

# SAFETY DATA SHEET

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by UK REACH Regulation SI 2019/758

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

### 1.1 Product identifier

**Product name** : Tau Ink 2 - Orange  
**Trade name** : Orange  
                   Tau Ink 2  
**Product code** : 1690195  
**UFI** : X1D3-24Y8-400P-JPJS  
**Date of issue/Date of revision** : 11 January 2026  
**Version** : 2.11

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

#### Identified uses

Printing ink; Printing ink related material; Colorant

#### Uses advised against

Not applicable.

### 1.3 Details of the supplier of the safety data sheet

**Manufacturer/ Distributor** : Durst Group AG  
                                   Julius-Durst-Straße 4  
                                   39042 Brixen  
                                   Italy  
                                   P.: +39 0472 810111  
                                   F.: +39 0472 830980

**e-mail address of person responsible for this SDS** : sds@durst-group.com

### 1.4 Emergency telephone number

#### Supplier

**Telephone number** : (44) 20 3807 3798 (Chemtrec - 24 hours)

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

**Product definition** : Mixture

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


Skin Irrit. 2, H315  
 Eye Dam. 1, H318  
 Skin Sens. 1, H317  
 Repr. 1B, H360FD  
 STOT RE 1, H372  
 Aquatic Acute 1, H400  
 Aquatic Chronic 2, H411

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

### 2.2 Label elements

## SECTION 2: Hazards identification

<b>Hazard pictograms</b>	:	
<b>Signal word</b>	:	Danger
<b>Hazard statements</b>	:	<p>Causes skin irritation.</p> <p>May cause an allergic skin reaction.</p> <p>Causes serious eye damage.</p> <p>May damage fertility. May damage the unborn child.</p> <p>Causes damage to organs through prolonged or repeated exposure.</p> <p>Very toxic to aquatic life with long lasting effects.</p>
<b><u>Precautionary statements</u></b>		
<b>Prevention</b>	:	P280 - Wear protective gloves. Wear eye or face protection. P201 - Obtain special instructions before use. P270 - Do not eat, drink or smoke when using this product.
<b>Response</b>	:	P308 + P313 - IF exposed or concerned: Get medical attention. P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
<b>Disposal</b>	:	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
<b>Hazardous ingredients</b>	:	<p>hexamethylene diacrylate</p> <p>1-vinylhexahydro-2H-azepin-2-one</p> <p>oxybis(methyl-2,1-ethanediyl) diacrylate</p> <p>phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide</p> <p>diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide</p> <p>Poly[oxy(methyl-1,2-ethanediyl)], <math>\alpha, \alpha'</math>-(2,2-dimethyl-1,3-propanediyl)bis[<math>\omega</math>-[(1-oxo-2-propen-1-yl)oxy]-</p> <p>propoxylated glycerol triacrylated</p> <p>2-Phenoxyethyl Acrylate</p> <p>2,6-bis(1,1-dimethylethyl)-4-(phenylenemethylene)cyclohexa-2,5-dien-1-one</p> <p>2-hydroxyethyl acrylate</p>
<b>Supplemental label elements</b>	:	Not applicable.
<b>Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles</b>	:	Restricted to professional users.
<b>2.3 Other hazards</b>		
<b>Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII</b>	:	This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
<b>Other hazards which do not result in classification</b>	:	<p>None known.</p> <p>This mixture does not contain any substances that are assessed to be endocrine disrupting.</p>

