MATERIAL SAFETY DATA SHEET

ISSUE DATE: 1 April 1998	AIS RIGID FOAM INSULATION (Polyurethane, Polyisocyanurate)	PAGE: 1 of 4
1. CHEMICAL PRODUCT & COMPANY IDENTIFICATION	Australasian Insulation Supplies Pty Ltd	Telephone: 61 8 9417 9494

2. COMPOSITION/INFORMATION ON INGREDIENTS

Polymerized polyurethane modified poly-isocyanurate rigid cellular plastic 89%
1,1 - Dichloro-1-fluoroethane .....CAS# 001717-00-6 11%

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Colour. Coloured. Appearance: Solid. Odour: None. Toxic fumes are released in fire situation

- EYE: Solid or dust may cause irritation or corneal injury due to mechanical action.
- SKIN: Mechanical injury only. Essentially non-irritating to skin. Skin absorption is unlikely due to physical properties.
- INGESTION: Ingestion is unlikely due to physical state. Physical injury
- only. May cause choking if swallowed.
- INHALATION: Dust may cause irritation to upper respiratory tract. Signs
- and symptoms of excessive exposure to 1,1-Dichloro-1-fluoroethane may be anesthetic or narcotic effects. Signs and symptoms of excessive exposure to 1,1-Dichloro-1-fluoroethane may be central nervous system effects. Excessive exposure to 1,1-Dichloro-1-fluoroethane may increase sensitivity to epinephrine and increase myocardial irrability (irregular heartbeats). Concentrations of the blowing agents anticipated incidental to proper handling are expected to be well below those which cause the acute inhalation effects above and to be well below the OSHA PEL and Dow IHG.

4. FIRST AID

EYE: Flush eyes with plenty of water, mechanical effects only.
SKIN: Wash off in flowing water or shower.
INGESTION: No adverse effects anticipated by this route of exposure.
INHALATION: Remove to fresh air if effects occur. Consult a physician.

5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES
FLASH POINT: Not applicable
METHOD USED: Not applicable

HAZARDOUS COMBUSTION PRODUCTS:
Hazardous combustion products may include and are not limited to carbon dioxide and carbon monoxide.

EXTINGUISHING MEDIA:
If stored or in-place polyurethane or polyisocyanurate foam should ignite, extinguish fire immediately by drenching with water spray from a fire hose. For small fires, use water spray, foam, carbon dioxide, or dry chemical extinguishers.

FIRE FIGHTING INSTRUCTIONS:
Rigid polyurethane and polyisocyanurate foams, in common with other organic materials such as paper, wood, cotton and rubber, can present unreasonable fire risks in certain misapplications when exposed to ignition sources in air. Once ignited, such fires can burn rapidly and produce intense heat, dense smoke and irritating or toxic gases. Rigid polyurethane foams autoignite at about 650-800F (343-427C) and rigid polyisocyanurate foams at about 900-1000F (482-538C).

The probability of dust explosions from polyurethane or polyisocyanurate dust is very low, however, do not smoke or use naked lights, open flames, space heaters or other ignition sources near rigid foam fabricating operations or near stored buns or sheets.

Install foam only after all welding, cutting or other hot work has been completed. If hot work must be done after foam has been installed, the hot work trade must be warned. Remove foam from immediate work area to a sufficient distance that heat transmitted from the torch or through the metal will not ignite the foam. Remove all combustible material from vicinity of and immediately below work area. Post a fire watcher equipped with a fire extinguisher during and for 30 minutes after hot operations. Stop work immediately if foam begins to smoke and remove foam for the work area.

When hot-wire cutting rigid polyurethane or polyisocyanurate foam, keep a fire extinguisher nearby. Work should be carried out in well ventilated area - do not breathe fumes.

PROTECTIVE EQUIPMENT FOR FIRE FIGHTERS
Wear positive-pressure, self-contained breathing apparatus (SCBA) and protective fire fighting clothing (including fire fighting helmet, coat, pants, boots and gloves).

