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UNIT 1-2 ASHBOURNE COURT
ILKESTON, NT DE7 8EF
United Kingdom

June 30, 2016

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SAFETY DATA SHEET

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by Commission Regulation (EU) 2015/830 - United Kingdom (UK)

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

1.1 Product identifier

Product name : SNS26:PROCESS YELLOW:DK03
Product code : SNS26
Trade name :  SOLARFLEX NOVA SL
Date of issue/ Date of revision : 22 June 2016
Version : 16.02

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

Identified uses	
Colorant; Printing ink related material; Printing ink.	
Uses advised against	Reason
Not applicable.	

1.3 Details of the supplier of the safety data sheet

Manufacturer/ Distributor : SUN CHEMICAL
CRAY AVENUE
ST MARY CRAY
ORPINGTON
KENT
BR5 3PP
UNITED KINGDOM
(44) 1689 894000
SUN CHEMICAL
3 HIGH VIEW ROAD
SOUTH NORMANTON
DERBYSHIRE
DE55 2DT
UNITED KINGDOM
(44) 1773 813704

e-mail address of person responsible for this SDS : regulatory.affairs@sunchemical.com

1.4 Emergency telephone number

Supplier

Telephone number : (44) 870-8200418 (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

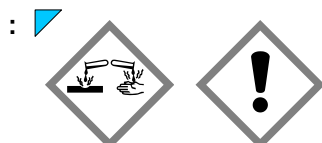
Aquatic Chronic 3, H412

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

Hazard pictograms



Signal word : **Danger**

Hazard statements : Causes serious eye damage.
Causes skin irritation.
May cause an allergic skin reaction.
Harmful to aquatic life with long lasting effects.

Precautionary statements

Prevention : Avoid breathing vapor. Wear protective gloves. Wear eye or face protection. Avoid release to the environment.

Response : **IF IN EYES**: Remove contact lenses, if present and easy to do. Continue rinsing. Rinse cautiously with water for several minutes. Immediately call a POISON CENTER or physician.

Disposal : Dispose of contents and container in accordance with all local, regional, national and international regulations.

Hazardous ingredients : Trimethylolpropane triacrylate
Glycerol, propoxylated, esters with acrylic acid
oxybis(methyl-2,1-ethanediyl) diacrylate
4-phenylbenzophenone
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, esters with acrylic acid
Propylidynetrimethanol, ethoxylated, esters with acrylic acid
2-Propenoic acid, reaction products with pentaerythritol
mequinol

Supplemental label elements : Not applicable.

2.3 Other hazards

Other hazards which do not result in classification : None known.

