

**Safety Data Sheet (Regulation (EC) n. 1907/2006 (REACH))
BOLICONE M4 PB**

Regulation (EU) n. 2020/878

Safety Data Sheet date: 29/10/2024, version 1**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

Trade name: BOLICONE M4 PB
SDS code: 101338EU
UFI: M9FD-H12N-FE9X-7C3Y

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

Recommended use:

Industrial uses
Hardener

1.3. Details of the supplier of the safety data sheet**Manufacturers:**

Socomore SASU - Zone Industrielle du Prat - CS 23707 - 56037 VANNES CEDEX - France
-Tel. +33 (0)2 97 43 76 90

Manufacturing - Parc Gohelis - 56250 ELVEN France - Tel +33 (0)2 97 43 76 83 - Fax +33 (0)2 97 54 50 26

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Competent person responsible for the safety data sheet:

msdsinformation-eu@socomore.com

1.4. Emergency telephone number

France : ORFILA (INRS) +33 (0)1 45 42 59 59

International : CHEMTEL +1-813-248-0585.

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 swallowed.
- ⚠ Warning, Skin Irrit. 2, Causes skin irritation.
- ⚠ Danger, Eye Dam. 1, Causes serious eye damage.
- ⚠ Warning, Skin Sens. 1B, May cause an allergic skin reaction.
- ⚠ Warning, STOT SE 3, May cause respiratory irritation.
- ⚠

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

⚠ Warning, STOT RE 2, May cause damage to organs through prolonged or repeated exposure.

Adverse physicochemical, human health and environmental effects:

No other hazards

2.2. Label elements

Hazard pictograms:



Danger

Hazard statements:

H226 Flammable liquid and vapour.

H302 Harmful if swallowed.

H315 Causes skin irritation.

H318 Causes serious eye damage.

H317 May cause an allergic skin reaction.

H335 May cause respiratory irritation.

H336 May cause drowsiness or dizziness.

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

Precautionary statements:

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

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P280 Wear protective gloves/clothing, eye/face protection and hearing protection.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P312 Call a POISON CENTER/doctor/... if you feel unwell.

P370+P378 In case of fire: Use dry sand, chemical powder or alcohol-resistant foam for extinction.

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

Special Provisions:

EUH208 Contains OLIGOMERS OF AMINOALKYLMETHOXYSILANES. May produce an allergic reaction.

EUH208 Contains N-N-BIS-(3-TRIMETHYLSILOXY) PROPYL)-1-2-ETHANEDIAMINE. May produce an allergic reaction.

EUH208 Contains ethylenediamine; 1,2-diaminoethane. May produce an allergic reaction.

EUH208 Contains Aminoéthylaminoisobutylméthyldiméthoxysilane. May produce an allergic reaction.

Contains

butan-1-ol; n-butanol

N-(3-TRIMETHOXYSILYL)PROPYL)ETHYLENEDIAMINE

methanol

N-N'-BIS(3-(TRIMETHYLSILOXY) PROPYL)-1-2-ETHANDIAMINE

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

None

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2.3. Other hazards

No PBT, vPvB or endocrine disruptor substances present in concentration $\geq 0.1\%$

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
$\geq 50\%$ - $< 60\%$	butan-1-ol; n-butanol	Index number: 603-004-00-6 CAS: 71-36-3 EC: 200-751-6 REACH No.: 01-2119484630-38	<ul style="list-style-type: none"> ⚠ 2.6/3 Flam. Liq. 3 H226 ⚠ 3.8/3 STOT SE 3 H335 ⚠ 3.2/2 Skin Irrit. 2 H315 ⚠ 3.3/1 Eye Dam. 1 H318 ⚠ 3.8/3 STOT SE 3 H336 ⚠ 3.1/4/Oral Acute Tox. 4 H302 Acute Toxicity Estimate: ATE - Oral 500 mg/kg bw ATE - Dermal 3430 mg/kg bw ATE - Inhalation (Dust/mist) 17,76 mg/l
$\geq 40\%$ - $< 50\%$	N-(3-TRIMETHOXYSILYL) PROPYL) ETHYLENEDIAMINE	CAS: 1760-24-3 EC: 217-164-6 REACH No.: 01-2119970215-39	<ul style="list-style-type: none"> ⚠ 3.1/4/Inhal Acute Tox. 4 H332 ⚠ 3.3/1 Eye Dam. 1 H318 ⚠ 3.4.2/1B Skin Sens. 1B H317 ⚠ 3.9/2 STOT RE 2 H373 Acute Toxicity Estimate: ATE - Oral 2295 mg/kg bw ATE - Dermal 2001 mg/kg bw ATE - Inhalation (Dust/mist) 1,49 mg/l
$\geq 3\%$ - $< 5\%$	N-N'-BIS(3-(TRIMETHYLSILOXY) PROPYL)-1-2-ETHANDIAMINE	CAS: 68845-16-9 EC: 272-453-4	<ul style="list-style-type: none"> ⚠ 3.2/2 Skin Irrit. 2 H315 ⚠ 3.3/1 Eye Dam. 1 H318 ⚠ 3.4.2/1 Skin Sens. 1 H317 ⚠ 3.8/3 STOT SE 3 H335
$\geq 1\%$ - $< 3\%$	OLIGOMERS OF AMINOALKYLMETHOXYSILANES		<ul style="list-style-type: none"> ⚠ 3.1/4/Inhal Acute Tox. 4 H332 ⚠ 3.3/1 Eye Dam. 1 H318 ⚠ 3.4.2/1B Skin Sens. 1B H317 ⚠ 3.9/2 STOT RE 2 H373 Acute Toxicity Estimate: ATE - Oral 2295 mg/kg bw ATE - Dermal 2001 mg/kg bw

