



SAFE USE INSTRUCTION SHEET (SUIS)

FBS-1 MMVF WOOL INSULATION

Non-Hazardous

Non-Dangerous Goods

SECTION 1: IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name:	MMVF WOOL INSULATION
Other Names:	FBS-1 Man-Made Vitreous Fibre products, including FBS-1 glasswool, rockwool, and slagwool. FBS-1 MMVF Wool Insulation is made up into many insulation products having individual trade names. Typically it is supplied in the form of batts, slabs, rolls, tiles or sheets.
Recommended Use:	Thermal and acoustic insulation, and energy conservation. Used in homes, public and commercial buildings, warehouses, industrial and petrochemical plants, motor vehicles, ships, public transport, power stations and white goods.
Supplier:	Member companies of Insulation Council of Australia and New Zealand (ICANZ)
Address:	(ICANZ) Suite 201, Level 2, 18 Kavanagh St, Southbank VIC 3006
Telephone:	1300 363 742 (within Australia only), or 61 3 9929 4150
Email address:	info@icanz.org.au
Website:	www.icanz.org.au
Emergency contact:	000 Fire Brigade and Police or 13 11 26 Poisons Information Centre (available in Australia only)
<p>Because certified FBS-1 MMVF Wool Insulation products manufactured in Australia and New Zealand by member companies of ICANZ are classified as NON-HAZARDOUS, a Safety Data Sheet (SDS) is not required under Australian Regulations. This information sheet is issued by ICANZ for the information of users, installers and the community. It has been formatted as required by the Globally Harmonized System of Classification and Labelling of Chemicals (GHS), as adopted by Safe Work Australia (SWA – formerly ASCC/NOHSC).</p> <p>The suppliers of these products also issue their own information sheets which reflect the health & safety information in this sheet and contain other product-specific information. These information sheets are available from suppliers' websites, or on request. The health & safety information for these products must not be altered, deleted or added to.</p>	

SECTION 2: HAZARDS IDENTIFICATION

FBS-1 certified MMVF Wool Insulation products are classified as **Non-Hazardous** according to the GHS. They are classified as **Non-Dangerous Goods** according to the Australian Code for the Transport of Dangerous Goods by Road and Rail. No GHS signal words, hazard statements or pictograms/symbols are applicable. In typical home, commercial and industrial installations there will be no identifiable risk to health from these products. Any work area presents hazards, and general safety risks. Some ICANZ information and advice regarding the general work risks is included for installers and their supervisors, and persons in charge of business units.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name:	Proportion:
Man-made vitreous fibre (glasswool, rock [stone] wool of low biopersistence)	>85%
fibre coating and binding agents, dust suppression agents	<15%

Note: Traces (<0.1%) of volatile original components may remain in recently manufactured product.

SECTION 4: FIRST AID MEASURES

Swallowed:	Rinse lips and mouth with water.
Eye:	Flush with clean water. If discomfort persists, seek medical attention.
Skin:	Flush off with water, preferably running. If any itch or discomfort persists, seek medical attention.
Inhaled:	Remove to fresh air. If symptoms persist, seek medical attention.
Advice to doctor:	Any symptoms and signs of ill-health are likely to be due to other causes. Can be slightly itchy on prolonged contact with skin. Does not cause any acute or chronic health effects. Treatment should be directed toward cleansing the skin and symptomatic treatment as necessary.

