



Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830
Reference number: EHC: 2861100002311
Issue date: 21/05/2021Version: 1.0

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

1.1. Product identifier

Product form : Mixture
Product name : XRD/S
Product code : XRD/S
Type of product : Adhesives
Product group : Blend

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

1.2.1. Relevant identified uses

Main use category : Professional use
Use of the substance/mixture : Adhesives, binding agents
Function or use category : Adhesives, binding agents

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

XRD Nano Limited
A-8, Spithead Business Centre,
Newport Road, Sandown,
PO36 9PH, United Kingdom
Tel: +44 7562 987952
www.xrdnano.com

1.4. Emergency telephone number

Table with 5 columns: Country, Organisation/Company, Address, Emergency number, Comment. Row 1: United Kingdom, Guy's & St Thomas' Poisons Unit, Avonley Road SE14 5ER London, +44 20 7188 7188

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Flammable liquids, Category 3 H226
Skin corrosion/irritation, Category 2 H315
Serious eye damage/eye irritation, Category 1 H318
Skin sensitisation, Category 1 H317
Reproductive toxicity, Category 2 H361
Hazardous to the aquatic environment — Chronic Hazard, Category 2 H411
Full text of H-statements: see section 16

Adverse physicochemical, human health and environmental effects

Flammable liquid and vapour. Suspected of damaging fertility or the unborn child. Causes skin irritation. May cause an allergic skin reaction. Causes serious eye damage. Toxic to aquatic life with long lasting effects.

2.2. Label elements

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

Hazard pictograms (CLP)



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Signal word (CLP)	: Danger
Hazardous ingredients	: ACRYLATED PENTAERYTHRITOL; 2-phenoxyethyl acrylate
Hazard statements (CLP)	: H226 - Flammable liquid and vapour. H315 - Causes skin irritation. H317 - May cause an allergic skin reaction. H318 - Causes serious eye damage. H361 - Suspected of damaging fertility or the unborn child. H411 - 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. P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P233 - Keep container tightly closed. P240 - Ground and bond container and receiving equipment. P241 - Use explosion-proof electrical/ventilating/lighting equipment. P261 - Avoid breathing dust/fume/gas/mist/vapours/spray. P264 - Wash hands, forearms and face thoroughly after handling. 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/face protection/hearing protection. P302+P352 - IF ON SKIN: Wash with plenty of water. P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with 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. P321 - Specific treatment (see supplemental first aid instruction on this label). P333+P313 - If skin irritation or rash occurs: Get medical advice/attention. P362+P364 - Take off contaminated clothing and wash it before reuse. P370+P378 - In case of fire: Use media other than water to extinguish. P391 - Collect spillage. P403+P235 - Store in a well-ventilated place. Keep cool. P405 - Store locked up. P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

Labelling according to: exemption for packages of a capacity of 125ml or less

Hazard pictograms (CLP)



Signal word (CLP)	: Danger
Hazardous ingredients	: ACRYLATED PENTAERYTHRITOL; 2-phenoxyethyl acrylate
Hazard statements (CLP)	: H317 - May cause an allergic skin reaction. H318 - Causes serious eye damage. H361 - Suspected of damaging fertility or the unborn child.

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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 dust/fume/gas/mist/vapours/spray.
P272 - Contaminated work clothing should not be allowed out of the workplace.
P280 - Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
P302+P352 - IF ON SKIN: Wash with plenty of 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.
P321 - Specific treatment (see supplemental first aid instruction on this label).
P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.
P362+P364 - Take off contaminated clothing and wash it before reuse.
P405 - Store locked up.
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

