

SAFETY DATA SHEET

Safety Data Sheet according to regulation (EC) No 1907/2006 & 1272/2008 and amendments

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND THE COMPANY/UNDERTAKING

Product Identifier: **SOLAREZ® FLY TIE (Flex)** Aliphatic urethane acrylate resin
Product Description:

RELEVANT IDENTIFIED USES OF THE SUBSTANCE OR MIXTURE AND USES ADVISED AGAINST.

Intended/Recommended Use: **Radiation cured coatings.**

DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET

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2. HAZARDS IDENTIFICATION

Irritating to eyes and skin.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance, Mixture or Article? Mixture

Component / CAS No.	%	EC-No	REACH Registration Number	Classification	Classification according to Regulation (EC) No 1272/2008 (CLP)
Acrylated resins	65 - 90	-	Not available	Xi; R36	Eye Irrit. 2 (H319)
Aliphatic urethane acrylate 63225-53-6	5-10%	202-617-2	Not available	Xi R37/R43	GHS07 corrosive R43 skin sensitizing
Isobornyl Acrylate monomer 5888-33-5	5-8%	202-851-5	01-2119452449-31	R10, R20, R36/38	GHS09 Environment GHS07 Irritant
Acrylic acid ester / TMPTA 15625-89-5	2-5%	210-037-6	Not available		H315 Skin irritant H319 Eye irritant H317 allergen
Dibutyltin dilaurate 77-58-7	<0.2	-201-039-8	Not available	Xi; R36/38 Xn; R48/22 N; R50/53	Eye Irrit. 2 (H319) Skin Sens. 1 (H317)
Triphenylstibine 603-36-1	<0.2	210-037-6	Not available	Xi; R36/38 Xn; R48/22	Eye Irrit. 2 (H319)

4. FIRST AID MEASURES

DESCRIPTION OF FIRST AID MEASURES

Eye Contact:

Rinse immediately with plenty of water for at least 15 minutes. Obtain medical advice if there are persistent symptoms.

Skin Contact:

Remove contaminated clothing and shoes without delay. Wash immediately with plenty of water. Do not reuse contaminated clothing without laundering. Get medical attention if pain or irritation persists after washing or if signs and symptoms of overexposure appear.

Ingestion:

If swallowed, call a physician immediately. Only induce vomiting at the instruction of a physician. Never give anything by mouth to an unconscious person.

Inhalation:

Material is not expected to be harmful if inhaled. Remove to fresh air.

MOST IMPORTANT SYMPTOMS AND EFFECTS,

INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDS

General Information

In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person.

5. FIRE-FIGHTING MEASURES

EXTINGUISHING MEDIA

Suitable Extinguishing Media:

Use water spray or fog, carbon dioxide or dry chemical.

Extinguishing Media to Avoid:

high pressure water jet.

SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE

Keep containers cool by spraying with water if exposed to fire.

ADVICE FOR FIREFIGHTERS

Protective Equipment:

Firefighters, and others exposed, wear self-contained breathing apparatus. Wear full firefighting protective clothing. See MSDS Section 8 (Exposure Controls/Personal Protection).

6. ACCIDENTAL RELEASE MEASURES

Where exposure level is not known, wear approved, positive pressure, self-contained respirator. Where exposure level is known, wear approved respirator suitable for level of exposure. In addition to the protective clothing/equipment in Section 8 (Exposure Controls/Personal Protection), wear impermeable boots.

Environmental Precautions:

None known

Methods and material for containment and cleaning up:

Cover spills with some inert absorbent material; sweep up and place in a waste disposal container. Flush spill area with water.

References to other sections:

See Sections 8 and 13 for additional information.

7. HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING

Precautionary Measures: Avoid contact with eyes, skin and clothing. Avoid prolonged or repeated contact with skin. Use with adequate ventilation. Keep container tightly closed. Wash thoroughly after handling.

Special Handling Statements: Provide good ventilation of working area (local exhaust ventilation if necessary).

Conditions for safe storage, including any incompatibilities:

Store in a cool, dry, well ventilated place and keep container tightly closed. Keep away from heat sources and direct sunlight.

Storage Temperature: Store at 4 - 40 °C

Reason: Quality.

