

Material Safety Data Sheet

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

SUPPLIER **ACM Pty Ltd**
 ABN 55 064 142 212
 Address: 47 Industrial Park Drive, Lilydale, Victoria 3140, AUSTRALIA
 Telephone: +61 3 9739 4911
 Emergency Telephone No: +61 3 9739 4911 (Monday to Friday, 8:30 am – 5:00 pm).

PRODUCT **Product Name:** PVC-U Pipe Cement - Type P
Other Names: ADHESIVES containing flammable liquid
Manufacturer's Code: 104/105

USE For bonding PVC-U pipes and fittings in pressure applications. Apply by brush.

2. HAZARDS IDENTIFICATION

HAZARD CLASSIFICATION **NOHSC Classification:** Hazardous Substance
ADG Classification: Dangerous Goods, Class 3
SUSDP Classification: Not scheduled

RISK PHRASES

R20	Harmful by inhalation.
R36/37	Irritating to eyes and respiratory system.
R65	Harmful: may cause lung damage if swallowed.
R66	Repeated exposure may cause may cause skin dryness or cracking.
R67	Vapours may cause drowsiness and dizziness.

SAFETY PHRASES

S2	Keep out of reach of children.
S9	Keep container in a well ventilated place.
S16	Keep away from ignition sources - No smoking.
S25	Avoid contact with eyes.
S29	Do not empty into drains.
S33	Take precautionary measures against static discharges.

3. COMPOSITION/INFORMATION ON INGREDIENTS

MIXTURE	CHEMICAL ENTITY	CAS No	PROPORTION
	Cyclohexanone	108-94-1	30 - 60 %
	Tetrahydrofuran	109-99-9	30 - 60 %
	PVC homopolymer	9002-86-2	10 - < 30%
	Other ingredients determined not to be hazardous	Not applicable	< 1%

4. FIRST AID MEASURESFIRST AID

Swallowed: For advice, call a Poisons Information Centre or a doctor at once. Do NOT induce vomiting. If spontaneous vomiting occurs, keep head below the hips to prevent aspiration into lungs .

Eyes: Can stick eyelids together. If in eye, irrigate immediately with copious amounts of water for 15 minutes with eyelids held open. Seek medical advice immediately.

Skin: Wash affected areas with soap and copious quantities of water immediately. Remove contaminated clothing and footwear. Decontaminate footwear and wash clothing before reuse. Seek medical advice if skin irritation develops.

Inhaled: Remove victim to fresh air. Seek medical advice immediately if adverse symptoms such as respiratory irritation, dizziness or unconsciousness develop. If breathing has stopped apply artificial respiration.

First Aid Facilities: Have eyewashes and safety showers available where contact can occur.

ADVICE TO
DOCTOR

Treat symptomatically. Look for signs of aspiration into lungs. The substance may cause chemical pneumonitis.

5. FIRE FIGHTING MEASURESEXTINGUISHING
MEDIA

Water fog, foam, dry chemical, carbon dioxide.

HAZARDOUS
COMBUSTION
PRODUCTS

Smoke, carbon monoxide, carbon dioxide, chlorine gas, hydrogen chloride and other noxious fumes.

PRECAUTIONS FOR
FIRE FIGHTERS

This product is highly flammable. Keep containers cool with water spray to prevent rupture of container. Wear full protective equipment including self-contained breathing apparatus. Vapour accumulation could flash and or explode even if ignited from a distance.

HAZCHEM CODE

3[Y]E

6. ACCIDENTAL RELEASE MEASURESEMERGENCY
PROCEDURES

This product is a highly flammable liquid. Isolate hazard area and deny entry. to unauthorised personnel. Remove all sources of ignition. Stop leak if it can be done without personal risk. Avoid breathing vapours. Ventilate enclosed area.

CLEAN UP
PROCEDURE

Small Spills: Wear safety goggles or face shield and butyl rubber gloves and wipe up spill with paper or rags. Allow product to dry outdoors or in a well ventilated area and dispose as general industrial waste.