2.3. Other hazards

No additional information available

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]
2-phenoxyethyl acrylate	(CAS-No.) 48145-04-6 (EC-No.) 256-360-6	≥ 25 – < 50	Skin Sens. 1A, H317 Repr. 2, H361d Aquatic Chronic 2, H411
Urethane acrylate oligomer		≥ 25 – < 50	Eye Irrit. 2, H319
ACRYLATED PENTAERYTHRITOL	(CAS-No.) 1245638-61-2 (EC-No.) 629-850-6	≥ 10 – < 25	Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317 Aquatic Chronic 2, H411
acrylic acid substance with national workplace exposure limit(s) (GB); substance with a Community workplace exposure limit	(CAS-No.) 79-10-7 (EC-No.) 201-177-9 (EC Index-No.) 607-061-00-8	< 5	Flam. Liq. 3, H226 Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Inhalation), H332 Skin Corr. 1A, H314 Eye Dam. 1, H318 STOT SE 3, H335 Aquatic Acute 1, H400 (M=10)
Stannous octoate substance with national workplace exposure limit(s) (GB)	(CAS-No.) 301-10-0 (EC-No.) 206-108-6	< 0.1	Eye Dam. 1, H318 Skin Sens. 1B, H317 Repr. 2, H361 Aquatic Chronic 3, H412
Butylated hydroxytoluene substance with national workplace exposure limit(s) (GB)	(CAS-No.) 128-37-0 (EC-No.) 204-881-4	< 0.1	Aquatic Acute 1, H400 Aquatic Chronic 1, H410

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Specific concentration limits:		
Name	Product identifier	Specific concentration limits
acrylic acid	(CAS-No.) 79-10-7 (EC-No.) 201-177-9 (EC Index-No.) 607-061-00-8	(1 ≤C < 100) STOT SE 3, H335

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.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact	: Rinse skin with water/shower. Take off immediately all 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. Call a physician immediately.
First-aid measures after ingestion	: 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	: Irritation. May cause an allergic skin reaction.
Symptoms/effects after eye contact	: Serious damage to eyes.

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.
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5.2. Special hazards arising from the substance or mixture

Fire hazard	: Flammable liquid and vapour.
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.
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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. No open flames, no sparks, and no smoking. Avoid contact with skin and eyes. Avoid breathing dust/fume/gas/mist/vapours/spray.
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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".
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6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment	: Collect spillage.
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- 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 : Ensure good ventilation of the work station, ventilate curing ovens to prevent emissions in the workplace. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground/bond container and receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Flammable vapours may accumulate in the container. Use explosion-proof equipment. Wear personal protective equipment. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid contact with skin and eyes. Avoid breathing dust/fume/gas/mist/vapours/spray.
- 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

- Technical measures : Ground/bond container and receiving equipment.
- Storage conditions : Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store locked up.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

acrylic acid (79-10-7)	
United Kingdom - Occupational Exposure Limits	
WEL TWA (OEL TWA) [1]	29 mg/m ³
WEL TWA (OEL TWA) [2]	10 ppm
WEL STEL (OEL STEL)	59 mg/m ³ (STEL in relation to a 1-minute reference period)
WEL STEL (OEL STEL) [ppm]	20 ppm

Stannous octoate (301-10-0)	
United Kingdom - Occupational Exposure Limits	
WEL TWA (OEL TWA) [1]	0.1 mg/m ³
WEL STEL (OEL STEL)	0.2 mg/m ³

Butylated hydroxytoluene (128-37-0)	
United Kingdom - Occupational Exposure Limits	
WEL TWA (OEL TWA) [1]	10 mg/m ³

8.2. Exposure controls

Appropriate engineering controls:

Ensure good ventilation of the work station, ventilate curing ovens to prevent emissions in the workplace.

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Hand protection:					
Protective gloves					
Type	Material	Permeation	Thickness (mm)	Penetration	Standard
Disposable gloves	Nitrile rubber (NBR)	6 (> 480 minutes)	>0.56		EN ISO 374

Eye protection:
Safety glasses with side shields

Skin and body protection:
Wear suitable protective clothing

Respiratory protection:			
[In case of inadequate ventilation] wear respiratory protection.			
Device	Filter type	Condition	Standard
Full face mask	Type A - High-boiling (>65 °C) organic compounds		

Personal protective equipment symbol(s):



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	: Colourless.
Odour	: Acrylate.
Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: Not applicable
Freezing point	: No data available
Boiling point	: 132 °C
Flash point	: 48.5 °C
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: Not applicable
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Solubility	: No data available
Partition coefficient n-octanol/water (Log Pow)	: No data available
Viscosity	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

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9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Flammable liquid and vapour.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

