



## MATERIAL SAFETY DATA SHEET

### SECTION 1 – CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Supplier Eli-Chem Resins, Astra House, The Common  
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Product Name: Eli-Flex FR993 Resin  
Product Use/Class: Polyurethane Resin 02.07.2013  
Supersedes Previous Revision: New

### SECTION 2 – COMPOSITION / INFORMATION ON INGREDIENTS

Resin

Chemical Name	CAS No.	Wt % Less than	Exposure Guidelines					
			ACGIH		OSHA		Units	Skin
			TWA	STEL	TWA	Ceil		
Polyether / polyester Polyols	Not classified	60- 100%	N/A	N/A	N/A	N/A	N/A	N/A

Any hazardous components, both singularly and cumulatively are below the concentrations at which they need to be declared or classified

Hardener

Chemical Name	CAS No.	Wt % Less than	Exposure Guidelines					
			ACGIH		OSHA		Units	Skin
			TWA	STEL	TWA	Ceil		
Aromatic Di- Isocyanate	9016-87-9	60%				N.E.		

\*Proprietary

N.E. = Not Established

S = Skin

C = Ceiling

### SECTION 3 – HAZARDOUS IDENTIFICATION

**EMERGENCY OVERVIEW:** Resin Clear / Transparent Paste with no odour. Non-flammable thixotropic paste . Supplied with a black hardener which is non-flammable and with no vapour. May cause skin and eye irritation. Not regarded as a health or environmental hazard under current legislation.

#### EFFECTS OF OVER-EXPOSURE

*Eye Contact:* Can cause eye irritation.

*Skin Contact:* Generally harmless, but may cause skin sensitisation.

*Inhalation:* Possible irritation of the respiratory system can occur causing a variety of symptoms such as dryness of the throat, tightness of the chest, and shortness of breath.

*Ingestion:* Harmful if swallowed. Ingestion is not an expected route of entry in industrial or commercial uses.

*Chronic Hazards:* Repeated or prolonged skin contact may cause dermatitis.

**PRIMARY ROUTE(S) OF ENTRY:** Skin contact, inhalation, ingestion, eye contact.

#### SECTION 4 – FIRST AID MEASURES

##### FIRST AID

*Eye contact:* Flush eyes immediately with large amounts of water for at least 15 minutes holding eyelids open while flushing. Get prompt medical attention.

*Skin Contact:* Flush contaminated skin with large amounts of water while removing contaminated clothing. Wash affected skin areas with soap and water. Get medical attention if symptoms occur.

*Inhalation:* Move person to fresh air. Restore and support continued breathing. If breathing is difficult, give oxygen. Get immediate medical attention.

*Ingestion:* If swallowed, do not induce vomiting. Give one or two glasses of water or milk. Call a physician or poison control centre immediately for further instructions. Never give anything by mouth to an unconscious person.

#### SECTION 5 – FIRE FIGHTING MEASURES

Resin FR993

Flash Point (Setaflash closed cup)	>160°C
OSHA Flammability Classification	Non-Flammable P.U Compound
Extinguishing Media	CO <sub>2</sub> Dry Chemical Foam Water Fog

Hardener FR993

Flash Point (Setaflash closed cup)	> 150°C
OSHA Flammability Classification	Non-Flammable
Extinguishing Media	CO <sub>2</sub> Dry Chemical Foam Water Fog

**UNUSUAL FIRE AND EXPLOSION HAZARDS:** Resin non-flammable. Keep containers tightly closed. Isolate from heat, open flame and other sources of ignition. Closed containers may rupture when exposed to extreme heat. Use water spray to keep fire exposed containers cool.

**SPECIAL FIREFIGHTING PROCEDURES:** Wear full fire fighting protective clothing, including self-contained breathing apparatus (SCBA). Water spray may be ineffective. If water is used, fog nozzles are preferable. During a fire, irritating and/or toxic gases and particulate may be generated by thermal decomposition or combustion.

