



Safety Data Sheet

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This Safety Data Sheet has been prepared in accordance with the New Zealand Hazardous Substances and New Organisms Act 1996 (HSNO) and as amended

SECTION 1: Identification

1.1. Product identifier

3M™ Interam™ Endothermic Mat E-5A-4, E-54A, E-54C

Product identification numbers

98-0400-5465-6 98-0400-5469-8 98-0400-5475-5 98-0400-5477-1

1.2. Recommended use and restrictions on use

Recommended use

Fire Barrier Mat

1.3. Supplier's details

Address: 3M New Zealand Ltd, 94 Apollo Drive, Rosedale 0632, Auckland

Telephone: (09) 477 4040

E Mail: innovation@nz.mmm.com

Website: 3m.co.nz

1.4. Emergency telephone number

24 hr Medical Emergency, National Poisons Centre, 0800 764 766 (0800 POISON)

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture

Classified as hazardous according to the New Zealand Hazardous Substances (Minimum Degrees of Hazard) Regulations 2001.

Not classified as a Dangerous Good according to; NZS 5433:2012 Transport of Dangerous Goods on Land, UN, IMDG and IATA.

HSNO classification

6.7B Suspected human carcinogen

6.9A Toxic to human target organs/systems

9.1C Aquatic toxicity

2.2. Label elements

SIGNAL WORD

DANGER!

Symbols:

Health Hazard |

Pictograms



HAZARD STATEMENTS:

- H351 Suspected of causing cancer.
- H372 Causes damage to organs through prolonged or repeated exposure: respiratory system |
- H412 Harmful to aquatic life with long lasting effects.

PRECAUTIONARY STATEMENTS

Prevention:

- P104 Read Safety Data Sheet before use.
- P201 Obtain special instructions before use.
- P202 Do not handle until all safety precautions have been read and understood.
- P260 Do not breathe dust/fume/gas/mist/vapours/spray.
- P281 Use personal protective equipment as required.
- P270 Do not eat, drink or smoke when using this product.
- P264 Wash thoroughly after handling.
- P273 Avoid release to the environment.

Response:

- P308 + P313 IF exposed or concerned: Get medical advice/attention.

Storage:

- P405 Store locked up.

Disposal:

- P501 Dispose of contents/container in accordance with applicable local/regional/national/international regulations.

SECTION 3: Composition/information on ingredients

Ingredient	CAS Nbr	% by Weight
Aluminium hydroxide	21645-51-2	60 - 90
Refractory ceramic fibres	142844-00-6	10 - 30
Water	7732-18-5	5 - 10
Polymer	Trade Secret	3 - 7
Steel (AISI 304L)	12611-86-8	< 7
2-Ethylhexyl diphenyl phosphate	1241-94-7	1 - 5
Cellulose	9004-34-6	1 - 5
Aluminium.	7429-90-5	< 3

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation

Remove person to fresh air. If you feel unwell, get medical attention.

Skin contact

Wash with soap and water. If signs/symptoms develop, get medical attention.

Eye contact

Flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. If signs/symptoms persist, get medical attention.

If swallowed

Rinse mouth. If you feel unwell, get medical attention.

4.2. Most important symptoms and effects, both acute and delayed

See Section 11.1 Information on toxicological effects

4.3. Indication of any immediate medical attention and special treatment required

Not applicable

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media

Material will not burn. Use a fire fighting agent suitable for the surrounding fire.

5.2. Special hazards arising from the substance or mixture

None inherent in this product.

5.3. Special protective actions for fire-fighters

No unusual fire or explosion hazards are anticipated.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Place in a closed container approved for transportation by appropriate authorities. Clean up residue. Dispose of collected material as soon as possible.

SECTION 7: Handling and storage

Refer to Section 15 - HSNO controls for more information

7.1. Precautions for safe handling

Avoid breathing of dust created by cutting, sanding, grinding or machining. For industrial or professional use only. Do not handle until all safety precautions have been read and understood. Do not breathe dust/fume/gas/mist/vapours/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Avoid release to the environment. Use personal protective equipment (eg. gloves, respirators...) as required.

7.2. Conditions for safe storage including any incompatibilities

No special storage requirements.