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 toxicological effects

Acute toxicity (oral) : Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (dermal) : Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (inhalation) : Not classified (Based on available data, the classification criteria are not met)

acrylic acid (79-10-7)	
LD50 oral rat	1500 mg/kg bodyweight (Equivalent or similar to OECD 401, Rat, Experimental value, Oral, 7 day(s))
LD50 dermal rabbit	> 2000 mg/kg bodyweight (OECD 402: Acute Dermal Toxicity, 24 h, Rabbit, Male / female, Experimental value, Dermal, 14 day(s))
LC50 Inhalation - Rat	> 5.1 mg/l air (Equivalent or similar to OECD 403, 4 h, Rat, Male / female, Experimental value, Inhalation (vapours), 14 day(s))

Stannous octoate (301-10-0)	
LD50 oral rat	5870 mg/kg bodyweight Animal: rat, Animal sex: male, 95% CL: 3,14 - 10,98
LD50 dermal rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)

Butylated hydroxytoluene (128-37-0)	
LD50 oral rat	> 6000 mg/kg bodyweight (OECD 401: Acute Oral Toxicity, Rat, Male / female, Experimental value, Oral, 14 day(s))
LD50 dermal rat	> 2000 mg/kg bodyweight (OECD 402: Acute Dermal Toxicity, 24 h, Rat, Male / female, Experimental value, Dermal, 14 day(s))

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2-phenoxyethyl acrylate (48145-04-6)	
LD50 oral rat	> 5000 mg/kg (OECD 401: Acute Oral Toxicity, Rat, Female, Experimental value, Oral, 14 day(s))

Skin corrosion/irritation : Causes skin irritation.
Serious eye damage/irritation : Causes serious eye damage.
Respiratory or skin sensitisation : May cause an allergic skin reaction.
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)

acrylic acid (79-10-7)	
IARC group	3 - Not classifiable

Butylated hydroxytoluene (128-37-0)	
IARC group	3 - Not classifiable

Butylated hydroxytoluene (128-37-0)	
NOAEL (chronic, oral, animal/male, 2 years)	25 mg/kg bodyweight Animal: rat, Animal sex: male, Remarks on results: other:Effect type: toxicity (migrated information)

Reproductive toxicity : Suspected of damaging fertility or the unborn child.

2-phenoxyethyl acrylate (48145-04-6)	
NOAEL (animal/female, F0/P)	300 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)

STOT-single exposure : Not classified (Based on available data, the classification criteria are not met)

STOT-repeated exposure : Not classified (Based on available data, the classification criteria are not met)

ACRYLATED PENTAERYTHRITOL (1245638-61-2)	
NOAEL (oral, rat, 90 days)	25 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)
NOAEL (dermal, rat/rabbit, 90 days)	0.75 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 411 (Subchronic Dermal Toxicity: 90-Day Study)

acrylic acid (79-10-7)	
LOAEL (oral, rat, 90 days)	100 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 452 (Chronic Toxicity Studies)

Stannous octoate (301-10-0)	
NOAEL (subchronic, oral, animal/male, 90 days)	180 mg/kg bodyweight Animal: mouse, Animal sex: male, Guideline: other:(51 FR 40329, Section 795.260;
NOAEL (subchronic, oral, animal/female, 90 days)	205 mg/kg bodyweight Animal: mouse, Animal sex: female, Guideline: other:(51 FR 40329, Section 795.260;

Butylated hydroxytoluene (128-37-0)	
LOAEL (oral, rat, 90 days)	100 mg/kg bodyweight Animal: rat, Animal sex: male
NOAEL (oral, rat, 90 days)	25 mg/kg bodyweight Animal: rat, Animal sex: male

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2-phenoxyethyl acrylate (48145-04-6)	
NOAEL (oral, rat, 90 days)	300 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)

Aspiration hazard : Not classified (Based on available data, the classification criteria are not met)

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	: Toxic to aquatic life with long lasting effects.
Ecology - water	: Toxic to aquatic life with long lasting effects.
Hazardous to the aquatic environment, short-term (acute)	: Not classified (Based on available data, the classification criteria are not met)
Hazardous to the aquatic environment, long-term (chronic)	: Toxic to aquatic life with long lasting effects.
Not rapidly degradable	

