

Material Safety Data Sheet**Section 1 – Chemical Product and Company Identification****Product/Chemical Name:** Maftec M, MLS, ALS**Chemical Formula:****CAS Number:** Proprietary**Manufacturer:** Mitsubishi Plastics, Inc.
1-2-2 Nihonbashi-hongoku-cho,
Chuo-ku, Tokyo 103-0021 Japan**Distributor:** Mitsubishi Plastics Composites America, Inc.
401 Volvo Pkwy
Chesapeake, VA 23320
757-548-7826**Emergencies:** Chemtrec 1-800-424-9300

HMIS
H 1
F 0
R 0
PPE
Sec.8

Section 2 - Composition / Information on Ingredients

Ingredient	OSHA PEL		ACGIH TLV		NIOSH REL		NIOSH
	TWA	STEL	TWA	STEL	TWA	STEL	IDLH
Polycrystalline Fiber	15 mg/M3*	5 mg/M3*	10 mg/M3**	3 mg/M3**	NE	NE	NE

NE: None Established

*There is no specific regulatory standard for polycrystalline fiber in the U.S. OSHA's "Particulate Not Otherwise Regulated (PNOR) standard (29 CFR 1910.1000, Subpart Z, Air Contaminates) applies generally.

**ACGIH's TLV for Particulates Not Otherwise Classified (PNOC).

Other manufacturers report a recommended exposure limits of 0.5 f/cc, as an 8-hr TWA.

The evaluation of occupational exposure limits and determining their relative applicability to the workplace is best performed, on a case-by-case basis, by a qualified Industrial Hygienist.

Section 3 – Hazards Identification**Emergency Overview**

Harmful upon inhalation. Maybe irritating to the skin, eyes, and respiratory system. Avoid breathing fibers.

Potential Health Effects**Inhalation:** May be irritating to the respiratory system including cough, sneezing, nasal discharge, headache, hoarseness and nose and throat pain.**Eye:** May cause mechanical eye irritation including pain, redness, tearing and corneal abrasion.**Skin:** May cause mechanical skin irritation including abrasion, redness, pain, and itching.**Ingestion:** Physical blockage including cramping, abdominal pain, and constipation.**Carcinogenicity:** The Seventh Annual Report on Carcinogens (1994), prepared by the National Toxicology Program (NTP), classified respirable RCF (another aluminosilicate, but vitreous, fiber product) and glasswool as substances reasonably anticipated to be carcinogens. The International Agency for Research on Cancer (IARC) has classified refractory ceramic fiber as a possible human carcinogen (Group 2B) based on sufficient evidence of carcinogenicity in animals, but insufficient data in humans. There has been no increased incidence of respiratory disease in studies examining occupationally exposed workers. Polycrystalline aluminosilicate fibers have not been specifically classified.

Section 4 – First Aid Measure

Inhalation: Protect yourself with appropriate PPE, remove the person to fresh air. Decontaminate and begin rescue breathing if breathing has stopped and CPR if heart action has stopped. Seek prompt medical attention.

Eye Contact: DO NOT allow victim to rub or keep eyes tightly shut. Gently lift eyelids and immediately flush eyes with large amounts of water. Continue to flush for at least 30 minutes, occasionally lifting the upper and lower lids. Seek prompt medical attention.

Skin Contact: Quickly remove contaminated clothing. Immediately wash area with large amounts of water. Seek prompt medical attention for any reddened skin other than from washing.

Ingestion: Never give anything by mouth to an unconscious or convulsing person. Contact a Poison Control Center (PCC). Unless the PCC advises otherwise, have the conscious and alert person drink 1 to 2 glasses of water to dilute. Induce vomiting only after recent ingestions due to the possibility of seizures. Seek prompt medical attention.

Section 5 – Fire-Fighting Measures

Flash Point: Not Applicable
Flash Point Method: Not Applicable
Flammability Classification: Not Applicable
Extinguishing Media: Non combustible, choose material suitable for surrounding fire.
Unusual Fire or Explosion Hazards: No unusual fire or explosion hazards are anticipated.
Hazardous Combustion Products: Hydrocarbons, Carbon Monoxide, Carbon Dioxide.
Fire-Fighting Equipment: Wear full protective equipment and a self-contained breathing apparatus.

Section 6 – Accidental Release Measures

Spill/Leak Procedures: Not Applicable
Regulatory Requirements: Follow applicable OSHA regulations (29 CFR 1910.120).
In the event of a release of this material, the user should determine if the release qualifies as reportable according to local, state, and federal regulations.

Section 7 – Handling and Storage

Handling Precautions: Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water. Avoid skin contact. For industrial or professional use only. Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below recommended exposure limits. If ventilation is not adequate, use respiratory protection equipment.

Storage Requirements: Store under normal warehouse conditions.

