SAFETY DATA SHEET
PLENCO 08112

SDS No : BMC
Date Revised : 01/09/2017
Revision No : 2

1. PRODUCT AND COMPANY IDENTIFICATION

GENERAL USE: Thermoset plastic molding compound
PRODUCT DESCRIPTION: Bulk molding compound
CHEMICAL FAMILY: Unsaturated polyester polymer bulk molding compound
GENERIC NAME: Thermoset polyester bulk molding compound

MANUFACTURER

Plastics Engineering Company
3518 Lakeshore Road
Sheboygan, WI 53083
Emergency Phone: +(1) 920-458-2127
Customer Service: +(1) 920-458-2121

24 HR. EMERGENCY TELEPHONE NUMBERS

Only during NORTH AMERICAN transportation:
CHEMTREC 1-800-424-9300

2. HAZARDS IDENTIFICATION

GHS CLASSIFICATIONS

Health:

Eye Irritation, Category 2A
Acute Toxicity (Inhalation), Category 4
Skin Irritation, Category 2

GHS LABEL

Exclamation mark

SIGNAL WORD: WARNING

HAZARD STATEMENTS

H315: Causes skin irritation.
H318: Causes serious eye damage.
H332: Harmful if inhaled.

PRECAUTIONARY STATEMENTS

Prevention:

P261: Avoid breathing dust or vapors.
P264: Wash hands and forearms thoroughly after handling.
P271: Use only outdoors or in a well-ventilated area.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P281: Use personal protective equipment as required.

Response:

P302+P352: IF ON SKIN: Wash with plenty of water and soap.
P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P314: Get medical advice/attention if you feel unwell.

P321: Specific treatment: Wash affected areas immediately with plenty of water and soap.
P333+P313: If skin irritation or rash 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.

Disposal:

P501: Dispose of contents and empty containers in accordance with local, regional and federal regulations.

EMERGENCY OVERVIEW

IMMEDIATE CONCERNS: Styrene and vinyl toluene vapors are heavier than air and may travel along ground or may be moved by ventilation and ignited by sources at locations distant from material handling point.

POTENTIAL HEALTH EFFECTS

EYES: Contact may cause eye irritation.

SKIN: Contact may cause skin irritation.

SKIN ABSORPTION: May cause skin irritation.

INGESTION: May be harmful if swallowed.

INHALATION: May be harmful if inhaled.

REPRODUCTIVE TOXICITY

REPRODUCTIVE EFFECTS: Not known or believed to be a reproductive toxin.

TERATOGENIC EFFECTS: Not known or believed to be teratogenic.

CARCINOGENICITY: IARC: 2B - Group 2B: Possibly carcinogenic to humans.

MUTAGENICITY: Not known or believed to be mutagenic.

ROUTES OF ENTRY: Inhalation, ingestion and through skin contact.

IRRITANCY: This product contains compounds that may cause skin or eye irritation.

COMMENTS: Refer to Section 11 for detailed information on health effects and symptoms.
AS SOLD the product is a polyester molding compound: It is a fibrous dough with a styrene and/or vinyl toluene odor; a polyester resin solution intimately mixed with one or more of a variety of inorganic filling materials, including fibrous glass. When fully compounded, the plastic resin binds the well-dispersed, embedded filling materials within the compound, which thus do not constitute an inhalation hazard. Styrene and vinyl toluene are irritants to skin, eyes and respiratory tract. Excessive exposure may cause stomach or intestinal upset, dizziness, drowsiness, fatigue or headache. Fibrous glass is a mechanical irritant to skin, eyes and nose. The IARC classified styrene in group 2B (Possibly carcinogenic to humans). The IARC Concluded that there was no convincing evidence for carcinogenic action of styrene in animals based on the animal studies which existed at the time. Rather, the IARC 2B listing was based on data for styrene oxide, a metabolite of styrene.
AS USED during polymerization (e.g., curing of the product during normal processing) some styrene and/or vinyl toluene vapors are expected to be released. During decomposition (e.g., overheating or burning of the product) normal products of combustion would be expected. Grinding or machining of cured molded material may create a dust that poses a respiratory hazard if inhaled.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	Wt.%	CAS
Unsaturated polyester resin	15 - 40	
Styrene	< 12	100-42-5
Vinyl Toluene	< 12	25013-15-4
Calcium Carbonate (limestone)	0 - 75	1317-65-3
glass, oxide, chemicals	0 - 45	65997-17-3
Carbon Black	0 - 5	1333-86-4
Kaolin	0 - 15	1332-58-7
Zinc Stearate	0 - 5	557-05-1

4. FIRST AID MEASURES

EYES: Immediately flush eyes with copious amounts of water for at least 15 minutes while lifting the eyelids. Seek medical attention if irritation occurs.

SKIN: Flush with large amounts of water for at least 10 minutes. Remove contaminated clothing. Seek medical attention if adverse effects occur.

