BRAD-CHEM
By UnivarSolutions

SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:
UK REACH Regulations (SI 2019/758 as amended)

Revision date 22-Jan-2026 **Revision Number** 2

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

1.1. Product identifier

Product Code(s) 127194

Safety data sheet number 127194

Product Name BRAD-CHEM 346

Pure substance/mixture Mixture

Contains BENZENAMINE, N-PHENYL-, REACTION PRODUCTS WITH 2,4,4-TRIMETHYLPENTENE; AMINES, C11-14-BRANCHED ALKYL, MONOHEXYL AND DIHEXYL PHOSPHATES

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

Recommended use Lubricant Additive.

1.3. Details of the supplier of the safety data sheet

Supplier
Univar Solutions UK Ltd
Aquarius House
6 Mid Point Business Park
Bradford
GBR

For further information, please contact

E-mail address SDS.EMEA@univarsolutions.com

Non-Emergency Telephone Number +44 1274 267300 / +44 1274 267306

1.4. Emergency telephone number

Emergency Telephone SGS - +32 (0)3 575 55 55 (24h)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Reproductive toxicity	Category 2 - (H361)
Specific target organ toxicity — repeated exposure	Category 2 - (H373)
Chronic aquatic toxicity	Category 1 - (H410)

2.2. Label elements

Contains BENZENAMINE, N-PHENYL-, REACTION PRODUCTS WITH 2,4,4-TRIMETHYLPENTENE; AMINES, C11-14-BRANCHED ALKYL, MONOHEXYL AND DIHEXYL PHOSPHATES

Signal word
Warning

Hazard statements
H361f - Suspected of damaging fertility
H373 - May cause damage to organs through prolonged or repeated exposure
H410 - Very toxic to aquatic life with long lasting effects
EUH208 - Contains REACTION MASS OF 1H-BENZOTRIAZOLE-1-METHANAMINE, N,N-BIS(2-ETHYLHEXYL)-6-METHYL-,2H-BENZOTRIAZOLE-2-METHANAMINE, N,N-BIS(2-ETHYLHEXYL)-4-METHYL-, 2H-BENZOTRIAZOLE-2METHANAMINE, N,N-BIS(2-ETHYLHEXYL)-5-METHYL-, N,N-BIS(2-ETHYLHEXYL)-4-METHYL-1H-BENZOTRIAZOLE-1METHYLAMINE AND N,N-BIS(2-ETHYLHEXYL)-5-METHYL-1H-BENZOTRIAZOLE-1-METHYLAMINE. May produce an allergic reaction.

Precautionary statements
P201 - Obtain special instructions before use
P260 - Do not breathe dust/fume/gas/mist/vapours/spray
P273 - Avoid release to the environment
P280 - Wear protective gloves/protective clothing/eye protection/face protection
P308 + P313 - IF exposed or concerned: Get medical advice/attention
P391 - Collect spillage

Additional information
This product requires tactile warnings if supplied to the general public.

2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients

3.1 Substances

Not applicable

3.2 Mixtures

Chemical name	Weight-%	EC No (EU Index No)	UK REACH registration number	Classification according to GB CLP (SI 2020/1567 as amended)	Specific concentration limit (SCL)	M-Factor	M-Factor (long-term)
O,O,O-TRIPHENYL PHOSPHOROTHIOATE 597-82-0	5 - 15%	209-909-9	-	Aquatic Chronic 1 (H410)	-	-	10
BENZENAMINE, N-PHENYL-, REACTION PRODUCTS WITH 2,4,4-TRIMETHYLP	5 - 10%	270-128-1	-	Repr. 2 (H361f) Aquatic Chronic 3 (H412)	-	-	-

