



Safety Data Sheet dated 31/7/2019, version 2
Regulation (EU) 2015/830

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

1.1. Product identifier

Identification of the mixture:

Trade name: ORION PRIMER
Trade code: 664.071

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

Phenoxy primer

1.3. Details of the supplier of the safety data sheet

Company:

BOERO BARTOLOMEO S.p.A. - Via Macaggi 19 - 16121 Genova - Tel. +39 010 55001 - Fax +39 010 5500305 - CF/P. IVA/REG. IMPRESE DI GENOVA 00267120103

Competent person responsible for the safety data sheet:

sicurezzaprodotti@boero.it

1.4. Emergency telephone number

BOERO BARTOLOMEO S.p.A. - Tel.+39 010 55001

opening hours: Monday - Tuesday 9.00 am - 5.00 pm

UK: in an emergency the enquirer should call NHS 111/24/Direct (free-to-call medical helplines) or a doctor.

MALTA: tel. 112

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

EC regulation criteria 1272/2008 (CLP)

Flam. Liq. 2, H225 Highly flammable liquid and vapour.

Eye Irrit. 2, H319 Causes serious eye irritation.

STOT SE 3, H336 May cause drowsiness or dizziness.

Aquatic Chronic 3, H412 Harmful to aquatic life with long lasting effects.

EUH066 Repeated exposure may cause skin dryness or cracking.

2.2. Label elements

Hazard pictograms:



Danger

Hazard statements:

H225 Highly flammable liquid and vapour.

H319 Causes serious eye irritation.

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.

P103 Read label before use.

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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.

P370+P378 In case of fire use CO₂ or chemical powder. Never use water.

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

P405 Store locked up.

P501 Dispose of contents/container according to local regulations.

Special Provisions:

EUH066 Repeated exposure may cause skin dryness or cracking.

PACK2 The packing must have tactile indications of danger for blind people.

Contains

butanone; ethyl methyl ketone

1-methoxy-2-propanol; monopropylene glycol methyl ether

hydrocarbons, C9, aromatics

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

None

2.3. Other hazards

Adverse physicochemical, human health and environmental effects:

The main adverse physical-chemical effects for human health and the environment are listed in accordance with Sections 9 to 12 of the safety data sheet

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:

>= 20% - < 25% butanone; ethyl methyl ketone

REACH No.: 01-2119457290-43-XXXX, Index number: 606-002-00-3, CAS: 78-93-3, EC: 201-159-0

Flam. Liq. 2 H225 Highly flammable liquid and vapour.

Eye Irrit. 2 H319 Causes serious eye irritation.

STOT SE 3 H336 May cause drowsiness or dizziness.

EUH066 Repeated exposure may cause skin dryness or cracking.

>= 15% - < 20% titanium dioxide

REACH No.: 01-2119489379-17-XXXX, CAS: 13463-67-7, EC: 236-675-5

Substance with a Union workplace exposure limit.

>= 12.5% - < 15% 2-methoxy-1-methylethyl acetate

REACH No.: 01-2119475791-29-XXXX, Index number: 607-195-00-7, CAS: 108-65-6, EC: 203-603-9

Flam. Liq. 3 H226 Flammable liquid and vapour.

>= 12.5% - < 15% 1-methoxy-2-propanol; monopropylene glycol methyl ether

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REACH No.: 01-2119457435-35-XXXX, Index number: 603-064-00-3, CAS: 107-98-2, EC: 203-539-1

Flam. Liq. 3 H226 Flammable liquid and vapour.

STOT SE 3 H336 May cause drowsiness or dizziness.

>= 11.5% - < 12.5% hydrocarbons, C9, aromatics

EC: 918-668-5

Flam. Liq. 3 H226 Flammable liquid and vapour.

STOT SE 3 H335 May cause respiratory irritation.

Asp. Tox. 1 H304 May be fatal if swallowed and enters airways.

STOT SE 3 H336 May cause drowsiness or dizziness.

Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.

EUH066 Repeated exposure may cause skin dryness or cracking.

DECLP (CLP)*

>= 0.1% - < 0.25% N-tallow-1,3-diaminopropane dioleate

REACH No.: 01-2119974117-33-XXXX, CAS: 61791-53-5, EC: 263-186-4

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2 H319 Causes serious eye irritation.

STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.

Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.

Aquatic Acute 1 H400 Very toxic to aquatic life. M=10.

*DECLP (CLP): Substance classified in accordance with Note P, Annex VI of EC Regulation (EC) 1272/2008. The classification as a carcinogen or mutagen need not apply if it can be shown that the substance contains less than 0,1 % w/w benzene (EINECS No 200-753-7). When the substance is not classified as a carcinogen at least the precautionary statements (P102-)P260-P262-P301 + P310-P331 (Table 3.1) or the S-phrases (2-)23-24-62 (Table 3.2) shall apply. This note applies only to certain complex oil-derived substances in Part 3.

SECTION 4: First aid measures

4.1. Description of first aid measures

In case of skin contact:

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.

Give nothing to eat or drink.

In case of Inhalation:

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

If breathing is irregular or stopped, administer artificial respiration.

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

Causes serious eye irritation.

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:

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None

SECTION 5: Firefighting measures

- 5.1. Extinguishing media
 - Suitable extinguishing media:
In case of fire use CO₂ or chemical powder. Never use water.
 - Extinguishing media which must not be used for safety reasons:
Do not use water jets
None in particular.
- 5.2. Special hazards arising from the substance or mixture
 - Avoid inhaling the fumes.
- 5.3. Advice for firefighters
 - Use suitable breathing apparatus .
 - 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.
 - 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.
 - Adequately ventilated premises.
 - Contaminated 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
 - Always keep the containers tightly closed.
 - 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.

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Adequately ventilated premises.

- 7.3. Specific end use(s)
See section 1.2

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

butanone; ethyl methyl ketone - CAS: 78-93-3

EU - TWA(8h): 600 mg/m³, 200 ppm - STEL: 900 mg/m³, 300 ppm

ACGIH - TWA(8h): 200 ppm - STEL: 300 ppm - Notes: BEI - URT irr, CNS and PNS impair

VLE1 - TWA(8h): 600 mg/m³, 200 ppm

VLE - STEL: 900 mg/m³, 300 ppm

titanium dioxide - CAS: 13463-67-7

EU - TWA(8h): 10 mg/m³

AGS - TWA(8h): 5 mg/m³

MAK - STEL: 3 mg/m³

ACGIH - TWA(8h): 10 mg/m³ - Notes: A4 - LRT irr

HRKGV1 - Notes: 4 mg/m³ (R respirabilna prašina)

VLE1 - Notes: 10 mg/m³ (U ukupna prašina)

2-methoxy-1-methylethyl acetate - CAS: 108-65-6

EU - TWA(8h): 275 mg/m³, 50 ppm - STEL: 550 mg/m³, 100 ppm - Notes: Skin

HR - TWA(8h): 275 mg/m³, 50 ppm

HRKGV1 - STEL: 550 mg/m³, 100 ppm

1-methoxy-2-propanol; monopropylene glycol methyl ether - CAS: 107-98-2

EU - TWA(8h): 375 mg/m³, 100 ppm - STEL: 563 mg/m³, 150 ppm - Notes: Skin

ACGIH - TWA(8h): 50 ppm - STEL: 100 ppm - Notes: A4 - Eye and URT irr

hydrocarbons, C9, aromatics

EU - STEL: 100 mg/m³, 20 ppm

AGS - TWA(8h): 250-350 mg/m³

DNEL Exposure Limit Values

titanium dioxide - CAS: 13463-67-7

Worker Industry: 10 mg/m³ - Exposure: Human Inhalation - Frequency: Long Term, local effects

Consumer: 700 mg/kg - Exposure: Human Oral - Frequency: Long Term, systemic effects

