

## GPS Safety Summary

### Substance Name: **ETHOXYLATED BISPHENOL A DIACRYLATE**

#### 1. General Statement

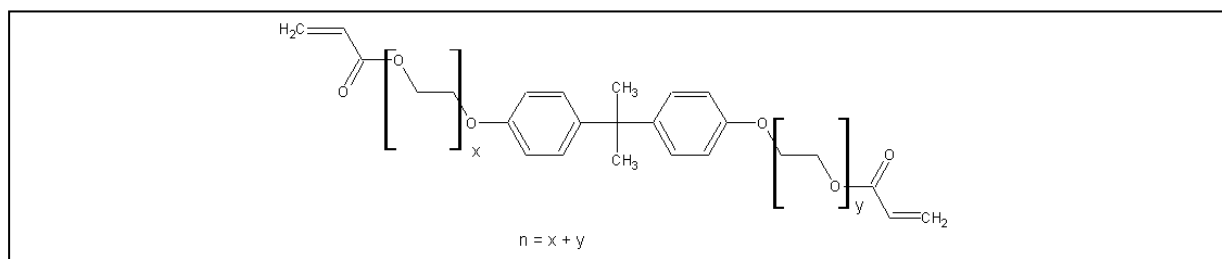
---

Ethoxylated bisphenol A diacrylate is a difunctional acrylate monomer designed for a wide variety of applications.

#### 2. Chemical Identity

---

<b>Name:</b>	<b>ETHOXYLATED BISPHENOL A DIACRYLATE</b>
<b>Brand names:</b>	SR349
<b>Chemical name (IUPAC):</b>	Esterification products of 4,4'-isopropylidenediphenol, ethoxylated and prop-2-enoic acid
<b>CAS number:</b>	64401-02-1
<b>ES number:</b>	613-584-2
<b>Molecular formula:</b>	$(C_2 H_4 O)_x (C_2 H_4 O)_y C_{21} H_{20} O_4$
<b>Structure (optional):</b>	general structure (UVCB)



#### 3. Use and applications

---

Ethoxylated bisphenol A diacrylate, shows low odour, low volatility monomer used in free radical polymerization. It has a hydrophobic backbone for complete alkali solubility.

#### 4. Physical / Chemical properties

---

Ethoxylated bisphenol A diacrylate has a very low volatility and is a non flammable product with a very low solubility into water.

Property	Value
Physical state	Liquid at 20°C and 1013.25 hPa
Form	
Particle size	Not applicable
Colour	Colorless
Odour	Characteristic

Molecular weight	370.5 to 839.0 g/mol for UVCB components
Relative density	1.1459
Vapour pressure	0.000000335 Pa at 20°C
Freezing / boiling points	< -35°C / > 320°C (polymerization before boiling point)
Flammability (optional) H statement in case classified	Non flammable upon ignition
Flash point	> 250°C
Self-ignition temperature	-
Explosive / oxidizing properties	Not expected based on structure
Water solubility	0.425 mg/L at 20°C
Dissociation constant (pK <sub>a</sub> )	Not applicable
Octanol-water partition coefficient (Log K <sub>ow</sub> )	93.5% of the components of this UVCB have Log Pow in the range from 3.66 to 4.16

## 5. Health Effects

Based on available data, Ethoxylated bisphenol A diacrylate is not classified for human health.

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 does not cause skin irritation.. Eye contact does not cause eye irritation. No data is available on respiratory tract irritation.
Sensitisation	Not skin sensitising.
Toxicity after repeated exposure Oral / inhalation / dermal	Based on the available data, no severe organ toxicity was found 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, it is not possible to conclude on potential genetic effects.
Carcinogenicity	No data is available.
Toxicity for reproduction	Based on the available data, does not cause effects on the reproduction in animal study.

## 6. Environmental Effects

Ethoxylated bisphenol A diacrylate is inherently biodegradable. It can be assumed that this UVCB is also biodegradable in soil and sediment and thus can be considered as non persistent in soil and sediment.

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 an Ethoxylated bisphenol A diacrylate manufacturing facility or in the various industrial facilities that use Ethoxylated bisphenol A diacrylate. Those working with Ethoxylated bisphenol A diacrylate 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:**

Ethoxylated bisphenol A diacrylate 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 Ethoxylated bisphenol A diacrylate. Based on the results of risk assessment, all uses are adequately controlled with regard to the environment.

## 8. Risk Management recommendations

<b>Human health measures</b>	
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.
<b>Environment protective measures</b>	
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: – Chronic Aquatic Toxicity; Category 2.	
Signal word	
Pictogram	
– GHS09: Environment	
Hazard statement	
– H411 – Toxic to aquatic life with long lasting effects	
Alternative classification according to Globally Harmonized System (GHS)	
– H411 – Toxic to aquatic life with long lasting effects	
– H401 – Toxic to aquatic life	

## 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.