

GPS Safety Summary

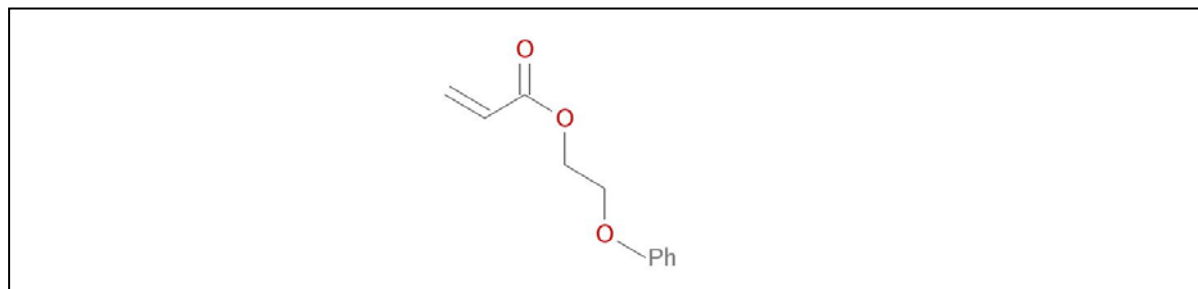
Substance Name:
2-Phenoxyethyl Acrylate

1. General Statement

2-Phenoxyethyl acrylate is a monofunctional acrylic monomer which can be polymerised by free radicals. In particular, 2-Phenoxyethyl acrylate is designed for use in ultra violet and electron beam curing applications.

2. Chemical Identity

Name: 2-Phenoxyethyl acrylate
Brand names: SR339
Chemical name (IUPAC): 2-phenoxyethyl prop-2-enoate
CAS number(s): 48145-04-6
EC number (optional): 256-360-6
Molecular formula (optional): C₁₁H₁₂O₃
Structure (optional):



3. Use and applications

2-Phenoxyethyl acrylate is a monofunctional acrylic monomer which can be polymerised by free radicals. In particular it is used in U.V & E.B cured coatings, inks and adhesives.

4. Physical / Chemical properties

2-Phenoxyethyl acrylate is a non flammable, low volatility liquid with moderate solubility in water.

Property	Value
Physical state	Liquid at 20°C and 1013.25 hPa
Form	
Particle size	Not applicable
Colour	Clear, colorless liquid

Odour	Characteristic
Molecular weight	192.22 g/mol
Density	1.105 g/cm ³ at 20°C
Vapour pressure	0.22 Pa at 20 °C
Freezing / boiling points	-74°C / 132°C at 1013 hPa.
Flammability (optional) H statement in case classified	Non flammable upon ignition.
Flash point	> 140°C at 1013 hPa
Self-ignition temperature	-
Explosive / oxidizing properties	Not expected based on structure
Water solubility	525 mg/L at 25°C
Dissociation constant (pK _a)	Not applicable
Octanol-water partition coefficient (Log K _{ow})	2.58 at 25°C

5. Health Effects

2-Phenoxyethyl acrylate is a strong skin sensitizer.

Effect Assessment	Result
Acute Toxicity Oral / inhalation / dermal	Does not cause acute toxicity after oral and dermal exposure. No data is available by inhalation.
Irritation / corrosion Skin / eye/ respiratory tract	Skin contact causes a slight skin irritation. Eye contact causes a slight eye irritation.
Sensitisation	Strong 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, does not expected to cause genetic effects.
Carcinogenicity	No data is available.
Reproductive / Developmental Toxicology	Based on the limited available data, 2-Phenoxyethyl acrylate is not classified for reprotoxicity.

6. Environmental Effects

2-phenoxyethyl acrylate was determined to be hydrolytically stable under acidic conditions, but moderately unstable under neutral and basic conditions. 2-phenoxyethyl acrylate is inherently biodegradable. It is assumed to be also biodegradable in soil and sediments.

Effect Assessment	Result
Aquatic Toxicity	Toxic to aquatic organisms.

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 bioaccumulative, 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 2-Phenoxyethyl acrylate manufacturing facility or in the various industrial facilities that use 2-Phenoxyethyl acrylate. Those working with 2-Phenoxyethyl acrylate 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. Particularly as 2-Phenoxyethyl acrylate is a potent skin sensitizer, dermal Local exposure and risk should be minimized. 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:

2-Phenoxyethyl acrylate 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 2-Phenoxyethyl acrylate. 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

Do not allow material to contaminate ground water system.
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.

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	
According to REGULATION (EC) no 1272/2008, the substance is classified: <ul style="list-style-type: none">– Skin Sens. 1A– 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">– H303: May be harmful if swallowed.– 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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