SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:
Regulation (EC) No. 1907/2006 and Regulation (EC) No. 1272/2008

Revision date 12-Sep-2023 **Revision Number** 2

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

1.1. Product identifier

Product Name Amethyst A50-RIG M

Pure substance/mixture Mixture
Contains Morpholine, 4-(1-oxo-2-propenyl)-, 2-(2-ethoxyethoxy)ethyl acrylate, Phenylbis(2,4,6-trimethylbenzoyl)-phosphine oxide, Isobornyl acrylate monomer

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

Recommended use Digital Printing

Uses advised against No information available

1.3. Details of the supplier of the safety data sheet

Supplier
NUtec Digital Ink (Pty) Ltd.
1 Clifford Street
Ottery 7800
South Africa
For further information, please contact

Contact Point regulatory@nutecdigital.com

E-mail address regulatory@nutecdigital.com

Non-Emergency Telephone Number:
+27217636990

1.4. Emergency telephone number

Emergency Telephone +27217636990
24 Hour Emergency Phone Number +27217636990

Emergency: New Zealand 0800 Poison (0800 764 766)
Supplier: Hitec-Ink
Unit 4 / 231 Annex Road
Middleton 8025
Christchurch
Ph 03 6660100

Emergency Telephone - §45 - (EC)1272/2008	
Europe	**112**

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture
Regulation (EC) No 1272/2008

Acute toxicity - Oral	Category 4 - (H302)
Skin corrosion/irritation	Category 2 - (H315)
Serious eye damage/eye irritation	Category 1 - (H318)
Skin sensitisation	Category 1 - (H317)
Reproductive toxicity	Category 1B - (H360D)
Specific target organ toxicity — single exposure	Category 3 - (H335)
Specific target organ toxicity — repeated exposure	Category 2 - (H373)
Acute aquatic toxicity	Category 1 - (H400)
Chronic aquatic toxicity	Category 1 - (H410)

2.2. Label elements

Contains Morpholine, 4-(1-oxo-2-propenyl)-, 2-(2-ethoxyethoxy)ethyl acrylate, Phenylbis(2,4,6-trimethylbenzoyl)-phosphine oxide, Isobornyl acrylate monomer

Signal word
Danger

Hazard statements
H302 - Harmful if swallowed
H315 - Causes skin irritation
H317 - May cause an allergic skin reaction
H318 - Causes serious eye damage
H335 - May cause respiratory irritation
H360D - May damage the unborn child
H373 - May cause damage to organs through prolonged or repeated exposure
H410 - Very toxic to aquatic life with long lasting effects
EUH208 - Contains 3,3,5-Trimethtyl Cyclohexane Acrylate, Propoxylated neopentyl glycol, 1,6-Hexanediol diacrylate, n-Butyl Acrylate May produce an allergic reaction.

Precautionary Statements - EU (§28, 1272/2008)
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
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P310 - Immediately call a POISON CENTER or doctor
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-%	REACH registration number	EC No (EU Index No)	Classification according to Regulation (EC) No. 1272/2008 [CLP]	Specific concentration limit (SCL)	M-Factor	M-Factor (long-term)
Isobornyl acrylate monomer 5888-33-5	50 - 60%	01-2119957862-25-XXXX	(607-756-00-6) 227-561-6	STOT SE 3 (H335) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)			

