

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

1.1. Product identifier

Product form : Mixture
Product name : BMC & SMC Polyester / Vinyl Ester Thermoset Molding Compounds
Other means of identification : Alluralite / Dielectrite / Flamevex / Fortium / Nodorinite / Rosite

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Multiple Industrial Uses

1.3. Details of the supplier of the safety data sheet

IDI Composites International
15389 North Pointe Blvd.
Noblesville, IN USA 46060
(317) 773-1766

1.4. Emergency telephone number

Emergency number : 24-Hour Contact CHEMTREC 1-800-424-9300

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (GHS-US)

Skin Irrit. 2 H315
Eye Irrit. 2A H319
Carc. 1B H350

2.2. Label elements

GHS-US labeling

Hazard pictograms (GHS-US) :



GHS07

GHS08

Signal word (GHS-US) :

Danger

Hazard statements (GHS-US) :

H315 - Causes skin irritation
H319 - Causes serious eye irritation
H350 - May cause cancer

Precautionary statements (GHS-US) :

P201 - Obtain special instructions before use
P202 - Do not handle until all safety precautions have been read and understood
P264 - Wash hands and other exposed areas thoroughly after handling
P280 - Wear protective gloves/protective clothing/eye protection
P302 + P352 - If on skin: Wash with plenty of water
P305+P351+P338 - 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 - Take off contaminated clothing and wash before reuse
P403+P235 - Store in a well-ventilated place. Keep cool.
P501 - Dispose of contents/containers in accordance with local, state and federal regulations

2.3. Other hazards

Sanding, grinding, or other machining of molded parts made from BMC and SMC may create the potential for combustible dust-air mixtures. Follow safe work practices and prevent dust accumulations to minimize explosion hazards.

Carbon Black (CAS 1333-86-4)

Carbon black, as a colorant, is a minor component of some BMC and SMC products. It is in a paste form, and therefore does not pose a risk from inhalation.

BMC & SMC Polyester / Vinyl Ester Thermoset Molding Compounds

Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Styrene (CAS 100-42-5)

A recently published update to an extensive, 55,000- composite worker study concluded there is no evidence that styrene exposure increased their risk of cancer.

In addition, a published study determined that the mechanism for causing cancer in styrene exposed mice is not relevant to humans.

2.4. Unknown acute toxicity (GHS-US)

None of the ingredients are of unknown toxicity.

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable – the product is a mixture

3.2. Mixture

Name	Product identifier	%	Classification (GHS-US)
Styrene	(CAS No) 100-42-5	0 – 20*	Flam. Liq. 3, H226 Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Carc. 1B, H350
Carbon Black	(CAS No) 1333-86-4	0 – 3.0*	Carc. 2, H351

*The exact percentages will vary by product

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
First-aid measures after inhalation	: Allow victim to breathe fresh air. Allow the victim to rest.
First-aid measures after skin contact	: Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation occurs: Get medical advice/attention.
First-aid measures after eye contact	: 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.
First-aid measures after ingestion	: Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries after inhalation	: Inhalation of vapors may cause CNS depression, respiratory tract irritation and coughing.
Symptoms/injuries after skin contact	: Causes skin irritation.
Symptoms/injuries after eye contact	: Causes serious eye irritation.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Dry powder. Carbon dioxide. Water spray. This product is not flammable; use extinguishing agent appropriate for surrounding fire.
Unsuitable extinguishing media	: None.

5.2. Special hazards arising from the substance or mixture

Fire hazard	: Processing and handling of the product may form combustible dust concentrations in air.
Explosion hazard	: Potential dust explosion hazard. When dust becomes airborne and is exposed to an ignition source, sufficient combustible dust may exist to burn in open areas or explode in confined spaces.

5.3. Advice for firefighters

Firefighting instructions	: Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.
Protection during firefighting	: 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

6.1.1. For non-emergency personnel

Emergency procedures	: Evacuate unnecessary personnel.
----------------------	-----------------------------------

BMC & SMC Polyester / Vinyl Ester Thermoset Molding Compounds

Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection.
Emergency procedures : Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if material enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : On land, sweep or shovel into suitable containers. Store away from initiators and peroxides.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Wash hands and other exposed areas 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.

Hygiene measures : Wash hands and other exposed areas thoroughly after handling.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep only in the original container in a cool, well-ventilated place. Keep container closed when not in use. Maximum recommended storage temperature below 85°F.

Incompatible products : Strong bases. Strong acids.

Incompatible materials : Sources of ignition. Direct sunlight.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Carbon Black (1333-86-4)		
ACGIH	ACGIH TWA (mg/m ³)	3 mg/m ³ (inhalable fraction)
OSHA	OSHA PEL (TWA) (mg/m ³)	3.5 mg/m ³
Styrene (100-42-5)		
ACGIH	ACGIH TWA (ppm)	20 ppm
ACGIH	ACGIH STEL (ppm)	40 ppm
OSHA	OSHA PEL (TWA) (ppm)	100 ppm
OSHA	OSHA PEL (Ceiling) (ppm)	200 ppm

8.2. Exposure controls

Appropriate engineering controls : Ensure that proper ventilation is provided to maintain exposures below regulated limits.
Personal protective equipment : Avoid all unnecessary exposure.
Hand protection : Protective gloves, such as latex, are recommended.
Eye protection : Safety glasses recommended.
Skin and body protection : Not typically required.
Respiratory protection : Not typically required. If airborne exposures exceed recommended limits wear a NIOSH-approved respirator.
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 : Flexible, soft sheets or doughy compound, pungent odor. A soft, tacky, fibrous material of various colors.
Color : Various Colors
Odor : Characteristic odor of styrene/ vinyl toluene

BMC & SMC Polyester / Vinyl Ester Thermoset Molding Compounds

Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Odor threshold	: 0.1 ppm (Styrene)
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)	: 0
Flammability (solid, gas)	: Not flammable
Explosion limits	: 1.1 - 6.1 vol %
Explosive properties	: Not explosive
Oxidizing properties	: No data available
Vapor pressure	: 4.5
Relative density	: 1.7 - 2.2
Relative vapor density at 20 °C	: No data available
Solubility	: Negligible in water
Log Pow	: No data available
Log Kow	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

This product is not reactive under normal handling and storage conditions.