Section 8 – Exposure Controls / Personal Protection**Engineering Controls:****Ventilation:**

The best protection is to enclose operations and/or provide local exhaust ventilation at the site of chemical release

Respiratory Protection:

IMPROPER USE OF RESPIRATORS IS DANGEROUS. Seek professional advice prior to respirator selection and use. Follow OSHA respirator regulations (29 CFR 1910.134 and 1910.137) and, if necessary, wear a NIOSH approved respirator. Select respirator based on its suitability to provide adequate worker protection for given work conditions, level of airborne contamination, and presence of sufficient oxygen. For emergency or non-routine operations (cleaning spills, reactor vessels, or storage tanks), wear an SCBA. *Warning! Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.* If respirators are used, OSHA requires a written respiratory protection program that includes at least: medical certification, training, fit testing, periodic environmental monitoring, maintenance, inspection, cleaning and convenient, sanitary storage areas.

Protective Clothing/Equipment:

Wear chemically protective gloves, boots, aprons, and gauntlets to prevent prolonged or repeated skin contact. Wear splash-proof chemical goggles and face shield when working with liquid, unless full facepiece respiratory protection is worn. Contact lenses are not eye protective devices. Appropriate eye protection must be worn instead of, or in conjunction with contact lenses.

Safety Stations:

Make emergency eyewash stations, safety/quick-drench showers, and washing facilities available in work area.

Contaminated Equipment:

Separate contaminated work clothes from street clothes. Launder before reuse. Remove material from your shoes and clean personal protective equipment. Never take home contaminated clothing.

Comments:

Never eat, drink, or smoke in work areas. Practice good personal hygiene after using this material, especially before eating, drinking, smoking, using the restroom, or apply cosmetics.

Section 9 – Physical and Chemical Properties

Physical State: Solid

Appearance and Odor: Mat rope block, bulk white, odorless

Odor Threshold: Not Applicable

Freezing/Melting Point: 1823 degrees Celcius

Vapor Pressures: Not Applicable

Vapor Density (Air=1): Not Applicable

Section 10 – Stability and Reactivity

Stability: Stable

Polymerization: Will not polymerize

Chemical Incompatibilities: None known

Conditions to Avoid: No decomposition if used according to specifications.

Hazardous Decomposition Products: None known

Section 11 – Toxicological Information

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Skin: May cause mechanical skin irritation including abrasion, redness, pain, and itching.

Ingestion: Physical blockage including cramping, abdominal pain, and constipation.

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Additional information: Mean fiber diameter:

5 -7 μm : EU standard diameter measuring method (ECB/TM/1(00) rev.2: Length weighted Geometric Mean Diameter of Fibres)

4.5 – 6.5 μm : Mitsubishi internal optical microscope method

Based on a sample analysis of Fraunhofer Institut für Toxikologie und Experimentelle Medizin, Hannover (Certificate dated October 30, 2007) the material does not contain WHO fibers (length $>5 \mu\text{m}$, diameter $\leq 3 \mu\text{m}$, relation length/diameter $> 3/1$).

Section 12 – Ecological Information

Ecotoxicity: Not Determined

Environmental Fate: Not Determined

Environmental Degradation: Not Determined

Soil Absorption/Mobility: Not Determined

Section 13 – Disposal Considerations

Disposal: Follow applicable local, state and federal regulations.

Disposal Regulatory Requirements: If discarded in its purchased form, this product would not to be a hazardous waste under RCRA by listing or characteristic. Under RCRA, it is the responsibility of the product user to determine at the time of disposal whether a material containing the product, derived from the product or absorbed by the product should be classified as a hazardous waste.

Section 14 – Transport Information

DOT Transportation Data (49 CFR 172.101):

Not regulated per U.S. DOT, IATA, or IMO.

Section 15 – Regulatory Information

EPA Regulations: Superfund Amendments and Reauthorization Act (SARA) Title III: This product does not contain any substances reportable under Sections 302, 304, 313, (40 CFR 372). Sections 311 and 312 (40 CFR 370) apply (delayed hazard).

Toxic Substances Control Act (TSCA): All substances in this product are listed, as required, on the TSCA inventory.

Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) and the Clean Air Act (CAA): This product contains fibers with an average diameter > 1 µm and thus is not considered a hazardous air pollutant.

OSHA Regulations: Comply with all applicable OSHA standards.

Section 16 – Other Information

Revision Notes: Revision #06

Abbreviations:

ACGIH -	American Conference of Governmental Industrial Hygienist
OSHA -	Occupational Safety and Health Administration
TLV -	Threshold Limit Value
PEL -	Permissible Exposure Limit
TWA -	Time Weighted Average
STEL -	Short Term Exposure Limit
TSCA -	Toxic Substance Control Act
RCRA -	Resource Conservation Recovery Act
IDLH -	Immediately Dangerous to Life and Health

Judgements as to the suitability of information herein are the purchaser's responsibility. Although reasonable care has been taken in the preparation of such information, Mitsubishi Chemical America, Inc. extends no warranties, makes no representations, and assumes no responsibility as to the accuracy or suitability of such information for application to the purchaser's intended purpose or for consequences of its use.