Morpholine, 4-(1-oxo-2-propenyl) - 5117-12-4	10 - 20%	01-2120102080-83-XXXX	(613-222-00-3) 418-140-1	Acute Tox. 4 (H302) Eye Dam. 1 (H318) Skin Sens. 1 (H317) STOT RE 2 (H373)			
Acrylic Acid ester	10 - 20%	01-2120752384-53-XXXX	.?	Acute Tox. 4 (H302) Acute Tox. 3 (H311) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) Skin Sens. 1A (H317) Aquatic Chronic 2 (H411)			
Phenylbis(2,4,6-trimethylbenzoyl)-phosphine oxide 162881-26-7	0 - 10%	No data available	(015-189-00-5) 423-340-5	Skin Sens. 1A (H317) Aquatic Chronic 4 (H413)			
2-Benzyl-2-dimethylamino-1-(4-morpholinphenyl)butan-1-one 119313-12-1	0 - 10%	No data available	(606-047-00-9) 404-360-3	Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410) Repr. 1B H360D			
3,3,5-Trimethtyl Cyclohexane Acrylate 86178-38-3	0 - 10%	01-2120747316-53-XXXX	(607-133-00-9) 289-200-9	Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) Skin Sens. 1 (H317) STOT. 3 (H335)	STOT SE 3 :: C>=10%		
Propoxylated neopentyl glycol 84170-74-1	0 - 10%	No data available	617-546-6	Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) Skin Sens. 1 (H317) STOT SE 3 (H335)			
Oxybis(methyl-2,1-ethanediyl diacylate 57472-68-1	0 - 10%	Not Applicable	260-754-3	Skin Irrit. 2 (H315) Eye Dam. 1 (H318) Skin Sens. 1 (H317)			
N,N-Dimethylacrylamide 2680-03-7	0 - 10%	No data available	220-237-5	Acute Tox. 3 (H301) Acute Tox. 3 (H311) Eye Dam. 1 (H318)			
1,6-Hexanediol diacrylate 13048-33-4	0 - 10%	Not Applicable	(607-109-00-8) 235-921-9	Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) Skin Sens. 1 (H317) Aquatic Chronic 2 (H411) Aquatic Acute 1 (H400)			
n-Butyl Acrylate 141-32-2	0 - 10%	No data available	(607-062-00-3) 205-480-7	Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) Skin Sens. 1 (H317) STOT SE 3 (H335) Flam. Liq. 3 (H226)	STOT SE 3 :: C>=10%		

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

Acute Toxicity Estimate
If LD50/LC50 data is not available or does not correspond to the classification category, then the appropriate conversion value from CLP Annex I, Table 3.1.2, is used to calculate the acute toxicity estimate (ATEmix) for classifying a mixture based on its components

Chemical name	Oral LD50 mg/kg	Dermal LD50 mg/kg	Inhalation LC50 - 4 hour - dust/mist - mg/L	Inhalation LC50 - 4 hour - vapour - mg/L	Inhalation LC50 - 4 hour - gas - ppm
Isobornyl acrylate monomer 5888-33-5	4890	3000			
Morpholine, 4-(1-oxo-2-propenyl)- 5117-12-4		2000			
Acrylic Acid ester		2000 1000			
Phenylbis(2,4,6-trimethyl benzoyl)-phosphine oxide 162881-26-7	2000	2000			
2-Benzyl-2-dimethylamino-1-(4-morpholinphenyl)butan-1-one 119313-12-1		2000			
Propoxylated neopentyl glycol 84170-74-1		2000			
Oxybis(methyl-2,1-ethanediyl diacylate 57472-68-1	4600	2000			
N,N-Dimethylacrylamide 2680-03-7	316				
1,6-Hexanediol diacrylate 13048-33-4	5000	3600			
n-Butyl Acrylate 141-32-2	9050	3024	10.3		

This product contains one or more candidate substance(s) of very high concern (Regulation (EC) No. 1907/2006 (REACH), Article 59)

Chemical name	CAS No	SVHC candidates
2-Benzyl-2-dimethylamino-1-(4-morpholinphenyl)butan-1-one	119313-12-1	X

SECTION 4: First aid measures

4.1. Description of first aid measures

General advice Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.

Inhalation Remove to fresh air. Get medical attention immediately if symptoms occur. IF exposed or concerned: Get medical advice/attention.

Eye contact Get immediate medical attention. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open while rinsing. Do not rub affected area.

Skin contact Wash off immediately with soap and plenty of water for at least 15 minutes. May cause an allergic skin reaction. In the case of skin irritation or allergic reactions see a doctor.

Ingestion Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Call a doctor.

Self-protection of the first aider Avoid contact with skin, eyes or clothing. Wear personal protective clothing (see section 8).

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

Symptoms Burning sensation. Itching. Rashes. Hives.

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

Note to doctors May cause sensitisation in susceptible persons. Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable Extinguishing Media Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

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 Product is or contains a sensitiser. May cause sensitisation by skin contact.

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. Use personal protection equipment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Avoid contact with skin, eyes or clothing. Use personal protective equipment as required. Ensure adequate ventilation. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

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 Prevent further leakage or spillage if safe to do so.

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 Take up mechanically, placing in appropriate containers for disposal.

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 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. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Take off contaminated clothing and wash it before reuse. Remove contaminated clothing and shoes. Avoid breathing vapours or mists.

General hygiene considerations Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. 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 containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children. Store locked up.