ENTENE 68411-46-1							
AMINES, C11-14-BRANCHED ALKYL, MONOHEXYL AND DIHEXYL PHOSPHATES 80939-62-4	5 - 10%	279-632-6	-	Aquatic Chronic 2 (H411) Eye Irrit. 2 (H319) Skin Irrit. 2 (H315) STOT RE 1 (H372)	-	-	-
REACTION MASS OF 1H-BENZOTRIAZOLE-1-METHANAMINE, N,N-BIS(2-ETHYLHEXYL)-6-METHYL-, 2H-BENZOTRIAZOLE-2-METHANAMINE, N,N-BIS(2-ETHYLHEXYL)-4-METHYL-, 2H-BENZOTRIAZOLE-2METHANAMINE, N,N-BIS(2-ETHYLHEXYL)-5-METHYL-, N,N-BIS(2-ETHYLHEXYL)-4-METHYL-1H-BENZOTRIAZOLE-1METHYLAMINE AND N,N-BIS(2-ETHYLHEXYL)-5-METHYL-1H-BENZOTRIAZOLE-1-METHYLAMINE -	< 1%	939-700-4	-	Skin Irrit. 2 (H315) Skin Sens. 1 (H317) Aquatic Acute 1 (H400) Aquatic Chronic 2 (H411)	-	-	-

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

This product does not contain candidate substances of very high concern at a concentration >= 0.1% (UK REACH Article 59)

SECTION 4: First aid measures

4.1. Description of first aid measures

General advice Show this safety data sheet to the doctor in attendance.

Inhalation IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. If breathing is difficult, (trained personnel should) give oxygen.

Eye contact Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a doctor.

Skin contact Wash skin with soap and water. In the case of skin irritation or allergic reactions see a doctor.

Ingestion Rinse mouth.

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

Symptoms	Suspected of damaging fertility. Prolonged contact may cause redness and irritation.
Dermal	Hives. Itching. Rashes. Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain, or flushing. Prolonged contact may cause redness and irritation.
Ingestion	May cause damage to organs through prolonged or repeated exposure if swallowed Lymphatic System

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	Dry chemical, CO2, water spray or regular foam. Halons.
Large Fire	CAUTION: Use of water spray when fighting fire may be inefficient.
Unsuitable extinguishing media	Do not scatter spilled material with high pressure water streams.

5.2. Special hazards arising from the substance or mixture

Specific hazards arising from the chemical	Toxic to aquatic life with long lasting effects. Do not allow run-off from fire-fighting to enter drains or water courses.
Hazardous combustion products	Carbon oxides. Oxides of sulphur. Nitrogen oxides (NOx). Phosphorus oxides.

5.3. Advice for firefighters

Special protective equipment and precautions for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Cool containers with flooding quantities of water until well after fire is out. Collect contaminated fire extinguishing water separately. Do not allow it to enter drains or surface water.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions	Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Avoid contact with skin, eyes and inhalation of vapours. Use personal protection recommended in Section 8. In case of insufficient ventilation, wear suitable respiratory equipment. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). No action shall be taken involving any personal risk or without suitable training. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas.
Other information	Refer to protective measures listed in Sections 7 and 8.
For emergency responders	Use personal protection recommended in Section 8.

6.2. Environmental precautions

Environmental precautions	Toxic to aquatic life with long lasting effects. Local authorities should be advised if significant spillages cannot be contained.

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 Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Avoid release to the environment.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

6.4. Reference to other sections

Reference to other sections See section 8 for more information. See section 13 for more information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling Avoid contact with skin, eyes and inhalation of vapours. Ensure adequate ventilation. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use personal protection recommended in Section 8. Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. Remove contaminated clothing and shoes. Ensure adequate ventilation.

General hygiene considerations Remove contaminated clothing and protective equipment before entering eating areas. Contaminated work clothing should not be allowed out of the workplace. Take off all contaminated clothing and wash it before reuse. Ensure that eyewash stations and safety showers are close to the workstation location. Wash hands before breaks and immediately after handling the product. Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions Keep away from heat, sparks and open flame. Keep away from food, drink and animal feedingstuffs. Avoid contact with:. Strong oxidising agents. Store locked up.

7.3. Specific end use(s)

Specific use(s)
See section 1 for more information.

Risk Management Methods (RMM) The information required is contained in this Safety Data Sheet.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure Limits This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Biological occupational exposure limits This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies.

