



Safety Data Sheet

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SECTION 1: Identification

1.1 Product

Thermon EFS

1.2 Recommended use / restrictions on use

For use as a melt and set heat transfer compound in heat tracing and various other applications.

1.3 Supplier

Manufacturer: Thermon Manufacturing Company

Address: 100 Thermon Drive, San Marcos, Texas 78667 USA

Telephone: 1 (800) 820-4328 or 1 (512) 396-5801

1.4 Emergency phone number

1 (800) 820-4328 or 1 (512) 396-5801

1 (713) 205-2690 (24 Hours)

Alternate: National Poison Control Center: 1 (800) 222-1222

SECTION 2: Hazard identification

2 General Information

Hazards arising from this product are primarily present when product is in the uncured state or upon removal. Uncured product is an extruded thermoset material (see detailed composition in Section 3). Product is packaged in reels and rolls.

2.1 Hazard classification

GHS: Contact hazard-skin: Category 2

2.2 Label types

Signal word: Warning

Symbols: Exclamation mark

Pictogram:



2.3 Hazard statements

Causes skin irritation. May cause irritation of the skin and eyes on contact.

Harmful if swallowed. If swallowed the compound may cause irritation to mucous membranes of mouth, throat, esophagus and gastrointestinal systems.

May be harmful if inhaled. May irritate the nose, throat, and respiratory tract.

2.3.1 Risk code

Irritating to the skin, eyes, and respiratory system.

2.3.2 Safety statements

In case of contact with eyes, rinse immediately with water for 10-15 minutes and seek medical advice.

Wear suitable protective clothing, gloves, and eye/face protection.

2.3.3 Precautionary statements

Wash hands thoroughly after handling.

Wear protective gloves.

Avoid release to the environment.

2.4 Hazards not otherwise classified

None

SECTION 3: Composition/information on ingredients

Ingredient	CAS No	EC No	Class*	Weight % ⁺
Natural Graphite	7782-42-5	231-955-3	Xi	30 to 60 %
Calcium Metasilicate	13983-17-0	237-772-5	Xi	1 to 10 %
Bisamide Wax	110-30-5	203-755-6	Xi	1 to 10 %
Industrial Oil	64742-57-0	265-160-8	Xn	1 to 10 %
Antioxidant	27676-62-6	248-597-9		< 1 %
Polyterpene Resin	26813-14-9	608-001-3		1 to 10 %
Ethylene Vinyl Acetate Resin	24937-78-8	607457-0	Xi	10 to 30 %

* See SECTION 2 for a full list of risk codes and safety statements.

⁺ The exact percentage of this composition is held as a trade secret.

SECTION 4: First aid measures

4.1 Description of first aid measures

Eye contact: Flush with water for 10 – 15 minutes, while holding eyelids open. If irritation persists seek medical attention. As a precaution, remove contact lenses, if worn.

Skin contact: The material is not likely to be hazardous by skin contact, but cleaning skin after use is advisable. Cool skin rapidly with cold water after contact with molten material. Do not attempt to remove molten material from the skin. Obtain medical treatment for thermal burn. Wash contaminated clothing before reuse.

Inhalation: Move to fresh air. If breathing is difficult after being relocated to fresh air, administer oxygen and seek medical attention. If symptoms persist seek medical attention.

Ingestion: If ingested, irritation can be reduced by rinsing mouth with water and otherwise treating symptomatically. Do not induce vomiting. Seek medical attention.

4.2 Most important symptoms and effects, both acute and delayed

No known significant effects or critical hazards. Refer to SECTION 11- Information on toxicological effects.

4.3 Indication of immediate medical attention and special treatment needed

Notes to physician: No specific treatment. Treat symptomatically. Contact a poison treatment specialist if large quantities have been ingested or inhaled.

Protection of first aid personnel: No action shall be taken involving any personal risk or without suitable training. Wash contaminated clothing thoroughly with water.

SECTION 5: Fire-fighting measures

5.1 Flammable limits

No data available.

5.2 Suitable extinguishing media

Water spray, dry chemical, CO₂ or foam.

5.3 Unsuitable extinguishing media

No information available.

5.4 Special exposure hazards arising from product

Highly dependent on combustion conditions. A complex mixture of airborne solids, liquids, and gases including carbon monoxide, carbon dioxide, and unidentified organic compounds will be evolved if this material undergoes combustion.

5.5 Special protective equipment for fire-fighting

Wear self contained breathing apparatus (SCBA) for fire-fighting. Evacuate personnel and keep upwind of fire. Grounding and elimination of the static charge is recommended.

SECTION 6: Accidental release measures

6.1 Personal precautions

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

Do not dispose into streams, ponds, lakes, or sewers. Local authorities should be advised if a significant disposal occurs.