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			ATE - Inhalation (Dust/mist) 2,44 mg/l
>= 1% - < 3%	N-N-BIS-(3-TRIMETHYLSILOXY) PROPYL)-1-2-ETHANEDIAMINE	CAS: 74956-86-8	<ul style="list-style-type: none"> ⚠ 3.2/2 Skin Irrit. 2 H315 ⚠ 3.3/1 Eye Dam. 1 H318 ⚠ 3.4.2/1 Skin Sens. 1 H317 ⚠ 3.8/3 STOT SE 3 H335
>= 1% - < 3%	methanol	Index number: 603-001-00-X CAS: 67-56-1 EC: 200-659-6 REACH No.: 01-2119433307-44	<ul style="list-style-type: none"> ⚠ 2.6/2 Flam. Liq. 2 H225 ⚠ 3.8/1 STOT SE 1 H370 (eyes, central nervous system) ⚠ 3.1/3/Oral Acute Tox. 3 H301 ⚠ 3.1/3/Dermal Acute Tox. 3 H311 ⚠ 3.1/3/Inhal Acute Tox. 3 H331 Specific Concentration Limits: C >= 10%: STOT SE 1 H370 3% <= C < 10%: STOT SE 2 H371 Acute Toxicity Estimate: ATE - Oral 5000 mg/kg bw ATE - Dermal 300 mg/kg bw ATE - Inhalation (Vapours) 3 mg/l
>= 0.5% - < 1%	ethylenediamine; 1,2-diaminoethane	CAS: 107-15-3 EC: 203-468-6 REACH No.: 01-2119480383-37	<ul style="list-style-type: none"> ⚠ 2.6/3 Flam. Liq. 3 H226 ⚠ 3.1/4/Oral Acute Tox. 4 H302 ⚠ 3.1/3/Dermal Acute Tox. 3 H311 ⚠ 3.1/4/Inhal Acute Tox. 4 H332 ⚠ 3.2/1B Skin Corr. 1B H314 ⚠ 3.3/1 Eye Dam. 1 H318 ⚠ 3.4.1/1 Resp. Sens. 1 H334 ⚠ 3.4.2/1 Skin Sens. 1 H317 4.1/C3 Aquatic Chronic 3 H412 Acute Toxicity Estimate: ATE - Oral 866 mg/kg bw ATE - Dermal 560 mg/kg bw ATE - Inhalation (Vapours) 14,7 mg/l
>= 0.1% - < 0.25%	Aminoéthylaminoisobutylméthyl diméthoxysilane	CAS: 23410-40-4 EC: 245-642-4	<ul style="list-style-type: none"> ⚠ 3.1/4/Oral Acute Tox. 4 H302 ⚠ 3.3/1 Eye Dam. 1 H318 ⚠ 3.4.2/1 Skin Sens. 1 H317 ⚠ 4.1/C2 Aquatic Chronic 2 H411 Acute Toxicity Estimate: ATE - Oral 653 mg/kg bw ATE - Dermal 2001 mg/kg bw ATE - Inhalation (Vapours) 0,6 mg/l

SVHC, PBT, vPvB, endocrine disruptor substances:

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>= 0.5% - < 1% ethylenediamine; 1,2-diaminoethane

REACH No.: 01-2119480383-37, CAS: 107-15-3, EC: 203-468-6

SVHC

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.

OBTAIN IMMEDIATE MEDICAL ATTENTION.

Wash thoroughly the body (shower or bath).

Remove contaminated clothing immediately and dispose of safely.

After contact with skin, wash immediately with soap and plenty of water.

In case of eyes contact:

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.

Protect uninjured eye.

In case of Ingestion:

Give nothing to eat or drink.

In case of Inhalation:

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

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:

No particular treatment.

SECTION 5: Firefighting measures**5.1. Extinguishing media**

Suitable extinguishing media:

Foam.