10.2. Chemical stability

This product is stable under normal handling and storage conditions.

10.3. Possibility of hazardous reactions

Not anticipated under normal handling and storage conditions.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures. High temperatures will induce non-violent polymerization.

10.5. Incompatible materials

Peroxides and polymerization initiators.

10.6. Hazardous decomposition products

Toxic fumes. Carbon monoxide. Carbon dioxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

Styrene (100-42-5)	
LD50 oral rat	1000 mg/kg
LC50 inhalation rat (mg/l)	11.7 mg/l/4h
ATE US (oral)	1000.000 mg/kg body weight
ATE US (vapors)	11.700 mg/l/4h
ATE US (dust, mist)	11.700 mg/l/4h

Skin corrosion/irritation : Causes skin irritation.

Serious eye damage/irritation : Causes serious eye irritation.

BMC & SMC Polyester / Vinyl Ester Thermoset Molding Compounds

Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Respiratory or skin sensitization : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Carbon black (CAS 1333-86-4)
Carbon black, as a colorant, is a minor component of some BMC and SMC products. It is in a paste form, and therefore does not pose a risk from inhalation.

Styrene (CAS 100-42-5)

A recently published update to an extensive, 55,000- composite worker study concluded there is no evidence that styrene exposure increased their risk of cancer.

In addition, a published study determined that the mechanism for causing cancer in styrene exposed mice is not relevant to humans.

Carbon Black (1333-86-4)	
IARC group	2B - Possibly carcinogenic to humans
In OSHA Hazard Communication Carcinogen list	Yes

Styrene (100-42-5)	
IARC group	2A - Probable carcinogenic to humans
National Toxicology Program (NTP) Status	3 - Reasonably anticipated to be Human Carcinogen
In OSHA Hazard Communication Carcinogen list	Yes

Reproductive toxicity : Not classified
Specific target organ toxicity (single exposure) : Not classified
Specific target organ toxicity (repeated exposure) : Not classified
Aspiration hazard : Not classified
Potential Adverse human health effects and symptoms : No additional information available
Symptoms/injuries after inhalation : Inhalation of vapors may cause CNS depression, respiratory tract irritation and coughing.
Symptoms/injuries after skin contact : Causes skin irritation.
Symptoms/injuries after eye contact : Causes serious eye irritation.

SECTION 12: Ecological information

12.1. Toxicity

Styrene (100-42-5)	
LC50 fish 1	3.24 - 4.99 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
EC50 Daphnia 1	3.3 - 7.4 mg/l (Exposure time: 48 h - Species: Daphnia magna)
LC50 fish 2	19.03 - 33.53 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])
NOEC (acute)	44 mg/kg (Exposure time: 14 Days - Species: Eisenia foetida [soil dry weight])

12.2. Persistence and degradability

Carbon Black (1333-86-4)	
Persistence and degradability	Not established.

12.3. Bioaccumulative potential

Carbon Black (1333-86-4)	
Bioaccumulative potential	Not established.

Styrene (100-42-5)	
BCF fish 1	13.5
Log Pow	2.95

12.4. Mobility in soil

No additional information available

BMC & SMC Polyester / Vinyl Ester Thermoset Molding Compounds

Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

12.5. Other adverse effects

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment 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

Department of Transportation (DOT)

In accordance with DOT

Not regulated for transport

Additional information

ADR

No additional information available

Transport by sea

Marine Pollutant: No

Air transport

No additional information available

SECTION 15: Regulatory information

15.1. US Federal regulations

BMC & SMC Polyester / Vinyl Ester Thermoset Molding Compounds

All constituents are in compliance with the United States TSCA (Toxic Substances Control Act) inventory

BMC & SMC Polyester / Vinyl Ester Thermoset Molding Compounds

SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard Delayed (chronic) health hazard
-------------------------------------	--

Carbon Black (1333-86-4)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Styrene (100-42-5)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Listed on United States SARA Section 313

SARA Section 313 - Emission Reporting	0.1 % deminimis
---------------------------------------	-----------------

15.2. International regulations

CANADA

Carbon Black (1333-86-4)

Listed on the Canadian DSL (Domestic Substances List)

Styrene (100-42-5)

Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

Carbon Black (1333-86-4)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

Listed on ELINCS (European List of Notified Chemical Substances)

Styrene (100-42-5)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

Classification according to Regulation (EC) No. 1272/2008 [CLP]

No additional information available

BMC & SMC Polyester / Vinyl Ester Thermoset Molding Compounds

Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

No additional information available

15.3. US State regulations

Carbon Black (1333-86-4)				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significance risk level (NSRL)
Yes	No	No	No	

Styrene (100-42-5)				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significance risk level (NSRL)
Yes	No	No	No	

SECTION 16: Other information

Other information : None.

SDS US (GHS HazCom 2012)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety, and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.