CLEANUP: Pick up, or if dust or in small pieces, sweep up, and place in suitable container for disposal. Use cyclone dust collectors on all fabricating power tools. Keep work areas clean. Remove settled dust by vacuuming not blowing.

6. HANDLING AND STORAGE

HANDLING

DUST: The probability of dust explosions from polyurethane or polyisocyanurate dust is very low. Finely divided dust can cause health risks and can irritate the eyes, nose and throat, as can any other nuisance dust. Avoid exposure to any dust, including foam dust. Conduct rigid foam fabrication operations (sawing, routing, fly-cutting, etc.) in areas reserved exclusively for such operations. Do not allow dust to accumulate. Use cyclone dust collectors on all fabricating power tools. Keep work areas clean. Remove dust by vacuuming, not blowing.

FIRE: Polyurethane or polyisocyanurate foam used as a wall or ceiling insulation must not be left exposed, but must be covered as soon as practicable with a fire-resistive thermal barrier of one-half inch gypsum wallboard or the equivalent. If covering is not immediately possible or practicable, post signs that fire risk exists because of the exposed foam. Do not install foam in any flue-like configuration. Do not allow combustible trash or scrap foam to accumulate on the job site. Dispose of scrap foam according to good industrial practice and in accordance with environmental protection regulations. Provide protection for BOTH surfaces of foam used as ceiling insulation. Polyisocyanurate foam plastic must not remain exposed in attics or crawl spaces.

STORAGE:

Potential risks associated with rigid polyurethane and polyisocyanurate foams arise from DUST, FIRE and TOXIC THERMAL DECOMPOSITION PRODUCTS and may result from improper storage, inadequate ventilation, improper disposal and/or misapplication.

Store polyurethane and polyisocyanurate foam buns and sheets with adequate aisleways to permit access to all areas. Protect all indoor bun and sheet storage areas with fusible sprinklers. Maintain a minimum clearance of six feet between tops of foam stacks and sprinkler heads.

Gas fired recirculating air furnaces or heaters, gas water heaters, etc., drawing air from areas where there may be a presence of dichlorofluoroethane from storage or fabrication of polyisocyanurate foam storage or fabrication of polyisocyanurate foam, can be subjected to rust and corrosion problems as a result of thermal decomposition of the blowing agents to hydrogen chloride.

7. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS:

Provide general and/or local extraction to control airborne levels below the exposure guidelines.

PERSONAL PROTECTIVE EQUIPMENT EYE/FACE PROTECTIONS:
Use safety glasses. If there is a potential for exposure to particles which could cause mechanical injury to the eye, wear chemical goggles.
SKIN PROTECTION:
No precautions other than clean body-covering clothing should be needed.
RESPIRATORY PROTECTION:
Atmospheric levels should be maintained below the exposure guideline. When respiratory protection is required for certain operations, use an approved air-purifying respirator. In dusty atmospheres, use an approved dust respirator.

8. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE/PHYSICAL STATE: Rigid cellular plastic.
ODOUR: None.
VAPOUR PRESSURE: Not applicable.
VAPOUR DENSITY: Not applicable.
BOILING POINT: Not applicable.
SOLUBILITY IN WATER/MISCIBILITY: None
SPECIFIC GRAVITY OR DENSITY: Not applicable.

9. STABILITY AND REACTIVITY

- CHEMICAL STABILITY: Stable.
- CONDITIONS TO AVOID: Open flames and other ignition sources.
- INCOMPATIBILITY WITH OTHER MATERIALS: None known.
- HAZARDOUS DECOMPOSITION PRODUCTS: Carbon dioxide, carbon monoxide, possible traces of hydrogen cyanide, halogen acids and nitrogen oxides under fire conditions.
- HAZARDOUS POLYMERIZATION: Will not occur.