7.3. Specific end use(s)

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

Chemical name	European Union	Austria	Belgium	Bulgaria	Croatia
n-Butyl Acrylate 141-32-2	TWA: 2 ppm TWA: 11 mg/m³ STEL: 10 ppm STEL: 53 mg/m³	TWA: 2 ppm TWA: 11 mg/m³ STEL 10 ppm STEL 53 mg/m³ S+	TWA: 2 ppm TWA: 11 mg/m³ STEL: 10 ppm STEL: 53 mg/m³	STEL: 10 ppm STEL: 53 mg/m³ TWA: 2 ppm TWA: 11 mg/m³	TWA: 2 ppm TWA: 11 mg/m³ STEL: 10 ppm STEL: 53 mg/m³ * Skin Sensitisation
Chemical name	**Cyprus**	**Czech Republic**	**Denmark**	**Estonia**	**Finland**
n-Butyl Acrylate 141-32-2	STEL: 10 ppm STEL: 53 mg/m³ TWA: 2 ppm TWA: 11 mg/m³	TWA: 10 mg/m³ Ceiling: 20 mg/m³ D* S+	TWA: 2 ppm TWA: 11 mg/m³ STEL: 53 mg/m³ STEL: 10 ppm	TWA: 2 ppm TWA: 11 mg/m³ STEL: 10 ppm STEL: 53 mg/m³	TWA: 2 ppm TWA: 11 mg/m³ STEL: 10 ppm STEL: 53 mg/m³
Chemical name	**France**	**Germany TRGS**	**Germany DFG**	**Greece**	**Hungary**
Isobornyl acrylate monomer 5888-33-5	-	-	skin sensitizer	-	-
1,6-Hexanediol diacrylate 13048-33-4	-	-	skin sensitizer	-	-
n-Butyl Acrylate 141-32-2	TWA: 2 ppm TWA: 11 mg/m³ STEL: 10 ppm STEL: 53 mg/m³	TWA: 2 ppm TWA: 11 mg/m³ Sh+ H*	TWA: 2 ppm TWA: 11 mg/m³ Peak: 4 ppm Peak: 22 mg/m³ * skin sensitizer	TWA: 10 ppm TWA: 55 mg/m³	TWA: 2 ppm TWA: 11 mg/m³ STEL: 10 ppm STEL: 53 mg/m³
Chemical name	**Ireland**	**Italy MDLPS**	**Italy AIDII**	**Latvia**	**Lithuania**
n-Butyl Acrylate	TWA: 2 ppm	TWA: 2 ppm	TWA: 2 ppm	TWA: 2 ppm	STEL: 10 ppm

141-32-2	TWA: 11 mg/m³ STEL: 10 ppm STEL: 53 mg/m³ Sens+	TWA: 11 mg/m³ STEL: 10 ppm STEL: 53 mg/m³	TWA: 10 mg/m³ senD+	TWA: 11 mg/m³ STEL: 10 ppm STEL: 53 mg/m³	STEL: 53 mg/m³ J+ TWA: 2 ppm TWA: 11 mg/m³
Chemical name	Luxembourg	Malta	Netherlands	Norway	Poland
n-Butyl Acrylate 141-32-2	STEL: 10 ppm STEL: 53 mg/m³ TWA: 2 ppm TWA: 11 mg/m³	STEL: 10 ppm STEL: 53 mg/m³ TWA: 2 ppm TWA: 11 mg/m³	TWA: 2 ppm TWA: 11 mg/m³ STEL: 10 ppm STEL: 53 mg/m³	TWA: 2 ppm TWA: 11 mg/m³ A+ STEL: 4 ppm STEL: 16.5 mg/m³	STEL: 30 mg/m³ TWA: 11 mg/m³
Chemical name	Portugal	Romania	Slovakia	Slovenia	Spain
n-Butyl Acrylate 141-32-2	TWA: 2 ppm TWA: 11 mg/m³ STEL: 10 ppm STEL: 53 mg/m³ Sensitizer dermal	TWA: 2 ppm TWA: 11 mg/m³ STEL: 10 ppm STEL: 53 mg/m³	TWA: 2 ppm TWA: 11 mg/m³ S+ Ceiling: 53 mg/m³	TWA: 2 ppm TWA: 11 mg/m³ STEL: 10 ppm STEL: 53 mg/m³ K*	TWA: 2 ppm TWA: 11 mg/m³ STEL: 10 ppm STEL: 53 mg/m³ Sen+