Carbon dioxide (CO₂)

Dry powder

Extinguishing media which must not be used for safety reasons:

High power water jet

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.
- 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, ensure 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

- Always keep in a well ventilated place.
- Store at ambient temperatures. 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.
- 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

Occupational exposure limit values

butan-1-ol; n-butanol - CAS: 71-36-3

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

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- OEL Type: National - STEL: 150 mg/m³, 50 ppm - Notes: France
- methanol - CAS: 67-56-1
 - OEL Type: National - TWA(8h): 260 mg/m³, 200 ppm - STEL: 1300 mg/m³, 1000 ppm - Notes: France VLEC
 - OEL Type: EU - TWA(8h): 260 mg/m³, 200 ppm - Notes: Skin
 - OEL Type: ACGIH - TWA(8h): 200 ppm - STEL: 250 ppm - Notes: Skin, BEI - Headache, eye dam, dizziness, nausea
 - OEL Type: TWA - TWA: 200 ppm
- ethylenediamine; 1,2-diaminoethane - CAS: 107-15-3
 - OEL Type: ACGIH - TWA(8h): 10 ppm - Notes: Skin, A4
 - OEL Type: DOW IHG - TWA: 5 ppm - Notes: Skin, DSEN, RSEN
 - OEL Type: National - TWA: 25 mg/m³, 10 ppm - STEL: 15 mg/m³, 15 ppm - Behaviour: Indicative - Notes: France

DNEL Exposure Limit Values

- butan-1-ol; n-butanol - CAS: 71-36-3
 - Worker Industry: 310 mg/m³ - Exposure: Human Inhalation - Frequency: Long Term (repeated) - Notes: 100 ppm
 - Consumer: 3125 mg/kg - Exposure: Human Oral - Frequency: Long Term (repeated) - Notes: 1 day
 - Consumer: 55 mg/m³ - Exposure: Human Inhalation - Frequency: Long Term (repeated)
- N-(3-TRIMETHOXYSILYL)PROPYL)ETHYLENEDIAMINE - CAS: 1760-24-3
 - Worker Industry: 35.3 mg/m³ - Consumer: 8.7 mg/m³ - Exposure: Human Inhalation - Frequency: Long Term, systemic effects
 - Worker Industry: 5 mg/kg b.w./day - Consumer: 2.5 mg/kg b.w./day - Exposure: Human Dermal - Frequency: Long Term, systemic effects
 - Worker Industry: 5 mg/kg b.w./day - Consumer: 17 mg/kg b.w./day - Exposure: Human Dermal - Frequency: Short Term, systemic effects
 - Consumer: 2.5 mg/kg b.w./day - Exposure: Human Oral
- methanol - CAS: 67-56-1
 - Worker Industry: 40 mg/kg b.w./day - Consumer: 8 mg/kg b.w./day - Exposure: Human Dermal - Frequency: Short Term, systemic effects
 - Worker Industry: 40 mg/kg b.w./day - Consumer: 8 mg/kg b.w./day - Exposure: Human Dermal - Frequency: Long Term, systemic effects
 - Worker Industry: 260 mg/m³ - Exposure: Human Inhalation - Frequency: Short Term, systemic effects
 - Worker Industry: 260 mg/m³ - Exposure: Human Inhalation - Frequency: Long Term, local effects
 - Worker Industry: 260 mg/m³ - Exposure: Human Inhalation - Frequency: Long Term, systemic effects
- ethylenediamine; 1,2-diaminoethane - CAS: 107-15-3
 - Worker Industry: 5 mg/kg/day - Exposure: Human Dermal - Frequency: Short Term, systemic effects
 - Worker Industry: 35 mg/m³ - Exposure: Human Inhalation - Frequency: Long Term, systemic effects
 - Worker Industry: 3.6 mg/kg/day - Exposure: Human Dermal - Frequency: Long Term,

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systemic effects

Worker Industry: 25 mg/m³ - Exposure: Human Inhalation - Frequency: Long Term, systemic effects

Consumer: 0.27 mg/kg b.w./day - Exposure: Human Oral - Frequency: Long Term, systemic effects

Aminoéthylaminoisobutylméthyldiméthoxysilane - CAS: 23410-40-4

Worker Industry: 16.29 mg/m³ - Exposure: Human Inhalation - Frequency: Long Term, systemic effects

