REGULATORY REACH 1907/2006, ANNEX II AS AME. REGULATORY 878/2020

993.MS-- HARDENER EXTRA SOLID

Safety Data Sheet dated 10/5/2023, version 77

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

1.1. Product identifier

Mixture identification:

Trade name : HARDENER EXTRA SOLID

Trade code : 993.MS--

UFI: D3X0-H0GX-T003-W2HQ

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

Product type and use: Painting product for car refinish and industrial job-professional use-

1.3. Details of the supplier of the safety data sheet

Supplier:

PALINI VERNICI S.R.L. Via San Gerolamo, 14 25055 Pisogne (BS)

PALINI VERNICI S.R.L. Tel.+390364/880496- 882727 Fax.+390364/882740-87722 (9-12 13-18)

Competent person responsible for the safety data sheet:

ricerca@palinal.com

1.4. Emergency telephone number

PALINI VERNICI S.R.L. Tel.+390364/880496- 882727 Fax.+390364/882740-87722 (9-12 13-18)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

EC regulation criteria 1272/2008 (CLP):

- Warning, Flam. Liq. 3, Flammable liquid and vapour.
- Warning, Acute Tox. 4, Harmful if inhaled.
- Warning, Skin Sens. 1, May cause an allergic skin reaction.
- Warning, STOT SE 3, May cause respiratory irritation.
- Warning, STOT SE 3, May cause drowsiness or dizziness.
- Danger, Asp. Tox. 1, May be fatal if swallowed and enters airways. Aquatic Chronic 3, Harmful to aquatic life with long lasting effects.

Adverse physicochemical, human health and environmental effects:

No other hazards

2.2. Label elements

Hazard pictograms:



Danger

Hazard statements:

H226 Flammable liquid and vapour.

H332 Harmful if inhaled.

H317 May cause an allergic skin reaction.

H335 May cause respiratory irritation.

H336 May cause drowsiness or dizziness.

H304 May be fatal if swallowed and enters airways.

H412 Harmful to aquatic life with long lasting effects.

Precautionary statements:

P210 Keep away from heat - No smoking.

P261 Avoid breathing vapours.

P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing

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protection/...

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor/...

P331 Do NOT induce vomiting.

P370+P378 In case of fire, use a dry powder fire extinguisher to extinguish.

P403+P235 Store in a well-ventilated place. Keep cool.

Special Provisions:

None

Contains

Hexamethylene diisocyanate, oligomers

n-butyl acetate

Solvent naphtha (petroleum), light arom.; Low boiling point naphtha - unspecified

xylene

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

Restricted to professional users.

2.3. Other hazards

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
>=40% - < 50%	Hexamethylene diisocyanate isocyanurate-type oligomers	CAS: REACH No.:	28182-81-2 01- 2119485796 -17	 \$\daggeq 3.1/4/Inhal Acute Tox. 4 H332 \$\daggeq 3.4.2/1 Skin Sens. 1 H317 \$\daggeq 3.8/3 STOT SE 3 H335
>=25% - < 30%	n-butyl acetate	Index number: CAS: EC: REACH No.:	123-86-4 204-658-1	◆ 2.6/3 Flam. Liq. 3 H226◆ 3.8/3 STOT SE 3 H336
>=15% - < 20%	Solvent naphtha (petroleum), light arom.; Low boiling point naphtha - unspecified	Index number: CAS: EC: REACH No.:	64742-95-6 265-199-0	
>=7% -< 10%	xylene	Index number: CAS: EC: REACH No.:	1330-20-7 215-535-7	 ◆2.6/3 Flam. Liq. 3 H226 4.1/C3 Aquatic Chronic 3 H412 ◆3.1/4/Dermal Acute Tox. 4 H312 ◆3.1/4/Inhal Acute Tox. 4 H332

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			-32	
>=1% -< 3%	ethylbenzene	Index number: CAS: EC: REACH No.:	100-41-4 202-849-4	 \$2.6/2 Flam. Liq. 2 H225 4.1/C3 Aquatic Chronic 3 H412 \$3.1/4/Inhal Acute Tox. 4 H332 \$3.10/1 Asp. Tox. 1 H304 \$3.9/2 STOT RE 2 H373

*DECLP (CLP): Substance classified in accordance with Note P, Annex VI of EC Regulation (EC) 1272/2008. The harmonised classification as a carcinogen or mutagen applies unless it can be shown that the substance contains less than 0,1 % w/w benzene (Einecs No 200-753-7), in which case a classification in accordance with Title II of this Regulation shall be performed also for those hazard classes. Where the substance is not classified as a carcinogen or mutagen, at least the precautionary statements (P102-)P260-P262-P301 + P310-P331 shall apply.

