



Safety Data Sheet

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SECTION 1: Identification

1.1. Product identifier

3M(tm) Thermal Barrier 5000 (Part B Pigmented)

1.2. Recommended use and restrictions on use

Recommended use

Automotive

1.3. Supplier's details

MANUFACTURER: 3M
DIVISION: Automotive and Aerospace Solutions Division
ADDRESS: 3M Center, St. Paul, MN 55144-1000, USA
Telephone: 1-888-3M HELPS (1-888-364-3577)

1.4. Emergency telephone number

1-800-364-3577 or (651) 737-6501 (24 hours)

SECTION 2: Hazard identification

2.1. Hazard classification

Acute Toxicity (oral): Category 4.

Serious Eye Damage/Irritation: Category 2B.

Skin Sensitizer: Category 1B.

2.2. Label elements

Signal word

Warning

Symbols

Exclamation mark |

Pictograms



Hazard Statements

Harmful if swallowed.
Causes eye irritation.
May cause an allergic skin reaction.

Precautionary Statements**Prevention:**

Avoid breathing dust/fume/gas/mist/vapors/spray.
Wear protective gloves.
Do not eat, drink or smoke when using this product.
Wash thoroughly after handling.
Contaminated work clothing must not be allowed out of the workplace.

Response:

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.
IF ON SKIN: Wash with plenty of soap and water.
If skin irritation or rash occurs: Get medical advice/attention.
Wash contaminated clothing before reuse.
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
Rinse mouth.

Disposal:

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

21% of the mixture consists of ingredients of unknown acute oral toxicity.

SECTION 3: Composition/information on ingredients

Ingredient	C.A.S. No.	% by Wt
SILOXANES AND SILICONES, DI-ME, VINYL GROUP-TERMINATED	68083-19-2	10 - 50
AMMONIUM POLYPHOSPHATE	68333-79-9	15 - 40 Trade Secret *
DI-ME, HYDROGEN-TERMINATED SILOXANES AND SILICONES	70900-21-9	5 - 20
DIMETHYL METHYL HYDROGEN SILICONE FLUID	68037-59-2	5 - 20
PARTITIONING AGENT	1317-65-3	1 - 10
SILOXANES AND SILICONES, DI-ME, REACTION PRODUCTS WITH SILICA	67762-90-7	<= 6
MELAMINE-FORMALDEHYDE RESIN	9003-08-1	< 3 Trade Secret *
COPOLYMER OF ACRYLONITRILE AND OTHER ACRYLICS	Trade Secret*	< 1.5

*The specific chemical identity and/or exact percentage (concentration) of this composition has been withheld as a trade secret.

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:

Immediately wash with soap and water. Remove contaminated clothing and wash before reuse. 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

Allergic skin reaction (redness, swelling, blistering, and itching).

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 special protective actions for fire-fighters are anticipated.

SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures**

Evacuate area. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. 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. For larger spills, cover drains and build dikes to prevent entry into sewer systems or bodies of water.

6.3. Methods and material for containment and cleaning up

Contain spill. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent material does not remove a physical, health, or environmental hazard. Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Clean up residue with an appropriate solvent selected by a qualified and authorized person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and SDS. Seal the container. Dispose of collected material as soon as possible in accordance with applicable local/regional/national/international regulations.

SECTION 7: Handling and storage**7.1. Precautions for safe handling**

Avoid breathing dust/fume/gas/mist/vapors/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. Contaminated work clothing should not be allowed out of the

workplace. Avoid release to the environment. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage including any incompatibilities

No special storage requirements.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

If a component is disclosed in section 3 but does not appear in the table below, an occupational exposure limit is not available for the component.

