

Safety Data Sheet

according to Regulation (EC) No. 2015/830

| 9-2031 | 8-F |
|--------|-----|
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9-20318-F

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Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

Product Name

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

Manufacturing Sites

Dymax Europe GmbH

Kasteler Strasse 45, Building G 359

65203 Wiesbaden, Germany

Phone: +49 (0) 611.962.7900

Fax: +49 (0) 611.962.9440

Identified uses

Uses advised against

Adhesives

No information available

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1.3 Details of the supplier of the safety data sheet

Manufacturer Dymax Corporation 318 Industrial Lane Torrington, CT 06790 Tel: 860-482-1010 Fax: 860-496-0608

For further information, please contact:

Contact Point E-mail Address

Mr. Wolfgang Lorscheider wlorscheider@dymax.com

1.4 Emergency Telephone

Emergency Telephone

Chemtrec 001-703-527-3887 (24hrs)

Supplier

Dymax Europe GmbH

Kasteler Strasse 45, Building G 359

65203 Wiesbaden, Germany

Phone: +49 (0) 611.962.7900

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| Austria +(43)-13649237 | Germany 0800-181-7059 | Netherlands +(31)-858880596 | Switzerland +(41)435082011 |
|---------------------------------|----------------------------|-----------------------------|--------------------------------|
| Belgium +(32)-28083237 | Greece +(30)-2111768478 | Norway +(47)-21930678 | Ukraine +(380)-947101374 |
| Bulgaria +(359)-32570104 | Hungary +(36)-18088425 | Poland +(48)-223988029 | UK (London) +(44)-870-8200418 |
| Croatia +(385)-17776920 | Ireland +(353)-19014670 | Portugal +(351)-308801773 | |
| Czech Republic +(420)-228880039 | Italy 800-789-767 | Slovakia +(423)-233057972 | Israel (IL) +(972)-37630639 |
| Denmark +(45)-69918573 | Latvia +(371)-66165504 | Slovenia +(386)-18888016 | Russia 8-800-100-6346 |
| Finland | Lithuania +(370)-52140238 | Spain 900-868538 | Saudi Arabia +(966)-8111095861 |
| France | Luxembourg +(352)-20202416 | Sweden +(46)-852503403 | Turkey +(90)-212-7055340 |
| | | | |
| Australia +(61)-290372994 | India 000-800-100-7141 | Indonesia 001-803-017-9114 | New Zealand +(64)-98010034 |
| Malaysia +(60)-327884561 | Singapore 800-101-2201 | Taiwan 00801-14-8954 | Thailand 001-800-13-203-9987 |

Section 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture Classification of the substance or mixture

Regulation (EC) No 1272/2008

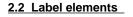
| Acute toxicity - Oral | Category 4 - (H302) |
|---|---------------------|
| Acute toxicity - Inhalation (Dusts/Mists) | Category 4 - (H332) |
| Serious eye damage/eye irritation | Category 1 - (H318) |
| Skin sensitisation | Category 1 - (H317) |

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Physical hazards None





Signal word

Danger

Hazard statements

H302 - Harmful if swallowed H317 - May cause an allergic skin reaction H318 - Causes serious eye damage H332 - Harmful if inhaled

Contains 1-Propanone, 2-hydroxy-2-methyl-1-phenyl-, N,N-Dimethylacrylamide, 2-Hydroxyethyl acrylate Contains Phosphine oxide, phenylbis(2,4,6-trimethylbenzoyl)-, ethylene glycol diacrylate - EUH208 - May produce an allergic reaction

Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling Do not eat, drink or smoke when using this product Avoid breathing dust/fume/gas/mist/vapours/spray Use only outdoors or in a well-ventilated area Wear protective gloves/protective clothing/eye protection/face protection Contaminated work clothing should not be allowed out of the workplace

Precautionary Statements - Response

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing IF ON SKIN: Gently wash with plenty of soap and water Take off contaminated clothing and wash it before reuse

Precautionary Statements - Storage

Store in a well-ventilated place. Keep container tightly closed

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

2.3 Other Information

Unknown Acute Toxicity

0% of the mixture consists of ingredient(s) of unknown toxicity

Testing for acute and chronic aquatic effects determined no environmental classification is required.