Derived No Effect Level (DNEL) - Workers

Chemical name	Oral	Dermal	Inhalation
O,O,O-TRIPHENYL PHOSPHOROTHIOATE 597-82-0		0.4 mg/kg bw/day [4] [6]	1.39 mg/m³ [4] [6]
BENZENAMINE, N-PHENYL-, REACTION PRODUCTS WITH 2,4,4-TRIMETHYLPENTENE 68411-46-1		0.08 mg/kg bw/day [4] [6]	0.6 mg/m³ [4] [6]
AMINES, C11-14-BRANCHED ALKYL, MONOHEXYL AND DIHEXYL PHOSPHATES 80939-62-4		0.03 mg/kg bw/day [4] [6]	0.2 mg/m³ [4] [6]
REACTION MASS OF 1H-BENZOTRIAZOLE-1-METHANAMINE, N,N-BIS(2-ETHYLHEXYL)-6-METHYL-,2H-BENZOTRIAZOLE-2-METHANAMINE, N,N-BIS(2-ETHYLHEXYL)-4-METHYL-, 2H-BENZOTRIAZOLE-2METHANAMINE, N,N-BIS(2-ETHYLHEXYL)-5-METHYL-, N,N-BIS(2-ETHYLHEXYL)-4-METHYL-1H-BENZOTRIAZOLE-1METHYLAMINE AND N,N-BIS(2-ETHYLHEXYL)-5-METHYL-1H-BENZOTRIAZOLE-1-METHYLAMINE -		0.4 mg/kg [4] [6]	1.3 mg/m³ [4] [6]

[4] Systemic health effects.
[6] Long term.

Derived No Effect Level (DNEL) - General Public

Chemical name	Oral	Dermal	Inhalation
O,O,O-TRIPHENYL PHOSPHOROTHIOATE 597-82-0	0.2 mg/kg bw/day [4] [6]		0.34 mg/m³ [4] [6]
BENZENAMINE, N-PHENYL-, REACTION PRODUCTS WITH 2,4,4-TRIMETHYLPENTENE 68411-46-1	0.04 mg/kg bw/day [4] [6]		0.14 mg/m³ [4] [6]
AMINES, C11-14-BRANCHED ALKYL, MONOHEXYL AND DIHEXYL PHOSPHATES 80939-62-4	0.01 mg/kg bw/day [4] [6]		0.05 mg/m³ [4] [6]
REACTION MASS OF 1H-BENZOTRIAZOLE-1-METHANAMINE, N,N-BIS(2-ETHYLHEXYL)-6-METHYL-,2H-BENZOTRIAZOLE-2-METHANAMINE, N,N-BIS(2-ETHYLHEXYL)-4-METHYL	0.2 mg/m³ [4] [6]	0.2 mg/m³ [4] [6]	0.3 mg/m³ [4] [6]

Chemical name	Oral	Dermal	Inhalation
-, 2H-BENZOTRIAZOLE-2METHANAMINE, N,N-BIS(2-ETHYLHEXYL)-5-METHYL -, N,N-BIS(2-ETHYLHEXYL)-4-METHYL -1H-BENZOTRIAZOLE-1METHYLAMINE AND N,N-BIS(2-ETHYLHEXYL)-5-METHYL -1H-BENZOTRIAZOLE-1-METHYLAMINE -			

[4] Systemic health effects.
[6] Long term.

Predicted No Effect Concentration (PNEC)

Chemical name	Freshwater	Freshwater (intermittent release)	Marine water	Marine water (intermittent release)	Air
BENZENAMINE, N-PHENYL-, REACTION PRODUCTS WITH 2,4,4-TRIMETHYLPENTENE 68411-46-1	0.0338 mg/L	0.51 mg/L	0.00338 mg/L		
AMINES, C11-14-BRANCHED ALKYL, MONOHEXYL AND DIHEXYL PHOSPHATES 80939-62-4	0.055 mg/L	0.01 mg/L	0.0055 mg/L		