7.3. Approved handler test certificate

Not required

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

Ingredient	CAS Nbr	Agency	Limit type	Additional comments
Aluminium.	7429-90-5	New Zealand WES	TWA(Al, welding fume)(8 hours):5 mg/m ³ ;TWA(as Al pyrophoric powder)(8 hours): 5 mg/m ³ ; TWA(as Al)(8 hours): 2 mg/m ³ ; TWA(as Al, dust)(8 hours): 10 mg/m ³ .	
Cellulose	9004-34-6	New Zealand WES	TWA(8 hours):10 mg/m ³	

New Zealand WES : New Zealand Workplace Exposure Standards.

TWA: Time-Weighted-Average

STEL: Short Term Exposure Limit

ppm: parts per million

mg/m³: milligrams per cubic metre

CEIL: Ceiling

8.2. Exposure controls

8.2.1. Engineering controls

Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapours/spray. If ventilation is not adequate, use respiratory protection equipment.

8.2.2. Personal protective equipment (PPE)

Eye/face protection

Wear eye/face protection.

The following eye protection(s) are recommended: Safety glasses with side shields.

Refer AS/NZS 1336 - Recommended practices for occupational eye protection and for performance specifications AS/NZS 1337, Parts 1 - 6 - Personal eye-protection.

Skin/hand protection

Wear appropriate gloves to minimise risk of injury to skin from contact with dust or physical abrasion from grinding or sanding.

Gloves made from the following material(s) are recommended: Neoprene.

Nitrile rubber.

The following protective clothing material(s) are recommended: Coveralls - Disposable

Respiratory protection

Wear respiratory protection if ventilation is inadequate to prevent overexposure.

An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of

a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure:

Half facepiece or full facepiece air-purifying respirator suitable for particulates.

For questions about suitability for a specific application, consult with your respirator manufacturer.

Refer AS/NZS 1715 - Selection, use and maintenance of respiratory protective equipment and AS/NZS 1716 - Respiratory protective devices.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Solid.
Specific Physical Form:	Roll of material
Appearance/Odour	White mat with metal foil on one side, no odour.
Odour threshold	<i>Not applicable.</i>
Melting point/Freezing point	<i>No data available.</i>
Boiling point/Initial boiling point/Boiling range	<i>Not applicable.</i>
Flash point	<i>Not applicable.</i>
Flammability (solid, gas)	Not classified
Flammable Limits(LEL)	<i>Not applicable.</i>
Flammable Limits(UEL)	<i>Not applicable.</i>
Density	0.866 g/cm ³
Relative density	<i>No data available.</i>
Water solubility	Nil
Solubility- non-water	<i>Not applicable.</i>
Autoignition temperature	<i>No data available.</i>
Decomposition temperature	<i>Not applicable.</i>
VOC less H₂O & exempt solvents	3.6 g/l

SECTION 10: Stability and reactivity

10.1 Reactivity

This material is considered to be non reactive under normal use conditions

10.2 Chemical stability

Stable.

10.3 Possibility of hazardous reactions

Hazardous polymerisation will not occur.

10.4 Conditions to avoid

None known.

10.5 Incompatible materials

None known.

10.6 Hazardous decomposition products

<u>Substance</u>	<u>Condition</u>
Carbon monoxide.	Not specified.
Carbon dioxide.	Not specified.

SECTION 11: Toxicological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be present below the threshold for labelling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

11.1 Information on Toxicological effects

Signs and Symptoms of Exposure

Based on test data and/or information on the components, this material may produce the following health effects:

Inhalation

Respiratory tract irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain. Dust from cutting, grinding, sanding or machining may cause irritation of the respiratory system: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, nose and throat pain. May cause target organ effects after inhalation.

Skin contact

During cutting:

Mechanical skin irritation: Signs/symptoms may include abrasion, redness, pain, and itching.

Eye contact

During cutting:

Mechanical eye irritation: Signs/symptoms may include pain, redness, tearing and corneal abrasion.

Ingestion

Physical Blockage: Signs/symptoms may include cramping, abdominal pain, and constipation.

Target Organ Effects:

Prolonged or repeated exposure may cause:

During cutting:

Fibrosis: Signs/symptoms may include breathlessness, chronic dry cough, phlegm production, wheezing, and changes in lung function tests.

Carcinogenicity:

Contains a chemical or chemicals which can cause cancer.