SECTION 3: Composition/information on ingredients

Substance/mixture : Mixture

Product/ingredient name	Identifiers	%	<u>Classification</u> Regulation (EC) No. 1272/2008 [CLP]	Type
Trimethylolpropane triacrylate	REACH #: 01-2119489896-11 EC: 239-701-3 CAS: 15625-89-5 Index: 607-111-00-9	25 < 50	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Chronic 3, H412	[1]
Glycerol, propoxylated, esters with acrylic acid	REACH #: 01-2119487948-12 EC: 500-114-5 CAS: 52408-84-1	10 < 20	Eye Irrit. 2, H319 Skin Sens. 1, H317	[1]
oxybis(methyl-2,1-ethanediyl) diacrylate	REACH #: 01-2119484629-21 EC: 260-754-3 CAS: 57472-68-1	2.5 < 5	Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317	[1]
4-phenylbenzophenone	EC: 218-345-2 CAS: 2128-93-0	2.5 < 5	Skin Irrit. 2, H315 Skin Sens. 1, H317	[1]
2-benzyl-2-dimethylamino-4-morpholinobutyrophenone	REACH #: 01-0000015394-70 EC: 404-360-3 CAS: 119313-12-1 Index: 606-047-00-9	1.0 < 2.5	Repr. 2, H361d (Unborn child) Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1)	[1]
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, esters with acrylic acid	REACH #: 01-2119490020-53 EC: 500-130-2 CAS: 55818-57-0	1.0 < 2.5	Skin Sens. 1, H317	[1]
Acrylated resin	CAS: Polymer	1.0 < 2.5	Eye Irrit. 2, H319	[1]
Dodecan-1-ol, ethoxylated	EC: 500-002-6 CAS: 9002-92-0	0.25 < 1.0	Eye Dam. 1, H318 Aquatic Acute 1, H400 (M=1)	[1]
Stabilizer	CAS: Proprietary	0.1 < 0.25	Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1)	[1]
mequinol	EC: 205-769-8 CAS: 150-76-5 Index: 604-044-00-7	0.1 < 0.25	Acute Tox. 4, H302 Eye Irrit. 2, H319 Skin Sens. 1, H317 Repr. 2, H361f (Fertility) (oral) Aquatic Chronic 3, H412	[1]
1,4-dihydroxybenzene	EC: 204-617-8 CAS: 123-31-9 Index: 604-005-00-4	0.015149	Acute Tox. 4, H302 Eye Dam. 1, H318 Skin Sens. 1, H317 Muta. 2, H341 Carc. 2, H351 Aquatic Acute 1, H400 (M=10)	[1] [2]

SECTION 3: Composition/information on ingredients

			See Section 16 for the full text of the H statements declared above.	
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There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs or vPvBs or have been assigned a workplace exposure limit and hence require reporting in this section.

Type

- [1] Substance classified with a health or environmental hazard
- [2] Substance with a workplace exposure limit
- [3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII
- [4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII
- [5] Substance of equivalent concern

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 | : Check for and remove any contact lenses. Immediately flush eyes with room temperature water for at least 15 minutes, keeping eyelids open. 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 recognized 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 this container or label. Keep person warm and at rest. Do NOT induce vomiting. |
| Protection of first-aiders | : <input checked="" type="checkbox"/> 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

☒ There are no data available on the mixture itself. 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 trimethylolpropane triacrylate, Glycerol, propoxylated, esters with acrylic acid, oxybis(methyl-2,1-ethanediyl)

SECTION 4: First aid measures

diacrylate, 4-phenylbenzophenone, 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, esters with acrylic acid, Propylidynetrimethanol, ethoxylated, esters with acrylic acid, 2-Propenoic acid, reaction products with pentaerythritol, mequinol. May produce an allergic reaction.

The following products have sensitizing properties: trimethylolpropane triacrylate, Glycerol, propoxylated, esters with acrylic acid, oxybis(methyl-2,1-ethanediyl) diacrylate, 4-phenylbenzophenone, 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, esters with acrylic acid. Cases of hypersensitivity may occur, possibly with cross-sensitization 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.

SECTION 5: Firefighting measures

5.1 Extinguishing media

- Suitable extinguishing media** : Use dry chemical, CO₂, 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 thermal decomposition 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. Avoid breathing vapor or mist. Refer to protective measures listed in sections 7 and 8.
- For emergency responders** : If specialized 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".

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.

SECTION 6: Accidental release measures

6.3 Methods and materials 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 : Use only in well-ventilated areas.
Avoid contact with skin and eyes. Avoid the inhalation of dust, particulates, spray or mist arising from the application of this mixture. Keep container tightly closed. Keep away from heat, sparks and flame.
Always keep in containers made from the same material as the original one.
Put on appropriate personal protective equipment (see Section 8).
Never use pressure to empty. Container is not a pressure vessel.
Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed.
Comply with the health and safety at work laws.

7.2 Conditions for safe storage, including any incompatibilities : Store between the following temperatures: 5 - 35 °C
Keep away from heat and direct sunlight.

Store in accordance with local regulations.

Notes on joint storage

Keep away from: oxidizing agents, strong alkalis, strong acids.

Additional information on storage conditions

Observe label precautions. 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 unauthorized access.

Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Keep only in the original container.

