

## Safety Data Sheet KIRON



Safety Data Sheet dated 14/3/2022, version 12

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

1.1. Product identifier

Mixture identification:

Trade name: KIRON

Trade code: 277

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

Recommended use:

Coating material

1.3. Details of the supplier of the safety data sheet

Company:

SAN MARCO GROUP S.P.A.

Via Alta 10

30020 MARCON (VE) - Italy -

Tel.+39 041 4569322

Fax. +39 041 5950153

Competent person responsible for the safety data sheet:

sicurezza.prodotti@sanmarcogroup.it

1.4. Emergency telephone number

Technical information: SAN MARCO GROUP SPA +39 041 4569322 (Monday – Friday  
9.00-12.30 ; 13.30-17.00)

### 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, STOT SE 3, May cause drowsiness or dizziness.

Aquatic Chronic 3, Harmful to aquatic life with long lasting effects.

EUH066 Repeated exposure may cause skin dryness or cracking.

Adverse physicochemical, human health and environmental effects:

No other hazards

2.2. Label elements

Hazard pictograms:



Warning

Hazard statements:

H226 Flammable liquid and vapour.

H336 May cause drowsiness or dizziness.

H412 Harmful to aquatic life with long lasting effects.

Precautionary statements:

P101 If medical advice is needed, have product container or label at hand.

P102 Keep out of reach of children.

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

P271 Use only outdoors or in a well-ventilated area.

P405 Store locked up.

P501 Dispose of contents / container in accordance with national regulations.

Special Provisions:

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EUH066 Repeated exposure may cause skin dryness or cracking.

EUH208 Contains Neodecanoic acid, cobalt salt. May produce an allergic reaction.

Contains

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics

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

None

2.3. Other hazards

No PBT, vPvB or endocrine disruptor substances present in concentration  $\geq$  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. Number	Classification
>= 20% - < 25%	Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics	EC: 919-857-5 REACH No.: 01-2119463258-33-XXXX	<p>⚠ 2.6/3 Flam. Liq. 3 H226</p> <p>⚠ 3.10/1 Asp. Tox. 1 H304</p> <p>⚠ 3.8/3 STOT SE 3 H336</p> <p>EUH066</p>
>= 1% - < 3%	trizinc bis(orthophosphate)	Index number: 030-011-00-6 CAS: 7779-90-0 EC: 231-944-3 REACH No.: 01-2119485044-40-XXXX	<p>⚠ 4.1/A1 Aquatic Acute 1 H400 M=1.</p> <p>⚠ 4.1/C1 Aquatic Chronic 1 H410 M=1.</p>
>= 1% - < 3%	aluminium powder (stabilised)	Index number: 013-002-00-1 CAS: 7429-90-5 EC: 231-072-3 REACH No.: 01-2119529243-45-XXXX	<p>⚠ 2.12/2 Water-react. 2 H261</p> <p>⚠ 2.7/1 Flam. Sol. 1 H228</p>
>= 1% - < 3%	Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2% aromatics	EC: 918-481-9 REACH No.: 01-2119457273-39-XXXX	<p>⚠ 3.10/1 Asp. Tox. 1 H304</p> <p>EUH066</p>
>= 0.25% - < 0.5%	xylene (mixture of isomers)	Index number: 601-022-00-9 CAS: 1330-20-7 EC: 215-535-7 REACH No.: 01-2119488216-32-XXXX	<p>⚠ 2.6/3 Flam. Liq. 3 H226</p> <p>⚠ 3.10/1 Asp. Tox. 1 H304</p> <p>⚠ 3.2/2 Skin Irrit. 2 H315</p> <p>⚠ 3.9/2 STOT RE 2 H373</p> <p>⚠ 3.1/4/Dermal Acute Tox. 4 H312</p> <p>⚠ 3.3/2 Eye Irrit. 2 H319</p> <p>⚠ 3.1/4/Inhal Acute Tox. 4 H332</p> <p>⚠ 3.8/3 STOT SE 3 H335</p>
>= 0.25% - < 0.5%	2-ethylhexanoic acid, zirconium salt	CAS: 22464-99-9 EC: 245-018-1	<p>⚠ 3.7/2 Repr. 2 H361</p>

