Perfect.A.Smile Pontic Paint

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878
Revision date: 3/15/2024 Version: 1.1

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

1.1. Product identifier

Product form : Mixture
Product name : Perfect.A.Smile Pontic Paint

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

1.2.1. Relevant identified uses

Use of the substance/mixture : For Rx Only

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Manufacturer/Importer/Representative/User/Distributor:
Reliance Orthodontic Products, Inc.
1540 W. Thorndale Ave
Itasca, IL 60143 USA
T 630-773-4009, during normal business hours
regulatory@relianceorthodontics.com
www.RelianceOrthodontics.com

U.S. Federal Register:
According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations
FDA Registration: 1420089

Australian Sponsor:
Emergo Australia, 201 Sussex St.
Darling Park, Tower II, Level 20
Sydney, NSW 2000 Australia
T +61 2 9006 1662

EC Representative:
Emergo Europe
Westervoortsedijk 60
6827 AT Arnhem
The Netherlands
T +31 70 345 8570

Switzerland Representative:
MedEnvoy Global BV
Leidschendam-Voorburg, Zug Branch Office
Gotthardstrasse 28, 6302 Zug, Switzerland
T +41 41 462 01 42

U.K. Person Responsible:
Emergo Consulting (UK) Limited
c/o Cr360 - UL International Compass House, Vision Park Histon
Cambridge CB24 9BZ
England, United Kingdom
T +44(0) 1223 772 671

1.4. Emergency telephone number

Emergency number : CHEMTREC - 24-Hour Hazmat Emergency Communications Center
Domestic: 1-800-424-9300 Outside the U.S.: 1-703-527-3887, collect calls accepted

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Acute toxicity (oral), Category 4	H302
Acute toxicity (dermal), Category 4	H312
Serious eye damage/eye irritation, Category 1	H318
Skin sensitisation, Category 1	H317
Reproductive toxicity, Category 2	H361
Hazardous to the aquatic environment - Acute Hazard, Category 1	H400
Hazardous to the aquatic environment - Chronic Hazard, Category 2	H411

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

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :

GHS05 GHS07 GHS08 GHS09

Signal word (CLP) : Danger

Contains : Tricyclodecane Dimethanol Diacrylate; N,N-Dimethylacrylamide; Pentaerythritol Tetrakis(3-mercaptopropionate); Phenyl Bis(2,4,6-trimethylbenzoyl)phosphine Oxide

Hazard statements (CLP) : H302+H312 - Harmful if swallowed or in contact with skin.
H317 - May cause an allergic skin reaction.
H318 - Causes serious eye damage.
H361 - Suspected of damaging fertility or the unborn child.
H410 - Very toxic to aquatic life with long lasting effects.

Precautionary statements (CLP) : P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P261 - Avoid breathing fume, vapours.
P264 - Wash hands thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P272 - Contaminated work clothing should not be allowed out of the workplace.
P273 - Avoid release to the environment.
P280 - Wear protective gloves, protective clothing, eye protection.
P301+P312 - IF SWALLOWED: Call a POISON CENTER, doctor if you feel unwell.
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.
P312 - Call a POISON CENTER, doctor if you feel unwell.
P321 - Specific treatment (see supplemental first aid instruction on this label).
P330 - Rinse mouth.
P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.
P362+P364 - Take off contaminated clothing and wash it before reuse.
P391 - Collect spillage.
P501 - Dispose of contents and container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation, a licensed hazardous-waste disposal contractor or collection site except for empty clean containers which can be disposed of as non-hazardous waste.

2.3. Other hazards

Contains no PBT/vPvB substances ≥ 0.1% assessed in accordance with REACH Annex XIII

Component	
Tricyclodecane Dimethanol Diacrylate (42594-17-2)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
N,N-Dimethylacrylamide (2680-03-7)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
Pentaerythritol Tetrakis(3-mercaptopropionate) (7575-23-7)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
Phenyl Bis(2,4,6-trimethylbenzoyl)phosphine Oxide (162881-26-7)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
Titanium Dioxide (13463-67-7)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Tricyclodecane Dimethanol Diacrylate	CAS-No.: 42594-17-2 EC-No.: 255-901-3	40 - 60	Skin Sens. 1B, H317 Repr. 2, H361 Aquatic Chronic 2, H411
N,N-Dimethylacrylamide	CAS-No.: 2680-03-7 EC-No.: 220-237-5	10 - 30	Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311 Eye Dam. 1, H318
Pentaerythritol Tetrakis(3-mercaptopropionate)	CAS-No.: 7575-23-7 EC-No.: 231-472-8	10 - 20	Acute Tox. 4 (Oral), H302 Skin Sens. 1A, H317 Aquatic Acute 1, H400 (M=10) Aquatic Chronic 1, H410
Titanium Dioxide	CAS-No.: 13463-67-7 EC-No.: 236-675-5 EC Index-No.: 022-006-00-2	0.5 - 4	Carc. 2, H351
Phenyl Bis(2,4,6-trimethylbenzoyl)phosphine Oxide	CAS-No.: 162881-26-7 EC-No.: 423-340-5 EC Index-No.: 015-189-00-5	< 1	Skin Sens. 1A, H317 Aquatic Chronic 4, H413