Chemical name	Freshwater sediment	Marine sediment	Sewage treatment	Soil	Food chain
O,O,O-TRIPHENYL PHOSPHOROTHIOATE 597-82-0			10 mg/L	2.37 mg/kg soil dw	
BENZENAMINE, N-PHENYL-, REACTION PRODUCTS WITH 2,4,4-TRIMETHYLPENTENE 68411-46-1	0.446 mg/kg sediment dw	0.0446 mg/kg sediment dw	10 mg/L	1.76 mg/kg soil dw	
AMINES, C11-14-BRANCHED ALKYL, MONOHEXYL AND DIHEXYL PHOSPHATES 80939-62-4	239.64 mg/kg sediment dw	23.964 mg/kg sediment dw	1 mg/L	47.76 mg/kg soil dw	

8.2. Exposure controls

Engineering controls Ensure adequate ventilation. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protective equipment

Eye/face protection Use eye protection according to EN ISO 16321-1. Wear safety glasses with side shields (or goggles).

Hand protection Impervious gloves. Gloves must conform to standard EN 374. Ensure that the breakthrough time of the glove material is not exceeded. Refer to glove supplier for information on breakthrough time for specific gloves. Examples of preferred glove barrier materials include:. Polyvinyl chloride (PVC). Wear suitable gloves.

Skin and body protection Wear suitable protective clothing.

Respiratory protection In case of inadequate ventilation wear respiratory protection. EN 136/140/141/145/143/149.

General hygiene considerations Remove contaminated clothing and protective equipment before entering eating areas. Contaminated work clothing should not be allowed out of the workplace. Take off all contaminated clothing and wash it before reuse. Ensure that eyewash stations and safety showers are close to the workstation location. Wash hands before breaks and immediately after handling the product. Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Liquid
Appearance	Liquid
Colour	yellow
Odour	No information available.
Odour threshold	No information available

Property	Values	Remarks • Method
Melting point / freezing point		No information available.
Initial boiling point and boiling range		No information available.
Flammability		No information available.
Flammability Limit in Air		No information available.
Upper flammability or explosive limits		
Lower flammability or explosive limits		
Flash point	> 200 °C	No information available.
Autoignition temperature		No information available.
Decomposition temperature		No information available.
pH		No information available.
pH (as aqueous solution)		No information available.
Kinematic viscosity	21 cSt	40 °C.
Dynamic viscosity		No information available.
Water solubility	Immiscible in water	No information available.
Solubility(ies)		No information available.
Partition coefficient		No information available.
Vapour pressure		No information available.
Relative density	0.96	20 °C.
Bulk density		No information available

Liquid Density	No information available	No information available
Relative vapour density		No information available.
Particle characteristics		No information available.
Particle Size	No information available	
Particle Size Distribution	No information available	
Explosive properties	No information available	
Oxidising properties	No information available	

9.2. Other information

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity Stable under recommended storage conditions.

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

Possibility of hazardous reactions Hazardous polymerisation does not occur.

10.4. Conditions to avoid

Conditions to avoid None known based on information supplied.

10.5. Incompatible materials

Incompatible materials None known based on information supplied.

10.6. Hazardous decomposition products

Hazardous decomposition products Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours. Oxides of sulphur. Nitrogen oxides (NOx). Phosphorus oxides.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Information on likely routes of exposure

Product Information

Inhalation Inhalation of vapours in high concentration may cause irritation of respiratory system.

Eye contact May cause temporary eye irritation.

Skin contact Prolonged contact may cause redness and irritation. Specific test data for the substance or mixture is not available. Causes mild skin irritation.

Ingestion May cause damage to organs through prolonged or repeated exposure. Lymphatic System.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms Suspected of damaging fertility. Prolonged contact may cause redness and irritation.

Acute toxicity

Numerical measures of toxicity

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

ATEmix (oral) 81,818.20 mg/kg
ATEmix (dermal) 25,974.00 mg/kg

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
O,O,O-TRIPHENYL PHOSPHOROTHIOATE	10000 mg/kg (Rat)	> 2000 mg/kg (Rat)	-
BENZENAMINE, N-PHENYL-, REACTION PRODUCTS WITH 2,4,4-TRIMETHYLPENTENE	> 5000 mg/kg (Rat)	> 2000 mg/kg (Rat)	-
AMINES, C11-14-BRANCHED ALKYL, MONOHEXYL AND DIHEXYL PHOSPHATES	> 5000 mg/kg (Rat)	> 2000 mg/kg (Rat)	-

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation Based on available data the classification criteria are not met. Classification based on data available for ingredients. Causes mild skin irritation.