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		REACH No.: 01-2119979088-21-XXXX	
>= 0.1% - < 0.25%	Neodecanoic acid, cobalt salt	CAS: 27253-31-2 EC: 248-373-0 REACH No.: 01-2119970733-31-XXXX	<ul style="list-style-type: none"> <li>⚠ 3.1/4/Oral Acute Tox. 4 H302</li> <li>⚠ 3.9/1 STOT RE 1 H372</li> <li>⚠ 3.4.2/1 Skin Sens. 1 H317</li> <li>4.1/C3 Aquatic Chronic 3 H412</li> </ul>
>= 0.0015% - < 0.005%	2-butoxyethanol; ethylene glycol monobutyl ether	Index number: 603-014-00-0 CAS: 111-76-2 EC: 203-905-0 REACH No.: 01-2119475108-36-XXXX	<ul style="list-style-type: none"> <li>⚠ 3.1/4/Inhal Acute Tox. 4 H332</li> <li>⚠ 3.1/4/Oral Acute Tox. 4 H302</li> <li>⚠ 3.2/2 Skin Irrit. 2 H315</li> <li>⚠ 3.3/2 Eye Irrit. 2 H319</li> </ul> <p>Acute Toxicity Estimate: ATE - Oral 1200 mg/kg bw</p>

#### 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 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

None

##### 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:

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.

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#### 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

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#### 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.
  - See also section 8 for recommended protective equipment.
  - Advice on general occupational hygiene:
    - Contaminated clothing should be changed before entering eating areas.
    - Do not eat or drink while working.
- 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 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

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#### SECTION 8: Exposure controls/personal protection

- 8.1. Control parameters
  - Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics
    - OEL Type: ACGIH - TWA(8h): 1200 mg/m<sup>3</sup>, 197 ppm
  - aluminium powder (stabilised) - CAS: 7429-90-5
    - OEL Type: ACGIH - TWA(8h): 1 mg/m<sup>3</sup> - Notes: (R), A4 - Pneumoconiosis, LRT irr, neurotoxicity
  - Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2% aromatics
    - OEL Type: ACGIH - TWA: 1755 mg/m<sup>3</sup>
  - xylene (mixture of isomers) - CAS: 1330-20-7
    - OEL Type: EU - TWA(8h): 221 mg/m<sup>3</sup>, 50 ppm - STEL: 442 mg/m<sup>3</sup>, 100 ppm - Notes: Skin
    - OEL Type: ACGIH - TWA(8h): 100 ppm - STEL: 150 ppm - Notes: A4, BEI - URT and eye irr, CNS impair
  - 2-butoxyethanol; ethylene glycol monobutyl ether - CAS: 111-76-2
    - OEL Type: EU - TWA(8h): 98 mg/m<sup>3</sup>, 20 ppm - STEL: 246 mg/m<sup>3</sup>, 50 ppm - Notes:

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#### Skin

- OEL Type: ACGIH - TWA(8h): 20 ppm - Notes: A3, BEI - Eye and URT irr

#### DNEL Exposure Limit Values

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics

Consumer: 300 mg/kg - Exposure: Human Oral - Frequency: Long Term, systemic effects

Worker Professional: 1.5 mg/l - Consumer: 0.9 mg/l - Exposure: Human Inhalation -

Frequency: Long Term, systemic effects

Worker Professional: 300 - Consumer: 300 mg/kg - Exposure: Human Dermal -

Frequency: Long Term, systemic effects

trizinc bis(orthophosphate) - CAS: 7779-90-0

Consumer: 0.83 mg/kg - Exposure: Human Oral - Frequency: Long Term, systemic effects

Worker Professional: 83 mg/kg - Consumer: 83 mg/kg - Exposure: Human Dermal -

Frequency: Long Term, systemic effects

Worker Professional: 5 mg/m<sup>3</sup> - Consumer: 2.5 mg/m<sup>3</sup> - Exposure: Human Inhalation -

Frequency: Long Term, systemic effects

2-butoxyethanol; ethylene glycol monobutyl ether - CAS: 111-76-2

Worker Professional: 89 mg/kg - Consumer: 89 mg/kg - Exposure: Human Dermal -

Frequency: Short Term, systemic effects

Worker Professional: 1091 mg/m<sup>3</sup> - Consumer: 426 mg/m<sup>3</sup> - Exposure: Human

Inhalation - Frequency: Short Term, systemic effects

Worker Professional: 125 mg/kg - Consumer: 75 mg/kg - Exposure: Human Dermal -

Frequency: Long Term, systemic effects

Worker Professional: 98 mg/m<sup>3</sup> - Consumer: 59 mg/m<sup>3</sup> - Exposure: Human Inhalation -