SECTION 5: FIRE FIGHTING MEASURES

Flammability:	Non-flammable, will not burn.
Suitable Extinguishing Media:	As needed for surrounding fire conditions. Any extinguishing media may be used as required. Water fog may be used to cool intact containers and nearby storage areas.
Hazards from combustion products:	MMVF Wool Insulation is non-flammable, but the plastic wrapping, fibre coating and binding agents, dust suppression agents, and some facings, may decompose, smoulder or burn in a fire or when heated above 300°C. If product is present in a fire, toxic gases or smoke may be evolved depending on surrounding fire conditions.
Fire Fighting Procedures:	As needed for surrounding fire conditions. If required, evacuate area and contact emergency services; remain upwind and notify those downwind of fire hazard; and wear protective equipment including Self-Contained Breathing Apparatus (SCBA).
HAZCHEM Code:	None allocated.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Containment Procedure:	If product is torn or loose, cover or reseal to minimise dust and fibre release. Reuse where possible or place in a sealable plastic bag for disposal according to local authority guidelines.
Clean Up Procedure:	Personnel directly involved in clean-up of loose material should wear personal protective equipment as described in Section 8. Clean area so as to avoid dispersion of loose material or fibre using wet sweep methods if practicable, or vacuum cleaner.

SECTION 7: HANDLING & STORAGE

Handling:	<p>These FBS-1 certified products are safe in use.</p> <p>Once installed, the product does not release dust or fibres.</p> <p>Handling, installing or removing the product may result in some dust and airborne fibre.</p> <p>Minimise eye or skin contact and inhalation during handling, installation and removal (see Section 8). Observe good personal hygiene, including washing hands before eating. Remove personal protective equipment before entering eating areas.</p>
Storage:	Store in original packing in cool dry area, away from foodstuffs and children. Avoid storing for long periods under UV light (direct sunlight). Ensure packages retain their original labels or are correctly re-labelled, protected from physical damage, and sealed when not in use.
Incompatibilities:	None

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Standards:	<p>ICANZ recommends keeping exposures to dust and other atmospheric contaminants to as low a level as is reasonably practicable. No specific Workplace Exposure Standard (WES) applies to the dust or modified bonded fibre from FBS-1 MMVF Wool Insulation products. MMVF in these products manufactured by ICANZ member companies, is of low biopersistence. Dust from these products is regarded as nuisance dust, and the exposure standard for nuisance dusts of 10 mg/m³, measured as inhalable dust (8-hour TWA*) should be applied.</p> <p>In typical installation conditions or where work is being done on insulated premises, a variety of dusts will be present. In any work area where almost all the airborne material is fibrous MMVF, then a Workplace Exposure Standard (WES) of 2 mg/m³ (inhalable dust) applies.</p> <p>*An 8-hour time-weighted average (TWA) exposure is the average airborne concentration measured over an eight-hour working day and a 5-day working week.</p>
Engineering Controls, Ventilation:	During most applications and installations no special ventilation will be required. However, if installing in dusty or poorly-ventilated areas, or during the first heat-up cycle in high-temperature applications, local exhaust ventilation should be considered. Work practices should aim to minimise the release of, and exposure to, fibres and/or dust. Hand tools generate the least amount of dust and fibres. If power tools are used directly on the product appropriate dust collection systems are recommended. Work areas should be cleaned regularly, and vacuuming or wet sweeping is recommended.
Personal Protection	
Skin Protection:	Direct skin contact can be minimised by wearing long-sleeved shirts and long trousers, a cap or hat, and standard duty gloves conforming to Australian Standard AS 2161. Work clothes should be washed regularly and separately from other clothes.
Eye Protection:	When handling these products, particularly overhead or in enclosed or poorly-ventilated areas such as ceiling spaces or risers, eye contact with dust or fibre can be avoided by wearing ventilated non-fogging dust-resistant goggles conforming to Australian and New Zealand Standards AS/NZS 1336.