## SECTION 3: Composition/information on ingredients

**3.2 Mixtures** : Mixture

**SECTION 3: Composition/information on ingredients**

Product/ingredient name	Identifiers	%	Classification	Type
hexamethylene diacrylate	REACH #: 01-2119484737-22 EC: 235-921-9 CAS: 13048-33-4 Index: 607-109-00-8	25 < 50	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Acute 1, H400 (M=1) Aquatic Chronic 2, H411	[1]
1-vinylhexahydro-2H-azepin-2-one	REACH #: 01-2119977109-27 EC: 218-787-6 CAS: 2235-00-9	10 < 20	Acute Tox. 4, H302 Acute Tox. 4, H312 Eye Irrit. 2, H319 Skin Sens. 1, H317 STOT RE 1, H372 (liver, respiratory system) (inhalation)	[1]
oxybis(methyl-2,1-ethanediyl) diacrylate	REACH #: 01-2119484629-21 EC: 260-754-3 CAS: 57472-68-1	5 < 10	Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317	[1]
phenyl bis (2,4,6-trimethylbenzoyl)- phosphine oxide	REACH #: 01-2119489401-38 01-2119936813-33 EC: 423-340-5 CAS: 162881-26-7 Index: 015-189-00-5	3 < 5	Skin Sens. 1A, H317 Aquatic Chronic 4, H413	[1]
diphenyl (2,4,6-trimethylbenzoyl) phosphine oxide	REACH #: 01-2119972295-29 EC: 278-355-8 CAS: 75980-60-8	3 < 5	Skin Sens. 1B, H317 Repr. 1B, H360FD (oral)	[1]
2-Oxepanone, homopolymer, 2-[(1-oxo- 2-propen-1-yl)oxy]ethyl ester	CAS: 110489-05-9	3 < 5	Skin Irrit. 2, H315 Eye Irrit. 2, H319	[1]
Poly[oxy(methyl- 1,2-ethanediyl)], $\alpha,\alpha'$ - (2,2-dimethyl- 1,3-propanediyl)bis[ $\omega$ -[ (1-oxo-2-propen-1-yl)oxy]-	REACH #: 01-2119970213-43 EC: 701-440-2 CAS: 84170-74-1	3 < 5	Skin Sens. 1, H317 Aquatic Chronic 2, H411	[1]
Benzene, (1-methylethenyl)- , homopolymer, ar- (2-hydroxy-2-methyl- 1-oxopropyl) derivs.	REACH #: 01-0000015270-82 01-2120016508-60 CAS: 163702-01-0	1,0 < 3,0	Repr. 2, H361f Aquatic Chronic 4, H413	[1]
2-Hydroxy-2-Methyl- 1-Phenyl-1-Propanone	REACH #: 01-2119472306-39 EC: 231-272-0 CAS: 7473-98-5	1,0 < 2,5	Acute Tox. 4, H302 Aquatic Chronic 3, H412	[1]
propoxylated glycerol triacylated	REACH #: 01-2119487948-12 EC: 500-114-5 CAS: 52408-84-1	0,25 < 1,0	Eye Irrit. 2, H319 Skin Sens. 1, H317	[1]
2-Phenoxyethyl Acrylate	REACH #: 01-2119980532-35 EC: 256-360-6 CAS: 48145-04-6	0,25 < 1,0	Skin Sens. 1A, H317 Repr. 2, H361fd (oral) Aquatic Chronic 2, H411	[1]

### SECTION 3: Composition/information on ingredients

2,6-bis(1,1-dimethylethyl)-4-(phenylenemethylene)cyclohexa-2,5-dien-1-one	REACH #: 01-2119450089-37 01-2119928020-54 EC: 429-460-4 CAS: 7078-98-0 Index: 606-117-00-9	0,1 < 0,25	Skin Sens. 1, H317 Aquatic Chronic 4, H413	[1]
2,6-di-tert-butyl-p-cresol	REACH #: 01-2119480433-40 01-2119555270-46 01-2119565113-46 EC: 204-881-4 CAS: 128-37-0	0,1 < 0,25	Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1)	[1]
2-hydroxyethyl acrylate	REACH #: 01-2119459345-34 EC: 212-454-9 CAS: 818-61-1	< 0,1	Acute Tox. 4, H302 Acute Tox. 3, H311 Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1, H317 Aquatic Acute 1, H400 (M=1) Aquatic Chronic 3, H412  <b>See Section 16 for the full text of the H statements declared above.</b>	[1]

#### Type

[1] Substance classified with a health or environmental hazard  
Occupational exposure limits, if available, are listed in Section 8.

### SECTION 4: First aid measures

#### 4.1 Description of first aid measures

- General** : In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and seek medical advice.
- Eye contact** : Remove contact lenses, if present and easy to do. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Seek medical attention. In case of accidental eye contact, avoid concurrent exposure to the sun or other sources of UV light which may increase the sensitivity of the eyes.
- Inhalation** : Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.
- Skin contact** : Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognised skin cleanser. Do NOT use solvents or thinners. In case of accidental skin contact, avoid concurrent exposure to the sun or other sources of UV light which may increase the sensitivity of skin.
- Ingestion** : If swallowed, seek medical advice immediately and show the container or label. Keep person warm and at rest. Do NOT induce vomiting.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

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

## SECTION 4: First aid measures

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]. See Sections 2 and 3 for details.

This takes into account, where known, delayed and immediate effects and also chronic effects of components from short-term and long-term exposure by oral, inhalation and dermal routes of exposure and eye contact.

Acrylate components of the mixture have irritating properties. Prolonged or repeated contact with skin or mucous membrane may result in irritation symptoms, such as redness, blistering, dermatitis etc. May cause allergic skin reactions with repeated exposure.