2-methoxy-1-methylethyl acetate - CAS: 108-65-6

Worker Industry: 153.5 mg/kg - Worker Professional: 153.5 mg/kg - Exposure: Human Dermal - Frequency: Long Term, systemic effects

Worker Industry: 275 mg/kg - Worker Professional: 275 mg/kg - Exposure: Human Inhalation - Frequency: Long Term, systemic effects

Consumer: 54.8 mg/kg - Exposure: Human Dermal - Frequency: Long Term, systemic effects

Consumer: 33 mg/kg - Exposure: Human Inhalation - Frequency: Long Term, systemic effects

Consumer: 1.67 mg/kg - Exposure: Human Oral - Frequency: Long Term, systemic effects

1-methoxy-2-propanol; monopropylene glycol methyl ether - CAS: 107-98-2

Consumer: 3.3 mg/kg - Exposure: Human Oral - Frequency: Long Term, systemic effects

Worker Professional: 369 ppm - Consumer: 43.9 ppm - Exposure: Human Inhalation - Frequency: Long Term, systemic effects

Worker Professional: 50.6 mg/kg - Consumer: 18.1 mg/kg - Exposure: Human Dermal - Frequency: Long Term, systemic effects

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hydrocarbons, C9, aromatics

Worker Industry: 25 mg/kg - Consumer: 11 mg/kg - Exposure: Human Dermal -
Frequency: Long Term, systemic effects

Worker Industry: 150 mg/m³ - Consumer: 32 mg/m³ - Exposure: Human Inhalation -
Frequency: Long Term, systemic effects

Consumer: 11 mg/kg - Exposure: Human Oral - Frequency: Long Term, systemic effects

N-tallow-1,3-diaminopropane dioleate - CAS: 61791-53-5

Worker Industry: 0.29 mg/m³ - Consumer: 0.07 mg/m³ - Exposure: Human Inhalation -
Frequency: Long Term, systemic effects

Worker Industry: 0.04 mg/kg - Consumer: 0.018 mg/kg - Exposure: Human Dermal -
Frequency: Long Term, systemic effects

Consumer: 0.018 mg/cm² - Exposure: Human Oral

PNEC Exposure Limit Values

titanium dioxide - CAS: 13463-67-7

Target: Marine water - Value: 1 mg/L

Target: Fresh Water - Value: 0.127 mg/L

Target: Microorganisms in sewage treatments - Value: 100 mg/L

Target: Marine water sediments - Value: 100 mg/kg

Target: Freshwater sediments - Value: 1000 mg/kg

2-methoxy-1-methylethyl acetate - CAS: 108-65-6

Target: Fresh Water - Value: 0.635 mg/L

Target: Marine water - Value: 0.0635 mg/L

Target: Microorganisms in sewage treatments - Value: 100 mg/L

Target: Freshwater sediments - Value: 3.29 mg/kg

Target: Marine water sediments - Value: 0.329 mg/kg

1-methoxy-2-propanol; monopropylene glycol methyl ether - CAS: 107-98-2

Target: Fresh Water - Value: 10 mg/L

Target: Freshwater sediments - Value: 41.6 mg/kg

Target: Marine water sediments - Value: 4.17 mg/kg

Target: Microorganisms in sewage treatments - Value: 100 mg/L

Target: Soil (agricultural) - Value: 2.47 mg/kg

N-tallow-1,3-diaminopropane dioleate - CAS: 61791-53-5

Target: Fresh Water - Value: 0.00638 mg/L

Target: Marine water - Value: 0.000638 mg/L

Target: Food chain - Value: 98.6 mg/L

Target: Freshwater sediments - Value: 204 mg/kg

Target: Marine water sediments - Value: 20.4 mg/kg

Biological Exposure Index

butanone; ethyl methyl ketone - CAS: 78-93-3

Value: 2.6 mgg creatinina - medium: Urine - Biological Indicator: MEK in urine - Sampling
Period: End of turn

8.2. Exposure controls

Eye protection:

Use goggles/face mask certified UNI EN 166.

