Safety Data Sheet

Version: GHS 2.0

Date of issue: 12/01/2023

Material: Bulk and extruded molding compounds, All grades. Sheet Molding Compound

SECTION 1: Identification of substance/mixture and of the company/undertaking

1.1 GHS Product identifier

Bulk and extruded molding compounds, All grades. Sheet Molding Compound

1.2 Other means of identification

MB500, MB1000-PC, MB1000-10, MB1000-15, MB1000-20, MB1000-25, MB1100-15
MB2000-5, MB2000-8, MB2000-10, MB2000-15, MB2000-20, MB2000-25, MB2000-30
MB3000-15, MB3000-25, MB3000-15NY, MB3000-20NY
MB4000, MB5500, MB6000, MB7000, MB9000-5, MB10000-45, MB8250, AS8250

1.3 Recommended use of the chemical and restrictions on use

Thermoset molding compound for injection and compression molding.

1.4 Supplier's details

Mar-Bal Inc.
787 Renaissance Parkway
Painesville, OH 44077
Phone: (440)-709-1371
Fax: (440) 358-1519

1.5 Emergency phone number

Phone: (440) 543-7526 7:00am-6:00pm (Eastern Standard Time, UTC-05:00)

SECTION 2: Hazards identification

2.1 Classification of the substance of mixtures

Acute Toxicity (Inhalation), Category 4, H332
Skin corrosion/irritation, Category 2, H315
Serious eye damage/eye irritation, Category 2A, H319
Carcinogenicity, Category 2, H351
STOT-Single exposure, Category 3, H336

2.2 GHS label elements, including precautionary statements

Hazard Pictograms

Signal Word: Warning

Hazard Statements:
H332 – Harmful if inhaled
H315 – Causes skin irritation
H319 – Causes serious eye irritation
H351 – Suspected of causing cancer

H336 – May cause drowsiness or dizziness

Precautionary Statements

P201 – Obtain special instructions before use.
P202 – Do not handle until all safety precautions have been read and understood.
P261 – Avoid breathing dust/fume.
P264 – Wash hands and exposed skin thoroughly after handling.
P271 – Use only outdoors or in a well-ventilated area.
P280 – Wear protective gloves/protective clothing/eye protection/face protection.
P312 – Call a POISON CENTER/doctor/local medical center if you feel unwell.
P321 – Specific treatment (see Section 4: First-aid measures).
P405 – Store locked up.
P308+P313 – If exposed or concerned: Get medical advice/attention.
P302+P352 – If on skin: Wash with plenty of water.
P304+P340 – If inhaled: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P360 – If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313 – If exposed or concerned: Get medical advice/attention.
P332+P313 – If skin irritation occurs: Get medical advice/attention.
P337+P313 – If eye irritation persists: Get medical advice/attention.
P362+P364 – Take off contaminated clothing. And wash it before reuse.
P403+P233 – Store in a well-ventilated place. Keep container tightly closed.
P501 – Dispose of contents/container in accordance with local, state, and federal regulations.

SECTION 3: Composition/information on ingredients

Mixture

Material	CAS #	Weight %
Styrene (vinyl benzene, ethenylbenzene)	100-42-5	0-10
Vinyl Toluene	25013-15-4	0-5
Calcium Carbonate	1317-65-3	0-60
Aluminum Trihydrate	21645-51-2	0-60
Fiberous Glass	65997-17-3	5-45

* The exact percent will vary by product.

SECTION 4: First-aid measures

4.1 Decription of necessary first-aid measures

General Information: In case of accident or if you feel unwell seek medical advice (show label or SDS where possible)

After inhalation: Allow victim to breathe fresh air. Allow the victim to rest.

After contact with skin:	Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation occurs: Get medical advice/attention.
After contact with the 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.
After swallowing:	Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

4.2 Most important symptoms/effects, acute and delayed

After inhalation:	Inhalation of vapors may cause central nervous system (CNS) depression, respiratory tract irritation and coughing.
After contact with skin:	Causes skin irritation
After contact with the eyes:	Causes serious eye irritation

4.3 Indication of immediate medical attention and special treatment needed, if necessary

If decomposition products are inhaled in a fire, symptoms may be delayed. The person exposed to fumes or decomposition products may need to be kept under medical surveillance.

SECTION 5: Fire-fighting measures

5.1 Suitable extinguishing media

Suitable media:	Dry powder. Carbon dioxide. Water spray. Product is not flammable; use extinguishing agent appropriate for surrounding fire.
Unsuitable media:	Do not use a heavy water stream.

5.2 Specific hazards arising from the chemical

Combustion products:	Carbon monoxide, carbon dioxide. Material will release styrene vapors. Styrene vapors can flow along surfaces, reach distant ignition sources and flash back.