AMINES, C11-14-BRANCHED ALKYL, MONOHEXYL AND DIHEXYL PHOSPHATES (80939-62-4)

Method	Species	Exposure route	Effective dose	Exposure time	Results
OECD Test No. 404: Acute Dermal Irritation/Corrosion	Rabbit	Dermal			Irritant

REACTION MASS OF 1H-BENZOTRIAZOLE-1-METHANAMINE, N,N-BIS(2-ETHYLHEXYL)-6-METHYL-,2H-BENZOTRIAZOLE-2-METHANAMINE, N,N-BIS(2-ETHYLHEXYL)-4-METHYL-, 2H-BENZOTRIAZOLE-2METHANAMINE, N,N-BIS(2-ETHYLHEXYL)-5-METHYL-, N,N-BIS(2-ETHYLHEXYL)-4-METHYL-1H-BENZOTRIAZOLE-1METHYLAMINE AND N,N-BIS(2-ETHYLHEXYL)-5-METHYL-1H-BENZOTRIAZOLE-1-METHYLAMINE (-)

Method	Species	Exposure route	Effective dose	Exposure time	Results
Draize Test	Rabbit	Dermal			Irritant

Serious eye damage/eye irritation Based on available data the classification criteria are not met.

AMINES, C11-14-BRANCHED ALKYL, MONOHEXYL AND DIHEXYL PHOSPHATES (80939-62-4)

Method	Species	Exposure route	Effective dose	Exposure time	Results
OECD Test No. 405: Acute Eye Irritation/Corrosion	Rabbit	eye			Irritant

REACTION MASS OF 1H-BENZOTRIAZOLE-1-METHANAMINE, N,N-BIS(2-ETHYLHEXYL)-6-METHYL-,2H-BENZOTRIAZOLE-2-METHANAMINE, N,N-BIS(2-ETHYLHEXYL)-4-METHYL-, 2H-BENZOTRIAZOLE-2METHANAMINE, N,N-BIS(2-ETHYLHEXYL)-5-METHYL-, N,N-BIS(2-ETHYLHEXYL)-4-METHYL-1H-BENZOTRIAZOLE-1METHYLAMINE AND N,N-BIS(2-ETHYLHEXYL)-5-METHYL-1H-BENZOTRIAZOLE-1-METHYLAMINE (-)

Method	Species	Exposure route	Effective dose	Exposure time	Results
Draize Test	Rabbit	eye			non-irritant

Respiratory or skin sensitisation Based on available data the classification criteria are not met.

AMINES, C11-14-BRANCHED ALKYL, MONOHEXYL AND DIHEXYL PHOSPHATES (80939-62-4)

Method	Species	Exposure route	Results
OECD Test No. 406: Skin Sensitisation Guinea pig maximisation test (GPMT)	Guinea pig	Dermal	Not a skin sensitiser

REACTION MASS OF 1H-BENZOTRIAZOLE-1-METHANAMINE, N,N-BIS(2-ETHYLHEXYL)-6-METHYL-,2H-BENZOTRIAZOLE-2-METHANAMINE, N,N-BIS(2-ETHYLHEXYL)-4-METHYL-, 2H-BENZOTRIAZOLE-2METHANAMINE, N,N-BIS(2-ETHYLHEXYL)-5-METHYL-, N,N-BIS(2-ETHYLHEXYL)-4-METHYL-1H-BENZOTRIAZOLE-1METHYLAMINE AND N,N-BIS(2-ETHYLHEXYL)-5-METHYL-1H-BENZOTRIAZOLE-1-METHYLAMINE (-)

Method	Species	Exposure route	Results
OECD Test No. 406: Skin Sensitisation Guinea pig maximisation test (GPMT)	Guinea pig	Dermal	Sensitising

Germ cell mutagenicity Based on available data the classification criteria are not met.