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

Protection for skin:

Suitable protective clothing is required for complete skin protection: for example coveralls with long sleeves and trousers, rubber boots and apron, etc., according to UNI EN 14325.

Protection for hands:

Use protective gloves: waterproof rubber gloves certified UNI EN 374. Nitrile gloves provide good protection. Use care in selecting a penetration time of the gloves longer than the foreseen

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usage time.

Respiratory protection:

Use adequate protective respiratory equipment: a carbon filter mask with filters certified UNI EN 149 or dust masks certified UNI EN 140. Filters of types A and P types may be considered.

Thermal Hazards:

None

Environmental exposure controls:

See sections 6 and 13

Appropriate engineering controls:

None

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance :	liquid
Odour:	N.A.
Colour:	green
pH:	N.A.
Melting point / freezing point:	N.A.
Boiling point (°C):	bp>35 °C
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:	1 °C
Evaporation rate:	N.A.
Vapour pressure:	N.A.
Specific gravity (Kg/L) 20°C :	1.1814
Methodology:	
Solubility in water:	N.A.
Lipid solubility:	N.A.
Partition coefficient (n-octanol/water):	N.A.
Auto-ignition temperature:	N.A.
Decomposition temperature:	N.A.
Kinematic viscosity at 40°C (mm ² /s):	kv > 20,5
Viscosity (23°C±0.5°C): min 70 - max 80	
Methodology: UNI EN ISO 2431 (ex DIN 53211 s)	
Flow cup: DIN 4	
Spindle: 0	
Speed (rpm): 0	

9.2. Other information

No further 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

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- 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 toxicological effects

Toxicological information of the product:

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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

The product is classified: Eye Irrit. 2 H319

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

The product is classified: STOT SE 3 H336

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:

titanium dioxide - CAS: 13463-67-7

a) acute toxicity:

Test: LD50 - Route: oral - Species: rat > 10.000 mg/kg

2-methoxy-1-methylethyl acetate - CAS: 108-65-6

a) acute toxicity:

Test: LD50 - Route: oral - Species: rat > 5000 mg/kg

Test: LC50 - Route: inhalation - Species: rat > 10.6 mg/kg

Test: LD50 - Route: dermal - Species: rat > 2000 mg/kg

b) skin corrosion/irritation:

Test: Skin Corrosive - Species: rabbit Negative

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1-methoxy-2-propanol; monopropylene glycol methyl ether - CAS: 107-98-2

a) acute toxicity:

Test: LD50 - Route: oral > 2000 mg/kg

hydrocarbons, C9, aromatics

a) acute toxicity:

Test: LD50 - Route: oral - Species: rat > 3492 mg/kg

Test: LD50 - Route: dermal - Species: rat > 3160 mg/kg

Test: LC50 - Route: inhalation - Species: rat > 6193 mg/m³ - Duration: 4h

N-tallow-1,3-diaminopropane dioleate - CAS: 61791-53-5

a) acute toxicity:

Test: LD50 - Route: oral - Species: rat > 5000 mg/kg

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

titanium dioxide - CAS: 13463-67-7

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish > 100 mg/l - Duration h: 96 - Notes: OECD 203

Endpoint: LC50 - Species: Daphnia > 100 mg/l - Duration h: 48 - Notes: OECD 202

2-methoxy-1-methylethyl acetate - CAS: 108-65-6

a) Aquatic acute toxicity:

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

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

Endpoint: EC50 - Species: Daphnia > 400 mg/l - Duration h: 48

1-methoxy-2-propanol; monopropylene glycol methyl ether - CAS: 107-98-2

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish > 100 mg/l

hydrocarbons, C9, aromatics

a) Aquatic acute toxicity:

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

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

N-tallow-1,3-diaminopropane dioleate - CAS: 61791-53-5

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish > 1 mg/l - Duration h: 96 - Notes: OECD 203

Endpoint: EC50 - Species: Daphnia > 1 mg/l - Duration h: 48

Endpoint: EC50 - Species: Algae > 0.1 mg/l - Duration h: 72

Endpoint: NOEC - Species: Algae > 0.1 mg/l - Duration h: 72 - Notes: OECD 201

12.2. Persistence and degradability

There is no data available on the preparation itself.