If splashed in the eyes, the liquid may cause irritation and reversible damage.

The inhalation of airborne droplets or aerosols may cause irritation of the respiratory tract.

Ingestion may cause nausea, weakness and central nervous system effects.

Contains hexamethylene diacrylate, 1-vinylhexahydro-2H-azepin-2-one, oxybis(methyl-2,1-ethanediyl) diacrylate, phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide, Poly[oxy(methyl-1,2-ethanediyl)],  $\alpha,\alpha'$ -(2,2-dimethyl-1,3-propanediyl)bis[ $\omega$ -[(1-oxo-2-propen-1-yl)oxy]-, Glycerol, propoxylated, esters with acrylic acid, 2-phenoxyethyl acrylate, 2,6-bis(1,1-dimethylethyl)-4-(phenylenemethylene)cyclohexa-2,5-dien-1-one. May produce an allergic reaction.

The following products have sensitising properties: hexamethylene diacrylate, 1-vinylhexahydro-2H-azepin-2-one, oxybis(methyl-2,1-ethanediyl) diacrylate, phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide, Poly[oxy(methyl-1,2-ethanediyl)],  $\alpha,\alpha'$ -(2,2-dimethyl-1,3-propanediyl)bis[ $\omega$ -[(1-oxo-2-propen-1-yl)oxy]-, 2-phenoxyethyl acrylate. Cases of hypersensitivity may occur, possibly with cross-sensitisation to other acrylate materials.

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

**Notes to medical doctor** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

**Specific treatments** : No specific treatment.

See toxicological information (Section 11)

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

**Suitable extinguishing media** : Use dry chemical, CO<sub>2</sub>, water spray (fog) or foam.

**Unsuitable extinguishing media** : Do not use water jet.

### 5.2 Special hazards arising from the substance or mixture

**Hazards from the substance or mixture** : Fire will produce dense black smoke. Exposure to decomposition products may cause a health hazard.

**Hazardous combustion products** : Decomposition products may include the following materials:  
carbon monoxide  
carbon dioxide  
smoke  
oxides of nitrogen

### 5.3 Advice for firefighters

**Special protective actions for fire-fighters** : Cool closed containers exposed to fire with water. Do not release runoff from fire to drains or watercourses.

**Special protective equipment for fire-fighters** : Appropriate breathing apparatus may be required.

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

**For non-emergency personnel** : Exclude sources of ignition and ventilate the area. Do not breathe vapour or mist. Refer to protective measures listed in sections 7 and 8.

**For emergency responders** : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

## SECTION 6: Accidental release measures

- 6.2 Environmental precautions** : Do not allow to enter drains or watercourses. If the product contaminates lakes, rivers, or sewers, inform the appropriate authorities in accordance with local regulations.
- 6.3 Methods and material for containment and cleaning up** : Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Preferably clean with a detergent. Avoid using solvents.
- 6.4 Reference to other sections** : See Section 1 for emergency contact information.  
See Section 8 for information on appropriate personal protective equipment.  
See Section 13 for additional waste treatment information.

## SECTION 7: Handling and storage

**Persons with a history of skin sensitization problems should not be employed in any process in which this product is used, without Personal Protective Equipment measures.**

### 7.1 Precautions for safe handling

- Protective measures** : Use only in well-ventilated areas. Keep container tightly closed. Keep away from heat, sparks and flame. Do not get in eyes or on skin or clothing. Do not breathe vapour or mist. Avoid the inhalation of dust, particulates, spray or mist arising from the application of this mixture. Always keep in containers made from the same material as the original one. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Avoid exposure during pregnancy. Put on appropriate personal protective equipment (see Section 8). Never use pressure to empty. Container is not a pressure vessel. Comply with the health and safety at work laws. Avoid release to the environment.
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

- 7.2 Conditions for safe storage, including any incompatibilities** : Store between the following temperatures: 5 – 35 °C. Store in accordance with local regulations. Store in a dry, cool and well-ventilated area. Keep away from heat and direct sunlight. Keep container tightly closed. Keep away from sources of ignition - No smoking. Prevent unauthorised access. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Use appropriate containment to avoid environmental contamination. Do not reuse container. See Section 10 for incompatible materials before handling or use.

### Seveso Directive - Reporting thresholds

#### Danger criteria

Category	Notification and MAPP threshold	Safety report threshold
E1	100 tonne	200 tonne

### 7.3 Specific end use(s)

- Recommendations** : For the relevant identified use(s) listed in Section 1 the advice mentioned in this section 7 is to be observed.
- Industrial sector specific solutions** : Not available.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational exposure limits

No exposure limit value known.