PNEC Exposure Limit Values

butan-1-ol; n-butanol - CAS: 71-36-3

Target: Fresh Water - Value: 0.082 mg/l

Target: Marine water - Value: 0.0082 mg/l

Target: Freshwater sediments - Value: 0.178 mg/kg

Target: Marine water sediments - Value: 0.0178 mg/kg

Target: Soil (agricultural) - Value: 0.015 mg/kg

N-(3-TRIMETHOXYSILYL)PROPYL)ETHYLENEDIAMINE - CAS: 1760-24-3

Target: Fresh Water - Value: 0.062 mg/l

Target: Marine water - Value: 0.0062 mg/l

Target: Freshwater sediments - Value: 0.048 mg/kg

Target: Marine water sediments - Value: 0.0048 mg/kg

Target: Soil - Value: 0.0075 mg/kg

Target: Sewage treatment plant - Value: 25 mg/l

methanol - CAS: 67-56-1

Target: Fresh Water - Value: 20.8 mg/l

Target: Marine water - Value: 2.08 mg/l

Target: Freshwater sediments - Value: 77 mg/kg

Target: Marine water sediments - Value: 7.7 mg/kg

Target: Soil (agricultural) - Value: 3.18 mg/kg

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

ethylenediamine; 1,2-diaminoethane - CAS: 107-15-3

Target: Fresh Water - Value: 0.016 mg/l

Target: Marine water - Value: 0.002 mg/l

Target: Water (intermittent discharge) - Value: 0.167 mg/l

Target: Freshwater sediments - Value: 7.68 mg/kg

Target: Marine water sediments - Value: 0.768 mg/kg

Target: Sewage treatment plant - Value: 0.5 mg/l

Target: Soil - Value: 4.36 mg/kg

Aminoéthylaminoisobutylméthyldiméthoxysilane - CAS: 23410-40-4

Target: Fresh Water - Value: 0.0082 mg/l

Target: Intermittent discharge - Value: 0.0149 mg/l

Target: Marine water - Value: 0.00082 mg/l

Target: Sewage treatment plant - Value: 20 mg/l

Target: Freshwater sediments - Value: 0.042 mg/kg dw

Target: Marine water sediments - Value: 0.0042 mg/kg dw

Target: Soil - Value: 0.004 mg/kg dw

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Biological Exposure Index

methanol - CAS: 67-56-1

Value: 15 mg/L - medium: Urine - Sampling Period: End of turn - Remark: Admissible concentration: 15 mg/l ; Base ACGIH BEI

8.2. Exposure controls

See below, example of PPE to use.

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.

Thermal Hazards:

None

Environmental exposure controls:

None

Appropriate engineering controls:

None

Other conditions affecting workers exposure:

None

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Properties	Value	Method:	Notes
Physical state:	Liquid	--	--
Colour:	Colourless	--	--
Odour:	de solvent/ solvent-like	--	--
Melting point/freezing point:	Not Relevant	--	--
Boiling point or initial boiling point and boiling range:	>36°C	--	--
Flammability:	Flam. Liq. 3, H226	--	--
Lower and upper explosion limit:	N.A.	--	--
Flash point (°C):	~30°C	--	--
Auto-ignition temperature:	N.A.	--	--

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Decomposition temperature:	Not Relevant	--	--
pH:	N.A.	--	--
Kinematic viscosity:	> 20,5 mm ² /sec (40 °C)	--	--
Solubility in water:	immiscible	--	--
Solubility in oil:	N.A.	--	--
Partition coefficient n-octanol/water (log value):	N.A.	--	--
Vapour pressure:	<1.000 hPa (50°C)	--	--
Density and/or relative density:	~0.91 g/cm ³ (23°C)	--	--
Relative vapour density:	N.A.	--	--
Particle characteristics:			
Particle size:	N.A.	--	--

9.2. Other information

Properties	Value	Method:	Notes
Viscosity:	>20.6 mm ² /s (40°C)	--	--

Volatile Organic compounds - VOCs = 51.25 %

N.A. = not available

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 oxidizers.

10.6. Hazardous decomposition products

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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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Acute toxicity

The product is classified: Acute Tox. 4 H302

ATEmix - Oral 909,091 mg/kg bw

ATEmix - Dermal 22702,7 mg/kg bw

ATEmix - Inhalation (Vapours) 23,4708 mg/l

Skin corrosion/irritation

The product is classified: Skin Irrit. 2 H315

Serious eye damage/irritation

The product is classified: Eye Dam. 1 H318

Respiratory or skin sensitisation

The product is classified: Skin Sens. 1B H317

Germ cell mutagenicity

Not classified

Based on available data, the classification criteria are not met

Carcinogenicity

Not classified

Based on available data, the classification criteria are not met

Reproductive toxicity

Not classified

Based on available data, the classification criteria are not met

STOT-single exposure

The product is classified: STOT SE 3 H335; STOT SE 3 H336

STOT-repeated exposure

The product is classified: STOT RE 2 H373

Aspiration hazard

Not classified

Based on available data, the classification criteria are not met

Toxicological information of the main substances found in the product:

butan-1-ol; n-butanol - CAS: 71-36-3

Acute toxicity

ATE - Oral 500 mg/kg bw

ATE - Dermal 3430 mg/kg bw

ATE - Inhalation (Dust/mist) 17,76 mg/l

Test: LD50 - Route: Oral - Species: Rat (Male, female) = 2292 mg/kg - Source: OECD, 401

Test: ATE - Route: Oral = 500 mg/kg

Test: LD50 - Route: Skin - Species: Rabbit = 3430 mg/kg

Test: ATE - Route: Skin = 3430 mg/kg

Test: LC50 - Route: Inhalation Vapour - Species: Rat = 17.76 mg/l - Duration: 4h - Source:

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OECD, 403

Test: ATE - Route: Inhalation (dust, mist) = 17.76 mg/l

N-(3-TRIMETHOXYSILYL)PROPYL)ETHYLENEDIAMINE - CAS: 1760-24-3

Acute toxicity

ATE - Oral 2295 mg/kg bw

ATE - Dermal 2001 mg/kg bw

ATE - Inhalation (Dust/mist) 1,49 mg/l

Test: LD50 - Route: Oral - Species: Rat = 2295 mg/kg

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

Test: LC50 - Route: Inhalation (dust, mist) - Species: Rat > 1.49 mg/l - Duration: 4h

Test: LC50 - Route: Inhalation (dust, mist) - Species: Rat < 2.44 mg/l - Duration: 4h

Test: ATE - Route: Oral = 2295 mg/kg

Test: ATE - Route: Inhalation (dust, mist) >= 1.49 mg/l - Duration: 4h

Test: ATE - Route: Inhalation (dust, mist) <= 2.44 mg/l - Duration: 4h

Test: ATE - Route: Skin > 2000 mg/kg

OLIGOMERS OF AMINOALKYLMETHOXYSILANES

Acute toxicity

ATE - Oral 2295 mg/kg bw

ATE - Dermal 2001 mg/kg bw

ATE - Inhalation (Dust/mist) 2,44 mg/l

Test: ATE - Route: Inhalation (dust, mist) >= 1.49 mg/l - Duration: 4h

Test: ATE - Route: Inhalation (dust, mist) <= 2.44 mg/l - Duration: 4h

Test: ATE - Route: Oral = 2295 mg/kg

Test: ATE - Route: Skin > 2000 mg/kg

Test: LD50 - Route: Oral = 2295 mg/kg - Source: OPPTS 870.1100

Test: LC50 - Route: Inhalation (dust, mist) >= 1.49 mg/l - Duration: 4h

Test: LC50 - Route: Inhalation (dust, mist) <= 2.44 mg/l - Duration: 4h

methanol - CAS: 67-56-1

Acute toxicity

ATE - Oral 5000 mg/kg bw

ATE - Dermal 300 mg/kg bw

ATE - Inhalation (Vapours) 3 mg/l

Test: ATE - Route: Oral = 100 mg/kg

Test: ATE - Route: Skin = 300 mg/kg

Test: ATE - Route: Inhalation Vapour = 3 mg/l

Test: LC50 - Route: Inhalation Vapour - Species: Rat = 3 mg/l - Duration: 4h

Test: LD50 - Route: Oral - Species: Rat = 100 mg/kg

Test: LD50 - Route: Skin - Species: Rabbit = 15800 mg/kg

Test: DLA - Approximate lethal dose - Species: Human = 340 mg/kg - Notes: Estimate

Test: DLA - Approximate lethal dose - Species: Human >= 29 mg/l - Notes: Estimate

Test: DLA - Approximate lethal dose - Species: Human <= 237 mg/l - Notes: Estimate

ethylenediamine; 1,2-diaminoethane - CAS: 107-15-3

Acute toxicity

ATE - Oral 866 mg/kg bw

ATE - Dermal 560 mg/kg bw

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ATE - Inhalation (Vapours) 14,7 mg/l

Test: LD50 - Route: Oral - Species: Rat = 866 mg/kg

Test: ATE - Route: Oral = 866 mg/kg

Test: LD50 - Route: Skin - Species: Rat = 560 mg/kg

Test: ATE - Route: Skin = 560 ml/kg

Test: LC50 - Route: Inhalation Vapour - Species: Rat = 14.7 mg/l

Test: ATE - Route: Inhalation Vapour = 11 mg/l - Duration: 4h

Aminoéthylaminoisobutylméthylméthoxysilane - CAS: 23410-40-4

Acute toxicity

ATE - Oral 653 mg/kg bw

ATE - Dermal 2001 mg/kg bw

ATE - Inhalation (Vapours) 0,6 mg/l

Test: ATE - Route: Oral = 653 mg/kg

Test: ATE - Route: Inhalation Vapour = 0.6 mg/l - Duration: 4h

Test: ATE - Route: Skin > 2000 mg/kg

Test: LD50 - Route: Oral - Species: Rat (Male, female) = 653 mg/kg - Source: OECD 401

Test: LD50 - Route: Skin - Species: Rabbit (male, female) > 2000 mg/kg - Source: OECD 402

Test: LC50 - Route: Inhalation Vapour - Species: Rat (Male, female) = 0.6 mg/l - Duration: 4h - Source: OECD 403

11.2. Information on other hazards

Endocrine disrupting properties:

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

Other toxicological information:

butan-1-ol; n-butanol

Skin corrosion/skin irritation:

Irritating to skin.

Rabbit, Result: Irritant, OECD Guideline 404

Rabbit, Result: Risk of serious eye damage, OECD Guideline 405.

-

N-N'-BIS(3-(TRIMETHYLSILOXY) PROPYL)-1-2-ETHANDIAMINE

Inhalation:

May cause respiratory tract irritation.

Skin contact:

May cause skin irritation. May cause skin allergy.