Chemical name	Sweden	Switzerland	United Kingdom
Isobornyl acrylate monomer 5888-33-5	-	S+	-
Acrylic Acid ester	-	S+	-
3,3,5-Trimethtyl Cyclohexane Acrylate 86178-38-3	-	S+	-
Propoxylated neopentyl glycol 84170-74-1	-	S+	-
Oxybis(methyl-2,1-ethanediyl diacylate 57472-68-1	-	S+	-
1,6-Hexanediol diacrylate 13048-33-4	-	S+	-
n-Butyl Acrylate 141-32-2	Bindande KGV: 10 ppm Bindande KGV: 53 mg/m³ S+ NGV: 2 ppm NGV: 11 mg/m³	S+ TWA: 2 ppm TWA: 11 mg/m³ STEL: 4 ppm STEL: 22 mg/m³ H*	TWA: 1 ppm TWA: 5 mg/m³ STEL: 5 ppm STEL: 26 mg/m³

Biological occupational exposure limits

Derived No Effect Level (DNEL) No information available.
Predicted No Effect Concentration (PNEC) No information available.

8.2. Exposure controls

Personal protective equipment

Eye/face protection Tight sealing safety goggles.

Hand protection Wear suitable gloves. Impervious gloves.

Skin and body protection Wear suitable protective clothing. Long sleeved clothing.

Respiratory protection No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

General hygiene considerations	Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product.
Environmental exposure controls	No information available.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Liquid
Appearance	Liquid
Colour	Magenta
Odour	Characteristic.
Odour threshold	No information available

Property	Values	Remarks • Method
Melting point / freezing point	No data available	None known
Initial boiling point and boiling range	200 °C	None known
Flammability	No data available	None known
Flammability Limit in Air		None known
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Flash point	100 °C	None known
Autoignition temperature	No data available	None known
Decomposition temperature		None known
pH	No data available	None known
pH (as aqueous solution)	No data available	No information available
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known
Water solubility	Immiscible in water	None known
Solubility(ies)	No data available	None known
Partition coefficient	No data available	None known
Vapour pressure	No data available	None known
Relative density	No data available	None known
Bulk density	No data available	
Liquid Density	No data available	
Relative vapour density	No data available	None known
Particle characteristics		
Particle Size	No information available	
Particle Size Distribution	No information available	

9.2. Other information

9.2.1. Information with regards to physical hazard classes
Not applicable

9.2.2. Other safety characteristics
No information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity No information available.

10.2. Chemical stability

Stability Stable under normal conditions.

Explosion data
Sensitivity to mechanical impact None.
Sensitivity to static discharge None.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions None under normal processing.

10.4. Conditions to avoid

Conditions to avoid None known based on information supplied.

10.5. Incompatible materials

Incompatible materials Strong acids. Strong bases. Strong oxidising agents.

10.6. Hazardous decomposition products

Hazardous decomposition products None known based on information supplied.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008
Information on likely routes of exposure
Product Information

Inhalation Specific test data for the substance or mixture is not available. May cause irritation of respiratory tract.

Eye contact Specific test data for the substance or mixture is not available. Causes serious eye damage. May cause irreversible damage to eyes.

Skin contact Specific test data for the substance or mixture is not available. May cause sensitisation by skin contact. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. (based on components). Causes skin irritation.

Ingestion Specific test data for the substance or mixture is not available. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea. Harmful if swallowed. (based on components).

Symptoms related to the physical, chemical and toxicological characteristics
Symptoms Redness. Burning. May cause blindness. Itching. Rashes. Hives. May cause redness and tearing of the eyes.

Acute toxicity
Numerical measures of toxicity

The following values are calculated based on chapter 3.1 of the GHS document
ATEmix (oral) 1,472.50 mg/kg
ATEmix (dermal) 2,455.50 mg/kg

Unknown acute toxicity
5.48 % of the mixture consists of ingredient(s) of unknown acute oral toxicity.
Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Isobornyl acrylate monomer	= 4890 mg/kg (Rat)	> 3000 mg/kg (Rabbit)	-

Morpholine, 4-(1-oxo-2-propenyl)-	-	> 2000 mg/kg (Rat)	-
Acrylic Acid ester	-	> 2000 mg/kg (Rabbit) 1000 - 2000 mg/kg (Rabbit)	-
Phenylbis(2,4,6-trimethylbenzoyl)-phosphine oxide	> 2000 mg/kg (Rat)	> 2000 mg/kg (Rat)	-
2-Benzyl-2-dimethylamino-1-(4-morpholinphenyl)butan-1-one	-	> 2000 mg/kg (Rat)	-
Propoxylated neopentyl glycol	-	> 2000 mg/kg (Rat)	> 2.25 mg/L (Rat) 4 h
Oxybis(methyl-2,1-ethanediyl diacylate	= 4600 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	-
N,N-Dimethylacrylamide	= 316 mg/kg (Rat)	-	> 776 ppm (Rat) 1 h
1,6-Hexanediol diacrylate	= 5 g/kg (Rat)	= 3600 mg/kg (Rabbit)	-
n-Butyl Acrylate	= 9050 mg/kg (Rat)	= 3024 mg/kg (Rabbit)	= 10.3 mg/L (Rat) 4 h

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

Skin corrosion/irritation Classification based on data available for ingredients. Causes skin irritation.

