



**5. FIRE FIGHTING MEASURES**

- 5.1 Extinguishing Media Fight fire with water spray, foam, dry chemical powder or carbon dioxide. Do not use water jet.
- 5.2 Explosion Hazard Risk of drums bursting in a fire causing explosion. Keep drums cool by spraying with water.
- 5.3 Special Exposure Hazards Preparation contains halogenated polymers which may give rise to toxic and corrosive combustion products such as hydrochloric acid.
- 5.4 Personal Protection Wear self contained breathing apparatus.

**6. ACCIDENTAL RELEASE MEASURES**

- 6.1 Fire hazard Remove all sources of ignition. Do not smoke.
- 6.2 Personal Protection Avoid contact with skin and eyes and avoid breathing the vapours. Wear goggles, gloves and respiratory protection where there is a risk of exposure to high vapour concentrations.
- 6.3 Environmental Precautions Prevent liquid entering sewers, basements and work pits where vapour may create an explosive atmosphere. If substance has entered drains inform police or fire service.
- 6.4 Clean-up of Spillages Absorb liquid in sand or earth and then remove to suitable place for subsequent disposal.

**7. HANDLING AND STORAGE**

- 7.1 Precautions during Handling Avoid inhaling vapour, avoid contact with skin and eyes. Handle in well ventilated area. All storage and transfer systems should be earthed to prevent build up of static electricity.
- 7.2 Precautions during Storage Store in accordance with the highly flammable liquids regulations. Temperatures in storage areas should not exceed 25°C. Drums should always be tightly closed after use.
- 7.3 Packaging Materials Mild steel, stainless steel. Many plastics are unsuitable.

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

## 8.1 Exposure Limits

	<u>STD</u>	<u>Long Term Exposure</u>	<u>Short Term Exposure</u>
Ethyl Acetate	OES	400 ppm-1400 mg/m <sup>3</sup>	
Acetone	OES	750ppm -1780 mg/m <sup>3</sup>	1500 ppm -3560 mg/m <sup>3</sup>
Toluene	OES	50ppm - 188 mg/m <sup>3</sup>	150 ppm - 560 mg/m <sup>3</sup>
Mixed Hydrocarbons	OES	250ppm	

- 8.2 Ventilation Ensure good ventilation by means of extraction (local exhaust ventilation) at point of use where necessary.

### 8.3 Personal Protective Equipment

Respiratory	Wear respiratory equipment where there is a risk of exposure to high vapour concentrations, i.e. above OES.
Hand	Wear gloves.
Eye	Wear chemical goggles.
Skin	Wear protective clothing.

## **9. PHYSICAL AND CHEMICAL PROPERTIES**

9.1 Appearance	Amber coloured liquid
9.2 Odour	Pungent
9.3 pH	N/A
9.4 Boiling Point	56°C (Acetone)                      70 - 90°C (Mixed Hydrocarbons) 110°C (Toluene)                      77°C (Ethyl Acetate)
9.5 Melting Point	N/A
9.6 Flash Point	-30°C (closed cup)
9.7 Flammability	Highly Flammable Liquid
9.8 Auto Ignition temperature	230°C (Mixed Hydrocarbons)
9.9 Explosion Limits in Air % V/V	LEL 0.9 UEL 13.0
9.10 Oxidising Properties	N/A
9.11 Viscosity at 20°C	Approx 4,000 cP
9.12 Vapour pressure @ 20°C Kpa	10.7 Ethyl Acetate                      24.1 Acetone 2.93 Toluene                              22.6 Mixed Hydrocarbons
9.13 Relative Density @ 20°C	0.85
9.14 Solubility	(i) Water - Acetone soluble - rest insoluble (ii) Fat - soluble in hydrocarbons, ketones and esters.

## **10. STABILITY AND REACTIVITY**

10.1 Although the preparation is stabilised, halogenated polymers can undergo dehydrohalogenation especially at elevated temperatures with the possible liberation of corrosive hydrochloric acid fumes.

## **11. TOXICOLOGICAL INFORMATION**

11.1 LD50 oral (Rats)	Acetone	3.98 g /kg
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		Toluene	5.50g/kg
11.2 LD50 Dermal (Rabbits)		Acetone	Greater than 8.0 ml/kg
11.3 LC50 Inhalation (Rats)		Acetone	Not known
		Toluene	4600 ppm
11.4 Effects of Exposure			
(i)	Eyes	May cause conjunctive irritation and corneal damage	
(ii)	Skin	Mild irritant but prolonged contact can cause more severe effects such as dermatitis.	
(iii)	Inhalation	Irritation of the respiratory tract. High concentrations may depress CNS with loss of consciousness.	
(iv)	Ingestion	Low acute toxicity, may cause gastro intestinal irritation and CNS depression leading to unconsciousness. Aspiration into lungs may cause chemical pneumonitis and lung damage.	

## **12. ECOLOGICAL INFORMATION**

12.1 Mobility	Not known
12.2 Persistence and Degradability	Acetone is very readily biodegradable, the main hazard in surface waters being oxygen depletion. Toluene is readily biodegradable. It will float on water but evaporates rapidly.
12.3 Bioaccumulation	Acetone does not bioaccumulate and Toluene has low potential to bioaccumulate.
12.4 Ecotoxicity	Acetone is considered to be an insignificant toxic hazard to aquatic organisms and at most slightly toxic to mammalian wildlife. Toluene is only slightly toxic to aquatic organisms but harmful to mammalian wildlife.

## **13. DISPOSAL CONSIDERATIONS**

13.1 Waste Disposal	Disposal of the wet adhesive is governed by the Control of Pollution (Special Wastes) Regulations 1980. Non-recoverable waste should be disposed of via a licensed waste disposal contractor. Dried material is non-hazardous.
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## **14. TRANSPORT INFORMATION**

14.1 UN No.	1133
14.2 CHIP Label for Conveyance	Highly Flammable

## **15. REGULATORY INFORMATION**

15.1 CHIP Regulation 9 Label for supply	Highly Flammable	
15.2 Classification	F and Xn	
15.3 CHIP Risk Phrases	R-11	Highly Flammable.

R - 20

Harmful by Inhalation

## 15.4 CHIP Safety Phrases

S9 Keep containers in a well ventilated place  
S16 Keep away from sources of ignition. NO SMOKING  
S23 Do not breathe vapour  
S25 Avoid contact with eyes  
S29 Do not empty into drains  
S33 Take precautionary measures against static discharges  
S51 Use only in well ventilated areas

## 15.5 Regulatory References

CHIP Regulations 1990, Highly Flammable, Liquid Regulations 1972, Health and Safety at Work Act 1974, COSHH Regulations 1988.

**16. OTHER INFORMATION**

## 16.1 User Notes

This adhesive should be used in accordance with the suppliers recommendations.

## 16.2 Information Sources

CHIP Approved Supply List  
CHIP Approved Guide to the Classification and Labelling of Substances and Preparations dangerous for supply.  
CHIP Approved Carriage List  
Raw Material Suppliers Literature  
Occupation Exposure Limits 1994 (EH4O)