ACRYLATED PENTAERYTHRITOL (1245638-61-2)	
LC50 - Fish [1]	3.2 mg/l Test organisms (species): Cyprinus carpio
EC50 - Crustacea [1]	13 mg/l Test organisms (species): Daphnia magna
EC50 96h - Algae [1]	12 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)

acrylic acid (79-10-7)	
LC50 - Fish [1]	27 mg/l (EPA OTS 797.1400, 96 h, Oncorhynchus mykiss, Flow-through system, Fresh water, Experimental value)
EC50 - Crustacea [1]	95 mg/l (EPA OTS 797.1930, 48 h, Daphnia magna, Flow-through system, Fresh water, Experimental value)
EC50 72h - Algae [1]	0.04 mg/l (EU Method C.3, Desmodesmus subspicatus, Static system, Fresh water, Experimental value)
EC50 72h - Algae [2]	0.14 mg/l (EPA OTS 797.1050, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value)
LOEC (chronic)	8.1 mg/l Test organisms (species): Daphnia magna Duration: '21 d'

Stannous octoate (301-10-0)	
LC50 - Fish [1]	> 116 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri)
EC50 - Crustacea [1]	85.4 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	6.9 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)

Butylated hydroxytoluene (128-37-0)	
LC50 - Fish [1]	0.199 mg/l (ECOSAR v1.00, 96 h, Pisces, QSAR, Lethal)
EC50 - Crustacea [1]	0.48 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, GLP)
EC50 72h - Algae [1]	> 0.24 mg/l (OECD 201: Alga, Growth Inhibition Test, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, Growth rate)
LOEC (chronic)	1 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC (chronic)	0.023 mg/l Test organisms (species): Daphnia magna Duration: '21 d'

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NOEC chronic fish	0.053 mg/l Test organisms (species): <i>Oryzias latipes</i> Duration: '42 d'
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2-phenoxyethyl acrylate (48145-04-6)	
LC50 - Fish [1]	10 mg/l (Equivalent or similar to OECD 203, 96 h, <i>Leuciscus idus</i> , Static system, Fresh water, Experimental value, Lethal)
EC50 - Crustacea [1]	1.21 mg/l (Equivalent or similar to OECD 202, 48 h, <i>Daphnia magna</i> , Static system, Fresh water, Experimental value, Locomotor effect)
EC50 72h - Algae [1]	4.4 mg/l (DIN 38412-9, <i>Desmodesmus subspicatus</i> , Static system, Fresh water, Experimental value, Growth rate)
EC50 72h - Algae [2]	1.7 mg/l Test organisms (species): <i>Desmodesmus subspicatus</i> (previous name: <i>Scenedesmus subspicatus</i>)
EC50 96h - Algae [1]	4.1 mg/l Test organisms (species): <i>Desmodesmus subspicatus</i> (previous name: <i>Scenedesmus subspicatus</i>)
EC50 96h - Algae [2]	1.33 mg/l Test organisms (species): <i>Desmodesmus subspicatus</i> (previous name: <i>Scenedesmus subspicatus</i>)

12.2. Persistence and degradability

acrylic acid (79-10-7)	
Persistence and degradability	Readily biodegradable in the soil. Readily biodegradable in water.

Stannous octoate (301-10-0)	
Persistence and degradability	Biodegradability in soil: no data available. Biodegradability in water: no data available.

Butylated hydroxytoluene (128-37-0)	
Persistence and degradability	Biodegradable in the soil. Not readily biodegradable in water.
Biochemical oxygen demand (BOD)	0.51 g O ₂ /g substance
Chemical oxygen demand (COD)	2.27 g O ₂ /g substance
ThOD	2.977 g O ₂ /g substance

2-phenoxyethyl acrylate (48145-04-6)	
Persistence and degradability	Not readily biodegradable in water.

12.3. Bioaccumulative potential

acrylic acid (79-10-7)	
Partition coefficient n-octanol/water (Log Pow)	0.46 (25 °C)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

Stannous octoate (301-10-0)	
Bioaccumulative potential	No bioaccumulation data available.