Serious eye damage/eye irritation Classification based on data available for ingredients. Causes burns. Causes serious eye damage.

Respiratory or skin sensitisation May cause an allergic skin reaction.

Germ cell mutagenicity No information available.

Carcinogenicity No information available.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

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

The table below indicates ingredients above the cut-off threshold considered as relevant which are listed as reproductive toxins.

Chemical name	European Union
2-Benzyl-2-dimethylamino-1-(4-morpholinphenyl)butan-1-one	Repr. 1B

STOT - single exposure May cause respiratory irritation.

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

Aspiration hazard No information available.

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

Endocrine disrupting properties No information available.

11.2.2. Other information

Other adverse effects No information available.

SECTION 12: Ecological information

12.1. Toxicity

Ecotoxicity Very toxic to aquatic life with long lasting effects.

Unknown aquatic toxicity Contains 39.2484 % of components with unknown hazards to the aquatic environment.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Isobornyl acrylate monomer	-	LC50: =0.704mg/L (96h, Danio rerio)	-	-
Phenylbis(2,4,6-trimethyl benzoyl)-phosphine oxide	-	LC50: >90µg/L (96h, Danio rerio)	-	-
2-Benzyl-2-dimethylamino-1-(4-morpholinphenyl)butan-1-one	-	LC50: =0.46mg/L (96h, Danio rerio)	-	-
Propoxylated neopentyl glycol	-	LC50: =2.7mg/L (96h, Danio rerio)	-	-
N,N-Dimethylacrylamide	-	LC50: >100mg/L (96h, Oncorhynchus mykiss)	-	-
n-Butyl Acrylate	EC50: =5.5mg/L (96h, Pseudokirchneriella subcapitata)	LC50: =5.2mg/L (96h, Oncorhynchus mykiss)	-	EC50: =8.2mg/L (48h, Daphnia magna)

12.2. Persistence and degradability

Persistence and degradability No information available.

12.3. Bioaccumulative potential

Bioaccumulation

Component Information

Chemical name	Partition coefficient
Isobornyl acrylate monomer	4.52
Morpholine, 4-(1-oxo-2-propenyl)-	-0.46
Acrylic Acid ester	1.2
Phenylbis(2,4,6-trimethylbenzoyl)-phosphine oxide	5.8
2-Benzyl-2-dimethylamino-1-(4-morpholinphenyl)butan-1-one	2.91
3,3,5-Trimethtyl Cyclohexane Acrylate	4.6
Propoxylated neopentyl glycol	4.86
Oxybis(methyl-2,1-ethanediyl diacylate	0.39
N,N-Dimethylacrylamide	-0.3
1,6-Hexanediol diacrylate	2.81
n-Butyl Acrylate	2.38

12.4. Mobility in soil

Mobility in soil No information available.

12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment No information available.

Chemical name	PBT and vPvB assessment
Isobornyl acrylate monomer	The substance is not PBT / vPvB
Morpholine, 4-(1-oxo-2-propenyl)-	The substance is not PBT / vPvB
Acrylic Acid ester	The substance is not PBT / vPvB
Phenylbis(2,4,6-trimethylbenzoyl)-phosphine oxide	The substance is not PBT / vPvB
2-Benzyl-2-dimethylamino-1-(4-morpholinphenyl)butan-1-one	The substance is not PBT / vPvB
3,3,5-Trimethtyl Cyclohexane Acrylate	The substance is not PBT / vPvB
Oxybis(methyl-2,1-ethanediyl diacylate	The substance is not PBT / vPvB
N,N-Dimethylacrylamide	The substance is not PBT / vPvB
1,6-Hexanediol diacrylate	The substance is not PBT / vPvB
n-Butyl Acrylate	The substance is not PBT / vPvB

12.6. Endocrine disrupting properties

Endocrine disrupting properties	No information available.