#### Biological exposure indices

No exposure indices known.

## SECTION 8: Exposure controls/personal protection

**Recommended monitoring procedures** : Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

### DNELs/DMELs

Product/ingredient name	Type	Exposure	Value	Population	Effects
hexamethylene diacrylate	DNEL	Long term Dermal	2.77 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	24.5 mg/m <sup>3</sup>	Workers	Systemic
1-vinylhexahydro-2H-azepin-2-one	DNEL	Long term Inhalation	0.17 mg/m <sup>3</sup>	Workers	Local
	DNEL	Long term Dermal	0.7 mg/kg bw/day	Workers	Systemic
oxybis(methyl-2,1-ethanediyl) diacrylate	DNEL	Long term Inhalation	4.9 mg/m <sup>3</sup>	Workers	Systemic
	DNEL	Long term Dermal	1.7 mg/kg bw/day	Workers	Systemic
phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	DNEL	Long term Inhalation	2.35 mg/m <sup>3</sup>	Workers	Systemic
	DNEL	Long term Dermal	3 mg/kg bw/day	Workers	Systemic
diphenyl(2,4,6-trimethylbenzoyl) phosphine oxide	DNEL	Short term Dermal	3.33 mg/kg bw/day	Workers	Systemic
	DNEL	Short term Inhalation	7.84 mg/m <sup>3</sup>	Workers	Systemic
	DNEL	Long term Inhalation	7.84 mg/m <sup>3</sup>	Workers	Systemic
Benzene, (1-methylethenyl)-, homopolymer, ar-(2-hydroxy-2-methyl-1-oxopropyl) derivs.	DNEL	Long term Dermal	0.233 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	0.822 mg/m <sup>3</sup>	Workers	Systemic
2-hydroxy-2-methylpropiophenone	DNEL	Long term Dermal	14.8 µg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	52.1 µg/m <sup>3</sup>	Workers	Systemic
Glycerol, propoxylated, esters with acrylic acid	DNEL	Long term Dermal	1 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	3.5 mg/m <sup>3</sup>	Workers	Systemic
2-phenoxyethyl acrylate	DNEL	Long term Dermal	2.1 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	7.4 mg/m <sup>3</sup>	Workers	Systemic
	DNEL	Long term Inhalation	12 mg/m <sup>3</sup>	Workers	Systemic
2,6-bis(1,1-dimethylethyl)-4-(phenylenemethylene)cyclohexa-2,5-dien-1-one	DNEL	Long term Inhalation	77 mg/m <sup>3</sup>	Workers	Local
	DNEL	Long term Inhalation	1.75 mg/m <sup>3</sup>	Workers	Systemic
2,6-di-tert-butyl-p-cresol	DNEL	Long term Dermal	0.5 mg/kg bw/day	Workers	Systemic

**SECTION 8: Exposure controls/personal protection**

2-hydroxyethyl acrylate	DNEL	Long term Inhalation	1.76 mg/m <sup>3</sup>	Workers	Systemic
	DNEL	Long term Inhalation	2.4 mg/m <sup>3</sup>	Workers	Local

**PNECs**

Product/ingredient name	Compartment Detail	Value	Method Detail
hexamethylene diacrylate	Fresh water	0.0015 mg/l	-
	Marine water	0.00015 mg/l	-
	Sewage Treatment Plant	2.7 mg/l	-
	Fresh water sediment	0.0243 mg/kg dwt	-
	Marine water sediment	0.00243 mg/kg dwt	-
	Soil	0.00397 mg/kg dwt	-
1-vinylhexahydro-2H-azepin-2-one	Fresh water	0.1 mg/l	-
	Marine water	0.01 mg/l	-
	Sewage Treatment Plant	262 mg/l	-
	Fresh water sediment	0.829 mg/kg	-
	Marine water sediment	0.0829 mg/kg	-
	Soil	0.107 mg/kg	-
oxybis(methyl-2,1-ethanediyl) diacrylate	Fresh water	0.0034 mg/l	-
	Marine water	0.00034 mg/l	-
	Sewage Treatment Plant	100 mg/l	-
	Fresh water sediment	0.00884 mg/kg dwt	-
	Soil	0.0013 mg/kg dwt	-
	Glycerol, propoxylated, esters with acrylic acid	Fresh water	0.00574 mg/l
Marine water		0.000574 mg/l	-
Sewage Treatment Plant		10 mg/l	-
Fresh water sediment		0.01687 mg/kg dwt	-
Marine water sediment		0.001687 mg/kg dwt	-
Soil		0.00111 mg/kg dwt	-
Secondary Poisoning		5.6 mg/kg	-
Fresh water		4 µg/l	-
Marine water		0.4 µg/l	-
Sewage Treatment Plant		100 mg/l	-
2,6-di-tert-butyl-p-cresol	Fresh water sediment	1.29 mg/kg dwt	-
	Soil	1.04 mg/kg dwt	-
	Secondary Poisoning	16.7 mg/kg	-
	Fresh water	0.0172 mg/l	-
	Marine water	0.00172 mg/l	-
	Fresh water sediment	0.0636 mg/kg dwt	-
2-hydroxyethyl acrylate	Marine water sediment	0.00636 mg/kg dwt	-
	Soil	0.00263 mg/kg dwt	-
	Sewage Treatment Plant	10 mg/l	-