VCI Storage Class: 10

Specific end use(s): Composite field repair.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

CONTROL PARAMETERS

77-58-7

Dibutyltin dilaurate

United Kingdom: WEL (Workplace Exposure Limits)

0.1 mg/m³ (TWA)

Europe ILV (Indicative Limit Values):

Not established

9. PHYSICAL AND CHEMICAL PROPERTIES

INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

Colour:	colorless to straw
Appearance:	clear viscous liquid
Odor:	acrylate
Boiling Point:	>100 °C
Melting Point:	Not available
Vapor Pressure:	<0.013 hPa @ 20 °C
Specific Gravity/Density:	1.05
Vapour density:	Not available
Percent Volatile (% by wt.):	Not available
Solids Content:	>=99%
pH:	Not available
Saturation In Air (% By Vol.):	Not available
Evaporation Rate:	Not available
Solubility In Water:	slightly soluble
Acid Number (mg KOH/g):	Not available
Hydroxyl Value (mg KOH/g):	Not available
Volatile Organic Content(1999/13/EC):	Not available

Flash point: >100 °C Setflash
Flammable Limits (% By Vol): Not available
Autoignition temperature: Not available
Decomposition Temperature: Not available
**Partition coefficient (noctanol/
water):** Not available
Fat Solubility (Solvent-Oil): Not available
Viscosity (Kinematic): Not available
Viscosity (Dynamic): 6000 - 9000 mPa.s @ 25 °C

10. STABILITY AND REACTIVITY

Reactivity: No information available

CHEMICAL STABILITY

Stability: Stable

Conditions To Avoid: Avoid direct exposure to sunlight. Avoid temperatures above 60°C (140°F). Avoid friction with temperature increase as result. Avoid exposure to strong UV sources.

Loss of dissolved air. Loss of polymerization inhibitor. Avoid direct contact with heat sources.

POSSIBILITY OF HAZARDOUS REACTIONS

Polymerization: May occur

Conditions To Avoid: Uncontrolled polymerization may cause rapid evolution of heat and increase in pressure that could result in violent rupture of sealed storage vessels or containers. Hazardous polymerization can occur when exposed to direct sunlight. Hazardous exothermic polymerization can occur when heated. Avoid contact with bases or amines. Avoid contact with strong oxidizing agents. Avoid contact with free radical initiators.

Incompatible materials: Avoid contact with peroxides. Copper, copper alloys, carbon steel, iron and rust.

Avoid free radical producing initiators. Contact with alkalis. They give an exothermic reaction with the product.

Unintentional contact with them should be avoided. Avoid contact with active metals. Hazardous polymerization may occur.

Hazardous Decomposition

Products:

oxides of carbon

smoke

hydrocarbons

soot

11. TOXICOLOGICAL INFORMATION

INFORMATION ON TOXICOLOGICAL EFFECTS

Likely Routes of Exposure: Eyes, Skin, Oral.

Acute toxicity - oral: Not classified - Based on available data and/or professional judgment, the classification criteria are not met.

Acute toxicity - dermal: Not Classified - Based on available data and/or professional judgment, the classification criteria are not met.

Acute toxicity - inhalation: Not Classified - Based on available data and/or professional judgment, the classification criteria are not met.

Skin corrosion / irritation: Not Classified - Based on available data and/or professional judgment, the classification criteria are not met.

Serious eye damage / eye irritation: Causes serious eye irritation.

Respiratory sensitization: Not Classified - Based on available data and/or professional judgment, the classification criteria are not met.

Skin sensitization: May cause an allergic skin reaction.

Carcinogenicity: Not Classified. - Based on available data and/or professional judgment, the classification criteria are not met.

Germ cell mutagenicity: Not Classified. - Based on available data and/or professional judgment, the classification criteria are not met.

Reproductive toxicity: Not Classified. - Based on available data and/or professional judgment, the classification criteria are not met.

Specific target organ toxicity (STOT) - single exposure: Not Classified. - Based on available data and/or professional judgment, the classification criteria are not met.

Specific target organ toxicity (STOT) - repeated exposure: Not Classified. - Based on available data and/or professional judgment, the classification criteria are not met.

Aspiration hazard: Not Classified. - Based on available data and/or professional judgment, the classification

criteria are not met.