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

3.2. Mixtures

Hazardous components

| Chemical Name | EC No | CAS No | Weight-% | REACH Registration Number | GHS Classification |
|------------------------------------|-----------|-------------|----------|------------------------------|--------------------------|
| Phosphine oxide, | 423-340-5 | 162881-26-7 | <1 | | Skin Sens. 1 (H317) |
| phenylbis(2,4,6-trimethylbenzoyl)- | | | | | Aquatic Chronic 4 (H413) |
| ethylene glycol diacrylate | 218-886-4 | 2274-11-5 | <1 | | Acute Tox. Cat 4 (H302) |

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| | Acute Tox. Cat 3 (H311) Skin Irrit. Cat 2 (H315) Eye Dam. Cat 1 (H318) Skin Sens. Cat 1 (H317) |
|--|---|
|--|---|

Remaining ingredients are not considered hazardous in accordance with the Globally Harmonized System (GHS)

Full text of H- and EUH-phrases: see section 16

Section 4: First aid measures

4.1 Description of first aid measures

General advice

Use first aid treatment according to the nature of the injury.

Skin Contact

Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.

Eye contact

Flush eyes with water for at least 15 minutes. Get medical attention if eye irritation develops or persists.

Inhalation

Remove to fresh air, If symptoms persist, call a doctor.

Ingestion

Rinse mouth, Get medical attention.

Self-protection of the first aider

Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.

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

Main symptoms

Itching. Rashes.

4.3 Indication of any immediate medical attention and special treatment needed

Note to doctors

Treat symptomatically.

Section 5: FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media

Use CO2, dry chemical, or foam.

Unsuitable extinguishing media

Do not use a solid water stream as it may scatter and spread fire.

5.2 Special hazards arising from the substance or mixture.

Specific hazards arising from the chemical

Carbon dioxide (CO2), carbon monoxide (CO), oxides of nitrogen (NOx), dense black smoke.

Hazardous combustion products

Hazardous decomposition products due to incomplete combustion.

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5.3 Advice for firefighters

Special protective equipment for fire-fighters

Wear self-contained breathing apparatus and protective suit, Wear personal protective equipment.

Section 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions

Ensure adequate ventilation. Wear personal protective equipment.

For emergency responders

Use personal protection recommended in Section 8.

6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so Try to prevent the material from entering drains or water courses Local authorities should be advised if significant spillages cannot be contained See Section 12 for additional Ecological Information

6.3 Methods and material for containment and cleaning up

Methods for containment

Prevent further leakage or spillage if safe to do so.

Methods for 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 section 13 for more information.

Section 7: HANDLING AND STORAGE

7.1 Precautions for safe handling.

Advice on safe handling

Ensure adequate ventilation Protect from light

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice Avoid breathing vapours, mist or gas Wash hands before breaks and at the end of workday Regular cleaning of equipment, work area and clothing is recommended When using do not eat, drink or smoke Contaminated work clothing should not be allowed out of the workplace

7.2 Conditions for safe storage, including any incompatibilities.

Technical measures and storage conditions

Keep container tightly closed in a dry and well-ventilated place Protect from light Store locked up

7.3 Specific end uses

Exposure scenario No information available.

Risk Management Methods (RMM)

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The information required is contained in this Material Safety Data Sheet.

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Exposure Limits

| Chemical Name | Ireland | Norway | Poland | Portugal | Switzerland |
|----------------------------|---------|--------|--------|----------|-------------|
| ethylene glycol diacrylate | | | | | S+ |
| <1 | | | | | |

Derived No Effect Level (DNEL)

No information available.

Predicted No Effect Concentration (PNEC)

No information available.

8.2 Exposure controls

Occupational exposure controls

Engineering Measures

Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction.