INGESTION: If material is swallowed, seek immediately medical attention or advice. DO NOT INDUCE VOMITING. Never give anything by mouth to an unconscious person. If vomiting occurs, keep head below hips to prevent aspiration into lungs.

INHALATION: Move person to non-contaminated area or outside of the building. If breathing proves difficult, seek immediate medical attention.

SIGNS AND SYMPTOMS OF OVEREXPOSURE

EYES: Redness, burning sensation and tearing (watering) of the eyes.

SKIN: Skin dryness or irritation.

INGESTION: No effects known.

INHALATION: Harmful if inhaled.

ACUTE EFFECTS: None Expected.

CHRONIC EFFECTS: None Expected.

NOTES TO PHYSICIAN: 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.

5. FIRE FIGHTING MEASURES

FLAMMABLE CLASS: Not classifiable as a flammable material.

FLAME PROPAGATION OR BURNING RATE OF SOLIDS: Product does not sustain fire or propagate flames.

GENERAL HAZARD: Styrene and vinyl toluene vapors are flammable and heavier than air and will spread along the ground. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back.

EXTINGUISHING MEDIA: Dry Chemical, carbon dioxide (CO_2), alcohol resistant foam or water spray.

HAZARDOUS COMBUSTION PRODUCTS: Normal products of combustion, including carbon dioxide and carbon monoxide.

SENSITIVE TO STATIC DISCHARGE: Electrostatic discharge may trigger an explosion if sufficient quantity of vapor builds up.

SENSITIVITY TO IMPACT: Not Applicable

6. ACCIDENTAL RELEASE MEASURES

SMALL SPILL: Sweep up material and place in original packaging. Use Personal Protective Equipment (PPE) to protect against inhalation of vapors. Wear gloves and long sleeves, avoid contact with skin. Use eye protection.

LARGE SPILL: Use the same methods described for small spills. Place material into appropriate containers for disposal.

RELEASE NOTES: Inform the relevant authorities if the product has been discharged into the environment, e.g. sewers, waterways, soil or air.

SPECIAL PROTECTIVE EQUIPMENT: Not Established

7. HANDLING AND STORAGE

HANDLING: 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. Avoid contact with eyes and repeated or prolonged contact with skin. Wash hands thoroughly after handling. Keep away from food or drinking water.

STORAGE: Store in original unopened or closed packaging, ideally at temperature less than 70ºF (21ºC) and under humidity control.

SPECIAL SENSITIVITY: Like most organic compounds this product is sensitive to strong oxidizing agents and may either decompose or ignite when mixed with same.

ELECTROSTATIC ACCUMULATION HAZARD: Point source exhaust recommended to remove dust particles evolved during handling or processing. Control build-up of dust and eliminate sources of ignition, e.g. open flames, sparks or electrostatic discharges, or use explosion proof motors where needed.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE GUIDELINES

OSHA HAZARDOUS COMPONENTS (29 CFR1910.1200)				
	EXPOSURE LIMITS			
Chemical Name	**Type**		**ppm**	**mg/m³**
Styrene	**OSHA PEL**	**TWA**	100	420
		STEL	200	
	ACGIH TLV	**TWA**	20	85
		STEL	40	170
Vinyl Toluene	**OSHA PEL**	**TWA**	100	480
	ACGIH TLV	**TWA**	50	242
		STEL	100	483
Calcium Carbonate (limestone)	**OSHA PEL**	**TWA**		15
	ACGIH TLV	**TWA**		10
Carbon Black	**OSHA PEL**	**TWA**		3.5
	ACGIH TLV	**TWA**		3.5
Kaolin	**OSHA PEL**	**TWA**		15
	ACGIH TLV	**TWA**		2
Zinc Stearate	**OSHA PEL**	**TWA**		15

ENGINEERING CONTROLS: Use with adequate ventilation and utilize Personnel Protection Equipment (PPE) if exposure limits are exceeded. Point source exhaust recommended to remove vapors evolved during use. Avoid source of ignition, e. g. heat, flames or electrostatic charges and use explosion proof motors.

PERSONAL PROTECTIVE EQUIPMENT

EYES AND FACE: Safety glasses with side shields are recommended. Snug-fitting googles should be worn in dusty work environments.

SKIN: Wear protective clothing and chemical resistant gloves to prevent skin contact. Remove contaminated clothing immediately and wash thoroughly before reuse.

RESPIRATORY: If exposure limits are exceeded, use properly fitted respiratory protection equipment particularly selected for the prevailing conditions.

PROTECTIVE CLOTHING: Work gloves and skin protection are recommended for the handling of this product. Launder contaminated work clothing separate from regular laundry.

WORK HYGIENIC PRACTICES: Maintain a clean work environment and practice good hygiene. Wash hands, face and forearms thoroughly after handling of this product, before eating or drinking and at the end of the work shift.

OTHER USE PRECAUTIONS: Not Available

9. PHYSICAL AND CHEMICAL PROPERTIES

ODOR: Odor of styrene or vinyl toluene.

APPEARANCE: Fibrous dough.

