

GPS Safety Summary

Substance Name:

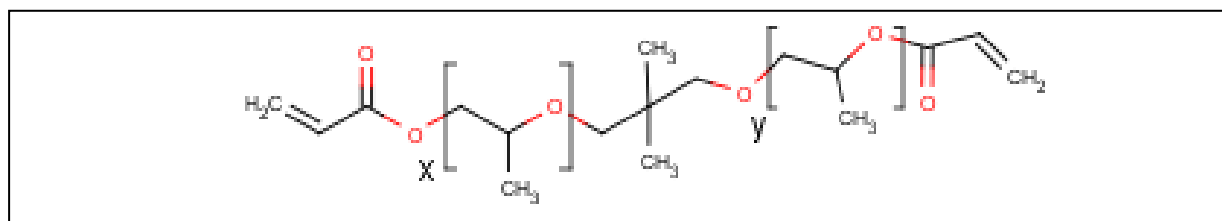
PROPOXYLATED NEOPENTYL GLYCOL DIACRYLATE

1. General Statement

Propoxylated neopentylglycol diacrylate is a di-functional acrylic monomer which can be polymerised by free radicals. In particular, Propoxylated Neopentylglycol diacrylate is designed for use in ultra violet and electron beam curing applications.

2. Chemical Identity

Name:	PROPOXYLATED NEOPENTYL GLYCOL DIACRYLATE
Brand names:	SR9003
Chemical name (IUPAC):	Esterification product of poly[oxy(methyl-1,2-ethanediyl)], alpha.,alpha.'-(2,2-dimethyl-1,3-propanediyl)bis[.omega.-hydroxy- and prop-2-enoic acid
CAS number(s):	84170-74-1
ES number (optional):	617-546-6
Molecular formula (optional):	$(C_3H_6O)_x (C_3H_6O)_y C_{11}H_{16}O_4$
Structure (optional):	general structure (UVCB)



3. Use and applications

SR9003 is a very low viscosity oligoether acrylate for use in ultra violet and electron beam curing compositions.

SR9003 is particularly suitable for the following applications: coatings, inks and adhesives.

4. Physical / Chemical properties

Propoxylated neopentylglycol diacrylate has a very low volatility and is a non flammable product with moderate solubility into water.

Property	Value
Physical state	Liquid at 20°C and 1013.25 hPa
Form	
Particle size	Not applicable

Colour	Colorless
Odour	Characteristic
Molecular weight	216-516 g/mol for UVCB components
Density	1.010 g/cm ³ at 22.5°C
Vapour pressure	0.058 Pa at 20°C
Freezing / boiling points	-81°C / > 200°C at 1013 hPa. (polymerisation of the substance)
Flammability (optional) H statement in case classified	Non flammable upon ignition.
Flash point	159°C at 1013 hPa
Self-ignition temperature	> 240°C at 1013 hPa
Explosive / oxidizing properties	Not expected based on structure
Water solubility	293 mg/L at 20°C
Dissociation constant (pK _a)	Not applicable
Octanol-water partition coefficient (Log K _{ow})	84.6% of the components have Log K _{ow} value ranged from 2.41 to 3.87 at 20°C

5. Health Effects

Propoxylated neopentylglycol diacrylate is a moderate skin sensitizer.

Effect Assessment	Result
Acute Toxicity Oral / inhalation / dermal	Does not cause acute toxicity after oral, dermal and inhalation exposure.
Irritation / corrosion Skin / eye/ respiratory tract	Skin contact does not cause skin irritation. Eye contact does not cause a slight eye irritation.
Sensitisation	Moderate skin sensitizer.
Toxicity after repeated exposure Oral / inhalation / dermal	Based on the available data, does not cause toxicity to internal organs after repeated exposure in animal studies by oral administration. No data is available by dermal route and inhalation.
Genotoxicity / Mutagenicity	Based on the available data, not expected to cause genetic effects.
Carcinogenicity	No data is available.
Reproductive / Developmental Toxicology	Based on the available data, does not cause effects on the reproduction and developmental toxicity in animal studies.

