

GPS Safety Summary

Substance Name:
Soybean oil, epoxidized, acrylate

1. General Statement

Soybean oil, epoxidized, acrylate is a multifunctional acrylic monomer which can be polymerised by free radicals. In particular, Soybean oil, epoxidized, acrylate is designed for use in ultra violet and electron beam curing applications.

2. Chemical Identity

Name:	Soybean oil, epoxidized, acrylate
Brand names:	CN111
Chemical name (IUPAC):	Soybean oil, epoxidized, acrylate
CAS number(s):	91722-14-4
EC number (optional):	294-415-6
Molecular formula (optional):	Not available (UVCB)
Structure (optional):	Not available (UVCB)

3. Use and applications

Soybean oil, epoxidized, acrylate is a multifunctional epoxidized soy bean oil acrylate oligomer which offers pigment wetting characteristics and results in flexible and improved adhesion in free radically cured films.

4. Physical / Chemical properties

Soybean oil, epoxidized, acrylate is considered to be stable in water. Soybean oil, epoxidized, acrylate is a non flammable viscous liquid, slightly soluble in water.

Property	Value
Physical state	Viscous liquid at 20°C and 1013.25 hPa
Form	
Particle size	Not applicable
Colour	Yellow
Odour	Characteristic
Molecular weight	ca. 1800 – ca. 7200 g/mol
Relative density	1.042
Vapour pressure	0.64 kPa at 20°C
Freezing / boiling points	< -20°C / > 400°C at 1013 hPa.

Flammability (optional) H statement in case classified	Non flammable upon ignition.
Flash point	> 200°C
Self-ignition temperature	> 400°C at 1013 hPa
Explosive / oxidizing properties	Not expected based on structure
Water solubility	291 mg/L at 20°C
Dissociation constant (pK _a)	Not applicable
Octanol-water partition coefficient (Log K _{ow})	The estimated log P _{ow} is 0.89 to 2.96 at 20°C

5. Health Effects

Soybean oil, epoxidized, acrylate did not show any potent health effects.

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	Not irritating for skin. Not irritating for the eyes. No data is available for respiratory tract irritation.
Sensitisation	Not skin sensitising.
Toxicity after repeated exposure Oral / inhalation / dermal	Does not cause toxicity to internal organs after repeated exposure in animal studies by oral administration. No data is available by inhalation or dermal route.
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.

6. Environmental Effects

Soybean oil, epoxidized, acrylate. did not show any potent hazard to the aquatic environment

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 a Soybean oil, epoxidized, acrylate: manufacturing facility or in the various industrial facilities that use the substance. Those working with it 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 being not toxic at the highest concentration tested (100 mg/L) for fish, invertebrates and algae with Log Kow <4, is not classified as hazardous to the aquatic environment. Hence, no risk from the substance to the environment is to be expected and all identified uses of the substance are considered to be safe for 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.
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	
Not classified according to REGULATION (EC) no 1272/2008:	
Signal word	
No signal word	
Pictogram	
Hazard statement	
Alternative classification according to Globally Harmonized System (GHS)	
Not classified	

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

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