GPS Safety Summary

Substance Name:

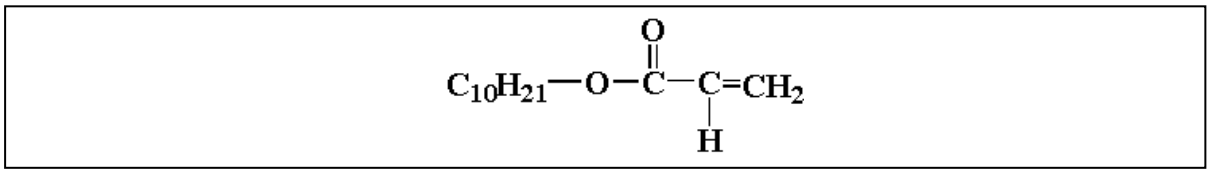
ISODECYL ACRYLATE

1. General Statement

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

2. Chemical Identity

Name:	ISODECYL ACRYLATE
Brand names:	SR395
Chemical name (IUPAC):	Reaction product of prop-2-enoic acid and alcohols, C9-11 iso, C10 rich
CAS number(s):	1330-61-6
ES number (optional)**:**	215-542-5
Molecular formula (optional)**:**	$C_{13}H_{24}O_2$ (main component)
Structure (optional)**:**	



3. Use and applications

Isodecyl acrylate, is a monofunctional, hydrophobic monomer.

4. Physical / Chemical properties

Isodecyl acrylate is a non flammable liquid, with a relatively low volatility and a low solubility in water.

Property	Value
Physical state	Liquid at 20°C and 1013.25 hPa
Form	
Particle size	Not applicable
Colour	Colorless
Odour	Characteristic
Molecular weight	212.33 g/mol
Relative density	0.8866

Vapour pressure	3.61 Pa at 20°C
Freezing / boiling points	< -30°C / 217 to 264°C at 1013 hPa.
Flammability (optional) H statement in case classified	Non flammable upon ignition.
Flash point	108°C
Self-ignition temperature	233°C at 1013 hPa
Explosive / oxidizing properties	Not expected based on structure
Water solubility	1.34 mg/L at 20°C
Dissociation constant (pK_a)	Not applicable
Octanol-water partition coefficient (Log K_{ow})	86.6% of the components have Log Pow ranged from 5.55 to 5.7.

5. Health Effects

Isodecyl Acrylate is a moderate skin sensitizer and irritating for respiratory tract.

Effect Assessment	Result
Acute Toxicity Oral / inhalation / dermal	Does not cause acute toxicity by oral, dermal and inhalation exposure.
Irritation / corrosion Skin / eye / respiratory tract	Skin contact does not cause skin irritation. Eye contact does not cause eye irritation. Cause irritation to Respiratory tract.
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 inhalation route. No data is available by oral and dermal routes.
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 or on the foetal development in animal studies.

6. Environmental Effects

Isodecyl acrylate was found to be hydrolytically unstable at pH 1.2 and 9 and stable at pH 4 and 7. The hydrolysis generated Isodecyl alcohol and potentially acrylic acid.

Based on structural analogue, Isodecyl Acrylate is considered to be readily biodegradable and assumed to be also biodegradable in soil and sediments. Bioaccumulation in water, soil and sediment is not expected.

Effect Assessment	Result
Aquatic Toxicity	Toxic to aquatic organisms.

Fate and behaviour	Result
Biodegradation	Readily biodegradable.
Bioaccumulation potential	Not assessed the substance being considered to be readily biodegradable.
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 Isodecyl Acrylate manufacturing facility or in the various industrial facilities that use Isodecyl Acrylate. Those working with Isodecyl 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. 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:

Isodecyl acrylate is readily biodegradable and will therefore be degraded rapidly within the waste water treatment process. 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 pure substance is classified: – Skin Sens. 1B – STOT Single Exp. 3 – Aquatic Chronic 2	
Signal word	
Warning	
Pictogram	
– GHS07: Exclamation mark	
– GHS09: Environment	
Hazard statement	
– **H317**: May cause an allergic skin reaction. – **H335**: May cause respiratory irritation – **H411**: Toxic to aquatic life with long lasting effects.	
Alternative classification according to Globally Harmonized System (GHS)	
– **H317**: May cause an allergic skin reaction. – **H335**: May cause respiratory irritation – **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.

NO WARRANTY OF FITNESS FOR ANY PARTICULAR PURPOSE, WARRANTY OF MERCHANTABILITY, OR ANY OTHER WARRANTY, EXPRESSED OR IMPLIED, IS MADE CONCERNING THE INFORMATION PROVIDED HEREIN.

No liability will be accepted by ARKEMA for damages of any nature whatsoever resulting from the use of or reliance on the information.