SECTION 4: First aid measures

4.1. Description of first aid measures

In case of skin contact:

Immediately take off all contaminated clothing.

Areas of the body that have - or are only even suspected of having - come into contact with the product must be rinsed immediately with plenty of running water and possibly with soap.

Wash thoroughly the body (shower or bath).

Remove contaminated clothing immediately and dispose off safely.

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 induce vomiting.

In case of Inhalation:

If breathing is irregular or stopped, administer artificial respiration.

In case of inhalation, consult a doctor immediately and show him packing or label.

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

No data available

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

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

Treatment:

None

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

In case of fire, use a dry powder fire extinguisher to extinguish.

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.

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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.

Wear breathing apparatus if exposed to vapours/dusts/aerosols.

Provide adequate ventilation.

Use appropriate respiratory protection.

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.

Use localized ventilation system.

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.

See also section 8 for recommended protective equipment.

Advice on general occupational hygiene:

Contamined clothing should be changed before entering eating areas.

Do not eat or drink while working.

7.2. Conditions for safe storage, including any incompatibilities

Always keep in a well ventilated place.

Store between 5 and 35°C. Keep away from unguarded flame and heat sources. Avoid direct exposure to sunlight.

Keep away from unguarded flame, sparks, and heat sources. Avoid direct exposure to sunlight.

Keep away from food, drink and feed.

Incompatible materials:

None in particular.

Instructions as regards storage premises:

Cool and adequately ventilated.

7.3. Specific end use(s)

None in particular

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

n-butyl acetate - CAS: 123-86-4

ACGIH - TWA(8h): 50 ppm - STEL: 150 ppm - Notes: Eye and URT irr

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EU - TWA(8h): 241 mg/m3, 50 ppm - STEL: 723 mg/m3, 150 ppm xylene - CAS: 1330-20-7

National - TWA: 221 mg/m3, 50 ppm - STEL: 442 mg/m3, 100 ppm - Notes: pelle EU - TWA(8h): 221 mg/m3, 50 ppm - STEL: 442 mg/m3, 100 ppm - Notes: Skin ACGIH - TWA(8h): 20 ppm - Notes: A4, BEI - URT and eye irr; hematologic eff; CNS impair

ethylbenzene - CAS: 100-41-4

EU - TWA(8h): 442 mg/m3, 100 ppm - STEL: 884 mg/m3, 200 ppm - Notes: Skin ACGIH - TWA(8h): 20 ppm - Notes: OTO; A3, BEI - URT & eye irr; ototoxicity; kidney eff; CNS impair

DNEL Exposure Limit Values

n-butyl acetate - CAS: 123-86-4

Worker Professional: 960 mg/kg - Exposure: Human Inhalation - Frequency: Short Term, systemic effects

Worker Professional: 960 mg/kg - Exposure: Human Inhalation - Frequency: Short Term, local effects

Worker Professional: 480 mg/kg - Exposure: Human Inhalation - Frequency: Long Term, systemic effects

Worker Professional: 480 mg/kg - Exposure: Human Inhalation - Frequency: Long Term, local effects

Worker Professional: 859.7 mg/kg - Exposure: Human Inhalation - Frequency: Short Term, systemic effects

Worker Professional: 859.7 mg/kg - Exposure: Human Inhalation - Frequency: Short Term (acute)

Solvent naphtha (petroleum), light arom.; Low boiling point naphtha - unspecified - CAS: 64742-95-6

Worker Professional: 25 mg/kg - Exposure: Human Dermal - Frequency: Long Term, systemic effects

Worker Professional: 150 mg/kg - Exposure: Human Oral - Frequency: Long Term, systemic effects

