



SAFETY DATA SHEET

according to Regulation (EU) No. 453/2010

Daltotherm TSW 38-00

1. Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product code Daltotherm TSW 38-00

Synonyms None.

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

Use of the Substance/Preparation Industrial uses
A component of a polyurethane system.

1.3. Details of the supplier of the safety data sheet

Company/Undertaking Identification PUR-Systems GmbH
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D-49124 Georgsmarienhütte
Germany
Tel +49 5401 8355 - 0
Fax +49 5401 8355 83
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1.4. Emergency telephone number +49 174 975 1711
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Version REACH GHS/CLP

2. Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 (GHS/CLP)

Skin corrosion/irritation, Cat. 2, H315
Serious eye damage/eye irritation, Cat. 1, H318
Reproductive toxicity, Cat. 1B (FD), H360
Can become flammable in use.

Classification according to EU Directives 67/548/EEC or 1999/45/EC

R10
Repr. Cat. 2; R60

Additional information

For the full text of the phrases mentioned in this Section, see Section 16.

2.2. Label elements



Signal Word
Hazard Statements

Danger
H315: Causes skin irritation.
H318: Causes serious eye damage.
H360FFDD: May damage fertility. May damage the unborn child.

Precautionary statements

P201: Obtain special instructions before use.
P264a: Wash skin thoroughly after handling.
P280c: Wear protective gloves/ eye protection/ face protection.
P281: Use personal protective equipment as required.
P302+P352: IF ON SKIN: Wash with plenty of soap and water.
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313: IF exposed or concerned: Get medical advice/ attention.
P310: Immediately call a POISON CENTER or doctor/ physician.
P332+P313: If skin irritation occurs: Get medical advice/ attention.
P405: Store locked up.

Additional advice

Can become flammable in use.

GHS product identifier

Dimethylpropylphosphonate, CAS-No. 18755-43-6

Labelling according to Directives 67/548/EEC or 1999/45/EC

R-phrases(s)

R10: Flammable.
R60: May impair fertility.

S-phrases(s)

S16: Keep away from sources of ignition - No smoking.
S45: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
S53: Avoid exposure - obtain special instructions before use.
S36/37: Wear suitable protective clothing and gloves.



Additional advice

Contains . May produce an allergic reaction.

Hazardous component(s) which must be listed on the label

Dimethylpropanphosphonate, CAS-No. 18755-43-6

2.3. Other hazards

No hazards to be specially mentioned.

3. Composition/information on ingredients

Chemical characterization

Mixture.

Components		CLP Classification	DSD/DPD Classification	Product identifier
Tris(2-chlor-1-methylethyl)phosphat	5% - 10%	Acute Tox. 4 H302	Xn; R-22	CAS-No.: 13674-84-5 EC-No.: 237-158-7 REACH No.: 01-2119486772-26-0000
Dimethylpropylphosphonate	10% - 25%	Eye Irrit. 2 H319, Repr. 1B H360 (FD)	Xn; R-60	CAS-No.: 18755-43-6 Index-No: 242-555-3
N,N-Bis[3-(dimethylamino)propyl]-N',N'-dimethylpropan-1,3-diamin	1% - 5%	Acute Tox. 4 H312, Skin Corr. 1B H314, Eye Dam. 1 H318	C; R-21-34	CAS-No.: 33329-35-0 EC-No.: 251-459-0
N,N-Bis(2-Dimethylaminoäthyl)Methylamin	< 1%	Acute Tox. 3 H301, Acute Tox. 3 H311, Skin Corr. 1B H314	T,C,Xn; R-22-24-34	CAS-No.: 3030-47-5 EC-No.: 221-201-1 Index-No: 612-109-00-6
Dibutylbis(dodecylthio)stannan	< 1%	Acute Tox. 4 H312, Skin Irrit. 2 H315, Skin Sens. 1 H317, Muta. 2 H341, Repr. 1B H360, STOT RE 2 H373o, Aquatic Chronic 1 H410	T; R-21-38-43-60-61-68-48/25-50/53	CAS-No.: 1185-81-5 Index-No: 214-688-7
Formic acid	< 1%	Skin Corr. 1A H314 [CSk1A: C ≥ 90 % ; CSk1B: 10 % ≤ C < 90 % ; CSk2: 2 % ≤ C < 10 % ; CEy2: 2 % ≤ C < 10 %], Notes B	C; R-35, Notes B [C ≥ 90 % \ C; R-35 ; 10 % ≤ C < 90 % \ C; R-34 ; 2 % ≤ C < 10 % \ Xi; R-36/38]	CAS-No.: 64-18-6 EC-No.: 200-579-1 Index-No: 607-001-00-0