Additional information:

- This product, when used under reasonable conditions and in accordance with the 3M directions for use, should not present a health hazard. However, use or processing of the product in a manner not in accordance with the product's directions for use may affect the performance of the product and may present potential health and safety hazards.

Toxicological Data

Acute Toxicity

Name	Route	Species	Value
Overall product	Ingestion		No test data available; calculated ATE >5,000 mg/kg
Aluminium hydroxide	Dermal		LD50 estimated to be > 5,000 mg/kg
Aluminium hydroxide	Ingestion	Rat	LD50 > 5,000 mg/kg
Refractory ceramic fibres	Dermal		LD50 estimated to be > 5,000 mg/kg
Refractory ceramic fibres	Ingestion		LD50 estimated to be 2,000 - 5,000 mg/kg
Polymer	Ingestion	Rat	LD50 > 2,000 mg/kg
Steel (AISI 304L)			No data available
Aluminium.	Ingestion	Rat	LD50 > 730 mg/kg
Cellulose	Dermal	Rabbit	LD50 > 2,000 mg/kg
Cellulose	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 5.8 mg/l
Cellulose	Ingestion	Rat	LD50 > 5,000 mg/kg
2-Ethylhexyl diphenyl phosphate	Dermal	Rabbit	LD50 > 7,940 mg/kg
2-Ethylhexyl diphenyl phosphate	Ingestion	Rat	LD50 > 24,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Aluminium hydroxide	Rabbit	No significant irritation
Refractory ceramic fibres		No data available
Polymer		Minimal irritation
Steel (AISI 304L)		No data available
Aluminium.		No data available
Cellulose		No data available
2-Ethylhexyl diphenyl phosphate		No data available

Serious Eye Damage/Irritation

Name	Species	Value
Aluminium hydroxide	Rabbit	No significant irritation
Refractory ceramic fibres		No data available
Polymer		Mild irritant
Steel (AISI 304L)		No data available
Aluminium.		No data available
Cellulose		No data available
2-Ethylhexyl diphenyl phosphate		No data available

Skin Sensitisation

Name	Species	Value
Aluminium hydroxide	Guinea pig	Not sensitizing
Refractory ceramic fibres		No data available
Polymer		No data available
Steel (AISI 304L)		No data available
Aluminium.		No data available
Cellulose		No data available
2-Ethylhexyl diphenyl phosphate		No data available

Respiratory Sensitisation

Name	Species	Value
Aluminium hydroxide		No data available
Refractory ceramic fibres		No data available
Polymer		No data available
Steel (AISI 304L)		No data available
Aluminium.		No data available

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Cellulose		No data available
2-Ethylhexyl diphenyl phosphate		No data available

Germ Cell Mutagenicity

Name	Route	Value
Aluminium hydroxide		No data available
Refractory ceramic fibres		No data available
Polymer		No data available
Steel (AISI 304L)		No data available
Aluminium.	In vivo	Some positive data exist, but the data are not sufficient for classification
Cellulose		No data available
2-Ethylhexyl diphenyl phosphate		No data available

Carcinogenicity

Name	Route	Species	Value
Aluminium hydroxide	Not specified.	Multiple animal species	Not carcinogenic
Refractory ceramic fibres	Inhalation	Multiple animal species	Carcinogenic.
Polymer			No data available
Steel (AISI 304L)			No data available
Aluminium.			No data available
Cellulose			No data available
2-Ethylhexyl diphenyl phosphate			No data available

Reproductive Toxicity**Reproductive and/or Developmental Effects**

Name	Route	Value	Species	Test result	Exposure Duration
Aluminium hydroxide	Ingestion	Not toxic to development	Rat	NOAEL 768 mg/kg/day	during organogenesis
Refractory ceramic fibres		No data available			
Polymer		No data available			
Steel (AISI 304L)		No data available			
Aluminium.	Inhalation	Not toxic to reproduction and/or development		NOEL 6.1 mg/m ³	
Aluminium.	Ingestion	Some positive reproductive/developmental data exist, but the data are not sufficient for classification		NOEL N/A	
Cellulose		No data available			
2-Ethylhexyl diphenyl phosphate		No data available			

Target Organ(s)**Specific Target Organ Toxicity - single exposure**

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Aluminium hydroxide			No data available			
Refractory ceramic fibres			No data available			
Polymer			No data available			