6.3 Methods for cleaning up a spill

Clean up by scraping or collecting as the material will be solid at room temperature. Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. Site authorities shall determine which regulations are applicable. Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Do not get in eyes or skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Once hardened, the compound is relatively inert to the environment.

7.2 Precautions for safe storage

Store in accordance with the particular national regulations.

SECTION 8: Exposure controls/personal protection

8.1 General advice

Follow safe industrial hygiene practices and always wear protective equipment when handling this product. Protective equipment should meet recommended national standards. Ensure that eye flushing systems and safety showers are located close to the working place. Wash contaminated clothing before re-use. These precautions are for room temperature handling.

8.2 Engineering controls

Use with adequate ventilation.

8.3 Eye protection

Wear safety glasses in situations where contact is possible.



8.4 Protective gloves

Wear protective gloves in situations where continuous contact is required. Wash hands before breaks and at the end of workday. Skin should be washed after contact.



8.5 Respiratory protection

In case of inadequate ventilation, use properly fitted, air-purifying or air-fed respirator NIOSH/MSHA approved dust respirator.



8.6 Exposure limits

EVA:	OSHA-PEL-TWA (8hr) 5 mg/m ³ [respirable fraction] OSHA-PEL-TWA (8hr) 15 mg/m ³ [total dust] ACGIH-TLV-TWA 10 mg/m ³ [inhalable particles] ACGIH-TLV-TWA 3 mg/m ³ [respirable particles]
Vinyl Acetate:	ACGIH-TLV-STEL 15ppm ACGIH-TLV-TWA 10 ppm AEL-TWA 5ppm (hours) AEL-TWA 10ppm (minutes)
Irganox:	OSHA -TWA 5 mg/m ³ [respirable fraction] OSHA- TWA 15 mg/m ³ [total dust] ACGIH -TWA 10 mg/m ³ [inhalable particles] ACGIH -TWA 3 mg/m ³ [respirable particles]
Polyterpene:	OSHA-PEL-TWA 5 mg/m ³ [respirable fraction] OSHA-PEL-TWA 15 mg/m ³ [total dust] ACGIH-TLV-TWA 10 mg/m ³ [inhalable particles] ACGIH-TLV-TWA 3 mg/m ³ [respirable particles]
Graphite:	OSHA-PEL-TWA 2.5 mg/m ³ [respirable fraction] ACGIH-TLV-TWA 2 mg/m ³ [respirable particles]
Calcium Metasilicate:	ACGIH-TLV-TWA 10 mg/m ³

Industrial Oil: ACGIH- TWA 5 mg/m³
ACGIH- STEL 10 mg/m³
OSHA Z-1- TWA 5 mg/m³

8.7 Ventilation

Ventilate to keep below PEL-TWA.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical State:	Semi-rigid black extruded heat transfer compound profile
Specific Gravity at 20 °C:	1.22
Odor/Odor Threshold:	No specific odor.
pH:	No data available
Vapor Pressure :	156 mmHg. at 61.5 °C
Evaporation Rate (Water = 1):	No data available
Percent Volatile by Volume:	0 %.
Percent Solubility in water:	No data available
Boiling Point at 14.7 psi (760mmHg):	No data available
Flash Point (°C) and Method:	No data available
Explosion Properties:	No data available
Vapor Density:	No data available
Relative Density:	No data available
Partition Coefficient:	No data available
Auto-ignition Temperature:	No data available
Decomposition Temperature:	No data available
Viscosity:	No data available
Flammability:	No data available
Freezing Point:	No data available

SECTION 10: Stability and reactivity

10.1 Reactivity

This material is considered to be nonreactive under normal use.

10.2 Stability

Compound is stable when used in its recommended temperature range.

10.3 Conditions to be avoided

Temperatures above intended use range (204 °C (400 °F)).

10.4 Materials to avoid

Can react with strong acids and oxidizing agents.

10.5 Hazardous decomposition products

May form vinyl acetate, acetic acid, nitrogen oxides, carbon dioxide, carbon monoxide, and various hydrocarbons including organic acids, aldehydes, and alcohols if exposed to temperatures beyond its intended exposure level.

SECTION 11: Toxicological information

11.1 Primary routes of exposure

Skin and eye contact are the possible routes for human exposure.

11.2 Effects of acute exposure

Eyes: Compound may cause irritation,

Skin: Compound may cause irritation.

Ingestion: Irritation to mucous membranes of mouth, throat, esophagus, and gastrointestinal system are possible.

Chronic Health Effects: This compound has no known chronic effects. Repeated or prolonged exposure to this compound is not known to aggravate medical conditions.

Carcinogenicity: This compound's ingredients are not listed by NTP, IARC or regulated as carcinogens by OSHA.