For the full text of the phrases mentioned in this Section, see Section 16.

Hazardous impurities

None known.

4. First aid measures

4.1. Description of first aid measures

Inhalation

Move to fresh air in case of accidental inhalation of vapours.

Skin contact

Wash off immediately with plenty of water. Remove contaminated clothes and shoes. Consult a physician for severe cases.



Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Protect unharmed eye. Consult an ophthalmologist.
Ingestion	Rinse the mouth thoroughly with water. Consult a physician if necessary. Prevent vomiting if possible.
4.2. Most important symptoms and effects, both acute and delayed	Causes severe burns.
4.3. Indication of any immediate medical attention and special treatment needed	None known.

5. Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media Use dry chemical, CO₂, water spray or alcohol foam.

Extinguishing media which must not be used for safety reasons High volume water jet.

5.2. Special hazards arising from the substance or mixture During a fire, smoke may contain the original material in addition to unidentified toxic and/or irritating compounds. In the event of fire the following can be released: CO_x, NO_x, SiO_x, PO_x, HX. Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

5.3. Advice for firefighters

Special protective equipment for firefighters Standard procedure for chemical fires. In case of fire and/or explosion do not breathe fumes. Wear self contained breathing apparatus for fire fighting if necessary.

Specific methods Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel Use personal protective equipment. Avoid contact with skin and eyes.

Advice for emergency responders Use personal protective equipment. Avoid contact with skin and eyes.

6.2. Environmental precautions Prevent product from entering surface water or sewage.



6.3. Methods and material for containment and cleaning up Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).

6.4. Reference to other sections See chapter 8 and 13.

7. Handling and storage

7.1. Precautions for safe handling Handle in accordance with good industrial hygiene and safety practice. Wear personal protective equipment. Ingestion, exposure to skin and eyes and inhalation of any generated vapours should be avoided.

7.2. Conditions for safe storage, including any incompatibilities The product is hygroscopic. Keep container tightly closed. Store at room temperature in the original container. Keep away from food and drink.

7.3. Specific end use(s) No information available.

8. Exposure controls/personal protection

8.1. Control parameters

Exposure limit(s) No data is available on the product itself.

Formic acid (CAS 64-18-6)

EU - Occupational Exposure (2006/15/EC) - Second List of Indicative Occupational Exposure Limit Values - TWAs 5 ppm TWA
9 mg/m³ TWA

Ireland - Occupational Exposure Limits - TWAs 5 ppm TWA
9 mg/m³ TWA

United Kingdom - Workplace Exposure Limits (WELs) - STELs 15 ppm STEL (calculated)
28.8 mg/m³ STEL (calculated)

United Kingdom - Workplace Exposure Limits (WELs) - TWAs 5 ppm TWA
9.6 mg/m³ TWA

8.2. Exposure controls

Occupational exposure controls General industrial hygiene practice. Ensure adequate ventilation, especially in confined areas.

Personal protection equipment

Respiratory protection In case of insufficient ventilation, wear suitable respiratory equipment.

Hand protection The selected protective gloves have to satisfy the specifications of EU Directive 89/689/EEC and the standard EN 374 derived from it.

