

GPS Safety Summary

Substance Name:

Tripropyleneglycol, esters with acrylic acid, reaction products with diethylamine

1. General Statement

Tripropyleneglycol, esters with acrylic acid, reaction products with diethylamine is an amine modified acrylic oligomer which can be polymerised by free radicals. In particular, Tripropyleneglycol, esters with acrylic acid, reaction products with diethylamine, is designed for use in ultra violet applications.

2. Chemical Identity

Name:	Tripropyleneglycol, esters with acrylic acid, reaction products with diethylamine
Brand names:	CN 386
Chemical name (IUPAC):	2-Propenoic acid, (1-methyl-1,2-ethanediyl) bis[oxy(methyl-2,1-ethanediyl)] ester, reaction products with diethylamine
CAS number(s):	111497-86-0
ES number:	601-101-8
Molecular formula:	Not available (UVCB)
Structure:	Not available (UVCB)

3. Use and applications

Tripropyleneglycol, esters with acrylic acid, reaction products with diethylamine, is an amine modified oligomer used as amine synergist in UV formulation.

4. Physical / Chemical properties

Tripropyleneglycol, esters with acrylic acid, reaction products with diethylamine is unstable in water, non flammable and has a very low volatility.

Property	Value
Physical state	Liquid at 20°C and 1013.25 hPa
Form	
Particle size	Not applicable
Colour	Colorless
Odour	Characteristic
Molecular weight	ca. 319 – 518 g/mol

Density	0.99 g/cm ³ at 20°C
Vapour pressure	0.0136 Pa at 20°C
Freezing / boiling points	-84 °C / 139°C at 1013 hPa.
Flammability (optional)	Non flammable upon ignition.
Flash point	138°C at 1013 hPa
Self-ignition temperature	281°C at 1013 hPa
Explosive / oxidizing properties	Not expected based on structure
Water solubility	Moderately soluble to soluble at 20 °C (hydrolysis)
Dissociation constant (pK _a)	Not applicable
Octanol-water partition coefficient (Log K _{ow})	Not possible to determine due to hydrolysis

5. Health Effects

Tripropyleneglycol, esters with acrylic acid, reaction products with diethylamine is irritating to skin and eyes, and is a moderate 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 skin irritation. Eye contact causes eye irritation.
Sensitisation	Does cause a moderate allergic skin reaction.
Toxicity after repeated exposure Oral / inhalation / dermal	Does not cause systemic toxicity after repeated exposure in animal studies by oral administration. No data is available after repeated dermal or inhalation exposure.
Genotoxicity / Mutagenicity	Based on the limited 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 in animal studies.

6. Environmental Effects

Tripropyleneglycol, esters with acrylic acid, reaction products with diethylamine hydrolyses rapidly under environmental conditions, with a half-life of 11 h at pH7 and 25°C.

It is considered to be inherently biodegradable as for the by products resulting from its hydrolysis. It is assumed to be also biodegradable in soil and sediments.

Effect Assessment	Result
Aquatic Toxicity	No toxicity 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 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 an Tripropyleneglycol, esters with acrylic acid, reaction products with diethylamine manufacturing facility or in the various industrial facilities that use the substance. Those working with the substance 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: The substance 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 the substance. 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. When required, 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 pure substance is classified	
<ul style="list-style-type: none">– Skin Irrit. Cat 2– Skin Sens. 1B– Eye Irrit. Cat 2	
Signal word	
Warning	
Pictogram	
<ul style="list-style-type: none">– GHS07: Exclamation mark	
Hazard statement	
<ul style="list-style-type: none">– H315: Causes skin irritation– H317: May cause an allergic skin reaction.– H319: Causes serious eye irritation.	
Alternative classification according to Globally Harmonized System (GHS)	
<ul style="list-style-type: none">– H315: Causes skin irritation– H317: May cause an allergic skin reaction.– H319: Causes serious eye irritation.	

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: 2014/09/30
- Date of revision:

12. Disclaimer

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