5.3 Special protective actions for fire-fighters

Firefighting:	Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment. Use water to cool fire exposed containers.
Protection:	Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures.

Non-emergency personnel:	Evacuate unnecessary personnel
Emergency responders:	Use personal protective equipment (PPE) to protect against inhalation of vapors. Wear gloves and long sleeves, avoid contact with skin. Use eye protection. See Section 8: Exposure controls/personal protection

6.2 Environmental precautions

Prevent entry to sewers and public waters. Avoid release to the environment. Notify authorities if material enters sewers or public waters.

6.3 Methods and materials for containment and cleaning up

On land, sweep or shovel into suitable containers. Minimize generation of dust. Store away from other materials.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Safe handling:	Wash hands and other exposed area with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.
General hygiene:	Wash hands and other exposed areas thoroughly after handling.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions:	Keep only in original container in a cool, well-ventilated place. Keep container closed when not in use. Store in a cool, dry place below 20°C (68°F).
Incompatible products:	Strong bases, strong acids.
Incompatible materials:	Sources of ignition. Direct sunlight. Sources of heat.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

	OSHA PEL	ACGIH TLV
Styrene (100-42-5)	TWA 100ppm Ceiling 200ppm 600 ppm (5-min max peak in any 3 hrs)	TWA 20ppm STEL 40ppm
Vinyl Toluene (25013-15-4)	TWA 100ppm (480 mg/m^3)	TWA 50ppm STEL 100ppm
Calcium Carbonate (1317-65-3)	TWA 15 mg/m^3 (total) TWA 5 mg/m^3 (resp)	Total dust, 10 mg/m^3 (<1% silica)
Aluminum Trihydrate (21645-51-2)	TWA 15 mg/m^3 (total) TWA 5 mg/m^3 (resp)	Total dust, 10 mg/m^3
Fiberous glass (65997-17-3)	TWA 15 mg/m^3 (total) TWA 5 mg/m^3 (resp)	TWA 5 mg/m^3 (inhalable) TWA 1 fiber/cm^3 (respirable)

8.2 Appropriate engineering controls

Use with adequate ventilation and utilize personal protection equipment (PPE) if exposure limits are exceeded. Point source exhaust recommended to remove vapors evolved during use.

8.3 Individual protection measures, such as personal protective equipment (PPE)

Personal protective equipment:	Avoid all unnecessary exposure
Hand protection:	Wear Protective gloves.
Eye protection:	Safety glasses.
Skin and body protection:	Not typically required.
Respiratory protection:	Not typically required.
Other information:	Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state:	Solid	
Appearance:	Fibrous, soft, tacky bulky mass or solid extrusion of various colors.	
Color:	Various colors	
Odor:	Odor of styrene or vinyl toluene. Characteristic. Aromatic.	
Odor threshold:	0.01 – 0.1 ppm	
pH:	No data available	
Melting point:	No data available	
Freezing point:	No data available	
Boiling point:	No data available	
Flash point:	No data available	
Relative evaporation rate (butyl acetate=1)	Styrene: 0.49;	Vinyl toluene: Less than 0.5
Flammability (solid, gas):	No data available	
Explosive limits:	Styrene: UEL 6.8%, LEL 0.9%;	Vinyl toluene: UEL 11%, LEL 0.8%
Vapor pressure:	Styrene: 5 mmHg;	Vinyl toluene: 1 mmHg
Relative vapor density at 20°C	Styrene: 3.6;	Vinyl toluene: 4.1
Relative density:	1.7 – 2.2	
Solubility:	No data available	
Partition coefficient: n-octanol/water. Log Kow:	No data available	
Auto-ignition temperature:	No data available	
Decomposition temperature:	No data available	
Viscosity	No data available	

9.2 Other information

VOC content:	<12%

SECTION 10: Stability and reactivity

10.1 Reactivity

Not reactive under normal handling and storage conditions.

10.2 Chemical stability
Is stable under normal handling and storage conditions.

10.3 Possibility of hazardous reactions
None under normal handling and storage conditions.

10.4 Conditions to avoid
Direct sunlight. Storage at high temperatures or exposure to open flames. High temperature will induce non-violent polymerization.