Eye protection Safety glasses with side-shields. Avoid contact with eyes.



Skin and body protection	Long sleeved clothing. Remove and wash contaminated clothing before re-use.
Thermal hazards	No special measures required.
Environmental exposure controls	Dispose of waste product or used containers according to local regulations. Prevent product from entering surface water or sewage.

9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Form	Liquid.
Colour	colorless to yellowish
Odour	Characteristic.
Odour Threshold	not determined
pH:	not applicable
Melting point/range:	< 0 °C
Boiling point/range:	not determined
Flash point:	not applicable
Evaporation Rate:	not determined
Flammability:	not applicable
Explosion limits:	not determined
Vapour pressure:	not determined
Vapor density:	not determined
Relative density:	1,17 g/cm ³ (25°C)
Water solubility:	partly soluble
Partition coefficient (n-octanol/water):	not determined
Autoignition temperature:	not determined
Decomposition temperature:	not determined
Viscosity:	275 mPas (25°C)
Combustion/explosion hazards:	not determined
Oxidizing properties:	None

9.2. Other information

General Product Characteristics	No information available.
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10. Stability and reactivity

10.1. Reactivity	Reagiert mit Isocyanat.
10.2. Chemical stability	No decomposition if used as directed.
10.3. Possibility of hazardous reactions	No if used as directed.



10.4. Conditions to avoid	Burning produces obnoxious and toxic fumes.
10.5. Incompatible materials	ferrous metals, alloys and galvanized surfaces
10.6. Hazardous decomposition products	None under normal use. In the event of fire the following can be released: CO _x , NO _x , SiO _x , PO _x , HX.

11. Toxicological information

11.1. Information on toxicological effects

Acute toxicity	2-Propanol, 1-chloro-, phosphate (3:1) (CAS 13674-84-5) Dermal LD50 Rabbit = 1230 mg/kg (IUCLID) Dermal LD50 Rat > 5000 mg/kg (IUCLID) Inhalation LC50 Rat = 5 mg/L 4 h (IUCLID) Inhalation LC50 Rat > 17.8 mg/L 1 h (IUCLID) Oral LD50 Rat = 500 mg/kg (IUCLID) Formic acid (CAS 64-18-6) Inhalation LC50 Rat = 15 g/m ³ 15 min (NLM_CIP) Oral LD50 Rat = 730 mg/kg (IUCLID)
Skin corrosion/irritation	Causes skin irritation.
Serious eye damage/eye irritation	Serious eye damage/eye irritation
Respiratory / Skin Sensitisation	None known.
Carcinogenicity	Carcinogenicity classification not possible from current data.
Germ cell mutagenicity	Classification not possible from current data.
Reproductive toxicity	Classification not possible from current data.
Specific target organ toxicity (single exposure)	No data available.
Specific target organ toxicity (repeated exposure)	No data available.
Aspiration hazard	No data available.
Human experience	This product has no known adverse effect on human health.

12. Ecological information

12.1. Toxicity No data is available on the product itself.

2-Propanol, 1-chloro-, phosphate (3:1) (CAS 13674-84-5)	
Ecotoxicity - Freshwater Fish -	96 h LC50 Brachydanio rerio: 56.2 mg/L [static]
Acute Toxicity Data	96 h LC50 Leuciscus idus: 180 mg/L [static]
	96 h LC50 Pimephales promelas: 98 mg/L [static]