PERCENT VOLATILE: <12%

FLASH POINT AND METHOD: Not Applicable

FLAMMABLE LIMITS: LEL: 1.1% Styrene, 1.1% Vinyl toluene to UEL: 6.1% Styrene, 5.2% Vinyl toluene

VAPOR PRESSURE: Styrene 4.5 mmHg, Vinyl toluene 1.0 mmHg

VAPOR DENSITY: Styrene 3.59, Vinyl toluene 4.08 (air=1)

BOILING POINT: Not Applicable

THERMAL DECOMPOSITION: Not Available

SOLUBILITY IN WATER: Negligible

EVAPORATION RATE: Not Applicable

SPECIFIC GRAVITY: See technical data sheet

OXIDIZING PROPERTIES: Not Applicable

10. STABILITY AND REACTIVITY

REACTIVITY: Stable

HAZARDOUS POLYMERIZATION: Should not occur.

STABILITY: This product is stable under normal conditions of storage and use.

CONDITIONS TO AVOID: Avoid storage at high temperatures or exposure to open flames.

HAZARDOUS DECOMPOSITION PRODUCTS: Normal products of combustion, including carbon dioxide and carbon monoxide.

INCOMPATIBLE MATERIALS: Like most organic materials, this product is sensitive to strong oxidizers, strong mineral acids and strong alkalies.

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY

Chemical Name	ORAL LD_{50}	DERMAL LD_{50}	INHALATION LC_{50}
Styrene	2650 mg/ kg BW (rat)		11800 mg/ m^3 (rat/ 4h)
Vinyl Toluene	3275 mg/ kg BW (rat)	> 4400 mg/ kg BW (rabbit)	16891 mg/ l (rat) (4h)

DERMAL LD_{50}: No data available.

ORAL LD_{50}: No data available.

INHALATION LC_{50}: No data available.

SKIN CORROSION/IRRITATION: Contact may cause skin irritation.

SERIOUS EYE DAMAGE/IRRITATION: Contact with this product may cause eye irritation.

RESPIRATORY OR SKIN SENSITISATION: None Expected.

GERM CELL MUTAGENICITY: No effects known.

CARCINOGENICITY

Chemical Name	NTP Status	IARC Status
Styrene	2 - Reasonably anticipated to be Human Carcinogen	2B - Possibly carcinogenic to humans

NOTES: Styrene manufacturers vary on their determination that the GHS hazard classification criteria for carcinogenicity has been met. Styrene has been tested for carcinogenicity in rats and mice. Styrene caused lung tumors in mice only. These tumors are not considered to be relevant to humans.

REPRODUCTIVE TOXICITY: None known.

STOT-SINGLE EXPOSURE: None Expected.

STOT-REPEATED EXPOSURE: No data available.

GENERAL COMMENTS: This product may contain a small amount crystalline silica (quartz), as a natural occurring impurity in mineral. The mineral is encapsulated within the molding compound by resin. Significant exposure to free respirable quartz is not expected under normal conditions of use and processing of this product. Respirable quartz may be released by grinding, machining or abrading of this product. The NTP's Report on Carcinogens lists crystalline silica (respirable size) as a known human carcinogen. IARC concluded that there is sufficient evidence in humans for the carcinogenicity of inhaled (respirable) crystalline silica.

12. ECOLOGICAL INFORMATION

COMMENTS: [This section deliberately left blank]

13. DISPOSAL CONSIDERATIONS

PRODUCT DISPOSAL: Avoid or minimize the generation of waste. Contact a licensed waste disposal contractor to manage the disposal of non-recyclable material.

GENERAL COMMENTS: Dispose of in compliance with local, state, federal and international regulations.

14. TRANSPORT INFORMATION

DOT (DEPARTMENT OF TRANSPORTATION)

PRIMARY HAZARD CLASS/DIVISION: Not hazardous

AIR (ICAO/IATA)

PRIMARY HAZARD CLASS/DIVISION: Not hazardous

15. REGULATORY INFORMATION

UNITED STATES

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)

EPCRA SECTION 313 SUPPLIER NOTIFICATION

Chemical Name	Wt.%	CAS
Styrene	< 12	100-42-5

CERCLA (COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND LIABILITY ACT)

Chemical Name	Wt.%	CERCLA RQ
Styrene	< 12	1,000

TSCA (TOXIC SUBSTANCE CONTROL ACT)

Chemical Name	CAS
Styrene	100-42-5
Vinyl Toluene	25013-15-4
Calcium Carbonate (limestone)	1317-65-3
glass, oxide, chemicals	65997-17-3
Carbon Black	1333-86-4
Kaolin	1332-58-7
Zinc Stearate	557-05-1

CALIFORNIA PROPOSITION 65

Chemical Name	Wt.%	Listed
Carbon Black	0 - 5	Cancer

16. OTHER INFORMATION

PREPARED BY: T. Olmsted **Date Revised:** 01/09/2017

REVISION SUMMARY: This SDS replaces the 08/03/2016 SDS.

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