

SAFETY DATA SHEET

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II - United Kingdom (UK)

1. Identification of the preparation and of the company

Product code : PDOO50
Trade name :
Product name : PD OPTIMA PDO ORANGE
Manufacturer/ Distributor : SUN CHEMICAL SCREEN
 NORTON HILL
 MIDSOMER NORTON
 BATH
 SOMERSET
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 UNITED KINGDOM
 (44) 1689 894000

Emergency phone:
 (44) 1761 408646

SUN CHEMICAL
 UNIT 1
 BARDON 22 BUSINESS PARK
 BEVERIDGE LANE COALVILLE
 LEICESTER
 LE67 1TE
 UNITED KINGDOM
 (44) 1530 275000

e-mail address of person responsible for this SDS : regulatory@eu.sunchem.com

Product use : Printing ink. Printing ink related material

2. Hazards identification

The preparation is classified as dangerous according to Directive 1999/45/EC and its amendments.

Classification : Xn; R22
 Xi; R36/37/38
 R43
 R52/53

Human health hazards : Harmful if swallowed. Irritating to eyes, respiratory system and skin. May cause sensitization by skin contact.

Environmental hazards : Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

3. Composition/information on ingredients

Substances presenting a health or environmental hazard within the meaning of the Dangerous Substances Directive 67/548/EEC.

Chemical name*	CAS number	%	EC number	Classification
Multifunctional acrylate n-vinylcaprolactam	2235-00-9	10 - 25 10 - 25	Polymer 218-787-6	Xi; R36/38 [1] Xn; R22 [1] Xi; R36
monoalkyl or monoaryl or monoalkylaryl esters of acrylic acid With the exception of those specified elsewhere in the Annex I	5888-33-5	10 - 25	227-561-6	Xi; R36/37/38 [1] N; R51/53
4-(1-oxo-2-propenyl)-morpholine	5117-12-4	5 - 10	418-140-1	Xn; R22, R48/22 [1]

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3. Composition/information on ingredients

Multifunctional acrylate n.o.s. TRIMETHYLBENZOYLDIPHENYLPHOSPHINE OXIDE	PROPRIETARY 75980-60-8	5 - 10 2.5 - 5	278-355-8	Xi; R41 R43 Xi; R36/38 Repr. Cat. 3; R62 R52/53 N; R50/53	[1] [1]
2-benzyl-2-dimethylamino-4- morpholinobutyrophenone See section 16 for the full text of the R-phrases declared above	119313-12- 1	< 1	404-360-3	N; R50/53	[1]

[1] Substance classified with a health or environmental hazard

[2] Substance with a workplace exposure limit

[3] PBT-substance

[4] vPvB-substance

Occupational exposure limits, if available, are listed in section 8.

4. First aid measures

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.
- 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. Give nothing by mouth. If unconscious, place in recovery position and seek medical advice.
- 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.

5. Fire-fighting measures

Extinguishing media

- Suitable** : Use dry chemical, CO₂, water spray (fog) or foam.
- Not suitable** : Do not use water jet.
- Recommendations** : Fire will produce dense black acrid smoke. Exposure to decomposition products may cause a health hazard. Appropriate breathing apparatus may be required. Cool closed containers exposed to fire with water. Do not release runoff from fire to drains or watercourses.

6. Accidental release measures

Note: see section 8 for personal protective equipment and section 13 for waste disposal.

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.

- Storage** : Store between the following temperatures: 5 - 35°C
Store in accordance with local regulations. Observe label precautions. Store in a cool, well-ventilated area away from incompatible materials and ignition sources. Keep away from heat and direct sunlight.
- Keep away from: oxidizing agents, strong alkalis, strong acids.
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

7. Handling and storage

container.
Do not empty into drains.
Keep away from heat and direct sunlight.

8. Exposure controls/personal protection

Engineering measures : 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.

Occupational exposure limits : Not applicable.