Ecotoxicity - Water Flea - Acute Toxicity Data	96 h LC50 <i>Poecilia reticulata</i> : 30 mg/L [static] 48 h EC50 <i>Daphnia magna</i> : 63 mg/L
Ecotoxicity - Freshwater Algae - Acute Toxicity Data	72 h EC50 <i>Desmodesmus subspicatus</i> : 45 mg/L 96 h EC50 <i>Pseudokirchneriella subcapitata</i> : 4 mg/L
Formic acid (CAS 64-18-6) Ecotoxicity - Freshwater Fish - Acute Toxicity Data	24 h LC50 <i>Lepomis macrochirus</i> : 175 mg/L [static]
Ecotoxicity - Water Flea - Acute Toxicity Data	48 h EC50 <i>Daphnia magna</i> : 120 mg/L 48 h EC50 <i>Daphnia magna</i> : 138 - 165.6 mg/L [Static]
Ecotoxicity - Freshwater Algae - Acute Toxicity Data	96 h EC50 <i>Desmodesmus subspicatus</i> : 25 mg/L 72 h EC50 <i>Desmodesmus subspicatus</i> : 26.9 mg/L
12.2. Persistence and degradability	No data is available on the product itself. Expected to be biodegradable.
12.3. Bioaccumulative potential	No data is available on the product itself. Bioaccumulation is unlikely.
12.4. Mobility in soil	No data available.
12.5. Results of PBT and vPvB assessment	No information available.
12.6. Other adverse effects	No information available.

13. Disposal considerations

13.1. Waste treatment methods

Waste from residues / unused products	Dispose of in accordance with local regulations.
Contaminated packaging	Dispose of as unused product.

14. Transport information

ADR/RID	Not required.
IMDG	Not required.
IATA	Not required.
Further Information	Not classified as dangerous in the meaning of transport regulations.

15. Regulatory information

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



Regulatory Information

The product contains organic halogens.

2-Propanol, 1-chloro-, phosphate (3:1) (CAS 13674-84-5)

EU - REACH (1907/2006) - List of Registered Substances Present

N-[2-(Dimethylamino)ethyl]-N,N'.N'-trimethyl-1,2-ethanediamine (CAS 3030-47-5)

EU - Seveso III Directive (2012/18/EU) - Qualifying Quantities of Dangerous Substances - Lower-Tier Requirements 50 tonne

EU - Seveso III Directive (2012/18/EU) - Qualifying Quantities of Dangerous Substances - Higher-Tier Requirements 200 tonne

Stannane, dibutylbis(dodecylthio)- (CAS 1185-81-5)

EU - REACH (1907/2006) - List of Registered Substances Present

Formic acid (CAS 64-18-6)

EU - Biocides (1451/2007) - Existing Active Substances Present

EU - REACH (1907/2006) - Article 15(1) - Substances Regarded as Being Registered - Plant Health Products Present

EU - REACH (1907/2006) - List of Registered Substances Present

15.2. Chemical safety assessment

A Chemical Safety Assessment is not required for this substance when it is used in the specified applications.

16. Other information

Key or legend to abbreviations and acronyms

None.

Full text of phrases referred to under sections 2 and 3

H301: Toxic if swallowed.
H302: Harmful if swallowed.
H311: Toxic in contact with skin.
H312: Harmful in contact with skin.
H314: Causes severe skin burns and eye damage.
H315: Causes skin irritation.
H317: May cause an allergic skin reaction.
H318: Causes serious eye damage.
H319: Causes serious eye irritation.
H341: Suspected of causing genetic defects.
H360: May damage fertility or the unborn child.
H360F: May damage fertility.
H360FD: May damage fertility. May damage the unborn child.
H360FFDD: May damage fertility. May damage the unborn child.
H373oral: May cause damage to organs through prolonged or repeated exposure if swallowed.
H410: Very toxic to aquatic life with long lasting effects.



R10: Flammable.
R21: Harmful in contact with skin.
R22: Harmful if swallowed.
R24: Toxic in contact with skin.
R34: Causes burns.
R38: Irritating to skin.
R43: May cause sensitisation by skin contact.
R48/25: Toxic: danger of serious damage to health by prolonged exposure if swallowed.
R50/53: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R60: May impair fertility.
R61: May cause harm to unborn child.
R68: Possible risk of irreversible effects.

Further information

Take notice of the directions of use on the label.

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release. It is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. This safety datasheet only contains information relating to safety and does not replace any product information or product specification.