Hanwha Glass Mat Thermoplastic (GMT) Composite

Safety Data Sheet

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

Revision date: 07/01/2015 Supercedes date: 12/12/2008 Version: 2.0

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

1.1. Product identifier

Product name : Hanwha Glass Mat Thermoplastic (GMT) Composite

Product form : Mixture

Other means of identification : Continuous and/or chopped filament glass fiber reinforced Polypropylene based composites. This MSDS is for all types, grades and colors of polypropylene based GMT Composites manufactured by Hanwha L&C, including mineral filled grades, using non- peroxide based fiberglass mats

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

1.3. Details of the supplier of the safety data sheet

Hanwha Advanced Materials America

925 Washburn Switch Road
Shelby, NC 28150

1.4. Emergency telephone number

Emergency number : (704) 434-2271

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS-US classification

Comb. Dust	H232
Acute Tox. 4 (Inhalation:dust,mist)	H332
Carc. 1B	H350
Repr. 1A	H360
STOT RE 2	H373

2.2. Label elements

GHS-US labelling

Hazard pictograms (GHS-US) :



GHS07 GHS08

Signal word (GHS-US) : **Danger**

Hazard statements (GHS-US) :
H232 - May form combustible dust concentrations in air
H332 - Harmful if inhaled
H350 - May cause cancer (Inhalation)
H360 - May damage the unborn child. Suspected of damaging fertility. (Inhalation)
H373 - May cause damage to organs (respiratory system) through prolonged or repeated exposure (Inhalation)

Precautionary statements (GHS-US) :
P201 - Obtain special instructions before use
P202 - Do not handle until all safety precautions have been read and understood
P271 - Use only outdoors or in a well-ventilated area
P280 - Wear eye protection, protective clothing, protective gloves
P260 - Do not breathe dust
P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing
P308+P313 - If exposed or concerned: Get medical advice/attention
P405 - Store locked up
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS US)

No data available

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Name	Product identifier	%
Polypropylene	(CAS No) 9003-07-0	55 - 80
Glass, oxide	(CAS No) 65997-17-3	20 - 45
Carbon black	(CAS No) 1333-86-4	0.4 - 2
2,5-Furandione, polymer with 1-propene	(CAS No) 25722-45-6	1 - 5

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : If exposed or concerned, get medical attention/advice. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before re-use. Never give anything to an unconscious person.

First-aid measures after inhalation : IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. Get medical attention. If breathing is difficult, supply oxygen. If breathing has stopped, give artificial respiration.

First-aid measures after skin contact : IF ON SKIN (or clothing): Remove affected clothing and wash all exposed skin with water for at least 15 minutes. If irritation develops or persists, get medical attention.

First-aid measures after eye contact : IF IN EYES: Immediately flush with plenty of water for at least 15 minutes. Remove contact lenses if present and easy to do so. If pain, blinking, or irritation develops or persists, get medical attention. Continue rinsing.

First-aid measures after ingestion : IF SWALLOWED: rinse mouth thoroughly. Do not induce vomiting without advice from poison control center or medical professional. Get medical attention if you feel unwell.

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

Symptoms/injuries after inhalation : Harmful if inhaled. May cause respiratory irritation. May cause damage to organs (respiratory system) through prolonged or repeated exposure (Inhalation)

Symptoms/injuries after skin contact : May cause skin irritation.

Symptoms/injuries after eye contact : Direct contact with eyes is likely to be irritating.

Symptoms/injuries after ingestion : May cause gastrointestinal irritation.

Chronic symptoms : May cause cancer. Suspected of damaging fertility. Suspected of damaging the unborn child. May cause damage to organs (respiratory system) through prolonged or repeated exposure (Inhalation)

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 chemical. carbon dioxide (CO2). Water spray.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Must be preheated before ignition can occur.

Explosion hazard : Product is not explosive. Grinding, sanding, or other forms of mechanical alteration of this product may result in exposure to dusts. Dust may form explosive mixture in air.

5.3. Advice for firefighters

Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Do not dispose of fire-fighting water in the 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

General measures : Evacuate area. Ventilate area. Keep upwind. Spill should be handled by trained clean-up crews properly equipped with respiratory equipment and full chemical protective gear (see Section 8). Avoid dust formation.

6.1.1. For non-emergency personnel

Protective equipment : Wear Protective equipment as described in Section 8.

Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Wear suitable protective clothing, gloves and eye or face protection. Approved supplied-air respirator, in case of emergency.

6.2. Environmental precautions

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

6.3. Methods and material for containment and cleaning up

For containment : Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

Methods for cleaning up : Sweep or shovel spills into appropriate container for disposal. Place in a suitable container for disposal in accordance with the waste regulations (see Section 13).

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Do not handle until all safety precautions have been read and understood. Handle in accordance with good industrial hygiene and safety procedures. Ensure good ventilation of the work station. Avoid breathing dust. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in a dry, cool and well-ventilated place. Keep container closed when not in use.

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 TWA (mg/m³)	3 mg/m³
Remark (ACGIH)	Bronchitis
OSHA PEL (TWA) (mg/m³)	3.5 mg/m³

Glass, oxide (65997-17-3)	
Remark (ACGIH)	OELs note established
Remark (OSHA)	OELs not established

8.2. Exposure controls

Appropriate engineering controls : Provide adequate general and local exhaust ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Use explosion-proof equipment with flammable materials. Ensure adequate ventilation, especially in confined areas.