Ingredient	C.A.S. No.	Agency	Limit type	Additional Comments
Particles (insoluble or poorly soluble) not otherwise specified, inhalable particles	1317-65-3	ACGIH	TWA(inhalable particulates):10 mg/m3	
Particles (insoluble or poorly soluble) not otherwise specified, respirable particles	1317-65-3	ACGIH	TWA(respirable particles):3 mg/m3	
PARTITIONING AGENT	1317-65-3	OSHA	TWA(as total dust):15 mg/m3;TWA(respirable fraction):5 mg/m3	
SILICA, AMORPHOUS	67762-90-7	OSHA	TWA:20 millions of particles/cu. ft.;TWA concentration:0.8 mg/m3	

ACGIH : American Conference of Governmental Industrial Hygienists

AIHA : American Industrial Hygiene Association

CMRG : Chemical Manufacturer's Recommended Guidelines

OSHA : United States Department of Labor - Occupational Safety and Health Administration

TWA: Time-Weighted-Average

STEL: Short Term Exposure Limit

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/vapors/spray. If ventilation is not adequate, use respiratory protection equipment.

8.2.2. Personal protective equipment (PPE)

Eye/face protection

Select and use eye/face protection to prevent contact based on the results of an exposure assessment. The following eye/face protection(s) are recommended:

Safety Glasses with side shields

Indirect Vented Goggles

Skin/hand protection

Select and use gloves and/or protective clothing approved to relevant local standards to prevent skin contact based on the results of an exposure assessment. Selection should be based on use factors such as exposure levels, concentration of the substance or mixture, frequency and duration, physical challenges such as temperature extremes, and other use conditions. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible gloves/protective clothing. Note: Nitrile gloves may be worn over polymer laminate gloves to improve dexterity.

Gloves made from the following material(s) are recommended: Polymer laminate

If this product is used in a manner that presents a higher potential for exposure (eg. spraying, high splash potential etc.), then use of protective coveralls may be necessary. Select and use body protection to prevent contact based on the results of an exposure assessment. The following protective clothing material(s) are recommended: Apron - polymer laminate

Respiratory protection

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 organic vapors and particulates

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

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance

Physical state

Liquid Paste

Color

Yellow

Specific Physical Form:

Paste

Odor

Odorless

Odor threshold

Not Applicable

pH

No Data Available

Melting point

No Data Available

Boiling Point

No Data Available

Flash Point

No flash point

Evaporation rate

No Data Available

Flammability (solid, gas)

Not Applicable

Flammable Limits(LEL)

No Data Available

Flammable Limits(UEL)

No Data Available

Vapor Pressure

No Data Available

Vapor Density

No Data Available

Density

0.6 - 0.8 g/cm³

Specific Gravity

0.6 - 0.8

Solubility In Water

No Data Available

Solubility- non-water

Nil [*Details: Solubility-non-water*]

Partition coefficient: n-octanol/ water

No Data Available

Autoignition temperature

No Data Available

Decomposition temperature

No Data Available

Viscosity

200 - 800 Pa-s

Molecular weight

Not Applicable

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 polymerization 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>
Formaldehyde	Not Specified
Carbon monoxide	Not Specified
Carbon dioxide	Not Specified
Ammonia	Not Specified
Oxides of Nitrogen	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 labeling, 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.

Skin Contact:

Contact with the skin during product use is not expected to result in significant irritation. Allergic Skin Reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

Eye Contact:

Moderate Eye Irritation: Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

Ingestion:

Harmful if swallowed. Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

Toxicological Data

If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or the data are not sufficient for classification.