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Steel (AISI 304L)			No data available			
Aluminium.	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification		Irritation Positive	
Cellulose			No data available			
2-Ethylhexyl diphenyl phosphate			No data available			

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Refractory ceramic fibres	Inhalation	pulmonary fibrosis	Causes damage to organs through prolonged or repeated exposure	Rat	NOAEL 26 fibers/cc	18 months
Refractory ceramic fibres	Inhalation	heart liver kidney and/or bladder	All data are negative	Rat	NOAEL 187 fibers/cc	18 months
Polymer			No data available			
Steel (AISI 304L)			No data available			
Aluminium.	Dermal	skin	Some positive data exist, but the data are not sufficient for classification		NOEL N/A	
Aluminium.	Dermal	central nervous system	All data are negative		NOEL N/A	
Aluminium.	Inhalation	central nervous system pulmonary fibrosis respiratory system	Some positive data exist, but the data are not sufficient for classification		NOEL N/A	
Aluminium.	Inhalation	skin endocrine system bone, teeth, nails, and/or hair hematopoietic system liver eyes kidney and/or bladder	All data are negative		NOEL 6.1 mg/m3	
Aluminium.	Ingestion	bone, teeth, nails, and/or hair hematopoietic system central nervous system	Some positive data exist, but the data are not sufficient for classification		NOAEL N/A	
Aluminium.	Ingestion	liver	Some positive data exist, but the data are not sufficient for classification		NOEL N/A	
Aluminium.	Ingestion	kidney and/or bladder	Some positive data exist, but the data are not sufficient for		LOEL 75 mg/kg	

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			classification			
Aluminium.	Ingestion	skin	Some positive data exist, but the data are not sufficient for classification		LOEL 130 mg/kg	
Aluminium.	Ingestion	respiratory system	All data are negative		NOEL N/A	
Aluminium.	Ingestion	eyes	All data are negative		NOEL 88 mg/m ³	
Aluminium.	Ingestion	endocrine system	All data are negative		NOEL 88 mg/kg	
Aluminium.	Ingestion	heart	All data are negative		NOEL 1.2 mg/kg	
Cellulose			No data available			
2-Ethylhexyl diphenyl phosphate			No data available			

Aspiration Hazard

Name	Value
Aluminium hydroxide	Not an aspiration hazard
Refractory ceramic fibres	Not an aspiration hazard
Polymer	Not an aspiration hazard
Steel (AISI 304L)	Not an aspiration hazard
Aluminium.	Not an aspiration hazard
Cellulose	Not an aspiration hazard
2-Ethylhexyl diphenyl phosphate	Not an aspiration hazard

Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.

SECTION 12: Ecological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. Additional information leading to material classification in Section 2 is available upon request. In addition, environmental fate and effects data on ingredients may not be reflected in this section because an ingredient is present below the threshold for labelling, an ingredient is not expected to be available for exposure, or the data is considered not relevant to the material as a whole.

12.1. Toxicity**Ecotoxic to the aquatic environment.**

9.1C Aquatic toxicity

No product test data available.

Material	CAS Number	Organism	Type	Exposure	Test endpoint	Test result
Aluminium hydroxide	21645-51-2	Fish	Laboratory	96 hours	LC50	>100 mg/l
Aluminium hydroxide	21645-51-2	Water flea	Laboratory	48 hours	EC50	>100 mg/l
Aluminium hydroxide	21645-51-2	Green algae	Laboratory	72 hours	EC50	>100 mg/l
2-Ethylhexyl diphenyl phosphate	1241-94-7	Green algae	Experimental	96 hours	EC50	0.2 mg/l
2-Ethylhexyl	1241-94-7	Water flea	Experimental	48 hours	EC50	0.15 mg/l

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diphenyl phosphate						
2-Ethylhexyl diphenyl phosphate	1241-94-7	Water flea	Experimental	21 days	NOEC	0.018 mg/l
Polymer	Trade Secret		No data available.			
Aluminium.	7429-90-5		No data available.			
Cellulose	9004-34-6		No data available.			
Refractory ceramic fibres	142844-00-6		No data available.			
Steel (AISI 304L)	12611-86-8		No data available.			