Butylated hydroxytoluene (128-37-0)	
BCF - Fish [1]	230 – 2500 (OECD 305: Bioconcentration: Flow-Through Fish Test, 56 day(s), <i>Cyprinus carpio</i> , Flow-through system, Fresh water, Experimental value)
Partition coefficient n-octanol/water (Log Pow)	4.17 (Experimental value, 37 °C)
Bioaccumulative potential	Potential for bioaccumulation (4 ≥ Log Kow ≤ 5).

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2-phenoxyethyl acrylate (48145-04-6)	
Partition coefficient n-octanol/water (Log Pow)	2.58 (room temperature, Experimental value, OECD 117: Partition Coefficient (n-octanol/water), HPLC method)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

12.4. Mobility in soil

acrylic acid (79-10-7)	
Surface tension	0.0281 N/m (20 °C, 1000 mg/l)
Partition coefficient n-octanol/water (Log Koc)	0.78 – 2.14 (log Koc, Experimental value)
Ecology - soil	Low potential for adsorption in soil.

Stannous octoate (301-10-0)	
Ecology - soil	Adsorbs into the soil.

Butylated hydroxytoluene (128-37-0)	
Surface tension	No data available (test not performed)
Partition coefficient n-octanol/water (Log Koc)	4.362 (log Koc, SRC PCKOCWIN v1.66, Calculated value)
Ecology - soil	Low potential for mobility in soil. May be harmful to plant growth, blooming and fruit formation.

2-phenoxyethyl acrylate (48145-04-6)	
Surface tension	53.6 mN/m (23 °C, Experimental value, 472.5 mg/l, OECD 115: Surface Tension of Aqueous Solutions)
Ecology - soil	No (test)data on mobility of the substance available.

12.5. Results of PBT and vPvB assessment

Component	
2-phenoxyethyl acrylate (48145-04-6)	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
acrylic acid (79-10-7)	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
Butylated hydroxytoluene (128-37-0)	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. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.
Additional information : Flammable vapours may accumulate in the container.

SECTION 14: Transport information

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

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ADR	IMDG	IATA	ADN	RID
14.1. UN number				
UN 3082	UN 3082	UN 3082	UN 3082	UN 3082
14.2. UN proper shipping name				
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (2-phenoxyethyl acrylate)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (2-phenoxyethyl acrylate)	Environmentally hazardous substance, liquid, n.o.s. (2-phenoxyethyl acrylate)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (2-phenoxyethyl acrylate)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (2-phenoxyethyl acrylate)
Transport document description				
UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (2-phenoxyethyl acrylate), 9, III, (-)	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (2-phenoxyethyl acrylate), 9, III, MARINE POLLUTANT	UN 3082 Environmentally hazardous substance, liquid, n.o.s. (2-phenoxyethyl acrylate), 9, III	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (2-phenoxyethyl acrylate), 9, III	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (2-phenoxyethyl acrylate), 9, III
14.3. Transport hazard class(es)				
9	9	9	9	9
14.4. Packing group				
III	III	III	III	III
14.5. Environmental hazards				
Dangerous for the environment : Yes	Dangerous for the environment : Yes Marine pollutant : Yes	Dangerous for the environment : Yes	Dangerous for the environment : Yes	Dangerous for the environment : Yes
No supplementary information available				

14.6. Special precautions for user

Overland transport

Classification code (ADR) : M6
Special provisions (ADR) : 274, 335, 375, 601
Limited quantities (ADR) : 5I
Excepted quantities (ADR) : E1
Packing instructions (ADR) : P001, IBC03, LP01, R001
Special packing provisions (ADR) : PP1
Mixed packing provisions (ADR) : MP19
Portable tank and bulk container instructions (ADR) : T4
Portable tank and bulk container special provisions (ADR) : TP1, TP29
Tank code (ADR) : LGBV
Vehicle for tank carriage : AT
Transport category (ADR) : 3
Special provisions for carriage - Packages (ADR) : V12
Special provisions for carriage - Loading, unloading and handling (ADR) : CV13
Hazard identification number (Kemler No.) : 90
Orange plates :



