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MATERIAL SAFETY DATA SHEET
HEAT SHIELD MAT

1. CHEMICAL PRODUCT COMPANY IDENTIFICATION

Product Name: HEAT SHIELD MAT
(Aluminium Coating, Silicone Coating, PU Coating)

Manufacturer: Heat Protection Products (National Auto Parts Depot Pty Ltd)

Manufacturer's Product Code: Not Available

Address: National Auto Parts Depot Pty Ltd, 20 Production Drive, Campbellfield, Vic 3061, Australia

Telephone: 03 9357 6100 **Fax:** 03 9357 0531

Part Number: 721005, 721010A, 721101, 721102, 721103A, 721202, 721203A, 721301A, 721302A, 721305, 721306A, 721505, 821005, 821101, 821202.

2. CHEMICAL PRODUCT COMPANY IDENTIFICATION

Components	CAS Number	%(By Weight)
SiO_2	N/D	54.1±0.5%
Al_2O_3	N/D	14.6±0.4%
CaO	N/D	16.6±0.3%

3. HAZARDS IDENTIFICATION

Classified as hazardous according to the criteria of NOHSC Not classified as a dangerous good according to the criteria of the ADG Code

3.1 RISK PHRASE
R 49 – May cause cancer by inhalation R 38 – Irritating to skin.

3.2 SAFETY PHRASES
S3/9/14 Keep in a cool place, well ventilated place and away from acid, alkalis, heat sources and foodstuffs
S20/21 When using do not eat, drink or smoke
S22 Do not breathe dust
S24/25 Avoid contact with skin and eyes
S26 In case of contact with eye, rinse immediately with plenty of water S36/37/39 Wear Suitable protective clothing, gloves and eye/face protection

4. FIRST-AID MEASURES

4.1 ROUTES OF EXPOSURE
Eyes
Slightly to moderately irritating; Fibres may be abrasive; prolonged contact may cause damage to the outer surface of the eye.

Skin
Slightly to moderately irritating; Exposure may result in irritation, inflammation, rash or itching.
Inhalation
If inhaled in sufficient quantity, may cause respiratory tract irritation. Symptoms may include scratchiness of the nose or throat, cough or chest discomfort.

Chronic Effects
Studies to date, involving occupationally exposed workers, have not identified any increase incidence of respiratory disease. Long term, high dose exposure to specially sized, rodent respirable fibre has resulted in the development of fibrosis, lung cancer and mesothelioma in rats & hamsters. See Sections 11 and 16 of this MSDS for more information.

Medical Conditions Aggravated By Exposure
Preexisting medical conditions, including dermatitis, asthma or chronic lung disease may be aggravated by exposure; individuals who are atopic (with a history of allergies) may experience greater amounts of skin and respiratory irritation.

4.2 FIRST AID MEASURES

Swallowed
For advice, contact a Poisons Information Centre or a doctor. Do not induce vomiting.

Eyes
Do not rub eyes. Flush gently with running water for 15 minutes. Seek medical attention if irritation persists.

Skin
Do not rub or scratch exposed skin. Remove contaminated clothing and gently flush affected areas with water. Seek medical advice if irritation persists.

Inhalation
If over exposure occurs, leave exposure area immediately. Seek medical attention if symptoms develop.

Advice to Doctor
Treat symptomatically

5. FIRST FIGNTING MEASURES

Flammability
Nonflammable, No fire or explosion hazard exists. Use extinguishing media suitable for type of surrounding fire.

Hazchem Code
None allocated

6. ACCIDENTAL RELEASE MEASURES

6.1 EMERGENCY PROCEDURES

Spillage
If spilt (bulk), contact emergency services if appropriate. If product is damaged, seal and minimize fibre release. Clean area using approved microfilter equipped vacuum cleaner or wet sweep. Clear the area of all unprotected personnel and prevent spill entering drains or waterways. Collect and place in sealable

containers for disposal or reuse. Avoid generating dust.

Fire and Explosion
Nonflammable, No fire or explosion hazard exists. Evacuate area and contact emergency services. Remain upwind and notify those downwind of hazard. Wear full protective equipment including Self Contained Breathing Apparatus (SCBA) when combating fire. Use water fog to cool intact containers and nearby storage areas.

Extinguishing
Non flammable

6.2 METHODS AND MATERIAL FOR CONTAINMENT AND CLEAN UP

Pick up large pieces and use a vacuum cleaner fitted with high efficiency filter (HEPA).If brushing is used, ensure that the areas are wetted down first.

- Do not use compressed air for clean up
- Do not allow being wind blown

Do not flush spillage to drain and prevent from entering natural watercourses.

7. HANDLING AND STORAGE

7.1 PRECAUTIONS FOR SAFE HANDLING

Before use carefully read the product label. Use of safe work practices are recommended to avoid eye or skin contact and inhalation. Observe good personal hygiene, including washing hands before eating. Prohibit eating, drinking and smoking in contaminated areas (ex if container is damaged).

Handling & Installation
a) All installation practices should be designed to minimise the liberation of any airborne fibre or dust.
b) In large installations of several days/weeks duration, the installation area should be clearly designated and barriers erected to limit access.
c) Where possible, materials should be delivered in sizes such that a minimum of handling and machining is required. However when cutting or drilling is required, these should be done with hand tools fitted with local exhaust extraction. The exhaust from such extraction equipment should be fitted and positioned away from other work areas.
e) Empty storage bags should be folded and stored in a waste container along with any waste material.
f) Upon completion of the job, all excess materials should be sealed in bags prior to removal from the designated work area. The work area should be vacuumed using an industrial vacuum cleaner. Wet mopping and wiping can be utilised if an industrial vacuum cleaner is not available.