11.3 Acute toxicity

Vinyl Acetate

LD50 RAT (ORAL): 3500 mg/kg

LC50 RAT (INHALATION): 15.8 mg/L

LD50 RABBIT (DERMAL): 7440 mg/kg

Bisamide Wax

LD50/dermal/rabbit = > 2000 mg/kg

LD50/oral/rat = > 5000 mg/kg Oral LD50 Rat

Irganox

LD50 RAT (ORAL): > 5 g/kg

LC50 RAT (INHALATION): 66.5 mg/L /1H

Industrial Oil

LD50 RAT (ORAL): > 5 g/kg

LD50 RABBIT (DERMAL): > 2 g/kg

Rabbit (SKIN IRRITATION): 0.58/8.0 [slightly irritating]

11.4 Special Studies

No data available.

SECTION 12: Ecological information

12.1 Possible environmental effects

Prevent disposal into streams or sewer systems. The substance is polymer based and is not expected to produce toxic effects.

12.2 Ecological toxicity

Components

Aquatic Toxicity:

Vinyl Acetate

EC50 (72 hr) green algae; 12.7 mg/L

LC50 (96 hr) Fathead minnow; 24 mg/L

EC50 (48 hr) Daphnia; 12.6 mg/L

Irganox

LC50 (96 hr) Brachydanio rerio: > 1000 mg/L

EC50 (24 hr) Daphnia magna: 100 mg/L

(72 hr) Scenedesmus sp.: > 100 mg/L

IC50 (3 hr) activated sludge: > 100 mg/L

12.3 Mobility

No data available

12.4 Persistence and degradability

This material on a whole has no data available.

Industrial Oil:

This material is not expected to be readily biodegradable. The biodegradability of this material is based on an evaluation of data for the components or a similar material. The product has not been tested. The statement has been derived from the properties of the individual components.

12.5 Physical/Chemical

No data available.

12.6 Other Adverse Effects

None known.

SECTION 13: Disposal considerations

13.1 Waste disposal

Dispose in accordance with local, state and federal regulations. Prevent discharges to streams or sewer systems.

13.2 Packaging/waste treatment methods

Dispose of packaging properly. Containers that cannot be cleaned shall be disposed of in the same manner as described in the waste disposal section.

13.3 Additional Information

No special precautions.

SECTION 14: Transport information

Special shipping information: Not specifically listed in the US hazardous materials shipping regulations (49 CFR, Table 172.101).

DOT (U.S.):

DOT Shipping Name:	Not regulated.
DOT Hazardous Class	Not applicable.
DOT UN Number:	Not applicable.
DOT Packing Group:	Not applicable.
DOT Reportable Quantity (lbs):	Not available.
Note:	No additional remark.
Marine Pollutant:	Not applicable.

CANADA Transport Information

TDG (Canada):

TDG Shipping Name:	Not regulated.
Hazard Class:	Not applicable.
UN Number:	Not applicable.
Packing Group:	Not applicable.
Note:	No additional remark.
Marine Pollutant:	Not applicable.

EU Transportation Information

UN Number:	Not Regulated.
UN proper shipping name:	Not Applicable.
Transport Hazard Class:	Not Applicable.
Packing Group:	Not Applicable.
Environmental Hazards:	No supplementary information
DOT UN Status:	Not Applicable.
Special Precautions:	

Overland (ADR/RID): NONE
Sea (IMDG): NONE
Air (ICAO/IATA): NONE

Transport in bulk according to ANNEX II of MARIPOL 73/78 and the IBC Code:
Not applicable

SECTION 15: Regulatory information

15.1 US Regulatory Information:

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

SARA 313: This material does contain vinyl acetate.

15.2 State Regulatory Information:

Does not contain any ingredients designated by IARC, NTP, ACGIH or OSHA as a probable human carcinogen.

Pennsylvania Right to Know

None known

New Jersey Right to Know

Vinyl Acetate

California Prop 65 This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

15.3 TSCA Regulatory Information:

The ingredients in this compound are included on or exempted from listing on the TSCA inventory of chemical substances and the Canadian domestic substance list.

15.4 International Regulatory Information:

Search online at www.thermon.com for appropriate SDS information for countries outside the USA.

SECTION 16: Other information

NFPA hazards identification:

Health: 1

Instability: 0

Flammability: 0

Special Hazards: None

HMIS hazards identification:

Health: 1

Flammability: 0

Reactivity: 0

Personal Protection: Refer to Section 8.

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Information Sources: Suppliers' material safety data sheets, CCOSH Cheminfo.

Prepared by: Thermon Manufacturing Company

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Disclaimer:

Data is presented in good faith and is based on the present state of our knowledge. It is intended to describe the compound with regard to the appropriate safety precautions. This information is not intended to be a product specification. No warranty, either expressed or implied, is hereby made. The recommended industrial hygiene and safe handling procedures are believed to be generally applicable. However, users should review these recommendations in the specific context of the intended use and determine whether they are appropriate.