Worker Professional: 11 mg/kg - Exposure: Human Dermal - Frequency: Long Term, systemic effects

Worker Professional: 32 mg/kg - Exposure: Human Inhalation - Frequency: Long Term, systemic effects

xvlene - CAS: 1330-20-7

Worker Professional: 3182 mg/kg - Exposure: Human Dermal - Frequency: Long Term, systemic effects

Worker Professional: 442 mg/kg - Exposure: Human Inhalation - Frequency: Short Term, systemic effects

Worker Professional: 221 mg/kg - Exposure: Human Inhalation - Frequency: Long Term, systemic effects

Worker Professional: 221 mg/kg - Exposure: Human Inhalation - Frequency: Long Term, local effects

PNEC Exposure Limit Values

n-butyl acetate - CAS: 123-86-4

Target: Fresh Water - Value: 0.18 mg/l Target: Marine water - Value: 0.018 mg/l

Target: 08 - Value: 0.36 mg/l Target: 09 - Value: 35.6 mg/l

Target: Freshwater sediments - Value: 0.981 mg/kg Target: Marine water sediments - Value: 0.0981 mg/kg

Target: Soil (agricultural) - Value: 0.0903 mg/kg

xylene - CAS: 1330-20-7

Target: Fresh Water - Value: 0.327 mg/l Target: Marine water - Value: 0.327 mg/l

Target: Marine water sediments - Value: 12.46 mg/l

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Target: Freshwater sediments - Value: 12.46 mg/l

Target: 09 - Value: 6.58 mg/l

Target: Soil (agricultural) - Value: 2.31 mg/kg

Target: 08 - Value: 0.327 mg/l

8.2. Exposure controls

Eye protection:

Use close fitting safety goggles, don't use eye lens.

Protection for skin:

Use clothing that provides comprehensive protection to the skin, e.g. cotton, rubber, PVC or

viton.

Protection for hands:

Use protective gloves that provides comprehensive protection, e.g. P.V.C., neoprene or rubber.

Respiratory protection:

Use respiratory protection where ventilation is insufficient or exposure is prolonged.

Use adequate protective respiratory equipment. es. CEN/FFP-2 o CEN/FFP-3

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:	Transparent		
Odour:	CHARACTER ISTIC		
Melting point/freezing point:	N.A.		
Boiling point or initial boiling point and boiling range:	> 35 gradi C.		
Flammability:	Flam. Liq. 3, H226		
Lower and upper explosion limit:	N.A.		
Flash point:	>= 23		
Auto-ignition temperature:	400 gradi C.		
Decomposition temperature:	N.A.		
pH:	Not Relevant		
Kinematic viscosity:	<= 20,5 mm2/		

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	sec (40 °C)		
Solubility in water:	Insolubile		
Solubility in oil:	N.A.		
Partition coefficient n-octanol/water (log value):	N.D.		
Vapour pressure:	N.D.		
Density and/or relative density:	0.988 Kg/L		
Relative vapour density:	>Air		
Particle characteristics:			
Particle size:	N.A.		

9.2. Other information

Properties	Value	Method:	Notes:
Explosive properties:	2/11 % Volume		
Solids	45		
% Volatile carbon:	40.6		
% Solvent	55.1		
Oxidizing properties:	N.D.		

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

Avoid contact with combustible materials. The product could catch fire.

10.6. Hazardous decomposition products None.

SECTION 11: Toxicological information

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

N.A.

Toxicological information of the main substances found in the product:

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Hexamethylene diisocyanate, oligomers - CAS: 28182-81-2
a) acute toxicity:
      Test: LD50 - Route: Oral - Species: Rat 2500 mg/kg
      Test: LD50 - Route: Skin - Species: Rat 2000 mg/kg
      Test: LD50 - Route: Skin - Species: Rabbit 2000 mg/kg
      Test: LC50 - Route: Inhalation - Species: Rat 0.39 mg/l - Duration: 4h
n-butyl acetate - CAS: 123-86-4
a) acute toxicity:
      Test: LD50 - Route: Oral - Species: Rat > 10000 mg/kg
      Test: LC50 - Route: Inhalation - Species: Rat > 21.1 mg/l - Duration: 4h
      Test: LD50 - Route: Skin - Species: Rabbit > 14000 mg/kg
Solvent naphtha (petroleum), light arom.; Low boiling point naphtha - unspecified - CAS:
64742-95-6
a) acute toxicity:
      Test: LC50 - Route: Inhalation Vapour - Species: Rat > 6193 mg/m3 - Duration: 4h
      Test: LD50 - Route: Skin - Species: Rabbit > 3160 mg/kg
      Test: LD50 - Route: Oral - Species: Rat 3492 mg/kg
b) skin corrosion/irritation:
      Test: Eye Irritant - Species: Rabbit 100 ul/kg
      Test: Skin Irritant - Route: Skin - Species: Rabbit
xylene - CAS: 1330-20-7
a) acute toxicity:
      Test: LC50 - Route: Inhalation - Species: Rat = 5000 Ppm - Duration: 4h
      Test: LD50 - Route: Skin - Species: Rabbit > 1700 mg/kg
ethylbenzene - CAS: 100-41-4
a) acute toxicity:
      Test: LD50 - Route: Oral - Species: Rat 3500 mg/kg
n-butyl acetate - CAS: 123-86-4
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OBSERVATIONS ON HUMAN SUBJECTS:

Inhalation: 3300 ppm (16 mg/l), for short periods, cause serious irritation to the eyes and to the nose.

Inhalation: 200-300 ppm (1-1.4 mg/l), for short periods, cause moderate irritation to the eyes and to the nose.

Inhaling the vapours can irritate the respiratory system.

The vapours can cause headache and nausea. As a liquid it can irritate the eyes and cause conjunctivitis, it can irritate the skin and cause dermatitis and, if swallowed, causes inebriation, hallucinations and sedation.

Symptoms of illness at 500 ppm. Serious toxic effects at 2,000 ppm for 60 min.

TCLo: 200 ppm xylene - CAS: 1330-20-7

OBSERVATIONS ON HUMAN SUBJECTS NON-PROFESSIONAL EXPOSURED-Effects following acute exposure:

Symptoms of intense exposure are: dermatitis, eczema, irritation to the eyes and to the respiratory tract.

Inhaling the vapours can cause dizziness, headache, nausea, incoordination, excitability, narcosis, anaemia, and paraesthesia of the hands and feet.

PROFESSIONAL EXPOSURED- Effects following acute exposure:

Narcotic at high concentrations.

Irritation through inhalation at 200 ppm (TCLo). Inhalation of 200 ppm has irritating effects in human subjects.

Human subject (oral)(LDLo): 50 mg/kg.

Inhalatory human subject (LCLo) 10000 ppm/6h.

If not differently specified, the information required in Regulation (EU)2020/878 listed below must be considered as N.A.:

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- a) acute toxicity;
- b) skin corrosion/irritation;
- c) serious eye damage/irritation;
- d) respiratory or skin sensitisation;
- e) germ cell mutagenicity;
- f) carcinogenicity;
- g) reproductive toxicity;
- h) STOT-single exposure;
- i) STOT-repeated exposure;
- j) aspiration hazard.
- 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 sound working practices, so that the product is not released into the environment. n-butyl acetate - CAS: 123-86-4

e) Plant toxicity:

Endpoint: EC50 - Species: Algae = 675 mg/l - Duration h: 72

Solvent naphtha (petroleum), light arom.; Low boiling point naphtha - unspecified - CAS: 64742-95-6

a) Aquatic acute toxicity:

Endpoint: EC50 - Species: Daphnia = 3.2 mg/l - Duration h: 48

Endpoint: LC50 - Species: Fish = 9.2 mg/l - Duration h: 96

xylene - CAS: 1330-20-7

a) Aquatic acute toxicity:

Endpoint: EC50 - Species: Algae = 21 mg/l - Duration h: 96

Endpoint: EC50 - Species: Daphnia = 29 mg/l - Duration h: 96

Endpoint: EC50 - Species: Fish = 35 mg/l - Duration h: 96

Endpoint: LC50 - Species: Daphnia = 165 mg/l - Duration h: 24

12.2. Persistence and degradability

None

N.A.

12.3. Bioaccumulative potential

N.A.