10.5 Incompatible materials
Strong oxidizing and reducing agents and strong acids and alkalis.

10.6 Hazardous decomposition products
Carbon dioxide, carbon monoxide.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity: Data is not available

Styrene (100-42-5)	
LD_{50} Oral rat	2,650 mg/kg
LD_{50} Dermal rat	> 26.4 mm/kg
LC_{50} Inhalation rat	11.8 mg/l/4h
LC_{50} Inhalation rat (ppm)	2,770 ppmV/4h
Vinyl toluene (25013-15-4)	
LD_{50} Oral rat	3,275 mg/kg
LD_{50} Dermal rabbit	> 4,400 mg/kg
LC_{50} Inhalation rat	16.891 mg/l/4h

Skin corrosion/irritation: May cause skin irritation.
Serious eye damage/irritation: Contact may cause eye irritation.
Respiratory or skin sensitization: Data is not available
Germ cell mutagenicity: Data is not available
Carcinogenicity: Data is not available

	IARC	NTP	OSHA
Styrene (100-42-5)	Group 2B – Possibly carcinogenic to humans	Reasonably anticipated to be human carcinogens	OSHA Select Carcinogens list
Vinyl toluene (25013-15-4)	Group 3 – Not classifiable as carcinogenic to humans.	No data available	No data available

Reproductive toxicity: Data is not available

STOT-Single exposure:	May cause drowsiness or dizziness. May cause respiratory irritation
STOT-Repeated exposure	Data is not available
Aspiration hazard:	Data is not available

11.7 Information on the likely routes of exposure

Inhalation, Ingestion, Skin, and eye contact.

11.15 Other information

Breathing excessive concentration of vapor may cause dizziness and /or drowsiness.

SECTION 12: Ecological information

12.1 Toxicity

No data available

Styrene (100-42-5)	
LC_{50} fish 1	3.24 – 4.99 mg/l (Exposure time: 96 h – Species: Pimephales promelas [flow through])
EC_{50} Daphnia 1	3.3 – 7.4 mg/l (Exposure time: 48 h – Species: Daphnia magna)
EC_{50} other aquatic organisms 1	1.4 mg/l (Exposure time: 72 h – Species: Pseudokirchneriella subcapitata)
LC_{50} fish 2	19.03 – 33.53 mg/l (Exposure time: 96 h – Species: Lepomis macrochirus [static])
EC_{50} other aquatic organisms 2	0.72 mg/l (Exposure time: 96 h – Species: Pseudokirchneriella subcapitata)
NOEC (acute)	44 mg/kg (Exposure time: 14 Days – Species: Eisenia foetida [soil dry weight])
Vinyl toluene (25013-15-4)	
EC_{50} fish 1	4 – 10 mg/l (Exposure time: 96 h – Species: Pimephales promelas [fathead minnow])
EC_{50} algae	4.9 mg/l (Exposure time: 72 h – Species: Selenastrum capricornutum)
EC_{50} Daphnia	4.7 mg/l (Exposure time 48 h – Species: Daphnia magna)

12.2 Persistence and degradability

Styrene is readily biodegradable in aerobic conditions. Styrene readily volatilizes to the atmosphere. Half-life in water is estimated at 4 hours.

12.3 Bioaccummulative potential

Styrene (100-42-5)	
BCF fish	13.5
Log Kow	2.95

12.4 Mobility in soil

No data available

SECTION 13: Disposal considerations

13.1 Disposal methods

Waste disposal recommendations: Dispose in a safe manner in accordance with local, state, and federal regulations.

Ecology – waste materials: Avoid release to the environment

SECTION 14: Transport information

United State Department of Transportation – Not regulated
Canadian Transportation of Dangerous Goods – Not regulated
ICAO/IATA – No data available
IMO/IMDG – No data available

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations specific for the product in question

United States EPA Toxic Substances Control Act of 1976
All components of this material are listed on the US Toxic Substances Control Act (TSCA) inventory.

CERCLA, SARA Title III, EPCRA 302. Emergency Response Planning
Components not on reporting list.

CERCLA, SARA Title III, EPCRA 311/312. Hazard category
Acute health hazard, chronic health hazard.

CERCLA, SARA Title III, EPCRA 313. Toxic Chemical List.
Components on reporting list. Styrene. RQ 1,000 lbs.

OSHA
Hazardous by definition of Hazard Communication Standard (29CFR 1910.1200)

State of California Proposition 65
Components not on list of chemicals known to the State of California to cause cancer or reproductive toxicity.

Canadian Environmental Protection Act. Domestic Substances List
Components on reporting list. Styrene.

EEC inventory EINECS(European Inventory of Existing Commercial Chemical Substances)
Components on reporting list. Styrene.

SECTION 16: Other information

Safety Data Sheet

Version: GHS 2.0

Date of issue: 12/01/2023

Material: Bulk and extruded molding compounds, All grades. Sheet Molding Compound

HMIS Rating

Health:	2
Fire Hazard:	1
Reactivity:	0
Personal Protection:	B

NFPA

Health:	1
Fire:	1
Reactivity:	0
Special:	NA

16.1 Disclaimer

The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of SDS