#### SECTION 6 – ACCIDENTAL RELEASE MEASURES

**STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:** No special provisions are required or personal protection equipment. Wear sensible industrial clothing and launder after use. Do not empty into drains.

#### SECTION 7 – HANDLING AND STORAGE

**HANDLING:** No specific handling precautions.

**STORAGE:** Store in well-ventilated areas. Do not puncture, drag or slide container.

#### SECTION 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

**ENGINEERING CONTROLS:** Sufficient ventilation in pattern and volume should be provided in order to maintain air contaminate levels below recommended exposure limits.

**RESPIRATORY PROTECTION:** No specific recommendations made.

**SKIN PROTECTION:** Use neoprene, nitrile, or rubber gloves to prevent skin contact. Use long sleeves.

**EYE PROTECTION:** Use safety eye-wear including safety glasses with side shields and chemical goggles where splashing may occur.

**OTHER PROTECTIVE EQUIPMENT:** Use disposable or impervious clothing if work clothing contamination is likely. Remove and wash contaminated clothing before re-use.

**HYGIENIC PRACTICES:** Wash hands thoroughly before eating, smoking or using the toilet facility. Do not smoke in any chemical handling or storage area. Food or beverages should not be consumed anywhere this product is handled or stored. Wash thoroughly after handling.

## SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Resin FR993

Flash Point ( DIN 51755 )	>160°C
Appearance	Cream / White
Physical State	Thixotropic Paste
Odour	None
Solubility in H <sub>2</sub> O	Insoluble
Vapour Pressure	Low
Vapour Density	Is heavier than air
Specific Gravity	1,06 g/cm <sup>3</sup>
PH	N.A.

Hardener FR993

Flash Point (DIN 51755 )	>200°C
Appearance	Clear liquid
Physical State	Non-flowing paste
Odour	None
Solubility in H <sub>2</sub> O	Insoluble
Specific Gravity	0,95 g/cm <sup>3</sup>
PH	N.A.

## SECTION 10 – STABILITY AND REACTIVITY

**CONDITIONS TO AVOID:** High temperatures. Sources of ignition.

**HAZAROUS DECOMPOSITION PRODUCTS:** No hazardous decomposition when stored and handled correctly. Carbon dioxide, carbon monoxide may be products of thermal decomposition.

**HAZAROUS POLYMERIZATION:** Will not occur under normal conditions.

**STABILITY:** This product is stable under normal storage conditions.

## SECTION 11 – TOXICOLOGICAL PROPERTIES

Product can be sensitising on skin and eyes.

## SECTION 12 – ECOLOGICAL INFORMATION

Not regarded as dangerous to the environment

## SECTION 13 – DISPOSAL CONSIDERATIONS

**DISPOSAL METHOD:** No specific recommendations. Follow local authority guidelines

**SECTION 14 – TRANSPORTATION INFORMATION**

Resin FR993

DOT Proper Shipping Name	Aromatic Diamine Resin
DOT Hazard Class	Not classified
DOT UN/NA Number	Not classified
Emergency Response Guide Number	26
Packing Group	II

Hardener FR993 (if shipped separately)

DOT Proper Shipping Name	Aromatic Diamine
DOT Hazard Class	Not classified
DOT UN/NA Number	Not classified
Emergency Response Guide Number	26
Packing Group	II

**SECTION 15 – REGULATORY INFORMATION**

Label for supply : Resin : None, Hardener : Harmful

Xn:R20, R36/37/38-42

Polyurethane resins are defined as “ non-hazardous “ in the Chemicals Hazard Information and Packaging regulations ( CHIP )

**SECTION 16 – OTHER INFORMATION**

**The product is intended for use by skilled or experienced personnel for the intended application as recommended by us.**

The information contained herein is based on data available to us and is believed to be correct. Since this information may have been obtained in part from independent laboratories or other sources not under our direct supervision, no representation is made that the information is accurate, reliable, complete or representative and the Buyer may rely thereon only at the Buyer's risk. We make no guarantee that the health and safety precautions we have suggested will be adequate for all individuals and/or situations involving its handling and use.

Last revision 02.07.2013