Eye contact:

Severe eye damage

-

N-N-BIS-(3-TRIMETHYLSILOXY) PROPYL)-1-2-ETHANEDIAMINE

Skin contact:

May cause skin irritation. May cause skin allergy.

Safety Data Sheet (Regulation (EC) n. 1907/2006 (REACH))
BOLICONE M4 PB

Eye contact:

Severe eye damage

May cause moderate corneal damage.

Inhalation:

May cause respiratory tract irritation.

-

methanol

Acute oral toxicity :

Methanol is highly toxic to humans and can cause central nervous system effects, visual disturbances up to and including blindness, metabolic acidosis and degenerative damage to other organs including the liver, kidneys and heart. Effects may be delayed

Acute dermal toxicity:

The effects of methanol are the same as those seen with oral or inhalation exposure and include central nervous system depression, visual disturbances up to and including blindness, metabolic acidosis, as well as effects on organ systems such as the liver, kidneys and heart, and even death.

Inhalation toxicity :

Vapour concentrations that are easy to reach can cause serious harmful effects and even death. At lower concentrations: Possible respiratory irritation and central nervous system depression. Symptoms may include headache, dizziness and drowsiness leading to loss of co-ordination and consciousness. Inhalation of methanol can cause effects ranging from headaches, narcosis and impaired vision to metabolic acidosis, blindness and even death. Effects may be delayed.

Skin corrosion/irritation:

Prolonged contact may cause slight skin irritation with local redness.

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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Not classified for environmental hazards

Based on available data, the classification criteria are not met

butan-1-ol; n-butanol - CAS: 71-36-3

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish > 1730 mg/l - Duration h: 96 - Notes: Pimephales promelas

Endpoint: EC50 - Species: Daphnia = 1983 mg/l - Duration h: 48

N-(3-TRIMETHOXYSILYL)PROPYL)ETHYLENEDIAMINE - CAS: 1760-24-3

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Daphnia Magna = 81 mg/l - Duration h: 48

Endpoint: EC50 - Species: Pseudokirchneriella subcapitata (green algae) = 8.8 mg/l - Duration h: 72 - Activated sludge

Endpoint: NOEC - Species: Pseudokirchneriella subcapitata (green algae) = 3.1 mg/l - Duration

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BOLICONE M4 PB

h: 72

Endpoint: EC50 - Species: *Pseudomonas putida* = 67 mg/l - Duration h: 16

b) Aquatic chronic toxicity:

Endpoint: NOEC - Species: *Daphnia Magna* > 1 mg/l - Duration h: 504 - Semi-static system

Endpoint: NOEC - Species: *Eisenia fetida* >= 1000 mg/kg - Duration h: 336

OLIGOMERS OF AMINOALKYLMETHOXYSILANES

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: *Danio rerio* = 597 mg/l - Duration h: 96 - Notes: Directive 67/548/CEE, Annexe V, C.1.

methanol - CAS: 67-56-1

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: *Daphnia Magna* > 10000 mg/l - Duration h: 48

Endpoint: EC50r - Species: *Pseudokirchneriella subcapitata* = 22000 mg/l - Duration h: 96 -

Notes: OECD 201

Endpoint: IC50 - Species: bacteria > 1000 mg/l - Duration h: 3 - Notes: OECD 209

Endpoint: NOEC - Species: *Oryzias latipes* = 15800 mg/l - Duration h: 200

ethylenediamine; 1,2-diaminoethane - CAS: 107-15-3

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish = 640 mg/l - Duration h: 96 - Notes: *Poecilia reticulata*

Endpoint: EC50 - Species: Aquatic invertebrates = 16.7 mg/l - Duration h: 48 - Notes: *Daphnia magna*

Endpoint: EC50 - Species: Aquatic plants = 645 mg/l - Duration h: 72 - Notes: *Selenastrum capricornutum*

Endpoint: NOEC - Species: Aquatic plants = 3.2 mg/l - Duration h: 72 - Notes: *Selenastrum capricornutum*

Endpoint: EC50 - Species: Microorganisms = 29 mg/l

b) Aquatic chronic toxicity:

Endpoint: NOEC - Species: Fish > 10 mg/l - Duration h: 672

Endpoint: NOEC - Species: Aquatic invertebrates = 0.16 mg/kg/d - Duration h: 504 - Notes: *Daphnia magna*

Aminoéthylaminoisobutylméthylidiméthoxysilane - CAS: 23410-40-4

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: *Lepomis macrochirus* = 200 mg/l - Duration h: 96 - Notes:

EPA-660/3-75-009 - Test Type: Static Test

Endpoint: EC50 - Species: *Daphnia Magna* = 81 mg/l - Duration h: 48 - Notes: Directive 67/548/CEE, Annexe V, C.2. - Test Type: Static Test

Endpoint: EC50r - Species: Algae = 1.71 mg/l - Duration h: 72 - Notes: *Selenastrum capricornutum* ; OECD 201

Endpoint: NOEC - Species: Algae = 0.365 mg/l - Duration h: 72 - Notes: *Selenastrum capricornutum* ; OECD 201

