



Material Safety Data Sheet

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1. IDENTIFICATION OF THE SUBSTANCE

Product name : **ACRI-BOND 120**
Supplier : **Acrylic Technologies Australia Pty Ltd**
Tel : 1300 788 907
Fax : 02 9639 1051
Mobile : 0414 26 09 58
E-mail : acrylictech@bigpond.com

Composition : CAS-No.778-93-3 Methyl Ethyl Ketone - **MEK**-Approx. 70%
CAS-No.109-99-9 Tetrahydrofuran - **THF**- Approx. 30 %

Recommended use : Industrial adhesive for various plastic materials

Appearance : Clear liquid with a characteristic odour.

2. HAZARDS IDENTIFICATION

ACRI-BOND 120 IS HAZARDOUS SUBSTANCE ACCORDING TO WORKSAFE CRITERIA

Classified as Dangerous Goods for the purpose of transport by road or rail. Refer to relevant regulations for storage and transport requirements.

Class : 3A Flammable Liquid

Poison Schedule : S4

3. FIRST AID MEASURES

Ingestion : Immediately rinse mouth with water. Give water to drink. Do NOT induce vomiting. If vomiting occurs, place victim's face downwards, head lower than hips to prevent vomit entering lungs. Seek immediate medical assistance.

Eye contact : Immediately irrigate with copious quantity of water for at least 15 minutes. Eyelids to be held open. Remove clothing if contaminated and wash skin. Urgently seek medical assistance.

Skin contact : Immediately wash contaminated skin with plenty of water. Remove contaminated clothing and wash before reuse. If irritation occurs seek medical advice.

Inhalation : Remove victim from exposure-avoid becoming a casualty. Remove contaminated clothing and wash before reuse. Allow patient to assume most comfortable position and keep warm. Keep at rest until fully recovered. If breathing laboured and patient cyanotic (blue), ensure airways are clear and have qualified person give oxygen through face mask. If breathing has stopped apply artificial respiration at once. In event of cardiac arrest, apply external cardiac massage. Seek medical advice.

Notes to physician : Treat symptomatically. Pulmonary oedema is a possible complication following aspiration of the material.



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4. FIRE-FIGHTING MEASURES

Specific hazard :

Highly flammable liquid and vapour. Avoid all ignition sources. Vapour may travel a considerable distance to source of ignition and flash back. Flameproof equipment necessary in area where this product is being used. Nearby equipment must be earthed.

Fire fighting further advice :

Highly flammable liquid. On burning will emit toxic fumes including those of carbon dioxide and carbon monoxide. Heating can cause expansion or decomposition leading to violent rupture of containers. If safe to do so, remove containers from path of fire. Keep containers cool with water spray. Fire fighters to wear self-contained breathing apparatus if risk of exposure to products of decomposition.

Suitable extinguishing media :

For small fires use foam, dry agent (carbon dioxide, dry chemical powder), fog in large quantities. For large fires use foam or water fog (or if unavailable fine water spray). Water may be ineffective but should be used to cool fire exposed structures.

5. ACCIDENTAL RELEASE MEASURES

Shut off all possible sources of ignition. Wear protective equipment to prevent skin and eye contamination and inhalation of vapours. Contain- prevent contamination of drains and waterways. Use absorbent (soil or sand, inert material). Collect and seal in properly labelled drums for disposal.

6. HANDLING AND STORAGE

Storage :

Store in well ventilated area. Store away from oxidising agents. Store away from sources of heat or ignition. Keep containers closed at all times and check regularly for leaks. This material is a toxic substance S4 and must be stored, maintained and used in accordance with the relevant regulations. To reduce possibility of peroxide formation Quick-Bond 20 should be stored in cool conditions away from light and under inert gas (nitrogen). Periodical checks should be carried out on the peroxide content, which should not be allowed to rise above 0.1%. Starch iodine paper can be used to test for the presence of peroxides.