Hygiene Measures

When using do not eat, drink or smoke, Wash hands before eating, drinking or smoking, Avoid contact with skin, eyes or clothing.

Personal protective equipment

General Information

Use personal protective equipment in good condition.

Respiratory protection

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

Hand Protection

Nitrile rubber, Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion.

Eye/face protection

Safety glasses with side-shields, If splashes are likely to occur, wear:, Goggles.

Skin and body protection

Long sleeved clothing, Apron, Impervious gloves.

Environmental Exposure Controls

Do not allow material to contaminate ground water system.

Section 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

| Physical state | liquid (gel) | |
|----------------|--------------|--|
| Appearance | translucent | |
| Colour | colourless | |

Odour Odour threshold Characteristic No information available Issue Date 2018-04-03

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| <u>Property</u> pH Melting point / freezing point Boiling point / boiling range Flash point | <u>Values</u> 101 °C / 214 °F | Remarks • Method No information available No information available No information available |
|---|----------------------------------|--|
| Evaporation rate | | No information available |
| Flammability (solid, gas) | | No information available |
| Flammability Limit in Air | | |
| Upper flammability limit | | No information available |
| Lower flammability limit | | No information available |
| Vapour pressure | | No information available |
| Vapour density | | No information available No information available |
| Specific Gravity Water Solubility | Practically incoluble | No information available |
| Solubility in other solvents | Practically insoluble | No information available |
| Partition coefficient: n-octanol/wate | .r | No information available |
| Autoignition temperature | | No information available |
| Decomposition temperature | | No information available |
| Dynamic viscosity | 50.000 cP | |
| Kinematic viscosity | | No information available |
| Explosive properties | No information available | |
| Oxidising properties | No information available | |
| 51 11 | | |
| 9.2 Other Information Softening point | No information available | |
| Molecular weight | No information available | |
| VOC Content (%) | No information available | |
| Density | No information available | |
| Bulk density | No information available | |
| ······ | | |

Section 10: Stability and reactivity

10.1 Reactivity

Reactivity

None under normal use conditions.

No information available.

10.2 Chemical stability

Stability

Stable under normal conditions

Explosion data

Sensitivity to Mechanical Impact None. Sensitivity to Static Discharge None.

10.3 Possibility of Hazardous Reactions

Hazardous polymerisation

None under normal processing.

Hazardous Reactions

None under normal processing.

10.4 Conditions to avoid

Protect from light, Heat, flames and sparks.

10.5 Incompatible materials

Amines, Oxygen scavengers, Strong oxidising agents, Strong acids, Strong bases, Thiosulfates.

10.6 Hazardous Decomposition Products

None under normal use conditions.

Section 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product Information

Product does not present an acute toxicity hazard based on known or supplied information.

| Inhalation | There is no data for this product. |
|--------------|------------------------------------|
| Eye contact | There is no data for this product. |
| Skin Contact | There is no data for this product. |
| Ingestion | There is no data for this product. |

Unknown acute toxicity

0% of the mixture consists of ingredient(s) of unknown toxicity.

The following values are calculated based on chapter 3.1 of the GHS document

| ATEmix (oral) | 1,502.00 mg/kg |
|-------------------------------|----------------|
| ATEmix (dermal) | 3,814.00 mg/kg |
| ATEmix (inhalation-dust/mist) | 1.53 mg/l |

Component Information

| Chemical Name | Oral LD50 | Dermal LD50 | Inhalation LC50 |
|------------------------------------|-------------------|----------------------|-----------------|
| Phosphine oxide, | | > 2,000 mg/kg (Rat) | |
| phenylbis(2,4,6-trimethylbenzoyl)- | | | |
| ethylene glycol diacrylate | = 300 mg/kg (Rat) | = 570 µL/kg (Rabbit) | |

Skin corrosion/irritation

No information available.

Serious eye damage/eye irritation

No information available.

Sensitisation

No information available.

Mutagenic effects

No information available.

Carcinogenic effects

No information available

Reproductive toxicity

No information available.