12.2. Persistence and degradability

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
Aluminium hydroxide	21645-51-2	No data available.	N/A	N/A	N/A	N/A
2-Ethylhexyl diphenyl phosphate	1241-94-7	Estimated Photolysis		Photolytic half-life (in air)	9.68 hours (t 1/2)	Other methods
Polymer	Trade Secret	No data available.	N/A	N/A	N/A	N/A
Aluminium.	7429-90-5	No data available.	N/A	N/A	N/A	N/A
Cellulose	9004-34-6	No data available.	N/A	N/A	N/A	N/A
Steel (AISI 304L)	12611-86-8	No data available.	N/A	N/A	N/A	N/A
Refractory ceramic fibres	142844-00-6	No data available.	N/A	N/A	N/A	N/A
2-Ethylhexyl diphenyl phosphate	1241-94-7	Experimental Biodegradation	28 days	CO2 evolution	67 % weight	Other methods

12.3 : Bioaccumulative potential

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
Aluminium hydroxide	21645-51-2	No data available.	N/A	N/A	N/A	N/A
Polymer	Trade Secret	No data available.	N/A	N/A	N/A	N/A
Aluminium.	7429-90-5	No data available.	N/A	N/A	N/A	N/A
Steel (AISI 304L)	12611-86-8	No data available.	N/A	N/A	N/A	N/A
2-Ethylhexyl diphenyl phosphate	1241-94-7	Experimental BCF - Bluegill	36 days	Bioaccumulation factor	934	Other methods
Cellulose	9004-34-6	No data available.	N/A	N/A	N/A	N/A

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Refractory ceramic fibres	142844-00-6	No data available.	N/A	N/A	N/A	N/A
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12.4. Mobility in soil

Please contact manufacturer for more details

12.5 Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1. Disposal methods

Dispose of contents/ container in accordance with the local/regional/national/international regulations

Dispose of waste product in a permitted industrial waste facility. As a disposal alternative, Proper destruction may require the use of additional fuel during incineration processes.

Packaging (that may or may not contain any residual substance) may be lawfully disposed of by householders or other consumers through public or commercial waste collection services.

SECTION 14: Transport Information

NOT HAZARDOUS FOR TRANSPORT

SECTION 15: Regulatory information

HSNO Approval number HSR002679
Group standard name Surface Coatings and Colourants (Toxic [6.7]) Group Standard 2006
HSNO Hazard classification Refer to section 2

NZ Inventory of Chemicals (NZIoC) Status

All applicable chemical ingredients in this material are in compliance with NZIoC listing requirements.

HSNO Controls

Approved handler test certificate	Not required
Location and transit Depot certification test	Not required
Hazardous atmosphere zone	Not required
Fire extinguishers	Not required
Emergency response plan	100 L or 100 kg (for a HSNO 9.1A substance); or 1,000 L or 1,000 kg (for a HSNO 6.1D, 6.5A, 6.5B, 9.1B or 9.1C substance); or 10,000 L or 10,000 kg (for all other substances)
Secondary containment	100 L or 100 kg (for a HSNO 9.1A substance); or 1,000 L or 1,000 kg (for a HSNO 6.1D, 6.5A, 6.5B, 9.1B or 9.1C substance); or 10,000 L or 10,000 kg (for all other substances)
Tracking	Not required
Warning signage	100 L or 100 kg (for a HSNO 9.1A substance); or 1,000 L or 1,000 kg (for a HSNO 8.3A, 9.1B or 9.1C substance); or 10,000 L or 10,000 kg (for a HSNO 6.1D or 9.1D substance)

SECTION 16: Other information

Revision information:

No revision information is available.

The information in this Safety Data Sheet (SDS) is believed to be correct as of the date of issue. TO THE EXTENT PERMITTED BY LAW, 3M MAKES NO WARRANTY, EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY, OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR COURSE OF PERFORMANCE OR USAGE OF TRADE. User is responsible for determining whether the 3M product is fit for a particular purpose and suitable for user's method of use or application. Given the variety of factors that can affect the use and application of a 3M product, some of which are uniquely within the user's knowledge and control, it is essential that the user evaluates the 3M product to determine whether it is fit for a particular purpose and suitable for user's method of use or application. 3M provides information in electronic form as a service to customers. Due to the remote possibility of electronic transfer may have resulted in errors, omissions or alterations in this information; 3M makes no representations as to its completeness or accuracy. In addition, information obtained from a database may not be as current as the information in the SDS available directly from 3M.

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