**8.2 Exposure controls**

## SECTION 8: Exposure controls/personal protection

- Appropriate engineering controls** : Provide adequate ventilation. Where reasonably practicable, this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and solvent vapours below the OEL, suitable respiratory protection must be worn.
- Individual protection measures**
- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Eye/face protection** : Use safety eyewear designed to protect against splash of liquids. Use eye protection according to EN 166.
- Skin protection**
- Hand protection** : Wear suitable gloves tested to EN374. There is no one glove material or combination of materials that will give unlimited resistance to any individual or combination of chemicals.
- Gloves** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
- "RadTech recommend use of:
- single use: disposable, unpowdered, nitrile gloves: Use for short duration exposures not exceeding 30 minutes, in situations where only splashes are likely. Do not use where mechanical resistance is required or where puncturing or tearing of the gloves is likely to occur. Replace immediately if punctured, degraded or tearing of the gloves has occurred.
  - general use: minimum 0.45mm thick, unlined, unpowdered, natural rubber latex-free nitrile gloves: Use for longer duration exposure (up to 4 hours for most UV/EB curing acrylates) or mechanical handling activities. Replace immediately when punctured or when a change of appearance (colour, elasticity, shape) occurs
  - heavy duty: unlined, natural rubber latex-free nitrile gloves: Use when handling solvents. Avoid the use of chlorinated solvents and limit the use of ketones (e.g. acetone, MEK, MIBK) and ethyl and butyl acetates, as they may accelerate glove deterioration."
- Barrier creams may help to protect the exposed areas of the skin but should not be applied once exposure has occurred.
- The user must check that the final choice of type of glove selected for handling this product is the most appropriate and takes into account the particular conditions of use, as included in the user's risk assessment.
- Body protection** : Personnel should wear protective clothing.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : In case of inadequate ventilation wear respiratory protection. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary.
- Environmental exposure controls** : Do not allow to enter drains or watercourses.

## SECTION 9: Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

### 9.1 Information on basic physical and chemical properties

#### Appearance

<b>Physical state</b>	: Liquid.
<b>Colour</b>	: Orange.
<b>Odour</b>	: Characteristic.
<b>Melting point/freezing point</b>	: Not applicable.
<b>Initial boiling point and boiling range</b>	: Lowest known value: 227°C (441°F)
<b>Flammability</b>	: Not flammable.
<b>Lower and upper explosion limit</b>	: Not available.
<b>Flash point</b>	: Closed cup: 96°C (204.8°F)
<b>Auto-ignition temperature</b>	: 220°C (428°F) (1-vinylhexahydro-2H-azepin-2-one (2235-00-9))
<b>Decomposition temperature</b>	: Not applicable.
<b>pH</b>	: Product is non-polar/aprotic.
<b>Viscosity</b>	: Not tested
<b>Solubility(ies)</b>	: Not available.
<b>Solubility in water (g/l)</b>	: Not available.
<b>Partition coefficient: n-octanol/ water</b>	: Not applicable.
<b>Vapour pressure</b>	: Not tested
<b>Evaporation rate</b>	: Highest known value: <1 (Poly[oxy(methyl-1,2-ethanediyl)], $\alpha,\alpha'$ -(2,2-dimethyl-1,3-propanediyl)bis[ $\omega$ -[(1-oxo-2-propen-1-yl)oxy]-] Weighted average: 0.9 compared with butyl acetate
<b>Relative density</b>	: Not tested
<b>Density</b>	: Approx. 1.12 g/cm <sup>3</sup>
<b>Vapour density</b>	: Not tested
<b>Explosive properties</b>	: Not applicable.
<b>Oxidising properties</b>	: Not applicable.