7. EXPOSURE CONTROLS / PERSONAL PROTECTION

National occupational exposure limits :	TWA		STEL		CARCINOGEN CATEGORY
	ppm	mg/m3	ppm	mg/m3	
Methyl Ethyl Ketone - MEK	150	445	300	890	
Tetrahydrofuran - THF	100	295			

As published by New Zealand Occupational Safety and Health Service (OSH)

WES-TWA Work Exposure Standard - is the Time Weighted Average airborne concentration over an eight-hour working day, for a five day working week, over an entire working life. According to current knowledge this concentration should neither impair the health or, not cause undue discomfort to nearly all workers.

WES-STEL Work Exposure Standard - Short Term Exposure Limit is the average airborne concentration over a 15 minute period which should not be exceeded at any time during a normal eight hour work day.



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These Workplace Expose Standards are guidelines to be used in the control of occupational health hazards. All atmospheric contamination should be kept to as low a level as is workable. **WES** should not be used as fine dividing lines between safe and dangerous concentration of chemicals. They are not a measure of relative toxicity.

Personal Protection Equipment : H-Overalls, Safety shoes, Chemical goggles, Gloves (S), Respirator.

Avoid skin and eye contact and inhalation of vapour. Wear overalls, chemical goggles and impervious gloves. Use with adequate ventilation. If inhalation risk exists wear organic vapour respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using.

8. PHYSICAL AND CHEMICAL PROPERTIES

Form/Colour/Odour : Clear colourless liquid with a characteristic odour. Odour treshold: 2 ppm.

	MEK	THF
Specific gravity (20 C)	0.81	0.89
Rel. Vapour Density (air=1)	2.42	2.5
Vapour Pressure (20 C)	9.4 kPa	19.3 kPa
Flammability Limits (%)	1.8-11.5	2-11.8
Autoignition Temperature (C)	515	321
Melting Point (C)	-86	-108.5
Boiling Point (C)	79.6	66
Viscosity	N Av	N Av
Solubility in Water (g/L)	N Av	30 % @ 25 C
Evapotation Rate	5.6	3
Flash Point (C)	7	14
pH	N Av	N Av
% Volatile by volume	100	100

N Av = Not available
N App- Not applicable

9. STABILITY AND REACTIVITY

Stability: Incompatible with strong alkalis, hydrochloric acid, sulphuric acid, and other strong inorganic acids, oxidising agents, amines, rubber, polyethylene and PVC, and most tank linings. THF may form explosive peroxides and react violently with air on standing, lithium aluminium hydride, potassium hydroxide, sodium aluminium hydride and sodium hydroxide.

10. TOXICOLOGICAL INFORMATION

Main symptoms :

No adverse health effects expected if the product is handled in accordance with this Safety Data Sheet and product label. Symptoms that may arise if the product is mishandled are:

Ingestion :

Will cause corrosion and damage of the gastrointestinal tract (1). Swallowing can result in nausea, vomiting, and central nervous system depression. Small amounts of liquid aspirated into the respiratory system during ingestion or from vomiting may cause broncho-pneumonia or pulmonary oedema (2).



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Eye contact :

Liquid and vapours are irritating to eyes. Contact can cause corneal injury.(1)

Skin contact :

The liquid can be absorbed through the skin. Contact with skin may result in irritation. Will have degreasing action on the skin. Repeated or prolonged contact may lead to irritant contact dermatitis. Unlikely to cause skin sensitisation (4).

Inhalation :

Vapour may be irritant to mucous membranes and respiratory tract.(4) Inhalation of vapours can result in headaches dizziness and possible nausea. Inhalation of very high concentrations can produce central nervous system depression, which can lead to loss of co-ordination, impaired judgement and if exposure is prolonged, unconsciousness.

Long term effects :

Tests in animals at concentrations much greater than the occupational exposure limit have shown serious health effects.(5) Repeated or prolonged exposure to THF could result in liver and kidney damage.

Acute Toxicity/Chronic Toxicity :

Oral LD50(rat): 2737 mg/kg (3)

Inhalation LC50(rat): 23500 mg/m³/8 hr (3)

Dermal LD50(rabbit): 5000-13000 mg/kg (4)

Eyes (Rabbit): Moderate irritant. Eye irritation reported in humans exposed to vapour at 350 ppm (1).