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Large spills: Notify fire brigade. Wearing full personal protective equipment, including self-contained breathing apparatus, contain spill with sand, earth or Vermiculite. Prevent run-off into drains or waterways. Bail or pump any free liquid into sealable metal containers. Collect absorbed material and also place it in into sealable metal drums. Seal containers and label them in accordance with the Hazardous Substances Labelling Code.

7. HANDLING AND STORAGE

PRECAUTION FOR SAFE HANDLING

Practice sound industrial hygiene. Wear butyl rubber gloves, safety glasses with side shields and clothing that will minimise skin contact. Wash hands before work breaks. Remove contaminated clothing and protective equipment before entering eating areas. Keep away from ignition sources and guard against static electricity discharges. Avoid run-off into drains or watercourses.

STORAGE

Store in a cool dry place and out of direct sunlight. Store in a manner that will minimize fire or explosion risks. Guard against static electricity accumulation or discharge. Store in a banded area, and if in excess of the regulatory quantity, in a flammable goods store. Do not store with oxidizing agents. May form explosive peroxides, due to the presence of THF, on storage.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

EXPOSURE

An exposure limit for this product has not been set. The exposure standards to [NOHSC:1003(1995)]for the major components are:

Exposure standard	TWA
Tetrahydrofuran	100 ppm
Cyclohexanone	25 ppm
PVC homopolymer (nuisance dust)	10mg/m ³

BIOLOGICAL LIMIT VALUES

Biological limits for tetrahydrofuran = 8 mg/L. (BAT)

ENGINEERING CONTROLS air

Use only in well ventilated areas and with local exhaust ventilation. Maintain concentrations below exposure standards.

PERSONAL PROTECTION EQUIPMENT

Under condition of ordinary use, wear safety glasses with side shields, butyl rubber gloves long sleeved overalls and sturdy work boots. In case of a large spills or when working in confined areas, use a full-face respirator fitted with suitable organic vapour canister (for selection guidance see AS 17150), impervious long sleeved overalls, long sleeved butyl rubber gloves and butyl rubber gumboots.

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ACUTE
HEALTH
EFFECTS

Swallowed: Ingestion may cause headaches, nausea, vomiting and adverse effects to the central nervous system due to the presence of tetrahydrofuran and cyclohexanone. Large doses may result in coma and death. Toxicity by this route is expected to be low. LD₅₀ (rat) for tetrahydrofuran is > 1650 mg/kg and for cyclohexanone is 1535mg/kg.

Eyes: Strong eye irritant. Can stick eyelids together. May cause reddening of the eye and lachrymation. May produce transient corneal damage due to the presence of cyclohexanone.

Skin: Skin irritant due to the presence of THF and cyclohexanone. May cause some reddening, drying and rough chapped skin. Both cyclohexanone and THF are absorbed through the skin. LD₅₀ (rabbit) for cyclohexanone is 948mg/kg and for THF is [no data].

Inhaled: Irritant to the respiratory system. Inhalation of high vapour or mist concentrations may lead to dizziness, nausea and loss of consciousness and continued inhalation may lead to death. LC₅₀ (rat) for cyclohexanone is 32 mg/L/4h and for THF is 53.9 mg/L/4 h.

CHRONIC
HEALTH
EFFECTS

Prolonged or repeated skin contact with THF or cyclohexanone may defat the skin and could lead to irritant contact dermatitis. Liver and kidney damage have been reported for both THF and cyclohexanone in test animals, particularly at high exposure levels. None of the ingredients in this mixture is a sensitizer, mutagenic or carcinogenic.

DELAYED
EFFECTS

Liver and kidney damage as well as blood and bone marrow effects have been observed in test animals exposed to cyclohexanone.

12. ECOLOGICAL INFORMATIONECOTOXICITY

Based on the data of the major raw materials used in this product, this mixture may be toxic to aquatic organisms.