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

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14.1. UN number or ID number

ADR-UN Number: 1263 IATA-UN Number: 1263 IMDG-UN Number: 1263

14.2. UN proper shipping name

ADR-Shipping Name: **PAINT** IATA-Shipping Name: PAINT IMDG-Shipping Name: PAINT

14.3. Transport hazard class(es)

ADR-Class: 3

ADR - Hazard identification number: 30

IATA-Class: 3 IATA-Label: 3 IMDG-Class: 3

14.4. Packing group

ADR-Packing Group: Ш IATA-Packing group: Ш IMDG-Packing group: Ш

14.5. Environmental hazards

ADR-Enviromental Pollutant: NO IMDG-Marine pollutant: NO IMDG-EmS: F-E , <u>S-E</u>

14.6. Special precautions for user

ADR-Subsidiary hazards:

1<u>63 367 650</u> ADR-S.P.:

ADR-Transport category (Tunnel restriction code): 3 (D/E)

IATA-Passenger Aircraft: 355 IATA-Subsidiary hazards: IATA-Cargo Aircraft: 366

A3 A72 A192 IATA-S.P.:

IATA-ERG: 3L **IMDG-Subsidiary hazards:**

IMDG-Stowage and handling: Category A

IMDG-Segregation:

14.7. Maritime transport in bulk according to IMO instruments

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) 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)

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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. 2018/1480 (ATP 13 CLP)

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

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

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

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

Regulation (EU) n. 2021/849 (ATP 10 CLP)

Regulation (EU) n. 2022/692 (ATP 17 CLP)

Restrictions related to the product or the substances contained according to Annex XVII Regulation

(EC) 1907/2006 (REACH) and subsequent modifications: 878/2020

Restrictions related to the product:

Restriction 3

Restriction 40

Restrictions related to the substances contained:

Restriction 28

Restriction 29

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: P5c

15.2. Chemical safety assessment

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

SECTION 16: Other information

Text of phrases referred to under heading 3:

H332 Harmful if inhaled.

H317 May cause an allergic skin reaction.

H335 May cause respiratory irritation.

H226 Flammable liquid and vapour.

H336 May cause drowsiness or dizziness.

H304 May be fatal if swallowed and enters airways.

H411 Toxic to aquatic life with long lasting effects.

H412 Harmful to aquatic life with long lasting effects.

H312 Harmful in contact with skin.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H373 May cause damage to organs through prolonged or repeated exposure.

H225 Highly flammable liquid and vapour.

H373 May cause damage to organs (hearing organs) through prolonged or repeated exposure.

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Hazard class and hazard category	Code	<u>Description</u>
Flam. Liq. 2	2.6/2	Flammable liquid, Category 2
Flam. Liq. 3	2.6/3	Flammable liquid, Category 3
Acute Tox. 4	3.1/4/Dermal	Acute toxicity (dermal), Category 4
Acute Tox. 4	3.1/4/Inhal	Acute toxicity (inhalation), Category 4
Asp. Tox. 1	3.10/1	Aspiration hazard, Category 1
Skin Irrit. 2	3.2/2	Skin irritation, Category 2
Eye Irrit. 2	3.3/2	Eye irritation, Category 2
Skin Sens. 1	3.4.2/1	Skin Sensitisation, Category 1
STOT SE 3	3.8/3	Specific target organ toxicity - single exposure, Category 3
STOT RE 2	3.9/2	Specific target organ toxicity - repeated exposure, Category 2
Aquatic Chronic 2	4.1/C2	Chronic (long term) aquatic hazard, category 2
Aquatic Chronic 3	4.1/C3	Chronic (long term) aquatic hazard, category 3

Paragraphs modified from the previous revision:

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
Flam. Liq. 3, H226	On basis of test data
Acute Tox. 4, H332	Calculation method
Skin Sens. 1, H317	Calculation method
STOT SE 3, H335	Calculation method
STOT SE 3, H336	Calculation method
Asp. Tox. 1, H304	Calculation method
Aquatic Chronic 3, H412	Calculation method

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

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NIOSH - Registry of toxic effects of chemical substances (1983)

I.N.R.S. - Fiche Toxicologique

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.