12.2. Persistence and degradability

butan-1-ol; n-butanol - CAS: 71-36-3

Biodegradability: Readily biodegradable - Duration: 19 days - %: > 70% - Notes: Aerobic

OLIGOMERS OF AMINOALKYLMETHOXYSILANES

Biodegradability: Biodegradability rate - Test: OECD 301A - Duration: 28 days - %: 39%

methanol - CAS: 67-56-1

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Biodegradability: Readily biodegradable

ethylenediamine; 1,2-diaminoethane - CAS: 107-15-3

Biodegradability: Readily biodegradable - Test: OECD 301C - Duration: 28 days - %: 95%

Aminoéthylaminoisobutylméthyldiméthoxysilane - CAS: 23410-40-4

Biodegradability: Biodegradability rate - Test: OECD 301D - Duration: 28 days - %: 11,1%

12.3. Bioaccumulative potential

N-(3-TRIMETHOXYSILYL)PROPYL)ETHYLENEDIAMINE - CAS: 1760-24-3

BCF < 100

Log Pow < 3

OLIGOMERS OF AMINOALKYLMETHOXYSILANES

BCF < 100

< 3

Log Pow

methanol - CAS: 67-56-1

BCF < 100

Log Kow < 3

Partition coefficient: n-octanol/water (log Pow) -1,6 (20 °C) - Notes: measured

ethylenediamine; 1,2-diaminoethane - CAS: 107-15-3

BCF 0.07

Log Pow -1.6

Aminoéthylaminoisobutylméthyldiméthoxysilane - CAS: 23410-40-4

BCF < 100

Log Pow < 3

Partition coefficient: n-octanol/water (log Pow) -0.31 - Notes: estimate

12.4. Mobility in soil

N-(3-TRIMETHOXYSILYL)PROPYL)ETHYLENEDIAMINE - CAS: 1760-24-3

Log Koc > 5000

OLIGOMERS OF AMINOALKYLMETHOXYSILANES

Koc > 5000

methanol - CAS: 67-56-1

Koc 0.44 - Notes: Estimate

ethylenediamine; 1,2-diaminoethane - CAS: 107-15-3

Log Koc 3.68

Volatility (H: Henry's Law Constant) 6E-01 atm m³/mol - Notes: 25°C

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

No harmful effects expected.

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.

Codes of wastes (Décision 2001/573/EC, Directive 2006/12/EEC, Directive 94/31/EEC on hazardous

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BOLICONE M4 PB

waste):

08 01 11* wastes of paint and varnish containing organic solvents or other dangerous substances

SECTION 14: Transport information



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 RELATED MATERIAL
 IATA-Shipping Name: PAINT RELATED MATERIAL
 IMDG-Shipping Name: PAINT RELATED MATERIAL

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: III
 IATA-Packing group: III
 IMDG-Packing group: III

14.5. Environmental hazards

ADR-Environmental Pollutant: No
 IMDG-Marine pollutant: No
 IMDG-EmS: F-E , S-E

14.6. Special precautions for user

ADR-Subsidiary hazards: -
 ADR-S.P.: 163 367 650
 ADR-Transport category (Tunnel restriction code): 3 (D/E)
 IATA-Passenger Aircraft: 355
 IATA-Subsidiary hazards: -
 IATA-Cargo Aircraft: 366
 IATA-S.P.: A3 A72 A192
 IATA-ERG: 3L
 IMDG-Subsidiary hazards: -
 IMDG-Stowage and handling: Category A
 IMDG-Segregation: -
 Q.L.: 5L
 Q.E.: E1

14.7. Maritime transport in bulk according to IMO instruments

N.A.

**Safety Data Sheet (Regulation (EC) n. 1907/2006 (REACH))
BOLICONE M4 PB****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. 286/2011 (ATP 2 CLP)
Regulation (EU) n. 618/2012 (ATP 3 CLP)
Regulation (EU) n. 487/2013 (ATP 4 CLP)
Regulation (EU) n. 944/2013 (ATP 5 CLP)
Regulation (EU) n. 605/2014 (ATP 6 CLP)
Regulation (EU) n. 2015/1221 (ATP 7 CLP)
Regulation (EU) n. 2016/918 (ATP 8 CLP)
Regulation (EU) n. 2016/1179 (ATP 9 CLP)
Regulation (EU) n. 2017/776 (ATP 10 CLP)
Regulation (EU) n. 2018/669 (ATP 11 CLP)
Regulation (EU) n. 2018/1480 (ATP 13 CLP)
Regulation (EU) n. 2019/521 (ATP 12 CLP)
Regulation (EU) n. 2020/217 (ATP 14 CLP)
Regulation (EU) n. 2020/1182 (ATP 15 CLP)
Regulation (EU) n. 2021/643 (ATP 16 CLP)
Regulation (EU) n. 2021/849 (ATP 17 CLP)
Regulation (EU) n. 2022/692 (ATP 18 CLP)

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

Restrictions related to the product:

Restriction 3

Restriction 40

Restrictions related to the substances contained:

Restriction 69

Restriction 75

Listed or in compliance with the following international inventories:

Labelling of detergents (EC Regulations 648/2004 and 907/2006):

N.A.