12.7. Other adverse effects
No information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste from residues/unused products	Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.
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. (2-Benzyl-2-dimethylamino-1-(4-morpholinphenyl)butan-1-one)
14.3 Transport hazard class(es)	9
14.4 Packing group	III
Description	UN3082, Environmentally hazardous substances, liquid, n.o.s. (2-Benzyl-2-dimethylamino-1-(4-morpholinphenyl)butan-1-one), 9, 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. (2-Benzyl-2-dimethylamino-1-(4-morpholinphenyl)butan-1-one)
14.3 Transport hazard class(es)	9
14.4 Packing group	III
Description	UN3082, Environmentally hazardous substances, liquid, n.o.s. (2-Benzyl-2-dimethylamino-1-(4-morpholinphenyl)butan-1-one), 9, III, Marine pollutant
14.5 Marine pollutant	P
Environmental hazards	Yes
14.6 Special precautions for user	
Special Provisions	274, 335, 969
EmS-No	F-A, S-F No information available
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. (2-Benzyl-2-dimethylamino-1-(4-morpholinphenyl)butan-1-one)
14.3 Transport hazard class(es)	9
14.4 Packing group	III
Description	UN3082, Environmentally hazardous substances, liquid, n.o.s. (2-Benzyl-2-dimethylamino-1-(4-morpholinphenyl)butan-1-one), 9, 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. (2-Benzyl-2-dimethylamino-1-(4-morpholinphenyl)butan-1-one)
14.3 Transport hazard class(es) 9
14.4 Packing group III
Description UN3082, Environmentally hazardous substances, liquid, n.o.s. (2-Benzyl-2-dimethylamino-1-(4-morpholinphenyl)butan-1-one), 9, 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

France
Occupational Illnesses (R-463-3, France)

Chemical name	French RG number	Title
n-Butyl Acrylate 141-32-2	RG 65	-

Netherlands

Chemical name	Netherlands - List of Carcinogens	Netherlands - List of Mutagens	Netherlands - List of Reproductive Toxins
2-Benzyl-2-dimethylamino-1-(4-morpholinphenyl)butan-1-one	-	-	Development Category 1B

European Union
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.

Authorisations and/or restrictions on use:
This product contains one or more substance(s) subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

Chemical name	Restricted substance per REACH Annex XVII	Substance subject to authorisation per REACH Annex XIV
Morpholine, 4-(1-oxo-2-propenyl)- - 5117-12-4	75.	
Phenylbis(2,4,6-trimethylbenzoyl)-phosphine oxide - 162881-26-7	75.	
2-Benzyl-2-dimethylamino-1-(4-morpholinphenyl)butan-1-one - 119313-12-1	30. 75.	
1,6-Hexanediol diacrylate - 13048-33-4	75.	
n-Butyl Acrylate - 141-32-2	75.	

Persistent Organic Pollutants
Not applicable

Dangerous substance category per Seveso Directive (2012/18/EU)

E1 - Hazardous to the Aquatic Environment in Category Acute 1 or Chronic 1
Named dangerous substances per Seveso Directive (2012/18/EU)

Ozone-depleting substances (ODS) regulation (EC) 1005/2009
Not applicable

Biocidal Products Regulation (EU) No 528/2012 (BPR)

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
KECL	Contact supplier for inventory compliance status
PICCS	Contact supplier for inventory compliance status
AIIC	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

15.2. Chemical safety assessment

Chemical Safety Report No information available

SECTION 16: Other information

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

Full text of H-Statements referred to under section 3
H225 - Highly flammable liquid and vapour
H226 - Flammable liquid and vapour
H301 - Toxic if swallowed
H302 - Harmful if swallowed
H304 - May be fatal if swallowed and enters airways
H311 - Toxic in contact with skin
H315 - Causes skin irritation
H317 - May cause an allergic skin reaction
H318 - Causes serious eye damage
H319 - Causes serious eye irritation
H331 - Toxic if inhaled
H335 - May cause respiratory irritation
H336 - May cause drowsiness or dizziness
H351 - Suspected of causing cancer
H360F - May damage fertility
H361d - Suspected of damaging the unborn child
H370 - Causes damage to organs
H372 - Causes damage to organs through prolonged or repeated exposure
H373 - May cause 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
H413 - May cause long lasting harmful effects to aquatic life

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

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)
EPA (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)
Japan GHS Classification
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)
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

Revision date 12-Sep-2023

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)
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End of Safety Data Sheet