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

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : IF exposed or concerned: Get medical advice/attention. Call a poison center or a doctor if you feel unwell.

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.

First-aid measures after skin contact : Wash skin with plenty of water. Take off contaminated clothing. If skin irritation or rash occurs: Get medical advice/attention.

First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

First-aid measures after ingestion : Rinse mouth out with water. Call a poison center or a doctor if you feel unwell.

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

Symptoms/effects after skin contact : May cause an allergic skin reaction.

Symptoms/effects after eye contact : Causes serious eye damage.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Advice for firefighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area. Avoid breathing fume, vapours. Avoid contact with skin, eyes and clothing.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters.

Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear personal protective equipment. Avoid breathing fume, vapours. Do not get in eyes, on skin, or on clothing.

Hygiene measures : Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in a well-ventilated place. Keep cool. Keep container closed when not in use.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

No additional information available

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

No additional information available

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:
Ensure good ventilation of the work station.

8.2.2. Personal protection equipment

Personal protective equipment symbol(s):

8.2.2.1. Eye and face protection

Eye protection:
Safety glasses

8.2.2.2. Skin protection

Skin and body protection:
Wear suitable protective clothing

Hand protection:
Protective gloves

8.2.2.3. Respiratory protection

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

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Environmental exposure controls:
Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Liquid
Colour	:	White / Tooth.
Appearance	:	Viscous Liquid.
Odour	:	Acrylic.
Odour threshold	:	Not available
Melting point	:	Not available
Freezing point	:	Not available
Boiling point	:	Not available
Flammability	:	Not available
Lower explosion limit	:	Not available
Upper explosion limit	:	Not available
Flash point	:	Not available
Auto-ignition temperature	:	Not available
Decomposition temperature	:	Not available
pH	:	Not available
Viscosity, kinematic	:	Not available

Solubility	:	Not available
Partition coefficient n-octanol/water (Log Kow)	:	Not available
Vapour pressure	:	Not available
Vapour pressure at 50°C	:	Not available
Density	:	Not available
Relative density	:	Not available
Relative vapour density at 20°C	:	Not available
Particle characteristics	:	Not applicable

9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions of use.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (oral)	:	Harmful if swallowed.
Acute toxicity (dermal)	:	Harmful in contact with skin.
Acute toxicity (inhalation)	:	Not classified

Perfect.A.Smile Pontic Paint	
ATE CLP (oral)	393.391 mg/kg bodyweight
ATE CLP (dermal)	1333.333 mg/kg bodyweight

Tricyclodecane Dimethanol Diacrylate (42594-17-2)	
LD50 dermal rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity), Guideline: EU Method B.3 (Acute Toxicity (Dermal)), Remarks on results: other:

N,N-Dimethylacrylamide (2680-03-7)	
LD50 oral rat	215 - 464 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity)

N,N-Dimethylacrylamide (2680-03-7)	
LD50 dermal rat	> 500 mg/kg bodyweight (Rat, Female, Experimental value, Dermal, 7 day(s))
LC50 Inhalation - Rat	> 3.16 mg/l (1 h, Rat, Male / female, Experimental value, (maximum achievable concentration), Inhalation (vapours), 14 day(s))

Pentaerythritol Tetrakis(3-mercaptopropionate) (7575-23-7)	
LD50 oral rat	1000 - 2000 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: OECD Guideline 423 (Acute Oral toxicity - Acute Toxic Class Method), Remarks on results: other:
LC50 Inhalation - Rat	> 3363 mg/l air Animal: rat, Guideline: OECD Guideline 403 (Acute Inhalation Toxicity), Guideline: EU Method B.2 (Acute Toxicity (Inhalation)), Guideline: EPA OPPTS 870.1300 (Acute inhalation toxicity), Remarks on results: other:

Phenyl Bis(2,4,6-trimethylbenzoyl)phosphine Oxide (162881-26-7)	
LD50 oral rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity), Remarks on results: other:
LD50 dermal rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity), Remarks on results: other:

Titanium Dioxide (13463-67-7)	
LD50 oral rat	> 2000 mg/kg bodyweight (OECD 401: Acute Oral Toxicity, Rat, Male / female, Experimental value, Oral, 14 day(s))
LC50 Inhalation - Rat	> 5.09 mg/l (OECD 403: Acute Inhalation Toxicity, 4 h, Rat, Male, Experimental value, Inhalation (dust), 14 day(s))
LC50 Inhalation - Rat (Dust/Mist)	> 6.82 mg/l Source: ECHA

Skin corrosion/irritation : Not classified
Additional information : Causes skin irritation.