Labelling of biocides (Regulations 1896/2000, 1687/2002, 2032/2003, 1048/2005, 1849/2006, 1451/2007 and Directive 98/8/EC):

N.A.

N.A.

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Where applicable, refer to the following regulatory provisions :

Directive 2003/105/CE ('Activities linked to risks of serious accidents') and subsequent amendments.

1999/13/EC (VOC directive)

Dir. 2004/42/EC (VOC directive)

SVHC Substances:

Substances in candidate list (Art. 59 Reg. 1907/2006, REACH):

ethylenediamine; 1,2-diaminoethane

Respiratory Sensitisation

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

SECTION 16: Other information

N.A.: Not Applicable or Not Available

Full text of phrases referred to in Section 3:

H226 Flammable liquid and vapour.

H335 May cause respiratory irritation.

H315 Causes skin irritation.

H318 Causes serious eye damage.

H336 May cause drowsiness or dizziness.

H302 Harmful if swallowed.

H332 Harmful if inhaled.

H317 May cause an allergic skin reaction.

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

H225 Highly flammable liquid and vapour.

H370 (eyes, central nervous system) Causes damage to organs (eyes, central nervous system).

H301 Toxic if swallowed.

H311 Toxic in contact with skin.

H331 Toxic if inhaled.

H370 Causes damage to organs.

H371 May cause damage to organs.

H314 Causes severe skin burns and eye damage.

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H412 Harmful to aquatic life with long lasting effects.

H411 Toxic to aquatic life with long lasting effects.

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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
Acute Tox. 3	3.1/3/Dermal	Acute toxicity (dermal), Category 3
Acute Tox. 3	3.1/3/Inhal	Acute toxicity (inhalation), Category 3
Acute Tox. 3	3.1/3/Oral	Acute toxicity (oral), Category 3
Acute Tox. 4	3.1/4/Inhal	Acute toxicity (inhalation), Category 4
Acute Tox. 4	3.1/4/Oral	Acute toxicity (oral), Category 4
Skin Corr. 1B	3.2/1B	Skin corrosion, Category 1B
Skin Irrit. 2	3.2/2	Skin irritation, Category 2
Eye Dam. 1	3.3/1	Serious eye damage, Category 1
Resp. Sens. 1	3.4.1/1	Respiratory Sensitisation, Category 1
Skin Sens. 1	3.4.2/1	Skin Sensitisation, Category 1
Skin Sens. 1B	3.4.2/1B	Skin Sensitisation, Category 1B
STOT SE 1	3.8/1	Specific target organ toxicity - single exposure, Category 1
STOT SE 2	3.8/2	Specific target organ toxicity - single exposure, 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 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

(EC) 1272/2008 [CLP] Yönetmeliğine göre karışımların sınıflandırmasını elde etmek için kullanılan sınıflandırma ve prosedür:

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Classification according to Regulation (EC) Nr. 1272/2008	Classification procedure
Flam. Liq. 3, H226	On basis of test data
Acute Tox. 4, H302	Calculation method
Skin Irrit. 2, H315	Calculation method
Eye Dam. 1, H318	Calculation method
Skin Sens. 1B, H317	Calculation method
STOT SE 3, H335	Calculation method
STOT SE 3, H336	Calculation method
STOT RE 2, H373	Calculation method

Due to the integration of the Mader Aero products range into the Socomore Group, all Safety Data Sheets have been re-evaluated on the basis of consolidated information. This may have led to significant changes in our Safety Data Sheets. If you have any questions regarding these changes, you can contact us at the address indicated in section 1.

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

CCNL - Appendix 1

Insert further consulted bibliography

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SOCOMORE strongly advises every recipient of this safety data sheet to read it carefully and to consult experts in the field if necessary or appropriate, in order to understand the information it contains, notably the possible dangers associated with this product. The users must ensure the conformity and completeness of this information with regards to their specific use of the product.

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 responsibility of the purchaser/user to ensure that their activities conform with current legislation in force.

The information is considered correct, but it is not exhaustive and it shall be used only as a guide which is based on the current knowledge of the substance or mixture and it is applicable to the safety

Safety Data Sheet (Regulation (EC) n. 1907/2006 (REACH))
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precautions appropriate for the product.

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.
LTE:	Long-term exposure.
PNEC:	Predicted No Effect Concentration.
RID:	Regulation Concerning the International Transport of Dangerous Goods by Rail.
STE:	Short-term exposure.
STEL:	Short Term Exposure limit.
STOT:	Specific Target Organ Toxicity.
STOT SE:	May cause drowsiness or dizziness
TLV:	Threshold Limiting Value.
TWA:	Time-weighted average
TWATLV:	Threshold Limit Value for the Time Weighted Average 8 hour day. (ACGIH Standard).
WGK:	German Water Hazard Class.