Acute Toxicity

Name	Route	Species	Value
Overall product	Ingestion		No data available; calculated ATE >300 - =2,000 mg/kg
SILOXANES AND SILICONES, DI-ME, VINYL GROUP-TERMINATED	Dermal	Rabbit	LD50 > 15,440 mg/kg
SILOXANES AND SILICONES, DI-ME, VINYL GROUP-TERMINATED	Ingestion	Rat	LD50 > 15,440 mg/kg
AMMONIUM POLYPHOSPHATE	Dermal	Rat	LD50 > 5,000 mg/kg
AMMONIUM POLYPHOSPHATE	Inhalation-Dust/Mist	Rat	LC50 > 4.85 mg/l

	(4 hours)		
AMMONIUM POLYPHOSPHATE	Ingestion	Rat	LD50 > 300, < 2,000 mg/kg
DIMETHYL METHYL HYDROGEN SILICONE FLUID	Dermal	Rabbit	LD50 > 2,000 mg/kg
DIMETHYL METHYL HYDROGEN SILICONE FLUID	Ingestion	Rat	LD50 > 2,000 mg/kg
PARTITIONING AGENT	Dermal	Rat	LD50 > 2,000 mg/kg
PARTITIONING AGENT	Inhalation-Dust/Mist (4 hours)	Rat	LC50 3 mg/l
PARTITIONING AGENT	Ingestion	Rat	LD50 6,450 mg/kg
SILOXANES AND SILICONES, DI-ME, REACTION PRODUCTS WITH SILICA	Dermal	Rabbit	LD50 > 5,000 mg/kg
SILOXANES AND SILICONES, DI-ME, REACTION PRODUCTS WITH SILICA	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
SILOXANES AND SILICONES, DI-ME, REACTION PRODUCTS WITH SILICA	Ingestion	Rat	LD50 > 5,110 mg/kg
MELAMINE-FORMALDEHYDE RESIN	Dermal	Rabbit	LD50 > 10,000 mg/kg
MELAMINE-FORMALDEHYDE RESIN	Ingestion	Rat	LD50 > 10,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
SILOXANES AND SILICONES, DI-ME, VINYL GROUP-TERMINATED	Rabbit	No significant irritation
AMMONIUM POLYPHOSPHATE	In vitro data	No significant irritation
DIMETHYL METHYL HYDROGEN SILICONE FLUID	Rabbit	No significant irritation
PARTITIONING AGENT	Rabbit	No significant irritation
SILOXANES AND SILICONES, DI-ME, REACTION PRODUCTS WITH SILICA	Rabbit	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
SILOXANES AND SILICONES, DI-ME, VINYL GROUP-TERMINATED	Rabbit	Mild irritant
AMMONIUM POLYPHOSPHATE	Rabbit	Moderate irritant
DIMETHYL METHYL HYDROGEN SILICONE FLUID	Rabbit	Mild irritant
PARTITIONING AGENT	Rabbit	No significant irritation
SILOXANES AND SILICONES, DI-ME, REACTION PRODUCTS WITH SILICA	Rabbit	No significant irritation

Skin Sensitization

Name	Species	Value
AMMONIUM POLYPHOSPHATE	similar compounds	Not classified
DIMETHYL METHYL HYDROGEN SILICONE FLUID	Guinea pig	Not classified
SILOXANES AND SILICONES, DI-ME, REACTION PRODUCTS WITH SILICA	Human and animal	Not classified
MELAMINE-FORMALDEHYDE RESIN	Human	Sensitizing

Respiratory Sensitization

For the component/components, either no data are currently available or the data are not sufficient for classification.

Germ Cell Mutagenicity

Name	Route	Value
DIMETHYL METHYL HYDROGEN SILICONE FLUID	In Vitro	Not mutagenic
SILOXANES AND SILICONES, DI-ME, REACTION PRODUCTS WITH SILICA	In Vitro	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
SILOXANES AND SILICONES, DI-ME, REACTION PRODUCTS WITH SILICA	Not Specified	Mouse	Some positive data exist, but the data are not sufficient for classification
MELAMINE-FORMALDEHYDE RESIN	Ingestion	Multiple animal species	Not carcinogenic