PRODUCT TOXICITY INFORMATION

ACUTE TOXICITY DATA

Oral	rat	Acute LD50	>2000 mg/kg
Dermal	rabbit	Acute LD50	>2000 mg/kg
Inhalation	rat	Acute LDC50 4 hr	>5 mg/l

LOCAL EFFECTS ON SKIN AND EYE

Acute Irritation	eye	irritating (tested)
Acute Irritation	dermal	Not irritating

ALLERGIC SENSITIZATION

Sensitization	respiratory	No data
Sensitization	Skin	Sensitizing

GENOTOXICITY

Assays for Gene Mutations

Ames Salmonella Assay	No data
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OTHER INFORMATION

The toxicity data above are the results from Cytec sponsored studies or from the available public literature.

The toxicological properties of this material have not been fully determined.

Prolonged or repeated contact with skin or mucous membrane may result in irritation symptoms such as redness, blistering, dermatitis, etc.

The inhalation of airborne droplets or aerosols may cause irritation of the respiratory tract.

HAZARDOUS INGREDIENT TOXICITY DATA

ACUTE TOXICITY DATA

Dibutyltin dilaurate	
oral (gavage) rat Acute LD50 (Actual)	175 mg/kg
dermal rabbit Acute LD50 (Actual)	~ 6800 mg/kg
Triphenylstibine	
oral (gavage) rat Acute LD50 (Actual)	< 100 mg/kg
dermal rabbit Acute LD50 (Actual)	> 200 mg/kg

LOCAL EFFECTS ON SKIN AND EYE

Acrylated resin	
Acute Eye Irritation rabbit	irritating
Acute Dermal Irritation rabbit	Irritating

12. ECOLOGICAL INFORMATION

The ecological properties of this material have not been fully investigated.

13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods

The Company encourages the recycle, recovery and reuse of materials, where permitted. If disposal is necessary, The Company recommends that organic materials, especially when classified as hazardous waste, be disposed of by thermal treatment or incineration at approved facilities. All local and national regulations should be followed.

14. TRANSPORT INFORMATION

This section provides basic shipping classification information. Refer to appropriate transportation regulations for specific requirements.

ADR/RID/ADN

Dangerous Goods? Not applicable/Not regulated

IMO

Dangerous Goods? Not applicable/Not regulated

ICAO / IATA

Dangerous Goods? Not applicable/Not regulated

15. REGULATORY INFORMATION

LABELING ACCORDING TO EC DIRECTIVES

Symbol(s): Xi – Irritant

Risk Phrases:

R36/38 - Irritating to eyes and skin.

Safety Phrases:

S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S28 - After contact with skin, wash immediately with plenty of soap and water.

HAZARDOUS INGREDIENTS

No Hazardous Ingredients for Label

SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS / LEGISLATION SPECIFIC FOR THE SUBSTANCE OR MIXTURE

Ozone Depleting Substances (Regulation (EC) No 1005/2009): Not applicable

Persistent Organic Pollutants (Regulation (EC) No 850/2004): Not applicable

Substances subject to Authorization (Annex XIV of Regulation (EC) No 1907/2006): Not applicable

Water Endangering Class (Germany): 2 according to VwVwS, 17.05.1999

Inventory Information**United States (USA):**

All components of this product are included on the TSCA Chemical Inventory or are not required to be listed on the TSCA Chemical Inventory.

Canada:

All components of this product are included on the Domestic Substances List (DSL) or are not required to be listed on the DSL.

Australia: All components of this product are included in the Australian Inventory of Chemical Substances (AICS) or are not required to be listed on AICS.

China: All components of this product are included on the Chinese inventory or are not required to be listed on the Chinese inventory.

Japan: All components of this product are included on the Japanese (ENCS) inventory or are not required to be listed on the Japanese inventory.

Korea: All components of this product are included on the Korean (ECL) inventory or are not required to be listed on the Korean inventory.

Philippines: All components of this product are included on the Philippine (PICCS) inventory or are not required to be listed on the Philippine inventory.

16. OTHER INFORMATION

Reasons for Issue: New Format

Classification methods include one or more of the following: use of specific product data, read-across data, modeling, professional judgment or a component based evaluation.

Component Risk and Hazard Phrases

Acrylated resin

R36/38 - Irritating to eyes and skin.

Dibutyltin dilaurate

R36/38 - Irritating to eyes and skin.

R48/22 - Harmful: danger of serious damage to health by prolonged exposure if swallowed.

R50/53 - Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Triphenylstibine

R20/22 - Harmful by inhalation and if swallowed. H302 - Harmful if swallowed.

R51/53 - Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

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