6. Environmental Effects

Propoxylated Neopentylglycol diacrylate is inherently biodegradable. It can be assumed that Propoxylated Neopentylglycol diacrylate is also biodegradable in soil and sediment and thus can be considered as non persistent in soil and sediment.

Effect Assessment	Result
Aquatic Toxicity	Toxic to aquatic organisms.

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Fate and behaviour	Result
Biodegradation	Inherently biodegradable.
Bioaccumulation potential	No bioaccumulation in aquatic organisms expected.
PBT / vPvB conclusion	As this substance is not considered to be persistent, it is not classified PBT. This substance is considered to be neither very persistent nor very bioaccumulative (vPvB).

7. Exposure

7.1 Human health

Workplace exposure:

Exposure can occur either in a Propoxylated neopentylglycol diacrylate manufacturing facility or in the various industrial facilities that use Propoxylated neopentylglycol diacrylate. Those working with Propoxylated neopentylglycol diacrylate in industrial operations could be exposed during maintenance, sampling, testing, or other procedures. Each industrial facility should have a thorough training program for employees and appropriate work processes and safety equipment in place to limit unnecessary exposure. Safety showers and eye-wash stations should be accessible nearby. Workers should follow the safety measures recommended in the Extended Safety Data Sheet (eSDS).

7.2 Environment

Environmental exposure:

Propoxylated neopentylglycol diacrylate is used in industrial settings and exposure of the environment is assessed for the manufacture, formulation and use. There are no direct consumer uses for Propoxylated neopentylglycol diacrylate. Based on the results of risk assessment, all uses are adequately controlled with regard to the environment.

8. Risk Management recommendations

Human health measures	
Eye/Face protection	Safety glasses with side-shields.
Skin protection	Long sleeved clothing.
Hand protection	Gloves: nitrile rubber > 0,5 mm,(suitable gloves tested to EN374). Replace gloves immediately when torn or any change in appearance (dimension, colour, flexibility, etc) is noticed.
Respiratory protection	When using concentrated chemicals always make sure that there is adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipments.
Organizational measures	Ensure workers are duly trained to minimize exposure
Engineering control	Apply technical measures to comply with the occupational exposure limits. When working in confined spaces (tanks, containers, etc.), ensure that there is a supply of air suitable for breathing and wear the recommended equipment.

Environmental measures
<p>Do not allow material to contaminate ground water system.</p> <p>All effluent releases that may include the substance must be directed to a (municipal) waste water treatment plant that removes the substance from the final releases to the receiving water.</p>

9. Regulatory Information / Classification and Labelling



9.1 Regulatory Information

This substance has been registered under:

- EU Regulation EC 1907/2006 (REACH)

9.2 Classification and labelling

Under GHS, substances are classified according to their physical, health, and environmental hazards. The hazards are communicated via specific labels and the eSDS. GHS attempts to standardize hazard communication so that the intended audience (workers, consumers, transport workers, and emergency responders) can better understand the hazards of the chemicals in use. Substances registered for REACH are classified according CLP (EC) 1272/2008, implementation of the GHS in the European Union.

Classification	
<p>According to REGULATION (EC) no 1272/2008, the pure substance is classified:</p> <ul style="list-style-type: none"> – Skin Sens. 1B – Aquatic Chronic 2 	
Signal word	
Warning	
Pictogram	
– GHS07: Exclamation mark	
– GHS09: Environment	
Hazard statement	
<ul style="list-style-type: none"> – H317: May cause an allergic skin reaction. – H411: Toxic to aquatic life with long lasting effects. 	
Alternative classification according to Globally Harmonized System (GHS)	
<ul style="list-style-type: none"> – H317: May cause an allergic skin reaction. – H401: Toxic to aquatic life – H411: Toxic to aquatic life with long lasting effects 	

10. Contact Information within Company

For further information on this substance or product safety summary in general, please contact:

- **ICCA portal where the GPS Safety Summary is posted:**
<http://www.icca-chem.org/en/Home/ICCA-initiatives/global-product-strategy/>

11. Date of Issues / Revision

- Date of issue: 2014/01/31
- Date of revision:

12. Disclaimer

The information contained in this paper is intended as advice only and whilst the information is provided in utmost good faith and has been based on the best information currently available, is to be relied upon at the user's own risk.

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