Tricyclodecane Dimethanol Diacrylate (42594-17-2)	
pH	6.8 - 7.2

N,N-Dimethylacrylamide (2680-03-7)	
pH	No data available in the literature

Phenyl Bis(2,4,6-trimethylbenzoyl)phosphine Oxide (162881-26-7)	
pH	No data available in the literature

Titanium Dioxide (13463-67-7)	
pH	7 Source: ECHA

Serious eye damage/irritation : Causes serious eye damage.

Tricyclodecane Dimethanol Diacrylate (42594-17-2)	
pH	6.8 - 7.2

N,N-Dimethylacrylamide (2680-03-7)	
pH	No data available in the literature

Phenyl Bis(2,4,6-trimethylbenzoyl)phosphine Oxide (162881-26-7)	
pH	No data available in the literature

Titanium Dioxide (13463-67-7)	
pH	7 Source: ECHA

Respiratory or skin sensitisation : May cause an allergic skin reaction.
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified

Titanium Dioxide (13463-67-7)	
IARC group	2B - Possibly carcinogenic to humans

Reproductive toxicity : Suspected of damaging fertility or the unborn child.
STOT-single exposure : Not classified
STOT-repeated exposure : Not classified

Tricyclodecane Dimethanol Diacrylate (42594-17-2)	
NOAEL (oral, rat, 90 days)	1000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity Study in Rodents), Guideline: EU Method B.7 (Repeated Dose (28 Days) Toxicity (Oral))

N,N-Dimethylacrylamide (2680-03-7)	
LOAEL (dermal, rat/rabbit, 90 days)	75 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 411 (Subchronic Dermal Toxicity: 90-Day Study)
NOAEL (oral, rat, 90 days)	5 mg/kg bodyweight Animal: rat, Guideline: other:, Guideline: other:
NOAEL (dermal, rat/rabbit, 90 days)	10 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 411 (Subchronic Dermal Toxicity: 90-Day Study)

Pentaerythritol Tetrakis(3-mercaptopropionate) (7575-23-7)	
NOAEL (oral, rat, 90 days)	50 mg/kg bodyweight Animal: rat, Guideline: EU Method B.26 (Sub-Chronic Oral Toxicity Test: Repeated Dose 90-Day Oral Toxicity Study in Rodents), Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents)

Aspiration hazard : Not classified

Tricyclodecane Dimethanol Diacrylate (42594-17-2)	
Viscosity, kinematic	195.648 mm²/s

N,N-Dimethylacrylamide (2680-03-7)	
Viscosity, kinematic	No data available in the literature

Phenyl Bis(2,4,6-trimethylbenzoyl)phosphine Oxide (162881-26-7)	
Viscosity, kinematic	Not applicable (solid)

Titanium Dioxide (13463-67-7)	
Viscosity, kinematic	Not applicable (solid)

11.2. Information on other hazards

No additional information available

SECTION 12: Ecological information

12.1. Toxicity

Ecology - water : Toxic to aquatic life with long lasting effects.
Hazardous to the aquatic environment, short-term (acute) : Very toxic to aquatic life.
Hazardous to the aquatic environment, long-term (chronic) : Toxic to aquatic life with long lasting effects.

Tricyclodecane Dimethanol Diacrylate (42594-17-2)	
LC50 - Fish [1]	1.65 mg/l Test organisms (species): Danio rerio (previous name: Brachydanio rerio)
EC50 - Crustacea [1]	2.36 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	1.6 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)

Tricyclodecane Dimethanol Diacrylate (42594-17-2)	
EC50 72h - Algae [2]	0.71 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
EC50 96h - Algae [1]	0.24 mg/l Source: EPISUITE v4.1

N,N-Dimethylacrylamide (2680-03-7)	
LC50 - Fish [1]	> 120 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri)
EC50 - Crustacea [1]	> 120 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	> 400 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
ErC50 algae	> 400 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, Nominal concentration)