Tunnel restriction code (ADR) : -
EAC code : •3Z

Transport by sea

Special provisions (IMDG) : 274, 335, 969

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Limited quantities (IMDG)	: 5 L
Excepted quantities (IMDG)	: E1
Packing instructions (IMDG)	: LP01, P001
Special packing provisions (IMDG)	: PP1
IBC packing instructions (IMDG)	: IBC03
Tank instructions (IMDG)	: T4
Tank special provisions (IMDG)	: TP1, TP29
EmS-No. (Fire)	: F-A
EmS-No. (Spillage)	: S-F
Stowage category (IMDG)	: A

Air transport

PCA Excepted quantities (IATA)	: E1
PCA Limited quantities (IATA)	: Y964
PCA limited quantity max net quantity (IATA)	: 30kgG
PCA packing instructions (IATA)	: 964
PCA max net quantity (IATA)	: 450L
CAO packing instructions (IATA)	: 964
CAO max net quantity (IATA)	: 450L
Special provisions (IATA)	: A97, A158, A197, A215
ERG code (IATA)	: 9L

Inland waterway transport

Classification code (ADN)	: M6
Special provisions (ADN)	: 274, 335, 375, 601
Limited quantities (ADN)	: 5 L
Excepted quantities (ADN)	: E1
Equipment required (ADN)	: PP
Number of blue cones/lights (ADN)	: 0

Rail transport

Classification code (RID)	: M6
Special provisions (RID)	: 274, 335, 375, 601
Limited quantities (RID)	: 5L
Excepted quantities (RID)	: E1
Packing instructions (RID)	: P001, IBC03, LP01, R001
Special packing provisions (RID)	: PP1
Mixed packing provisions (RID)	: MP19
Portable tank and bulk container instructions (RID)	: T4
Portable tank and bulk container special provisions (RID)	: TP1, TP29
Tank codes for RID tanks (RID)	: LGBV
Transport category (RID)	: 3
Special provisions for carriage – Packages (RID)	: W12
Special provisions for carriage - Loading, unloading and handling (RID)	: CW13, CW31
Colis express (express parcels) (RID)	: CE8
Hazard identification number (RID)	: 90

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

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

The following restrictions are applicable according to Annex XVII of the REACH Regulation (EC) No 1907/2006:

Reference code	Applicable on
3(a)	XRD/S ; acrylic acid
3(b)	XRD/S ; ACRYLATED PENTAERYTHRITOL ; acrylic acid ; Stannous octoate ; Urethane acrylate oligomer ; 2-phenoxyethyl acrylate

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3(c)	XRD/S ; ACRYLATED PENTAERYTHRITOL ; acrylic acid ; Stannous octoate ; 2-phenoxyethyl acrylate
40.	acrylic acid

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

Contains no substance subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals.

Contains no substance subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

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

Abbreviations and acronyms:	
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
COD	Chemical oxygen demand (COD)
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
EN	European Standard
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet

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STP	Sewage treatment plant
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
VOC	Volatile Organic Compounds
CAS-No.	Chemical Abstract Service number
N.O.S.	Not Otherwise Specified
vPvB	Very Persistent and Very Bioaccumulative
ED	Endocrine disrupting properties

Full text of H- and EUH-statements:	
Acute Tox. 4 (Dermal)	Acute toxicity (dermal), Category 4
Acute Tox. 4 (Inhalation)	Acute toxicity (inhal.), Category 4
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 3	Hazardous to the aquatic environment — Chronic Hazard, Category 3
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Flam. Liq. 3	Flammable liquids, Category 3
Repr. 2	Reproductive toxicity, Category 2
Repr. 2	Reproductive toxicity, Category 2
Skin Corr. 1A	Skin corrosion/irritation, Category 1, Sub-Category 1A
Skin Irrit. 2	Skin corrosion/irritation, Category 2
Skin Sens. 1	Skin sensitisation, Category 1
Skin Sens. 1A	Skin sensitisation, category 1A
Skin Sens. 1B	Skin sensitisation, category 1B
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation
H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
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.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H361	Suspected of damaging fertility or the unborn child.
H361d	Suspected of damaging the unborn child.
H400	Very toxic to aquatic life.

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H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

SDS EU (REACH Annex II) - EU date format

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.