Respiratory Protection:	None normally required. If dust is generated in enclosed or poorly-ventilated areas, an approved particulate respirator conforming to Australian and New Zealand Standards AS/NZS 1715 and 1716 is recommended. P1, P2 or N95 type respirators are appropriate. Use only respirators that bear the Australian Standards mark and are fitted and maintained correctly, and kept in clean storage when not in use.
Personal Hygiene:	Washing of exposed skin with soap and water at the end of a shift or as required is recommended as a comfort and hygiene measure.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	A matt of fibrous material resembling wool. It is supplied in different shapes and sizes, in outer packaging. It may be rigid or flexible, and facings such as aluminium foil, vinyl, and synthetic tissues applied to meet specific purposes.
Odour:	Slight amine/sour odour, particularly when recently manufactured, then odourless
pH:	Not applicable
Boiling Point:	Not applicable
Melting Point:	> 704°C
Vapour Pressure/Density:	Not applicable
Specific Gravity (H₂O = 1)	Generally low, but variable depending on facings
Solubility in water:	Insoluble
Volatile Organic Compounds (VOC) Content / % Volatiles:	Very low; <1% (as specified by the Green Building Council of Australia)
Flash Point:	Not applicable
Decomposition Temperature:	> 300°C
Lower/Upper Explosive Limits:	Not applicable

SECTION 10: STABILITY AND REACTIVITY

Chemical Stability:	Stable. The cured resin is stable and will remain intact for the life of the product under normal atmospheric conditions.
Incompatible Materials/ Conditions to Avoid:	No reported incompatibilities. Acids, alkalis or organic solvents may cause degradation of resin binder.
Hazardous Reactions/ Decomposition Products:	None known

SECTION 11: TOXICOLOGICAL INFORMATION

Toxicology data: The fibre component of these FBS-1 products, before modification into the final wool insulation material, is listed by Safe Work Australia as Man-made Vitreous Fibre (Glasswool, Rock[stone]wool, Slagwool) of certified low biopersistence. The fibrous wool insulation material present in these products as manufactured by ICANZ member companies is in the form of modified (bonded or coated) MMVF fibre.

Extensive air monitoring during real-life work situations including installation, handling or removal, shows that airborne fibre from these products is almost entirely made up of fibre larger than respirable size (i.e. it is not respirable). Coarse fibres from the product which are visible in air are made up of many individual fibres clumped together, and are not of respirable size.

More health testing in real-life working situations has been done on MMVF than on any other insulation products, with the research and investigations now going back over 60 years. The results of all the medical and health research has been reviewed by the International Agency for Research on Cancer (IARC), and many other health authorities.

Previous concerns regarding any health effects from exposure to the fibres from which these products are made, were finally dispelled in 2002 when IARC (part of the World Health Organisation) completed a review of all the health research about MMVF. The conclusion of IARC was that MMVF (including those types used in Australian glasswool, rockwool and slagwool insulation for many decades) was placed in IARC Group 3: not classified as carcinogenic. Other concerns about health, raised from the 1970s through to the 1980s had already been researched and proven not to be of concern, before the IARC review and report of 2002. In summary, MMVF is not hazardous to health.

When working with these insulation products, various precautions are advised for comfort reasons (see Section 8 above). Any fibres inhaled into the lungs dissolve in body fluids and are then cleared from the lungs by the natural body processes. Dust from FBS-1 certified MMVF products is regarded as “nuisance dust” (see Section 8).

FBS-1 type MMVF was designed and is manufactured to give fibre of certified low biopersistence. If any stray fibres do lodge in the deep parts of the lung, they will dissolve more readily and be naturally lost from the body. This may offer added safety, in conditions where high levels of dust and fibre are inhaled.

Acute toxicity based on the composition is estimated as being very low, with LD50 >5000 mg/kg.

Health Effects: Acute (short-term)

Swallowed:	Unlikely in normal use, but may result in temporary itching of the lips, mouth and throat. Attempting to swallow large amounts would be expected to cause gagging and possibly vomiting.
Eyes:	May cause eye discomfort resulting in watering and redness.
Skin:	Handling repeatedly during installation may cause temporary itching of exposed skin. This is not an allergy, or chemical irritation, and usually disappears quickly.
Inhaled:	Unprotected exposure to high levels of dust of these products (during installation or removal) may cause discomfort of the nose, throat, and upper and lower respiratory tract, especially in persons suffering from upper respiratory or chest complaints such as hay fever, asthma or bronchitis.