Aspiration hazard

No information available.

Section 12: Ecological information

0 % of the mixture consists of component(s) of unknown hazards to the aquatic environment

Acute aquatic toxicity

Product Information

Testing for acute and chronic aquatic effects determined no environmental classification is required.

Component Information

| Chemical Name | Toxicity to fish | Toxicity to daphnia and other aquatic invertebrates | Toxicity to algae |
|---------------------------------|-----------------------|--|-----------------------|
| Phosphine oxide, | LC50 > 0.09 mg/l 96 h | EC50 > 1.175 mg/l 48 h | EC50 > 0.26 mg/l 72 h |
| phenylbis(2,4,6-trimethylbenzoy | (Brachydanio rerio) | (Daphnia magna) | (Scenedesmus sp.) |

12.2 Persistence and degradability

No information available.

12.3 Bioaccumulative potential

12.4 Mobility in soil

No information available.

12.5 Results of PBT and vPvB assessment

No information available.

12.6 Other adverse effects.

None

Section 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Waste from residues / unused products

Should not be released into the environment, Dispose of in accordance with local regulations.

Contaminated packaging

Empty containers should be taken to an approved waste handling site for recycling or disposal, Dispose of as hazardous waste in compliance with local and national regulations.

Other Information

According to the European Waste Catalogue, Waste Codes are not product specific, but application specific. Waste codes should be assigned by the user based on the application for which the product was used.

Section 14: Transport information

| IMDG/IMO | | | | |
|---|----------------|--|--|--|
| 14.1 UN/ID no | Not regulated | | | |
| 14.2 Proper shipping name | Not regulated | | | |
| 14.3 Hazard Class | Not regulated | | | |
| 14.4 Packing Group | Not regulated | | | |
| 14.5 Marine pollutant | Not applicable | | | |
| 14.6 Special Provisions | None | | | |
| 14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code | | | | |
| No information available | | | | |
| | | | | |

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| 14.1 UN/ID no 14.2 Proper shipping name 14.3 Hazard Class 14.4 Packing Group 14.5 Fish and tree 14.6 Special Provisions | Not regulated Not regulated Not regulated Not regulated Not applicable None | | | |
|--|--|--|--|--|
| ΙCAO/ΙΑΤΑ | | | | |
| 14.1 UN/ID no | Not regulated | | | |
| 14.2 Proper shipping name | Not regulated | | | |
| 14.3 Hazard Class | Not regulated | | | |
| 14.4 Packing Group | Not regulated | | | |
| 14.5 Fish and tree | Not applicable | | | |
| 14.6 Special Provisions | None | | | |

Section 15: Regulatory information

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

WGK Classification

Water endangering class = 1 (self classification)

| International Inventories | |
|---------------------------|------------|
| AICS | Complies |
| DSL/NDSL | Complies |
| EINECS/ELINCS | Complies |
| ENCS | Complies |
| IECSC | Complies |
| KECI | Complies |
| PICCS | Not listed |
| NZIOC | Complies |
| TCSI | Complies |
| TSCA | Complies |

Legend:

AICS - Australian Inventory of Chemical Substances

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

NZIOC - New Zealand Inventory of Chemicals

TCSI - Taiwan Chemical Substance Inventory

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

15.2 Chemical Safety Assessment

No information available

Section 16: OTHER INFORMATION

Key or legend to abbreviations and acronyms used in the safety data sheet

Full text of H-Statements referred to under section 3

H302 - Harmful if swallowed

H311 - Toxic in contact with skin

H315 - Causes skin irritation

- H317 May cause an allergic skin reaction
- H318 Causes serious eye damage
- H413 May cause long lasting harmful effects to aquatic life

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Legend

SVHC: Substances of Very High Concern for Authorisation:

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

| TWA: | time weighted average | STEL: | Short term exposure limit |
|----------|-----------------------|-------|---------------------------|
| Ceiling: | Maximum limit value: | S* | Skin designation |

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Revision Note Not applicable.

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

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