N.A.

12.3. Bioaccumulative potential

There is no data available on the preparation itself.

N.A.

12.4. Mobility in soil

There is no data available on the preparation itself.

N.A.

12.5. Results of PBT and vPvB assessment

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vPvB Substances: None - PBT Substances: None

12.6. Other adverse effects

None

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Recover if possible. In so doing, comply with the local and national regulations currently in force. Directives 91/156/CEE, 91/689/CEE, 94/62/CE.

EWC CODE 080111

Do not empty into drains, ground or waterways. Dispose of product residues and related containers at a collection point for hazardous or special waste or, where appropriate, through an authorized waste disposal company.

SECTION 14: Transport information

14.1. UN number

UN 1263

14.2 Proper shipping name: Paint

14.3 Transport hazard class(es) and Packing Group:

3 PG II

14.4. Environmental hazards

Marine Pollutant: -

14.5. Special precautions for user

None

Other informations

Land transport ADR/RID

ADR Classification code: F1

Maximum quantity for Limited Quantities: 5L/Kg

Tunnel code :D/E

Transport category: 3

Maritime transport (IMDG)

Maximum quantity for Limited Quantities: 5L/Kg

EmS number: F-E/S-E

Stowage provisions: B

Air transport(IATA/ICAO)

Maximum quantity for Limited Quantities: 5L/Kg

Pkg. inst. passenger and cargo aircraft: 305

Pkg. inst. cargo aircraft only: 307

Erg-code: 3L

SECTION 15: Regulatory information

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

Dir. 89/391/CEE and subsequent amendments (Risks related to chemical agents at work and Occupational exposure limit values). Directive 1999/13/EC and subsequent amendments (limitation of emissions of volatile organic compounds due to the use of organic solvents in certain activities and installations). Regulation (CE) n. 1907/2006 , Regulation (CE) 830/2015 and subsequent amendments (concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals - REACH). Regulation (CE) n.1272/2008 and subsequent amendments (on classification, labeling and packaging of substances and mixtures - CLP).

International Maritime Dangerous Goods Code, IATA Dangerous Goods Regulation, International Carriage of Dangerous Goods by Road (ADR).

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

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

Restriction 3 is not applicable because the mixture does not fall within the restrictions mentioned in Annex XVII of EC Regulation No. 1907/2006.

Restriction 40 is not applicable because the mixture does not fall within the restrictions mentioned in Annex XVII of EC Regulation No. 1907/2006.

Where applicable, refer to the following regulatory provisions :

Directive 2004/42/CE on the limitation of emissions of volatile organic compounds due to the use of organic solvents in certain paints and varnishes and vehicle refinishing products.

Regulation UE No 649/2012 concerning the export and import of dangerous chemicals.

Regulation UE n. 528/2012 concerning the making available on the market and use of biocidal products.

Directive 2012/18/EU (Seveso III)

Regulation (EC) No. 648/2004 (detergents).

Directive 2004/42/CE on the limitation of emissions of volatile organic compounds due to the use of organic solvents in certain paints and varnishes and vehicle refinishing products.

Regulation (EC) No 689/2006 concerning the export and import of dangerous chemicals.

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

Hazard class and hazard category	Code	Description
Flam. Liq. 2	2.6/2	Flammable liquid, Category 2
Flam. Liq. 3	2.6/3	Flammable liquid, Category 3
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
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 Acute 1	4.1/A1	Acute aquatic hazard, category 1
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

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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. 2, H225	On basis of test data
Eye Irrit. 2, H319	Calculation method
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.
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.

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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.