Component Information

AMINES, C11-14-BRANCHED ALKYL, MONOHEXYL AND DIHEXYL PHOSPHATES (80939-62-4)

Method	Species	Results
		Not mutagenic

Carcinogenicity No information available.

Reproductive toxicity Suspected of damaging fertility. Contains a known or suspected reproductive toxin. Classification based on data available for ingredients. Suspected of damaging fertility or the unborn child.

STOT - single exposure No information available.

STOT - repeated exposure May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard No information available.

Other adverse effects No information available.

SECTION 12: Ecological information

12.1. Toxicity

Ecotoxicity Very toxic to aquatic life with long lasting effects. Harmful to aquatic life.

REACTION MASS OF 1H-BENZOTRIAZOLE-1-METHANAMINE, N,N-BIS(2-ETHYLHEXYL)-6-METHYL-,2H-BENZOTRIAZOLE-2-METHANAMINE, N,N-BIS(2-ETHYLHEXYL)-4-METHYL-, 2H-BENZOTRIAZOLE-2METHANAMINE, N,N-BIS(2-ETHYLHEXYL)-5-METHYL-, N,N-BIS(2-ETHYLHEXYL)-4-METHYL-1H-BENZOTRIAZOLE-1METHYLAMINE AND N,N-BIS(2-ETHYLHEXYL)-5-METHYL-1H-BENZOTRIAZOLE-1-METHYLAMINE (-)

Method	Species	Endpoint type	Effective dose	Exposure time	Results
OECD Test No. 203: Fish,	Brachydanio rerio	LC50	1.3 mg/L	96 hours	

Acute Toxicity Test					
OECD Test No. 202: Daphnia sp., Acute Immobilisation Test	Daphnia magna	EC50	2.05 mg/L	48 hours	
OECD Test No. 201: Freshwater Algae and Cyanobacteria, Growth Inhibition Test	Desmodesmus subspicatus	EC50	0.976 mg/L	72 hours	
OECD Test No. 209: Activated Sludge, Respiration Inhibition Test (Carbon and Ammonium Oxidation)	Desmodesmus subspicatus	EC20	15 mg/L	3 hours	

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
O,O,O-TRIPHENYL PHOSPHOROTHIOATE	-	LC50: >100mg/L (96h, Danio rerio)	-	-
BENZENAMINE, N-PHENYL-, REACTION PRODUCTS WITH 2,4,4-TRIMETHYLPENTENE	-	LC50: >100mg/L (96h, Danio rerio)	-	-

12.2. Persistence and degradability

Persistence and degradability No information available.

REACTION MASS OF 1H-BENZOTRIAZOLE-1-METHANAMINE, N,N-BIS(2-ETHYLHEXYL)-6-METHYL-,2H-BENZOTRIAZOLE-2-METHANAMINE, N,N-BIS(2-ETHYLHEXYL)-4-METHYL-, 2H-BENZOTRIAZOLE-2METHANAMINE, N,N-BIS(2-ETHYLHEXYL)-5-METHYL-, N,N-BIS(2-ETHYLHEXYL)-4-METHYL-1H-BENZOTRIAZOLE-1METHYLAMINE AND N,N-BIS(2-ETHYLHEXYL)-5-METHYL-1H-BENZOTRIAZOLE-1-METHYLAMINE (-)

Method	Exposure time	Value	Results
OECD Test No. 301B: Ready Biodegradability: CO2 Evolution Test (TG 301 B)	28 days	Biodegradation < 10%	Not readily biodegradable

12.3. Bioaccumulative potential

Bioaccumulation No information available.

Component Information

Chemical name	Partition coefficient
O,O,O-TRIPHENYL PHOSPHOROTHIOATE	5

12.4. Mobility in soil

Mobility in soil No information available.

12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment The product does not contain any substance(s) classified as PBT or vPvB.