Note: Products used in high temperature applications (above 177°C) may release fumes from the bonding and or dust suppression agents, during initial heat-up. In these applications and where suitable protective equipment is not worn (see Section 8), then some irritation to the eyes, nose, throat and respiratory tract may occur. In confined or poorly ventilated areas, use air-supplied respirators during the first heat-up cycle.

Health Effects: Chronic (long-term)

There are no known long-term health effects.
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SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity:	These FBS-1 certified products are accepted in all “green” insulation schemes and more information regarding energy efficiency and insulation is available on the ICANZ website and from the manufacturers. Neither the raw materials nor the finished product contain ozone-depleting chemicals. These products are not classified as hazardous air pollutants. No specific data is available on ecotoxicity, but estimations based on toxicity information suggest that the materials in these products are not toxic or harmful to fish, birds, insects, wildlife or organisms in the environment.
Persistence and Degradability:	All bonded MMVF Wool Insulation products are regarded as biosoluble and biodegradable to a variable extent. Some MMVF wools e.g. FBS-1 certified Insulation have lower biopersistence than others, Actual biopersistence and biodegradability will vary, depending mostly on environmental conditions. In most ecosystems these products would be expected to solubilize or biodegrade over a period of weeks to months. Binder-coated insulation wool is hydrophobic, and in water or soil no adverse environmental effects would be expected.

SECTION 13: DISPOSAL CONSIDERATIONS

Place in plastic bags or containers for disposal in accordance with local authority guidelines. Label as NON-HAZARDOUS insulation wool or as general building waste (non-hazardous), to assist local authorities waste disposal sites. Local and State authorities usually regard MMVF Wool Insulation as General Solid Waste (non-putrescible), and local authorities will advise any local handling arrangements at their disposal sites.

SECTION 14: TRANSPORTATION INFORMATION

Transport Requirements:	MMVF Wool Insulation products are not classified as Dangerous Goods and have no special transport requirements.		
UN number: None allocated	Class: None allocated	Subsidiary Risk: None allocated	
Packing Group: None allocated	HAZCHEM code: None allocated		

SECTION 15: REGULATORY INFORMATION

Poisons Schedule: None allocated. No specific regulatory requirements are applicable to these products, other than as outlined in other Sections above.

SECTION 16: OTHER INFORMATION

The following references are intended as guides to good industrial practice applicable to building and construction products.

Australian Standards References:

AS/NZS 1336	Recommended Practices for Occupational Eye Protection
AS/NZS 1715, 1716	Selection, Use and Maintenance of Respiratory Protective Devices
AS 2161	Industrial Safety Gloves and Mittens (excluding electrical and medical gloves)

Other References:

NOHSC:1008 (2004)	Approved Criteria for Classifying Hazardous Substances
Model Code of Practice	Preparation of Safety Data Sheets for Hazardous Chemicals, December 2011, Safe Work Australia.
Model Code of Practice	Labelling of Workplace Hazardous Chemicals, December 2011, Safe Work Australia.
Model Code of Practice	Managing Risks Of Hazardous Chemicals In The Workplace, July 2012, Safe Work Australia.
ADG Code	Australian Code for the Transport of Dangerous Goods by Road and Rail, 7th edition, National Transport Commission.
WES	Workplace Exposure Standards For Airborne Contaminants, April 2013, Safe Work Australia.
WES	Guidance On The Interpretation Of Workplace Exposure Standards For Airborne Contaminants, April 2013, Safe Work Australia.
GHS	Globally Harmonized System of Classification and Labelling of Chemicals (GHS), 5th revised edition, United Nations, New York and Geneva, 2013.
HSIS	Hazardous Substances Information System (HSIS), internet advisory service, Safe Work Australia.

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Issue Date: June 2015

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