### 9.2 Other information

<b>VOC content</b>	: 0%
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## SECTION 10: Stability and reactivity

<b>10.1 Reactivity</b>	: No specific test data related to reactivity available for this product or its ingredients.
<b>10.2 Chemical stability</b>	: Hazardous reactions or instability may occur under certain conditions of storage or use.
<b>10.3 Possibility of hazardous reactions</b>	: Under normal conditions of storage and use, hazardous reactions will not occur.
<b>10.4 Conditions to avoid</b>	: This mixture contains materials which are unstable under the following conditions: exposure to heat, strong UV sources. These could cause the product to polymerise exothermically. Unintentional contact with them should be avoided.
<b>10.5 Incompatible materials</b>	: Keep away from: free radical initiators, peroxides, strong alkalis, reactive metals.
<b>10.6 Hazardous decomposition products</b>	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.
<b>Hazardous polymerisation</b>	: May polymerise on exposure to sunlight.

## SECTION 11: Toxicological information

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

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]. See Sections 2 and 3 for details.

This takes into account, where known, delayed and immediate effects and also chronic effects of components from short-term and long-term exposure by oral, inhalation and dermal routes of exposure and eye contact.

Acrylate components of the mixture have irritating properties. Prolonged or repeated contact with skin or mucous membrane may result in irritation symptoms, such as redness, blistering, dermatitis etc. May cause allergic skin reactions with repeated exposure.

If splashed in the eyes, the liquid may cause irritation and reversible damage.

The inhalation of airborne droplets or aerosols may cause irritation of the respiratory tract.

Ingestion may cause nausea, weakness and central nervous system effects.

Contains hexamethylene diacrylate, 1-vinylhexahydro-2H-azepin-2-one, oxybis(methyl-2,1-ethanediyl) diacrylate, phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide, Poly[oxy(methyl-1,2-ethanediyl)],  $\alpha,\alpha'$ -(2,2-dimethyl-1,3-propanediyl)bis[ $\omega$ -[(1-oxo-2-propen-1-yl)oxy]-], Glycerol, propoxylated, esters with acrylic acid, 2-phenoxyethyl acrylate, 2,6-bis(1,1-dimethylethyl)-4-(phenylenemethylene)cyclohexa-2,5-dien-1-one. May produce an allergic reaction.

The following products have sensitising properties: hexamethylene diacrylate, 1-vinylhexahydro-2H-azepin-2-one, oxybis(methyl-2,1-ethanediyl) diacrylate, phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide, Poly[oxy(methyl-1,2-ethanediyl)],  $\alpha,\alpha'$ -(2,2-dimethyl-1,3-propanediyl)bis[ $\omega$ -[(1-oxo-2-propen-1-yl)oxy]-], 2-phenoxyethyl acrylate. Cases of hypersensitivity may occur, possibly with cross-sensitisation to other acrylate materials.

#### Acute toxicity

Prolonged or repeated contact with skin or mucous membrane may result in irritation symptoms, such as redness, blistering, dermatitis etc. May cause allergic skin reactions with repeated exposure.

Product/ingredient name	Result	Species	Dose	Exposure
hexamethylene diacrylate (13048-33-4)	LD50 Oral	Rat	5 g/kg	-
1-vinylhexahydro-2H-azepin-2-one	LD50 Dermal	Rat	>2000 mg/kg	-
oxybis(methyl-2,1-ethanediyl) diacrylate	LD50 Oral	Rat	1400 mg/kg	-
	LD50 Dermal	Rabbit	>2 g/kg	-
2-hydroxy-2-methylpropiophenone	LD50 Oral	Rat	4600 mg/kg	-
	LD50 Dermal	Rat	6929 mg/kg	-
2-hydroxyethyl acrylate	LD50 Oral	Rat	1694 mg/kg	-
	LD50 Dermal	Rabbit	298 mg/kg	-
	LD50 Oral	Rat	548 mg/kg	-

The product has not been tested. Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

#### Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapours) (mg/l)	Inhalation (dusts and mists) (mg/l)
Calculated value for the mixture	8875.4	7441.4	N/A	N/A	N/A
hexamethylene diacrylate (13048-33-4)	5000	N/A	N/A	N/A	N/A
1-vinylhexahydro-2H-azepin-2-one	1400	1100	N/A	N/A	N/A
oxybis(methyl-2,1-ethanediyl) diacrylate	4600	N/A	N/A	N/A	N/A
2-hydroxy-2-methylpropiophenone	1694	6929	N/A	N/A	N/A
2-hydroxyethyl acrylate	548	298	N/A	N/A	N/A