Chemical name	PBT and vPvB assessment
O,O,O-TRIPHENYL PHOSPHOROTHIOATE	PBT substance
BENZENAMINE, N-PHENYL-, REACTION PRODUCTS WITH 2,4,4-TRIMETHYLPENTENE	The substance is not PBT / vPvB
AMINES, C11-14-BRANCHED ALKYL, MONOHEXYL AND DIHEXYL	The substance is not PBT / vPvB

PHOSPHATES	
REACTION MASS OF 1H-BENZOTRIAZOLE-1-METHANAMINE, N,N-BIS(2-ETHYLHEXYL)-6-METHYL-,2H-BENZOTRIAZOLE-2-METHANAMINE, N,N-BIS(2-ETHYLHEXYL)-4-METHYL-, 2H-BENZOTRIAZOLE-2METHANAMINE, N,N-BIS(2-ETHYLHEXYL)-5-METHYL-, N,N-BIS(2-ETHYLHEXYL)-4-METHYL-1H-BENZOTRIAZOLE-1METHYLAMINE AND N,N-BIS(2-ETHYLHEXYL)-5-METHYL-1H-BENZOTRIAZOLE-1-METHYLAMINE	The substance is not PBT / vPvB

12.6. Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste from residues/unused products Waste is classified as hazardous waste. Disposal to licensed waste disposal site in accordance with the local Waste Disposal Authority. Toxic to aquatic life with long lasting effects. Do not discharge onto the ground or into water courses.

Contaminated packaging Do not reuse empty containers.

SECTION 14: Transport information

IATA

14.1 UN number or ID number UN3082
14.2 UN proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCES, LIQUID, N.O.S. (O,O,O-TRIPHENYL PHOSPHOROTHIOATE, AMINES, C11-14-BRANCHED ALKYL, MONOHEXYL AND DIHEXYL PHOSPHATES)
14.3 Transport hazard class(es) 9
14.4 Packing group III
14.5 Environmental hazards Yes
14.6 Special precautions for user
Special Provisions A97, A158, A197
ERG Code 9L

IMDG

14.1 UN number or ID number UN3082
14.2 UN proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCES, LIQUID, N.O.S. (O,O,O-TRIPHENYL PHOSPHOROTHIOATE, AMINES, C11-14-BRANCHED ALKYL, MONOHEXYL AND DIHEXYL PHOSPHATES)
14.3 Transport hazard class(es) 9
14.4 Packing group III
14.5 Environmental hazards Yes
14.6 Special precautions for user
Special Provisions 274, 335, 969
EmS-No F-A, S-F
14.7 Maritime transport in bulk according to IMO instruments No information available

RID

14.1 UN number or ID number UN3082
14.2 UN proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCES, LIQUID, N.O.S. (O,O,O-TRIPHENYL PHOSPHOROTHIOATE, AMINES, C11-14-BRANCHED ALKYL, MONOHEXYL AND

DIHEXYL PHOSPHATES)

14.3 Transport hazard class(es) 9
14.4 Packing group III
14.5 Environmental hazards Yes
14.6 Special precautions for user
Special Provisions 274, 335, 375, 601
Classification code M6

ADR

14.1 UN number or ID number UN3082
14.2 UN proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCES, LIQUID, N.O.S. (O,O,O-TRIPHENYL PHOSPHOROTHIOATE, AMINES, C11-14-BRANCHED ALKYL, MONOHEXYL AND DIHEXYL PHOSPHATES)
14.3 Transport hazard class(es) 9
14.4 Packing group III
14.5 Environmental hazards Yes
14.6 Special precautions for user
Special Provisions 274, 335, 601, 375
Classification code M6
Tunnel restriction code (-)

SECTION 15: Regulatory information

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

National regulations

Authorisations and/or restrictions on use:
This product contains one or more substances subject to restriction (UK REACH - Annex XVII).
This product does not contain substances subject to authorisation (UK REACH - Annex XIV).
Product restricted per REACH Annex XVII: 3