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

Name	Route	Value	Species	Test Result	Exposure Duration
PARTITIONING AGENT	Ingestion	Not classified for development	Rat	NOAEL 625 mg/kg/day	premating & during gestation
SILOXANES AND SILICONES, DI-ME, REACTION PRODUCTS WITH SILICA	Ingestion	Not classified for female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
SILOXANES AND SILICONES, DI-ME, REACTION PRODUCTS WITH SILICA	Ingestion	Not classified for male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
SILOXANES AND SILICONES, DI-ME, REACTION PRODUCTS WITH SILICA	Ingestion	Not classified for development	Rat	NOAEL 1,350 mg/kg/day	during organogenesis
MELAMINE-FORMALDEHYDE RESIN	Ingestion	Not classified for female reproduction	Rat	NOAEL 10% in the diet	1 generation
MELAMINE-FORMALDEHYDE RESIN	Ingestion	Not classified for development	Rat	NOAEL 10% in the diet	1 generation
MELAMINE-FORMALDEHYDE RESIN	Ingestion	Not classified for male reproduction	Dog	LOAEL 2.5% in the diet	2 years

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

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
AMMONIUM POLYPHOSPHATE	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL Not available	
PARTITIONING AGENT	Inhalation	respiratory system	Not classified	Rat	NOAEL 0.812 mg/l	90 minutes
MELAMINE-FORMALDEHYDE RESIN	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL not available	

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
PARTITIONING AGENT	Inhalation	respiratory system	Not classified	Human	NOAEL Not available	occupational exposure
SILOXANES AND SILICONES, DI-ME, REACTION PRODUCTS WITH SILICA	Inhalation	respiratory system silicosis	Not classified	Human	NOAEL Not available	occupational exposure
MELAMINE-FORMALDEHYDE RESIN	Inhalation	hematopoietic system liver immune system nervous system kidney and/or bladder	Not classified	Rat	NOAEL 0.036 mg/l	28 days
MELAMINE-FORMALDEHYDE RESIN	Inhalation	respiratory system	Not classified	Rat	LOAEL 0.036 mg/l	28 days
MELAMINE-	Inhalation	eyes	Not classified	Rat	NOAEL	28 days

FORMALDEHYDE RESIN					0.036 mg/l	
MELAMINE- FORMALDEHYDE RESIN	Ingestion	endocrine system hematopoietic system liver kidney and/or bladder	Not classified	Rat	NOAEL 2,000 mg/kg/day	2 years

Aspiration Hazard

For the component/components, either no data are currently available or the data are not sufficient for classification.

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**Ecotoxicological information**

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

Chemical fate information

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

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. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

SECTION 14: Transport Information

For Transport Information, please visit <http://3M.com/Transportinfo> or call 1-800-364-3577 or 651-737-6501.

SECTION 15: Regulatory information**15.1. US Federal Regulations**

Contact 3M for more information.

EPCRA 311/312 Hazard Classifications:**Physical Hazards**

Not applicable

Health Hazards

Acute toxicity

Respiratory or Skin Sensitization

Serious eye damage or eye irritation

15.2. State Regulations

Contact 3M for more information.

15.3. Chemical Inventories

The components of this material are in compliance with the provisions of Australia National Industrial Chemical Notification and Assessment Scheme (NICNAS). Certain restrictions may apply. Contact the selling division for additional information.

The components of this material are in compliance with the China "Measures on Environmental Management of New Chemical Substance". Certain restrictions may apply. Contact the selling division for additional information.

The components of this material are in compliance with the provisions of the Korean Toxic Chemical Control Law. Certain restrictions may apply. Contact the selling division for additional information.

The components of this material are in compliance with the provisions of Philippines RA 6969 requirements. Certain restrictions may apply. Contact the selling division for additional information.

The components of this product are in compliance with the chemical notification requirements of TSCA. All required components of this product are listed on the active portion of the TSCA Inventory.

Contact 3M for more information.

15.4. International Regulations

Contact 3M for more information.

This SDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 16: Other information

NFPA Hazard Classification

Health: 2 **Flammability:** 0 **Instability:** 0 **Special Hazards:** None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

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