#### Irritation/Corrosion

Product/ingredient name	Result	Species	Exposure	Observation
hexamethylene diacrylate (13048-33-4)	Skin - Severe irritant	Rabbit	-	24 hours 500 mg

## SECTION 11: Toxicological information

- Skin** : The product has not been tested. Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]
- Eyes** : The product has not been tested. Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]
- Respiratory** : The product has not been tested. Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

### Sensitisation

- Skin** : The product has not been tested. Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]
- Respiratory** : The product has not been tested. Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

### Mutagenicity

The product has not been tested. Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

### Carcinogenicity

The product has not been tested. Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

### Reproductive toxicity

The product has not been tested. Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

### Teratogenicity

The product has not been tested. Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

### Specific target organ toxicity (single exposure)

Not available.

### Specific target organ toxicity (repeated exposure)

Product/ingredient name	Category	Route of exposure	Target organs
1-vinylhexahydro-2H-azepin-2-one	Category 1	inhalation	liver, respiratory system

### Aspiration hazard

Not available.

## 11.2 Information on other hazards

### 11.2.1 Endocrine disrupting properties

Not available.

### 11.2.2 Other information

Not available.

## SECTION 12: Ecological information

### 12.1 Toxicity

Do not allow to enter drains or watercourses.

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]. See Sections 2 and 3 for details.

Product/ingredient name	Result	Species	Exposure
2-hydroxyethyl acrylate	Acute LC50 4800 µg/l Fresh water	Fish - <i>Pimephales promelas</i> - Juvenile (Fledgling, Hatchling, Weanling)	96 hours

The product has not been tested. Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

### 12.2 Persistence and degradability

The product has not been tested. Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

### 12.3 Bioaccumulative potential

## SECTION 12: Ecological information

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
hexamethylene diacrylate	2.81	-	Low
oxybis(methyl-2,1-ethanediyl) diacrylate	0.01 to 0.39	-	Low
phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	5.77	-	High
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	-	53 to 72	Low
2-hydroxy-2-methylpropiophenone	1.62	-	Low
Glycerol, propoxylated, esters with acrylic acid	2.52	-	Low
2,6-bis(1,1-dimethylethyl)-4-(phenylenemethylene)cyclohexa-2,5-dien-1-one	>6	-	High
2,6-di-tert-butyl-p-cresol	5.1	-	High
2-hydroxyethyl acrylate	-0.17	-	Low

### 12.4 Mobility in soil

**Soil/water partition coefficient (K<sub>oc</sub>)** : Not available.

**Mobility** : Not available.

### 12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

### 12.6 Endocrine disrupting properties

Not available.

### 12.7 Other adverse effects

No known significant effects or critical hazards.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

#### Product

**Methods of disposal** : The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

**Disposal considerations** : Do not allow to enter drains or watercourses. Dispose of according to all federal, state and local applicable regulations. If this product is mixed with other wastes, the original waste product code may no longer apply and the appropriate code should be assigned. For further information, contact your local waste authority.

#### European waste catalogue (EWC) (2008/98/EC)

Waste code	Waste designation
08 03 12*	waste ink containing hazardous substances

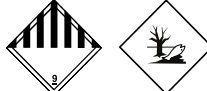
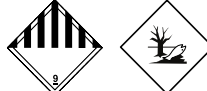
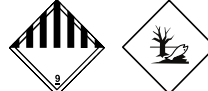
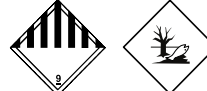
#### Packaging

**Methods of disposal** : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

## SECTION 13: Disposal considerations

- Disposal considerations** : Using information provided in this safety data sheet, advice should be obtained from the relevant waste authority on the classification of empty containers.  
Empty containers must be scrapped or reconditioned.  
Dispose of containers contaminated by the product in accordance with local or national legal provisions.
- Special precautions** : This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out.  
Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

## SECTION 14: Transport information

	ADR/RID	ADN	IMDG	IATA
<b>14.1 UN number or ID number</b>	UN3082	UN3082	UN3082	UN3082
<b>14.2 UN proper shipping name</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (hexamethylene diacrylate; Alkyl Acrylate Ester)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (hexamethylene diacrylate; Alkyl Acrylate Ester)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (hexamethylene diacrylate; Alkyl Acrylate Ester)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (hexamethylene diacrylate; Alkyl Acrylate Ester)
<b>14.3 Transport hazard class(es)</b>	9 	9 	9 	9 
<b>14.4 Packing group</b>	III	III	III	III
<b>14.5 Environmental hazards</b>	Yes.	Yes.	Yes.	Yes.