Keep away from heat and direct sunlight.

7.3 Specific end use(s)


Recommendations : Not available.

Industrial sector specific solutions : Not available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

Product/ingredient name	Exposure limit values
 4-dihydroxybenzene	EH40/2005 WELs (United Kingdom (UK), 12/2011). TWA: 0.5 mg/m ³ 8 hours.

SECTION 8: Exposure controls/personal protection

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. 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
Trimethylolpropane triacrylate Glycerol, propoxylated, esters with acrylic acid oxybis(methyl-2,1-ethanediyl) diacrylate	DNEL	Long term Inhalation	16.2 mg/m ³	Workers	Systemic
	DNEL	Long term Dermal	1.39 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	16.22 mg/kg	Workers	Systemic
	DNEL	Long term Dermal	1.92 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	24.28 mg/m ³	Workers	Systemic
	DNEL	Long term Dermal	2.77 mg/kg bw/day	Workers	Systemic

PNECs

Product/ingredient name	Type	Compartment Detail	Value	Method Detail
Trimethylolpropane triacrylate Glycerol, propoxylated, esters with acrylic acid oxybis(methyl-2,1-ethanediyl) diacrylate	-	Fresh water	0.00147 mg/l	-
	-	Marine water	0.000147 mg/l	-
	-	Sewage Treatment Plant	6.25 mg/l	-
	-	Fresh water sediment	0.0062 mg/kg dwt	-
	-	Fresh water sediment	0.00062 mg/kg dwt	-
	-	Soil	0.0043 mg/kg dwt	-
	-	Secondary Poisoning	5.6 mg/kg	-
	-	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	-
	-	Fresh water sediment	0.001687 mg/kg dwt	-
	-	Soil	0.00111 mg/kg dwt	-
	-	Secondary Poisoning	5.6 mg/kg	-
	-	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	-

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 vapors 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.

Skin protection

Hand protection : Barrier creams may help to protect the exposed areas of the skin but should not be applied once exposure has occurred.

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.

Gloves : "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."

Body protection : Personnel should wear protective clothing.

Respiratory protection : In situations where misting or flying may occur, use appropriate certified respirators.

Environmental exposure controls : Do not allow to enter drains or watercourses.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state : Liquid.
Color : Yellow.
Odor : Characteristic.
Odor threshold : Not applicable.
Melting point/freezing point : Not applicable.
Flash point : >93.3°C (200F)
VOC : 0%
pH : Not tested

SECTION 9: Physical and chemical properties

Boiling point	: Lowest known value: 429°C (807°F)
Evaporation rate	: Highest known value: <1 (trimethylolpropane triacrylate) Weighted average: 0.9 compared with butyl acetate
Upper/lower flammability or explosive limits	: Not tested
Vapor pressure	: Not tested
Vapor density	: Not tested
Relative density	: Not tested
Solubility(ies)	: Not tested
Partition coefficient: n-octanol/ water	: Not applicable.
Auto-ignition temperature	: Not applicable.
Decomposition temperature	: Not applicable.
Viscosity	: Not tested
Explosive properties	: Not applicable.
Oxidizing properties	: Not applicable.

9.2 Other information

No additional information.

SECTION 10: Stability and reactivity

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

SECTION 11: Toxicological information

There are no data available on the mixture itself. 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

SECTION 11: Toxicological information

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 trimethylolpropane triacrylate, Glycerol, propoxylated, esters with acrylic acid, oxybis(methyl-2,1-ethanediyl) diacrylate, 4-phenylbenzophenone, 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, esters with acrylic acid, Propylidynetrimethanol, ethoxylated, esters with acrylic acid, 2-Propenoic acid, reaction products with pentaerythritol, mequinol. May produce an allergic reaction.

The following products have sensitizing properties: trimethylolpropane triacrylate, Glycerol, propoxylated, esters with acrylic acid, oxybis(methyl-2,1-ethanediyl) diacrylate, 4-phenylbenzophenone, 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, esters with acrylic acid. Cases of hypersensitivity may occur, possibly with cross-sensitization to other acrylate materials.

