

GPS Safety Summary

Substance Name:

Propylidynetrimethanol, ethoxylated, esters with acrylic acid, reaction products with diethylamine

1. General Statement

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

2. Chemical Identity

Name:	Propylidynetrimethanol, ethoxylated, esters with acrylic acid, reaction products with diethylamine
Brand names:	CN3715
Chemical name (IUPAC):	Reaction product of poly(oxy-1,2-ethanediyl), .alpha.-hydro-omega.-[(1-oxo-2-propenyl)oxy]-, ether with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol (3:1) and N-ethylethanamine
CAS number(s):	159034-91-0
ES number:	500-425-6
Molecular formula:	Not available (UVCB)
Structure:	Not available (UVCB)

3. Use and applications

Propylidynetrimethanol, ethoxylated, esters with acrylic acid, reaction products with diethylamine, is an amine modified oligomer. It is particularly suitable for the following applications: coatings, inks and varnishes.

4. Physical / Chemical properties

Propylidynetrimethanol, ethoxylated, 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	yellowish
Odour	Characteristic
Molecular weight	ca. 300 - 800 g/mol

Relative density	1.0369 at 20°C
Vapour pressure	0.000126 Pa at 20°C
Freezing / boiling points	-80.2 to -57.5°C / > 250°C at 1013 hPa. (polymerisation of the substance)
Flammability (optional)	Non flammable upon ignition.
Flash point	153.0 ± 1.0°C at 1013 hPa
Self-ignition temperature	341 ± 5°C at 1013 hPa
Explosive / oxidizing properties	Not expected based on structure
Water solubility	58.8 g/L at 20°C
Dissociation constant (pK _a)	Not applicable
Octanol-water partition coefficient (Log K _{ow})	75.1% of the components of this UVCB have Log Pow ranged from 1.05 to 1.86 at 20°C

5. Health Effects

Propylidynetrimethanol, ethoxylated, esters with acrylic acid, reaction products with diethylamine is a strong skin sensitizer and irritating for eyes.

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 may cause a slight skin irritation. Eye contact causes eye irritation. No data is available on respiratory tract irritation.
Sensitisation	Strong skin sensitizer.
Toxicity after repeated exposure Oral / inhalation / dermal	Based on the available data, no severe organ toxicity was found after repeated exposure in animal study by oral administration. No data is available by dermal route and inhalation.
Genotoxicity / Mutagenicity	Based on the available data, it is not possible to conclude on potential genetic effects.
Carcinogenicity	No data is available.
Reproductive / Developmental Toxicology	Based on the limited available data does not cause effects on the reproduction in animal study.

6. Environmental Effects

Propylidynetrimethanol, ethoxylated, esters with acrylic acid, reaction products with diethylamine was found to be unstable in water and not readily biodegradable

Effect Assessment	Result
Aquatic Toxicity	Harmful to aquatic organisms.

Fate and behaviour	Result
Biodegradation	Not readily 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).
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7. Exposure

7.1 Human health

Workplace exposure: Exposure can occur either in a Propylidynetrimethanol, ethoxylated, 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. Particularly as the substance 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: 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 Sens. 1A– Eye Irrit. Cat 2– Aquatic Chronic Cat 3	
Signal word	
Warning	
Pictogram	
<ul style="list-style-type: none">– GHS07: Exclamation mark	
Hazard statement	
<ul style="list-style-type: none">– H317: May cause an allergic skin reaction.– H319: Causes serious eye irritation.– H412: Harmful 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.– H319: Causes serious eye irritation.– H402: Harmfull to aquatic life– H412: Harmful 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: 2014/09/30
- 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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