Personal protective equipment : Gloves. Protective goggles. Protective clothing. Insufficient ventilation: wear respiratory protection.



Hand protection : Use gloves chemically resistant to this material when prolonged or repeated contact could occur. Gloves should be classified under Standard EN 374 or ASTM F1296. Suggested glove materials are: Neoprene, Nitrile/butadiene rubber, Polyethylene, Ethyl vinyl alcohol laminate, PVC or vinyl. . Suitable gloves for this specific application can be recommended by the glove supplier. Change contaminated gloves immediately.

Eye protection : Wear eye protection, including chemical splash goggles and a face shield when possibility exists for eye contact due to spraying liquid or airborne particles.

Skin and body protection : Wear long sleeves, and chemically impervious PPE/coveralls to minimize bodily exposure.

Respiratory protection : Use NIOSH-approved dust/particulate respirator. Where vapor, mist, or dust exceed PELs or other applicable OELs, use NIOSH-approved respiratory protective equipment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Solid

Color : No data available

Odor : No data available

Odor Threshold : No data available

pH : No data available

Relative evaporation rate (butylacetate=1) : No data available

Melting point : 164 °C (327°F)

Freezing point	:	No data available
Boiling point	:	No data available
Flash point	:	No data available
Auto-ignition temperature	:	330 °C (625°F)
Decomposition temperature	:	No data available
Flammability (solid, gas)	:	No data available
Vapour pressure	:	No data available
Relative vapour density at 20 °C	:	No data available
Relative density	:	1.08 - 1.54 (Water=1)
Solubility	:	Insoluble in water.
Log Pow	:	No data available
Log Kow	:	No data available
Viscosity, kinematic	:	No data available
Viscosity, dynamic	:	No data available
Explosive properties	:	No data available
Oxidising properties	:	No data available
Explosive limits	:	No data available

9.2. Other information

VOC content : < 1 %

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Stable.

10.3. Possibility of hazardous reactions

Hazardous polymerization does not occur.

10.4. Conditions to avoid

None known.

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

In a sustained fire, resin may decompose releasing hazardous products of combustion. Molding at temperatures above those prescribed releases hazardous decomposition products.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Inhalation:dust/mist: Harmful if inhaled.

Carbon black (1333-86-4)	
LD50 oral rat	> 15400 mg/kg
LD50 dermal rabbit	> 3 g/kg

Skin corrosion/irritation	:	Not classified
Serious eye damage/irritation	:	Not classified
Respiratory or skin sensitisation	:	Not classified
Germ cell mutagenicity	:	Not classified
Carcinogenicity	:	May cause cancer (Inhalation).

Carbon black (1333-86-4)	
IARC group	2B - Possibly carcinogenic to humans

Reproductive toxicity	:	May damage the unborn child. Suspected of damaging fertility. (Inhalation).
Specific target organ toxicity (single exposure)	:	Not classified
Specific target organ toxicity (repeated exposure)	:	May cause damage to organs (respiratory system) through prolonged or repeated exposure (Inhalation).
Aspiration hazard	:	Not classified

Symptoms/injuries after inhalation	:	Harmful if inhaled. May cause respiratory irritation. May cause damage to organs (respiratory system) through prolonged or repeated exposure (Inhalation).
Symptoms/injuries after skin contact	:	May cause skin irritation.
Symptoms/injuries after eye contact	:	Direct contact with eyes is likely to be irritating.
Symptoms/injuries after ingestion	:	May cause gastrointestinal irritation.
Chronic symptoms	:	May cause cancer. Suspected of damaging fertility. Suspected of damaging the unborn child. May cause damage to organs (respiratory system) through prolonged or repeated exposure (Inhalation).

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : No information available.

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods	:	Do not discharge to public wastewater systems without permit of pollution control authorities. No discharge to surface waters is allowed without an NPDES permit.
Waste disposal recommendations	:	Dispose in a safe manner in accordance with local/national regulations. Do not allow the product to be released into the environment.

SECTION 14: Transport information

In accordance with DOT

Not hazardous for transport

Additional information

Other information : No supplementary information available.

Transport by sea

No additional information available

Air transport

No additional information available

SECTION 15: Regulatory information

15.1. US Federal regulations

Hanwha Glass Mat Thermoplastic (GMT) Composite

All chemical substances in this product are listed in the EPA (Environment Protection Agency) TSCA (Toxic Substances Control Act) Inventory or are exempt

15.2. International regulations

CANADA

No additional information available.

15.3. US State regulations

California Proposition 65

WARNING! This product contains chemicals known to the state of California to cause cancer, birth defects, or other reproductive harm.

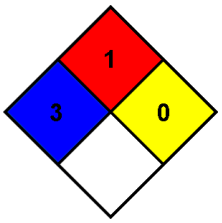
Carbon black (1333-86-4)

U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Massachusetts - Right To Know List
U.S. - Pennsylvania - RTK (Right to Know) - Special Hazardous Substances

SECTION 16: Other information

Indication of changes	:	Revision 2.0.
	:	07/01/2015
Other information	:	Author : BN.

NFPA health hazard	:	3 - Short exposure could cause serious temporary or residual injury even though prompt medical attention was given.
NFPA fire hazard	:	1 - Must be preheated before ignition can occur.
NFPA reactivity	:	0 - Normally stable, even under fire exposure conditions, and are not reactive with water.



HMIS III Rating

Health	:	3
Flammability	:	1
Physical	:	0
Personal Protection	:	

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