7.2 STORAGE

Store in sealed container in cool, dry area, removed from foodstuffs. Ensure packages are adequately labelled, protected from physical damage and sealed when not in use. Minimize airborne dusts by avoiding the unnecessary disturbance of materials.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 ENGINEERING CONTROLS

Review your applications in order to identify potential sources of dust exposure. Dust suppressing controls such as local exhaust ventilation, point of generation dust collection, and materials handling equipment are effective means of minimizing airborne fibre emissions. Keep the workplace clean. Use a vacuum cleaner fitted with a HEPA filter; avoid brushing and compressed air.

8.2 PERSONAL PROTECTIVE EQUIPMENT

Skin protection
Disposable coveralls or long sleeve, loose fitting clothing and PVC or rubber gloves (launder able clothing should be washed separately from other clothing).
a) The removal area should be signposted and contained, where possible, to minimise the transfer of dust to other work areas.
b) Separate change areas should be provided to minimise the transfer of dust to general work areas;
c) Where workable, the spent material should be wetted to suppress dust generation;
d) Waste shall be placed in containers, plastic bags or other methods which prevent fibre and/or dust emission, and disposed of in accordance with local waste disposal authority requirements;
e) The removal area should be cleaned using an industrial vacuum cleaner; and
f) Once visible dust has been cleaned up, containment material should be removed in a manner that minimises the liberation of any trapped dust.

Eye protection
As necessary wear dustproof goggles or safety glasses with side shields.

Respiratory protection
The National Code of Practice for the Safe Use of Synthetic Mineral Fibres (NOHSC 1990) advises the use of the following PPE that for installation and removal of both bonded and unbonded glasswool material. A half face Class P2 (Particulate) respirator should be worn during work in enclosed or poorly ventilated spaces, or where evidence suggests that respirable fibre levels may exceed 0.5 fibres/ml.

8.3 VENTILATION
Use with adequate natural or mechanical ventilation during installation. If cutting with power tools, local extraction ventilation is recommended. Clean area with micro equipped vacuum cleaner or by wet sweeping.

8.4 INFORMATION AND TRAINING OF WORKERS
Workers should be trained on good working practices and informed on applicable local regulations. This may include:
the applications involving fibre containing products; the potential risks to health resulting from the exposure to fibrous dust; the requirements regarding smoking, eating and drinking at the workplace; the requirements for protective equipment and clothing; the good working practices to limit dust emissions; the proper use of protective equipment;

8.5 ENVIRONMENTAL EXPOSURE CONTROLS
Refer to local applicable environmental permitted standards for air, water and soil.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE	White	**BULK DENSITY**	
ODOUR	Odorless	**MELTING POINT**	840°C
pH	Not Available	**SOLUBILITY IN WATER**	Insoluble
VAPOUR PRESSURE	Not Available	**SPECIFIC GRAVITY**	NA
VAPOUR DENSITY	Not Available		
BOILING POINT	Not Available	**CHEMICAL FAMILY**	Glass Fibre

LENGTH WEIGHTED GEOMETRIC MEAN DIAMETER

CHEMICAL ANALYSIS

SiO_2	54.1±0.5%
Al_2O_3	14.6±0.4%
CaO	16.6±0.3%

10. STABILITY AND REACTIVITY

10.1 STABILITY

This material is chemically stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

10.2 CONDITIONS & MATEIALS TO AVOID

Resin binders and facings may decompose, smolder or burn in fire situation or if heated over. Resin binders may be attacked by acidic, alkaline or solvent based substances. Soluble in hydrofluoric acid, phosphoric acid, and concentrated alkali

10.3 HAZARDOUS DECOMPOSITION PRODUCTS AND HAZARDOUS REACTIONS

None

11. TOXICOLOGICAL INFORMATION

11.1 EPIDEMIOLOGY

None

11.2 TOXICOLOGY

The potential for SMF fibres to produce health effects has been the subject of extensive investigations over a number of decades. The following is a review of the results to date: A number of studies have been conducted on the health effects of inhalation exposure of rats and hamsters. In a lifetime (6 hours per day, 5 days a week for 24 months) nose only inhalations study, rats exposed to Maximum Tolerated Dose (30 mg/M3, 200 fibres/ml) developed progressive lung damage (interstitial fibrosis) and cancer of the lung and mesothelioma. In contrast, hamsters similarly exposed developed interstitial fibrosis and mesothelioma but no lung cancers. A multiple dose study (3, 9, 16 mg/M3; 25, 75, and 150 fibres/ml) found a dose related parenchymal fibrosis however in the lowest exposed group (25 fibres/ml) no irreversible effects were found that could be attributed to ceramic fibre exposure. There was no statistical excess of lung tumors at any dose. One rat developed a mesothelioma in the 75fibre/mlexposure group. In 1997 the International Agency for Research on Cancer (IARC) reviewed the epidemiological and animal toxicology data on SMF (including ceramic fibre, glass wool, rock wool, and slagwool) and classified the group as possible human carcinogens (IARC Group 2B).

12. DISPOSAL CONSIDERATIONS

Waste Disposal

Place in sealed, appropriately labeled plastic bags and dispose of in accordance with local authority guidelines. Suitable label: CAUTION: SYNTHETIC MINERAL FIBRE WASTE. Clean area with micro equipped vacuum or wet sweep.