Pentaerythritol Tetrakis(3-mercaptopropionate) (7575-23-7)	
LC50 - Fish [1]	0.034 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri)
EC50 - Crustacea [1]	> 0.35 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	> 0.12 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)
EC50 96h - Algae [1]	2.909 mg/l Source: Ecological Structure Activity Relationships
ErC50 algae	> 0.12 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Desmodesmus subspicatus, Static system, Fresh water, Experimental value, GLP)

Phenyl Bis(2,4,6-trimethylbenzoyl)phosphine Oxide (162881-26-7)	
LC50 - Fish [1]	> 90 µg/l Test organisms (species): Danio rerio (previous name: Brachydanio rerio)
EC50 - Crustacea [1]	> 1175 µg/l Test organisms (species): Daphnia magna
EC50 - Crustacea [2]	> 1175 mg/l Test organisms (species): Daphnia magna
ErC50 algae	> 0.26 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Desmodesmus subspicatus, Static system, Fresh water, Experimental value, Growth rate)

Titanium Dioxide (13463-67-7)	
LC50 - Fish [1]	> 100 mg/l
EC50 - Crustacea [1]	> 1000 mg/l (Invertebrata, Fresh water)
EC50 - Other aquatic organisms [1]	> 100 mg/l Test organisms (species):
EC50 72h - Algae [1]	> 50 mg/l Source: ECHA
LOEC (chronic)	5 mg/l Test organisms (species): Daphnia magna Duration: '21 d'

12.2. Persistence and degradability

Tricyclodecane Dimethanol Diacrylate (42594-17-2)	
Persistence and degradability	Not readily biodegradable in water.

N,N-Dimethylacrylamide (2680-03-7)	
Persistence and degradability	Not readily biodegradable in water.

Pentaerythritol Tetrakis(3-mercaptopropionate) (7575-23-7)	
Persistence and degradability	Biodegradability in soil: no data available. Not readily biodegradable in water.

Phenyl Bis(2,4,6-trimethylbenzoyl)phosphine Oxide (162881-26-7)	
Persistence and degradability	Not readily biodegradable in water.

Titanium Dioxide (13463-67-7)	
Persistence and degradability	Biodegradability: not applicable.
Chemical oxygen demand (COD)	Not applicable (inorganic)
ThOD	Not applicable (inorganic)

12.3. Bioaccumulative potential

Perfect.A.Smile Pontic Paint	
Bioaccumulative potential	Not established.

Tricyclodecane Dimethanol Diacrylate (42594-17-2)	
BCF - Fish [1]	24 l/kg (QSAR)
Partition coefficient n-octanol/water (Log Pow)	4.6 (Practical experience/observation, OECD 117: Partition Coefficient (n-octanol/water), HPLC method)
Bioaccumulative potential	Potential for bioaccumulation (4 ≤ Log Kow ≤ 5).

N,N-Dimethylacrylamide (2680-03-7)	
Partition coefficient n-octanol/water (Log Pow)	-0.3 (Experimental value, OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method, 23 °C)
Bioaccumulative potential	Not bioaccumulative.

Pentaerythritol Tetrakis(3-mercaptopropionate) (7575-23-7)	
BCF - Fish [1]	23.7 (BCFBAF v3.00, Calculated value)
Partition coefficient n-octanol/water (Log Pow)	2.8 (Experimental value, OECD 117: Partition Coefficient (n-octanol/water), HPLC method, 30 °C)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

Phenyl Bis(2,4,6-trimethylbenzoyl)phosphine Oxide (162881-26-7)	
BCF - Fish [1]	< 5 (Equivalent or similar to OECD 305, 4 week(s), Cyprinus carpio, Flow-through system, Fresh water, Experimental value)
Partition coefficient n-octanol/water (Log Pow)	5.8 (Experimental value, OECD 117: Partition Coefficient (n-octanol/water), HPLC method, 22 °C)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

Titanium Dioxide (13463-67-7)	
Bioaccumulative potential	Not bioaccumulative.

12.4. Mobility in soil

Tricyclodecane Dimethanol Diacrylate (42594-17-2)	
Mobility in soil	1413 Source: EPISUITE v4.1
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	3.61 (log Koc, OECD 121: Estimation of the Adsorption Coefficient (Koc) on Soil and on Sewage Sludge using High Performance Liquid Chromatography (HPLC), Experimental value, GLP)
Ecology - soil	Low potential for mobility in soil.

N,N-Dimethylacrylamide (2680-03-7)	
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	< 1.25 (log Koc, OECD 121: Estimation of the Adsorption Coefficient (Koc) on Soil and on Sewage Sludge using High Performance Liquid Chromatography (HPLC), Experimental value, GLP)
Ecology - soil	Highly mobile in soil.