Personal protective equipment

Respiratory system : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. 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.

Skin and body : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Hands

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.

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."

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

Eyes : Use safety eyewear designed to protect against splash of liquids.

Environmental exposure controls

Do not allow to enter drains or watercourses.

9. Physical and chemical properties

Physical state : Liquid.

Color : Orange.

Flash point : 110°C

10. Stability and reactivity

This preparation contains materials which are unstable under the following conditions: strong UV sources, free radical initiators, peroxides, strong alkalis, reactive metals. These could cause the product to polymerize exothermically. Unintentional contact with them should be avoided.

Materials to avoid : Reactive or incompatible with the following materials: oxidizing agents, strong acids, strong alkalis.

Hazardous polymerization : May polymerize on exposure to sunlight.

11. Toxicological information

There is no data available on the preparation itself. The preparation has been assessed following the conventional method of the Dangerous Preparations Directive 1999/45/EC and classified for toxicological hazards accordingly. See sections 2 and 15 for details.

Acrylate components of the preparation 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 4-(1-oxo-2-propenyl)-morpholine. May produce an allergic reaction.

The following products have sensitizing properties: Multifunctional acrylates , n-vinylcaprolactam, Isobornyl Acrylate, 4-(1-oxo-2-propenyl)-morpholine, Multifunctional acrylate n.o.s., BUTYLATED HYDROXYTOLUENE, propoxylated glycerol triacrylated, 4-Methoxyphenol. Cases of hypersensitivity may occur, possibly with cross-sensitization to other acrylate materials.

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.

12. Ecological information

There is no data available on the preparation itself.
Do not allow to enter drains or watercourses.

The preparation has been assessed following the conventional method of the Dangerous Preparations Directive 1999/45/EC and is classified for eco-toxicological properties accordingly. See sections 2 and 15 for details.

13. Disposal considerations

Do not allow to enter drains or watercourses.
Dispose of according to all federal, state and local applicable regulations.

European waste catalogue (EWC) : 08 03 12

Hazardous waste : The classification of the product may meet the criteria for a hazardous waste.

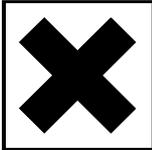
Refer to protective measures listed in sections 7 and 8.

Empty containers or liners may retain some product residues.

14. Transport information

This product is not regulated for carriage according to ADR/RID, IMDG, ICAO/IATA.

15. Regulatory information

- EU regulations** : The product is classified and labelled for supply in accordance with the Directive 1999/45/EC as follows:
- Hazard symbol or symbols** : 
Harmful
- Risk phrases** : R22- Harmful if swallowed.
R36/37/38- Irritating to eyes, respiratory system and skin.
R43- May cause sensitization by skin contact.
R52/53- Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- Safety phrases** : S24- Avoid contact with skin.
S37- Wear suitable gloves.
- Contains** : 4-(1-oxo-2-propenyl)-morpholine
- 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.

EU - Substances of very high concern - PBT

List name	Name on list	CAS #	Conc.
None of the components are listed.			

EU - Substances of very high concern - vPvB

List name	Name on list	CAS #	Conc.
None of the components are listed.			

16. Other information

- CEPE Classification** : 4
- Full text of R-phrases referred to in sections 2 and 3 - United Kingdom (UK)** : R62- Possible risk of impaired fertility.
R22- Harmful if swallowed.
R48/22- Harmful: danger of serious damage to health by prolonged exposure if swallowed.
R41- Risk of serious damage to eyes.
R36- Irritating to eyes.
R36/38- Irritating to eyes and skin.
R36/37/38- Irritating to eyes, respiratory system and skin.
R43- May cause sensitization by skin contact.
R50/53- Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R51/53- Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R52/53- Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II - United Kingdom (UK)

Date of revision : 22 June 2009

Version : 0.05

Indicates information that has changed from previously issued version.

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.

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Annex