11.1 Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Trimethylolpropane triacrylate	LD50 Dermal	Rabbit	5170 mg/kg	-
oxybis(methyl-2,1-ethanediyl) diacrylate	LD50 Dermal	Rabbit	>2 g/kg	-
	LD50 Oral	Rat	4600 mg/kg	-
2-benzyl-2-dimethylamino-4-morpholinobutyrophenone	LD50 Oral	Rat	>5000 mg/kg	-
mequinol	LD50 Oral	Rat	1600 mg/kg	-
1,4-dihydroxybenzene	LD50 Oral	Rat	302 mg/kg	-

Irritation/Corrosion

Not determined - Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Sensitization

Not determined - Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Mutagenicity

Not applicable.

Carcinogenicity

Not applicable.

Reproductive toxicity

Not determined - Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Teratogenicity

Not applicable.

Specific target organ toxicity (single exposure)

Not determined - Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Specific target organ toxicity (repeated exposure)

Not determined - Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Aspiration hazard

Not determined - Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

SECTION 12: Ecological information

There are no data available on the mixture itself.
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.

12.1 Toxicity

2-benzyl-2-dimethylamino-4-morpholinobutyrophenone	EC50 >2 mg/l	Aquatic plants - Selanastrum capricornutum	72 hours
	EC50 >100 mg/l	Micro-organism	2 hours
	Acute EC50 0.8 mg/l	Daphnia - Daphnia Magna	24 hours
	Acute LC50 0.46 mg/l	Fish	96 hours
Dodecan-1-ol, ethoxylated	Acute LC50 10000 to 25000 µg/l	Crustaceans - Sphaeroma serratum	48 hours
	Acute LC50 6460 to 7580 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
mequinol	Acute LC50 1400 µg/l Fresh water	Fish - Cyprinus carpio	96 hours
	Acute LC50 28500 µg/l Fresh water	Fish - Oncorhynchus mykiss - 4. 6 to 6.4 cm - 1.2 to 3.8 g	96 hours

12.2 Persistence and degradability

Not available.

12.3 Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
Trimethylolpropane triacrylate	0.67	-	low
Glycerol, propoxylated, esters with acrylic acid	2.52	-	low
oxybis(methyl-2, 1-ethanediyl) diacrylate	0.01 to 0.39	-	low
2-benzyl-2-dimethylamino-4-morpholinobutyrophenone	2.91	-	low
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2, 3-epoxypropane, esters with acrylic acid	1.6 to 3	-	low
mequinol	1.58	-	low
1,4-dihydroxybenzene	0.59	-	low

12.4 Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

Mobility : Not available.

12.5 Results of PBT and vPvB assessment

PBT : Not applicable.

vPvB : Not applicable.

12.6 Other adverse effects : No known significant effects or critical hazards.

SECTION 13: 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.

13.1 Waste treatment methods

Product

Methods of disposal : The generation of waste should be avoided or minimized 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.

Packaging

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

European Waste Catalogue (EWC): : 08 03 12 waste ink containing hazardous substances

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
14.1 UN number	Not regulated.	Not regulated.	Not regulated.	Not regulated.
14.2 UN proper shipping name	Not regulated.	Not regulated.	Not regulated.	Not regulated.
14.3 Transport hazard class(es)	Not regulated.	Not regulated.	Not regulated.	Not regulated.
14.4 Packing group	-	-	-	-
14.5 Environmental hazards	No.	No.	No.	No.
Additional information	-	The product is only regulated as a dangerous good when transported in tank vessels.	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.	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.

SECTION 14: Transport information

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 Transport in bulk according to Annex II of MARPOL and the IBC Code : 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 authorization

Substances of very high concern

None of the components are listed.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles : Not applicable.