Frequency: Long Term, systemic effects

Consumer: 26.7 mg/kg - Exposure: Human Oral - Frequency: Short Term, systemic effects

Worker Professional: 246 mg/m<sup>3</sup> - Consumer: 147 mg/m<sup>3</sup> - Exposure: Human Inhalation -

Frequency: Short Term, local effects

Consumer: 6.3 mg/kg - Exposure: Human Oral - Frequency: Long Term, systemic effects

#### PNEC Exposure Limit Values

trizinc bis(orthophosphate) - CAS: 7779-90-0

Target: Fresh Water - Value: 20.6 µg/l

Target: Marine water - Value: 6.1 µg/l

Target: Freshwater sediments - Value: 117.8 mg/kg

Target: Marine water sediments - Value: 56.5 mg/kg

Target: Soil (agricultural) - Value: 35.6 mg/kg

Target: Microorganisms in sewage treatments - Value: 100 µg/l

2-butoxyethanol; ethylene glycol monobutyl ether - CAS: 111-76-2

Target: Fresh Water - Value: 8.8 mg/l

Target: Marine water - Value: 0.88 mg/l

Target: Freshwater sediments - Value: 34.6 mg/kg

Target: Marine water sediments - Value: 3.46 mg/kg

Target: Microorganisms in sewage treatments - Value: 463 mg/l

Target: Food chain - Value: 20 mg/kg

Target: Soil (agricultural) - Value: 2.33 mg/kg

#### 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:

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

##### Respiratory protection:

Use adequate protective respiratory equipment.

##### Thermal Hazards:

None

##### Environmental exposure controls:

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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:	various	--	--
Odour:	characteristic of solvent	--	--
Melting point/freezing point:	N.A.	--	--
Boiling point or initial boiling point and boiling range:	N.A.	--	--
Flammability:	Flam. Liq. 3, H226	--	--
Lower and upper explosion limit:	N.A.	--	--
Flash point:	>23 °C ° C	--	--
Auto-ignition temperature:	N.A.	--	--
Decomposition temperature:	N.A.	--	--
pH:	N.A.	--	--
Kinematic viscosity:	> 20,5 mm <sup>2</sup> /sec (40 °C)	--	--
Solubility in water:		--	--
Solubility in oil:	N.A.	--	--
Partition coefficient n-octanol/water (log value):	N.A.	--	--
Vapour pressure:	N.A.	--	--
Density and/or relative density:	1.28 kg/l	--	--
Relative vapour density:	N.A.	--	--
Particle characteristics:			
Particle size:	N.A.	--	--

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#### 9.2. Other information

Properties	Value	Method:	Notes
Viscosity:	>20.5 mm <sup>2</sup> /s	--	--

## 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:

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#### a) acute toxicity

Not classified

No data available for the product

#### b) skin corrosion/irritation

Not classified

No data available for the product

#### c) serious eye damage/irritation

Not classified

No data available for the product

#### d) respiratory or skin sensitisation

Not classified

No data available for the product

#### e) germ cell mutagenicity

Not classified

No data available for the product

#### f) carcinogenicity

Not classified

No data available for the product

#### g) reproductive toxicity

Not classified

No data available for the product

#### h) STOT-single exposure

The product is classified: STOT SE 3 H336

#### i) STOT-repeated exposure

Not classified

No data available for the product

#### j) aspiration hazard

Not classified

No data available for the product

Toxicological information of the main substances found in the product:

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics

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a) acute toxicity:

Test: LD50 - Route: Oral - Species: Rat > 5000 mg/kg

Test: LD50 - Route: Skin - Species: Rabbit > 5000 mg/kg

Test: LC50 - Route: Inhalation - Species: Rat > 5000 mg/m<sup>3</sup>

trizinc bis(orthophosphate) - CAS: 7779-90-0

a) acute toxicity:

Test: LD50 - Route: Oral - Species: Rat > 5000 mg/kg

2-butoxyethanol; ethylene glycol monobutyl ether - CAS: 111-76-2

a) acute toxicity

ATE - Oral 1200 mg/kg bw

Test: LD50 - Route: Oral - Species: Rat 615 mg/kg

Test: LD50 - Route: Skin - Species: Rabbit 405 mg/kg

Test: LC50 - Route: Inhalation - Species: Rat 2.2 mg/l - Duration: 4h

11.2. Information on other hazards

Endocrine disrupting properties:

No endocrine disruptor substances present in concentration  $\geq$  0.1%

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## SECTION 12: Ecological information

12.1. Toxicity

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

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The product is classified: Aquatic Chronic 3 - H412

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish > 1000 mg/l - Duration h: 96

Endpoint: EC50 - Species: Algae > 1000 mg/l - Duration h: 72

Endpoint: EC50 - Species: Daphnia 1000 mg/l - Duration h: 48

trizinc bis(orthophosphate) - CAS: 7779-90-0

2-butoxyethanol; ethylene glycol monobutyl ether - CAS: 111-76-2

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish 1474 mg/l - Duration h: 96

Endpoint: EC50 - Species: Algae 1550 mg/l - Duration h: 48

Endpoint: EC50 - Species: Daphnia 1840 mg/l - Duration h: 72

12.2. Persistence and degradability

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  $\geq$  0.1%

12.7. Other adverse effects

None

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## 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.

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## SECTION 14: Transport information

14.1. UN number or ID number

ADR-UN number: 1263

IATA-Un number: 1263

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- IMDG-Un number: 1263
- 14.2. UN proper shipping name  
ADR-Shipping Name: PAINT or PAINT RELATED MATERIAL  
IATA-Technical name: PAINT or PAINT RELATED MATERIAL  
IMDG-Technical name: PAINT or PAINT RELATED MATERIAL
- 14.3. Transport hazard class(es)  
ADR-Class: 3  
ADR-Label: 3  
ADR - Hazard identification number: 30  
IATA-Class: 3  
IATA-Label: 3  
IMDG-Class: 3
- 14.4. Packing group  
ADR-Packing Group: III  
IATA-Packing group: III  
IMDG-Packing group: III
- 14.5. Environmental hazards  
ADR-Environmental Pollutant: No  
Marine pollutant: No
- 14.6. Special precautions for user  
ADR-Transport category (Tunnel restriction code): (D/E)  
IATA-Passenger Aircraft: 355  
IATA-Cargo Aircraft: 366
- 14.7. Maritime transport in bulk according to IMO instruments  
N.A.

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#### 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)
- 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 :

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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

Full text of phrases referred to in Section 3:

H226 Flammable liquid and vapour.  
H304 May be fatal if swallowed and enters airways.  
H336 May cause drowsiness or dizziness.  
EUH066 Repeated exposure may cause skin dryness or cracking.  
H400 Very toxic to aquatic life.  
H410 Very toxic to aquatic life with long lasting effects.  
H261 In contact with water releases flammable gases.  
H228 Flammable solid.  
H315 Causes skin irritation.  
H373 May cause damage to organs through prolonged or repeated exposure.  
H312 Harmful in contact with skin.  
H319 Causes serious eye irritation.  
H332 Harmful if inhaled.  
H335 May cause respiratory irritation.  
H361 Suspected of damaging fertility or the unborn child.  
H302 Harmful if swallowed.  
H372 Causes damage to organs through prolonged or repeated exposure.  
H317 May cause an allergic skin reaction.  
H412 Harmful to aquatic life with long lasting effects.

Hazard class and hazard category	Code	Description
Water-react. 2	2.12/2	Substance or mixture which in contact with water emits flammable gas, Category 2
Flam. Liq. 3	2.6/3	Flammable liquid, Category 3
Flam. Sol. 1	2.7/1	Flammable solid, Category 1
Acute Tox. 4	3.1/4/Dermal	Acute toxicity (dermal), Category 4
Acute Tox. 4	3.1/4/Inhal	Acute toxicity (inhalation), Category 4
Acute Tox. 4	3.1/4/Oral	Acute toxicity (oral), 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
Repr. 2	3.7/2	Reproductive toxicity, Category 2

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STOT SE 3	3.8/3	Specific target organ toxicity - single exposure, Category 3
STOT RE 1	3.9/1	Specific target organ toxicity - repeated exposure, Category 1
STOT RE 2	3.9/2	Specific target organ toxicity - repeated exposure, Category 2
Aquatic Acute 1	4.1/A1	Acute aquatic hazard, category 1
Aquatic Chronic 1	4.1/C1	Chronic (long term) aquatic hazard, category 1
Aquatic Chronic 3	4.1/C3	Chronic (long term) aquatic hazard, category 3

This safety data sheet has been completely updated in compliance to Regulation 2020/878. 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
STOT SE 3, H336	Calculation method
Aquatic Chronic 3, H412	Calculation method

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.

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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.