Chemical name	Restricted substance per REACH Annex XVII	Substance subject to authorisation per REACH Annex XIV
BENZENAMINE, N-PHENYL-, REACTION PRODUCTS WITH 2,4,4-TRIMETHYLPENTENE - 68411-46-1	3	-

Persistent Organic Pollutants
Not applicable

Export Notification requirements
Not applicable

Dangerous substance category per COMAH Regulations 2015 (as amended)
E1 - Hazardous to the Aquatic Environment in Category Acute 1 or Chronic 1

Named dangerous substances per COMAH Regulations 2015 (as amended)
Not applicable

The Ozone-Depleting Substances Regulations 2015
Not applicable

The Biocidal Products Regulations 2001 (as amended)
Not applicable

The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 (as amended)
Not applicable

Poisons Act 1972 (Explosive Precursors) Regulations (as Amended)

Not applicable

International Inventories

TSCA	Contact supplier for inventory compliance status
DSL/NDSL	Contact supplier for inventory compliance status
EINECS/ELINCS	Contact supplier for inventory compliance status
ENCS	Contact supplier for inventory compliance status
IECSC	Contact supplier for inventory compliance status
KECI	Contact supplier for inventory compliance status
PICCS	Contact supplier for inventory compliance status
AIIC	Contact supplier for inventory compliance status
NZIoC	Contact supplier for inventory compliance status

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
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
AIIC - Australian Inventory of Industrial Chemicals
NZIoC - New Zealand Inventory of Chemicals

15.2. Chemical safety assessment

Chemical Safety Report Not applicable

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
H315 - Causes skin irritation
H317 - May cause an allergic skin reaction
H319 - Causes serious eye irritation
H361f - Suspected of damaging fertility
H372 - Causes damage to organs through prolonged or repeated exposure
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
H412 - Harmful to aquatic life with long lasting effects

Legend
SVHC: Substances of Very High Concern for Authorisation:

Legend Section 8: Exposure controls/personal protection

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation
+	Sensitisers		

Revision Note Not applicable

Classification procedure

Classification according to Regulation (EC) No. 1272/2008 [CLP]	Method Used
Acute oral toxicity	Calculation method
Acute dermal toxicity	Calculation method
Acute inhalation toxicity - gas	Calculation method

Acute inhalation toxicity - vapour	Calculation method
Acute inhalation toxicity - dust/mist	Calculation method
Skin corrosion/irritation	Calculation method
Serious eye damage/eye irritation	Calculation method
Respiratory sensitisation	Calculation method
Skin sensitisation	Calculation method
Mutagenicity	Calculation method
Carcinogenicity	Calculation method
STOT - single exposure	Calculation method
STOT - repeated exposure	Calculation method
Acute aquatic toxicity	Calculation method
Chronic aquatic toxicity	Calculation method
Aspiration hazard	Calculation method
Ozone	Calculation method

Key literature references and sources for data used to compile the SDS
Agency for Toxic Substances and Disease Registry (ATSDR)
U.S. Environmental Protection Agency ChemView Database
European Food Safety Authority (EFSA)
European Chemicals Agency (ECHA) Committee for Risk Assessment (ECHA_RAC)
European Chemicals Agency (ECHA) (ECHA_API)
Environmental Protection Agency
Acute Exposure Guideline Level(s) (AEGL(s))
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
U.S. Environmental Protection Agency High Production Volume Chemicals
Food Research Journal
Hazardous Substance Database
International Uniform Chemical Information Database (IUCLID)
National Institute of Technology and Evaluation (NITE)
Australian National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH (National Institute for Occupational Safety and Health)
National Library of Medicine's ChemID Plus (NLM CIP)
National Library of Medicine’s PubMed database (NLM PUBMED)
U.S. National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
Organisation for Economic Co-operation and Development Environment, Health, and Safety Publications
Organisation for Economic Co-operation and Development High Production Volume Chemicals Programme
Organisation for Economic Co-operation and Development Screening Information Data Set
World Health Organization

Prepared By J Spenceley

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This material safety data sheet complies with the requirements of UK REACH Regulations (SI 2019/758 as amended) Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

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 and 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.

End of Safety Data Sheet