.
Viscosity:	N.A.
Explosive properties:	N.A.
Oxidizing properties:	N.A.

9.2. Other information

Miscibility:	N.A.
Fat Solubility:	N.A.
Conductivity:	N.A.
Substance Groups relevant properties	N.A.
V.O.C. (w/w):	31,3 %

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 toxicological effects

Toxicological information of the product:

STARLUX

a) acute toxicity

Not classified

Based on available data, the classification criteria are not met

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 4710 mg/kg

Test: LD50 - Route: Skin - Species: Rat 12800 mg/kg

Test: LC50 - Route: Inhalation - Species: Rat 76.2 mg/l - Duration: 4h

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

ethanol - CAS: 64-17-5

a) acute toxicity:

Test: LD50 - Route: Oral - Species: Rat > 2000 mg/kg

Test: LD50 - Route: Skin - Species: Rabbit > 2000 mg/kg

Test: LC50 - Route: Inhalation - Species: Mouse > 20 mg/l - Duration: 4h

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

a) acute toxicity:

Test: LC50 - Route: Inhalation - Species: Rat 1 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 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

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

SECTION 12: Ecological information

12.1. Toxicity

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

STARLUX

Not classified for environmental hazards

Based on available data, the classification criteria are not met

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

a) Aquatic acute toxicity:

Endpoint: EC0 - Species: Fish 10000 mg/l - Duration h: 48 - Notes: Pimephales promelas

Endpoint: LC50 - Species: Fish > 1400 mg/l - Duration h: 96 - Notes: Lepomis macrochirus

Endpoint: LC50 - Species: Fish 6550 mg/l - Duration h: 96 - Notes: Pimephales promelas

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

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish 107 mg/l - Duration h: 96 - Notes: OECD Test Guideline 203 Species: Danio rerio (zebra fish) semi-static Test substance: 30%

Endpoint: EC50 - Species: Daphnia 29.7 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%

12.2. Persistence and degradability

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

Biodegradability: Readily biodegradable - 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 0.350000-

12.4. Mobility in soil
N.A.
12.5. Results of PBT and vPvB assessment
vPvB Substances: None - PBT Substances: None
12.6. 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

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

14.2. UN proper shipping name

ADR-Shipping Name:	AEROSOLS, flammable (propane)
IATA-Technical name:	Aerosols, flammable
IMDG-Technical name:	AEROSOLS FLAMMABLE (propane)

14.3. Transport hazard class(es)

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

14.4. Packing group
14.5. Environmental hazards
14.6. Special precautions for user
ADR-Transport category (Tunnel restriction code): D

IATA-Passenger Aircraft:	203
IATA-Cargo Aircraft:	203
IMDG-Technical name:	AEROSOLS FLAMMABLE (propane)
IMDG-EMS:	F-D, S-U

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code
N.A.

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) 2015/830
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)

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:

No restriction.

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.

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	2.5	Gases under pressure
Flam. Liq. 2	2.6/2	Flammable liquid, Category 2
Acute Tox. 2	3.1/2/Inhal	Acute toxicity (inhalation), Category 2
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 7: Handling and storage
SECTION 8: Exposure controls/personal protection
SECTION 9: Physical and chemical properties
SECTION 15: Regulatory 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.