Pentaerythritol Tetrakis(3-mercaptopropionate) (7575-23-7)	
Mobility in soil	225300 Source: Quantitative Structure Activity Relation
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	2.42 (log Koc, Calculated value)
Ecology - soil	Low potential for adsorption in soil.

Phenyl Bis(2,4,6-trimethylbenzoyl)phosphine Oxide (162881-26-7)	
Surface tension	70.7 - 71.4 mN/m (20 °C, 0.1 g/l, EU Method A.5: Surface tension)
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	3.85 (log Koc, Equivalent or similar to OECD 121, Experimental value, GLP)
Ecology - soil	Low potential for mobility in soil.

Titanium Dioxide (13463-67-7)	
Surface tension	No data available in the literature
Ecology - soil	Low potential for mobility in soil.

12.5. Results of PBT and vPvB assessment

Component	
Tricyclodecane Dimethanol Diacrylate (42594-17-2)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
N,N-Dimethylacrylamide (2680-03-7)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
Pentaerythritol Tetrakis(3-mercaptopropionate) (7575-23-7)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
Phenyl Bis(2,4,6-trimethylbenzoyl)phosphine Oxide (162881-26-7)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
Titanium Dioxide (13463-67-7)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.
Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

14.1. UN number or ID number

Not regulated for transport

14.2. UN proper shipping name

Proper Shipping Name (ADR)	:	Not regulated
Proper Shipping Name (IMDG)	:	Not regulated
Proper Shipping Name (IATA)	:	Not regulated
Proper Shipping Name (ADN)	:	Not regulated
Proper Shipping Name (RID)	:	Not regulated

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR) : Not regulated

IMDG

Transport hazard class(es) (IMDG) : Not regulated

IATA

Transport hazard class(es) (IATA) : Not regulated

ADN

Transport hazard class(es) (ADN) : Not regulated

RID

Transport hazard class(es) (RID) : Not regulated

14.4. Packing group

Packing group (ADR)	:	Not regulated
Packing group (IMDG)	:	Not regulated
Packing group (IATA)	:	Not regulated
Packing group (ADN)	:	Not regulated
Packing group (RID)	:	Not regulated

14.5. Environmental hazards

Dangerous for the environment	:	Yes
Marine pollutant	:	Yes
Other information	:	No supplementary information available

14.6. Special precautions for user

Overland transport

Not regulated

Transport by sea

Not regulated

Air transport

Not regulated

Inland waterway transport

Not regulated

Rail transport

Not regulated

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

REACH Annex XVII (Restriction List)

Contains no substance(s) listed on REACH Annex XVII (Restriction Conditions)

REACH Annex XIV (Authorisation List)

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)

Contains no substance(s) listed on the REACH Candidate List

PIC Regulation (Prior Informed Consent)

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

POP Regulation (Persistent Organic Pollutants)

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

Ozone Regulation (1005/2009)

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 1005/2009 on substances that deplete the ozone layer)

Explosives Precursors Regulation (2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Indication of changes

Section	Changed item	Change	Comments
	Revision date	Added	
	Supersedes version of	Added	
	Issue date	Removed	
1.3	Display additional SDS EU addresses	Added	
2.1	Classification according to Regulation (EC) No. 1272/2008 [CLP]	Modified	
2.2	Hazard pictograms (CLP)	Modified	
2.2	Precautionary statements (CLP)	Modified	
2.2	Hazard statements (CLP)	Modified	
3	Composition/information on ingredients	Modified	
7.1	Precautions for safe handling	Modified	
7.2	Storage conditions	Modified	
11.1	ATE CLP (dermal)	Added	

Indication of changes			
Section	**Changed item**	**Change**	**Comments**
11.1	ATE CLP (oral)	Added	

Full text of H- and EUH-statements:	
Acute Tox. 3 (Dermal)	Acute toxicity (dermal), Category 3
Acute Tox. 3 (Oral)	Acute toxicity (oral), Category 3
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Acute 1	Hazardous to the aquatic environment - Acute Hazard, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment - Chronic Hazard, Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment - Chronic Hazard, Category 2
Aquatic Chronic 4	Hazardous to the aquatic environment - Chronic Hazard, Category 4
Carc. 2	Carcinogenicity, Category 2
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H311	Toxic in contact with skin.
H312	Harmful in contact with skin.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H351	Suspected of causing cancer.
H361	Suspected of damaging fertility or the unborn child.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H413	May cause long lasting harmful effects to aquatic life.
Repr. 2	Reproductive toxicity, Category 2
Skin Sens. 1A	Skin sensitisation, category 1A
Skin Sens. 1B	Skin sensitisation, category 1B

Safety Data Sheet (SDS), EU

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.