THF

Oral LD50(rat): 3000 mg/kg

Inhalation LC50(rat): 21000 ppm/3 hr

Mutagenicity:

MEK has been shown to be without genotoxic activity in a variety of in vitro and in vivo tests. Among these tests which produced negative results are assays for point mutation, chromosomal aberration, DNA damage and morphologic transformation(4).

No adverse effects on blood count, blood pressure, pulmonary function, neurological function cognitive function, alertness and coordination were detected when healthy adults were exposed repeatedly to up to 250 ppm of DCM for 7.5 hrs/day, 5 days/week for two weeks or in the case of the male subjects, at 500 ppm on two consecutive days (4). Several major studies on human workers showed no casual relationship between exposure to DCM and an increase in the evidence of cancer (1).

Reproductive effects:

No human studies have been reported. An animal inhalation study with rats indicated fetotoxicity (delayed foetal development) and possible teratogenicity at 3000 ppm. However, a comprehensive follow-up study in rats showed only slight fetotoxicity accompanied by maternal toxicity at 3000 ppm, but no teratogenic effects. No significant differences were seen between rats exposed to 1000 ppm or 400 ppm MEK and the control. Likewise, an inhalation study with mice showed only fetotoxicity at 3000 ppm and no effects at 1000 ppm or 400 ppm MEK.(4).

MEK is not neurotoxic. It has been shown to potentiate the neurotoxic effects of hexane, 2,5-hexanedione and methyl-n-butyl ketone and has also potentiated the liver toxicity of halogenated solvents in animal studies (4).

MEK is not a skin sensitiser based on human patch test (4).



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11. TRANSPORT INFORMATION

Classified as Dangerous Goods for the purpose of transport by road or rail. Refer to relevant regulations for storage and transport requirements.

ACRIBOND 120 as a mixtrure	MEK	THF
UN-No : 1193	1103	2056
Class : 3A Flammable liquid	3A Flammable liquid	3 Flammable liquid
Hazchem code : 2 (Y) E	2[Y]E	2[Y]E
Packing group : 2	2	2
EPG :		
Shipping Name: Flammable Liquid, N.O.S.		

Segregation Dangerous Goods : Not to be loaded with explosives (Class 1), flammable gases (Class 2), toxic gases (Class 2.3), spontaneously combustible substances (Class 4.2), oxidizing substances (Class 5.1), organic peroxides (Class 5.2), or radioactive materials (Class 7), unless specifically exempted.

12. DISPOSAL CONSIDERATIONS

Refer to Local City, District or regional Council Waste Management Authority. Transfer solvent residues to a labeled, sealed container for disposal or recovery. Waste disposal must be an accredited contractor.

13. OTHER INFORMATION

- (1) Hazard Data Sheet - Methyl Ethyl Ketone, ICI UK Pty Ltd, 01/91
- (2) Supplier's Material Safety Data Sheet- Exxon MEK; Exxon Chemical australia Ltd, 06/02/94
- (3) In 'Registry of Toxic Effects of Chemical Substances 1995', (Ed. D. Sweet), (US Dept. of Health and Human Services ; Cincinatti 1995)
- (4) Supplier's Material Safety Data Sheet- Methyl Ethyl Ketone; Hoechst Celanese Chemical Group, Dallas, USA; 07/07/97
- (5) Toxicology Profile for 2 Butanone; Us Department of Health and Human Services, p.3; 07/92.

This Material Safety Data Sheet summarises at the date of issue our best knowledge of the health and safety hazard information of the product, and in particular how to safely handle and use the product in the workplace. Since Adhesive Solutions Australia can not anticipate or control the conditions under which the product may be used, each user must, prior to usage, review this MSDS in the context of how the user intends to handle and use the product in the workplace.



ACRI-BOND 120

CLEAR, THICKENED,
FAST SETTING
SOLVENT CEMENT

INDUSTRIAL USE ONLY



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