Other EU regulations

Product/ingredient name	Carcinogenic effects	Mutagenic effects	Developmental effects	Fertility effects
 2-benzyl-2-dimethylamino-4-morpholinobutyrophenone mequinol	-	-	Repr. 2, H361d (Unborn child)	-
1,4-dihydroxybenzene	-	-	-	Repr. 2, H361f (Fertility) (oral)
	Carc. 2, H351	Muta. 2, H341	-	-

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 This product contains substances for which Chemical Safety Assessments are still to be received.

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]
 DNEL = Derived No Effect Level
 EUH statement = CLP-specific Hazard statement
 PNEC = Predicted No Effect Concentration
 RRN = REACH Registration Number

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

Classification	Justification
<input checked="" type="checkbox"/> Skin Irrit. 2, H315 <input checked="" type="checkbox"/> Eye Dam. 1, H318 <input checked="" type="checkbox"/> Skin Sens. 1, H317 <input checked="" type="checkbox"/> Aquatic Chronic 3, H412	Calculation method Calculation method Calculation method Calculation method

Full text of abbreviated H statements : ☒ H302 Harmful if swallowed.
☒ H315 Causes skin irritation.
☒ H317 May cause an allergic skin reaction.
☒ H318 Causes serious eye damage.
☒ H319 Causes serious eye irritation.
☒ H341 Suspected of causing genetic defects.
☒ H351 Suspected of causing cancer.
☒ H361d Suspected of damaging the unborn child.
 (Unborn child)
☒ H361f Suspected of damaging fertility if swallowed.
 (Fertility)
 (oral)
☒ H400 Very toxic to aquatic life.
☒ H410 Very toxic to aquatic life with long lasting effects.
☒ H412 Harmful to aquatic life with long lasting effects.

Full text of classifications [CLP/GHS] : ☒ Acute Tox. 4, H302 ACUTE TOXICITY (oral) - Category 4
☒ Aquatic Acute 1, H400 AQUATIC HAZARD (ACUTE) - Category 1
☒ Aquatic Chronic 1, H410 AQUATIC HAZARD (LONG-TERM) - Category 1
☒ Aquatic Chronic 3, H412 AQUATIC HAZARD (LONG-TERM) - Category 3
☒ Carc. 2, H351 CARCINOGENICITY - Category 2
☒ Eye Dam. 1, H318 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1
☒ Eye Irrit. 2, H319 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2
☒ Muta. 2, H341 GERM CELL MUTAGENICITY - Category 2
☒ Repr. 2, H361d (Unborn child) TOXIC TO REPRODUCTION (Unborn child) - Category 2
☒ Repr. 2, H361f (Fertility) TOXIC TO REPRODUCTION (Fertility) (oral) - Category 2
 (oral)
☒ Skin Irrit. 2, H315 SKIN CORROSION/IRRITATION - Category 2
☒ Skin Sens. 1, H317 SKIN SENSITIZATION - Category 1


Full text of abbreviated R phrases : ☒ R40- Limited evidence of a carcinogenic effect.
☒ R68- Possible risk of irreversible effects.
☒ R63- Possible risk of harm to the unborn child.
☒ R22- Harmful if swallowed.
☒ R41- Risk of serious damage to eyes.
☒ R36- Irritating to eyes.
☒ R38- Irritating to skin.
☒ R36/38- Irritating to eyes and skin.
☒ R43- May cause sensitization by skin contact.
☒ R50- Very toxic to aquatic organisms.
☒ R50/53- Very toxic to aquatic organisms, may cause long-term adverse effects in

SECTION 16: Other information

the aquatic environment.

R52/53- Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R53- May cause long-term adverse effects in the aquatic environment.

Full text of classifications [DSD/DPD] :  Carc. Cat. 3 - Carcinogen category 3
Muta. Cat. 3 - Mutagen category 3
Repr. Cat. 3 - Toxic to reproduction category 3
Xn - Harmful
Xi - Irritant
N - Dangerous for the environment

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Notice to reader

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 fulfill 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.

Annex