### Additional information

- ADR/RID** : This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8.
- ADN** : This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8.
- IMDG** : This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8.
- IATA** : This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 5.0.2.4.1, 5.0.2.6.1.1 and 5.0.2.8.
- 14.6 Special precautions for user** : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.
- 14.7 Maritime transport in bulk according to IMO instruments** : Not available.

## SECTION 15: Regulatory information

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

#### EU Regulation (EC) No. 1907/2006 (REACH)

##### Annex XIV - List of substances subject to authorisation

###### Annex XIV

None of the components are listed.

##### Substances of very high concern

Intrinsic property	Ingredient name	Status	Reference number	Date of revision
Toxic to reproduction	diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	Candidate	-	6/14/2023

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles** : Restricted to professional users.

#### Other EU regulations

**VOC content** : 0%

#### Ozone depleting substances (2024/590/EU)

Not listed.

#### Prior Informed Consent (PIC) (649/2012/EU)

Not listed.

#### Persistent Organic Pollutants

Not listed.

#### Seveso Directive

This product may add to the calculation for determining whether a site is within the scope of the Seveso Directive on major accident hazards.

#### National regulations

**Industrial use** : The information contained in this safety data sheet does not constitute the user's own assessment of workplace risks, as required by other health and safety legislation. The provisions of the national health and safety at work regulations apply to the use of this product at work.

### 15.2 Chemical safety assessment

No Chemical Safety Assessment has been carried out.

## SECTION 16: Other information

**CEPE code** : 4

☑ Indicates information that has changed from previously issued version.

**Abbreviations and acronyms** : ATE = Acute Toxicity Estimate  
 CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]  
 DMEL = Derived Minimal Effect Level  
 DNEL = Derived No Effect Level  
 EUH statement = CLP-specific Hazard statement  
 N/A = Not available  
 PBT = Persistent, Bioaccumulative and Toxic  
 PNEC = Predicted No Effect Concentration  
 RRN = REACH Registration Number  
 SGG = Segregation Group  
 vPvB = Very Persistent and Very Bioaccumulative

**SECTION 16: Other information**

**Key literature references and sources for data** : <https://echa.europa.eu/information-on-chemicals>  
<https://echa.europa.eu/information-on-chemicals/registered-substances>  
<https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32020R0878&rid=1>  
 FDS do fornecedor

**Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]**

Classification	Justification
Skin Irrit. 2, H315	Calculation method
Eye Dam. 1, H318	Calculation method
Skin Sens. 1, H317	Calculation method
Repr. 1B, H360FD	Calculation method
STOT RE 1, H372	Calculation method
Aquatic Acute 1, H400	Calculation method
Aquatic Chronic 2, H411	Calculation method

**Full text of abbreviated H statements**

H302	Harmful if swallowed.
H311	Toxic in contact with skin.
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.
H360FD	May damage fertility. May damage the unborn child.
H361f	Suspected of damaging fertility.
H361fd	Suspected of damaging fertility. Suspected of damaging the unborn child.
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.
H413	May cause long lasting harmful effects to aquatic life.

**Full text of classifications [CLP/GHS]**

Acute Tox. 3	ACUTE TOXICITY - Category 3
Acute Tox. 4	ACUTE TOXICITY - Category 4
Aquatic Acute 1	SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1
Aquatic Chronic 1	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 1
Aquatic Chronic 2	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2
Aquatic Chronic 3	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3
Aquatic Chronic 4	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 4
Eye Dam. 1	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1
Eye Irrit. 2	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2
Repr. 1B	REPRODUCTIVE TOXICITY - Category 1B
Repr. 2	REPRODUCTIVE TOXICITY - Category 2
Skin Corr. 1B	SKIN CORROSION/IRRITATION - Category 1B
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 RE 1	SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 1

**Training advice** : Not available.  
**Date of printing** : 21 January 2026  
**Date of issue/Date of revision** : 11 January 2026  
**Date of previous issue** : 10 January 2026  
**Version** : 2.11  
**Notice to reader**

## SECTION 16: Other information

The information in this SDS is based on the present state of our knowledge and on current laws. The product is not to be used for purposes other than those specified under section 1 without first obtaining written handling instructions. It is always the responsibility of the user to take all necessary steps to fulfil the demands set out in the local rules and legislation. The information in this SDS is meant to be a description of the safety requirements for our product. It is not to be considered a guarantee of the product's properties.

JCUP2148