TOXICITY TO:	TEST DATA		
	Tetrahydrofuran	Cyclohexanone	PVC resin
Fish	<i>P. promelas</i> LC ₅₀ = 2160 mg/L/96 h	<i>L. indus</i> LC ₅₀ = 536 mg/L/48 h	There is no known data that suggests that PVC resin is toxic to aquatic organisms.
Aqu. Invertebrates	<i>Daphnia magna</i> EC ₅₀ = 382 mg/L/24 h.	<i>Daphnia magna</i> EC ₅₀ = 800 mg/L/24 h.	
Algae	<i>Sc. quadricauda</i> IC ₅ = 3700 mg/L/8 d.	<i>Sc. quadricauda</i> IC ₅ = 370 mg/L/8 d.	
Micro-organisms	<i>Ps. putida</i> EC ₅ = 580 mg/L/16 h.	<i>Ps. putida</i> EC ₅ = 180 mg/L/16 h.	

PERSISTENCE
AND
DEGRADABILITY

Tetrahydrofuran – (Closed bottle test): 39 %/28 d
Cyclohexanone – 87%/14 d (MITI test)
PVC resin – Shows no evidence of biodegradability in soil or water, but can be Removed in biological treatment processes.

MOBILITY

Only low bioaccumulation is expected.
Tetrahydrofuran: log p (o/w) = 0.45
Cyclohexanone: log p (o/w) = 0.81
PVC resin: No mobility in soil.

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13. DISPOSAL CONSIDERATIONS

This product is a hazardous waste and may only be disposed of in accordance with applicable State and local regulations. These regulations vary from jurisdiction to jurisdiction and hence the user is advised to seek advice from the local authority before considering disposal. The disposal information given below is a general guide and does not replace the requirement of the local regulations.

DISPOSAL If possible recycle, otherwise incinerate in a suitable facility.
Empty containers should be drained thoroughly and then vented in a safe place away from heat or ignition sources. Send drums to a drum washing and recycling facility.

SPECIAL PRECAUTIONS Do not puncture, cut or weld a drum that has not been cleaned – it is an explosion hazard. The empty, uncleaned drums still fall under the auspices of the ADG Code and must be transported accordingly.

When large amounts of this product need to be disposed of, the services of a registered, professional waste disposal organisation is highly recommended.

14. TRANSPORT INFORMATION

This product has been classified as Dangerous Goods. It must be transported in accordance with the ADG Code requirements.

UN Number: 1133

Proper Shipping Name: ADHESIVES containing flammable liquid

ADG Class: 3

ADG Subsidiary Risk: None allocated

ADG Packaging Group: II

Hazchem Code: 3[Y]E

IMDG/IMO Code: Same classification as ADG Code

ICAO/IATA Code: Same classification as ADG Code

15. REGULATORY INFORMATION

AICS All ingredients are listed in AICS

SUSDP Not scheduled.

16. OTHER INFORMATION

MSDS

Issue Number: 03

Date of Issue: February 2004

Replaces Issue: July 2003

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Changes made to the previous issue: Changed MSDS from a 8-header to the 16-header format. Provided ecological data. Updated and expanded toxicological data.

ACRONYMS

ADG Code: Australian Code for the Transport of Dangerous Goods by Road and Rail

AICS: Australian Inventory of Chemical Substances.

CAS Number: Chemical Abstracts Service Registry Number

DG: Dangerous Goods

Hazchem Code: An emergency action code of numbers and letters, which gives information to emergency services.

IARC: International Agency for Research on Cancer.

IATA: International Air Transport Association

ICAO: International Civil Aviation Organization

IMDG: International Maritime Dangerous Goods Code

IMO: International Maritime Organization

N.O.S.: Not otherwise specified.

NOHSC: National Health and Safety Commission.

R-Phrases: Risk Phrases.

S-Phrases: Safety Phrases.

SUDP: Standard for the Uniform Scheduling of Drugs and Poisons.

UN Number: United Nations Number

The health and safety information contained in this MSDS is believed to be true and correct. However because ACM Pty Ltd no control over the method of use of this product, all statements or suggestions are made without warranty, expressed or implied, regarding the reliability of the information, or the hazards resulting from the use of the material. Every user should consider the information given in this MSDS in the context of how this product will be used in the user's workplace, including the effects of other products on the premises.
