

1. Identification

Product identifier	THERMOPLASTIC
Synonyms	Thermoplastic Road Marking Compound, Hot-Applied
Recommended use	Traffic Marking
Recommended restrictions	None known
Manufacturer	Ozark Materials, LLC 591 Glendale Ave. Greenville, AL 36037
General Assistance	334-213-2995
E-Mail	contact@ozarkmaterials.net
Contact Person	Derron Henderson
Emergency Telephone	770-355-4477

2. Hazard(s) Identification

Physical hazards	None known	
Health hazards	Acute toxicity, inhalation	Category 4
	Serious eye damage/eye irritation	Category 2A
	Germ cell mutagenicity	Category 2
	Carcinogenicity	Category 1A
	Specific target organ toxicity, single exposure; Respiratory tract irritation	Category 3
	Specific target organ toxicity, repeated exposure	Category 1

Label elements



Signal word Danger

Hazard statement Harmful if inhaled. Causes serious eye irritation. Suspected of causing genetic defects. May cause cancer. May cause respiratory irritation. Causes damage to lungs through prolonged or repeated exposure.

Precautionary statement

Prevention Wear protective gloves/protective clothing/eye protection/face protection. Wash skin thoroughly after handling. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use only outdoors or in a well-ventilated area. Do not breathe dust/fume/gas/mist/vapors/spray. Do not eat, drink or smoke when using this product.

Response IF INHALED: Remove person to fresh air and Keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
IF IN 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. IF exposed or concerned: Get medical advice/attention. Get medical advice/attention if you feel unwell.

Storage Store locked up. Store in a well-ventilated place. Keep container tightly closed.

Disposal Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard(s) not otherwise classified (HNOC) None known.

3. Composition/information on ingredients

Mixtures

Chemical name	CAS number	%
Calcium carbonate	1317-65-3	10-60
Titanium dioxide	13463-67-7	0-15
Quartz	14808-60-7	0-3
Carbon black	1333-86-4	<2
Barium sulfate	7727-43-7	0-1

The criteria for listing components in the composition are as follows: Carcinogens are listed when present at 0.1% or greater; components which are otherwise hazardous according to OSHA are listed when present at 1.0% or greater. Non-hazardous components may be listed at 3.0% or greater if not proprietary in nature. This is not intended to be complete compositional disclosure. Refer to section 15 for applicable states right-to-know and other regulatory information.

4. First-aid measures

Inhalation	Consult a physician if respiratory tract irritation occurs.
Skin contact	Cool affected area as soon as possible in cold water; be sure to leave plastic in place. Place furacin soluble dressing on plastic and surrounding area. Cover affected area with protective bandage. Consult a physician in case of a severe burn.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention.
Ingestion	Rinse mouth thoroughly. Never give anything by mouth to a victim who is unconscious or is having convulsions. Get medical attention immediately.
Most important symptoms/effects, acute and delayed	Respiratory tract irritation, thermal burns from molten material, chronic exposure may pose a silicosis risk.
Indication of immediate medical attention & special treatment needed	In case of shortness of breath, give oxygen. Keep victim warm. Keep victim under observation. Symptoms may be delayed.
General information	If exposed or concerned: get medical attention/advice. Ensure that medical personnel are aware of the material involved & take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before re-use.

5. Fire-fighting measures

Suitable extinguishing media	Water spray, dry chemical, CO ₂ , Foam
Unsuitable extinguishing media	Strong oxidizing agents.
Specific hazards arising from the chemical	Carbon Monoxide.
Special protective equipment and precautions for firefighters	Wear self contained breathing apparatus in the positive mode to avoid smoke and fumes. Avoid direct contact with water to avoid splattering of molten plastic.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. See Section 8 of the SDS for Personal Protective Equipment.
Methods and materials for containment and cleaning up	Granular material may be scooped up or swept. Allow molten material to cool & then dispose of in accordance with Federal, State & Local Regulations.

7. Handling and storage

Precautions for safe handling	Avoid inhaling dust particles. Wash hands after use. Do NOT eat, drink, or smoke in work areas. Avoid the release & swirl of particles.
Conditions for safe storage, including	Keep in a ventilated area when possible. Store in a cool, dry area and away

any incompatibilities

from acids or oxidizers.

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Components	Type	Value
Calcium carbonate (CAS#1317-65-3)	PEL (TWA)	15 mg/m ³ (total dust), 5 mg/m ³ (respirable)
Titanium dioxide (CAS#13463-67-7)	PEL (TWA)	15 mg/m ³
Carbon black (CAS#1333-86-4)	PEL (TWA)	3.5 mg/m ³
Barium sulfate (CAS#7727-43-7)	PEL (TWA)	15 mg/m ³ (total dust), 5 mg/m ³ (respirable)

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
Calcium carbonate (CAS#1317-65-3)	8-hour TWA	15 mg/m ³ (total dust), 5 mg/m ³ (respirable)
Titanium dioxide (CAS#13463-67-7)	8-hour TWA	15 mg/m ³ (total dust)
Carbon black (CAS#1333-86-4)	8-hour TWA	3.5 mg/m ³
Barium sulfate (CAS#7727-43-7)	8-hour TWA	15 mg/m ³ (total dust), 5 mg/m ³ (respirable)

US. OSHA Table Z-2 (29 CFR 1910.1000) None of the components in this product is listed.

US. OSHA Table Z-3 Mineral dusts (29 CFR 1910.1000)

Components	Type	Value
Quartz (CAS#14808-60-7)	TWA	10 mg/m ³ (respirable) %SiO ₂ +2 30 mg/m ³ (Total dust) %SiO ₂ +2

US. ACGIH Threshold Limit Values

Components	Type	Value
Titanium dioxide (CAS#13463-67-7)	TLV	10 mg/m ³ (total dust)
Carbon black (CAS#1333-86-4)	TLV	3 mg/m ³ (Inhalable)
Barium sulfate (CAS#7727-43-7)	TLV	5 mg/m ³

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Calcium carbonate (CAS#1317-65-3)	REL (TWA)	10 mg/m ³ (total dust), 5 mg/m ³ (respirable)
Quartz (CAS#14808-60-7)	REL (TWA)	Ca 0.05 mg/m ³
Carbon black (CAS#1333-86-4)	REL (TWA)	3.5 mg/m ³
Barium sulfate (CAS#7727-43-7)	REL (TWA)	10 mg/m ³ (total dust), 5 mg/m ³ (respirable)

Appropriate engineering controls Local exhaust recommended when generating excessive levels of airborne dust/vapors when heating plastic.

Individual protection measures, such as personal protective equipment



Eye/face protection

Safety glasses; Eye goggles covered with face shield when handling molten plastic.

Skin protection

Hand protection

Avoid exposures – obtain special instructions before use. Wear protective gloves.

Other

Wear heat resistant protective clothing & gloves when handling molten plastic.

Always carry first aid kit, water & ice during application.

Respiratory protection

Use an approved/certified respirator or equivalent.

Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

Always wash hands after use and before eating, drinking or any other personal activity.

9. Physical and chemical properties

Appearance	
Physical state	Solid
Form	Granular
Color	White, Yellow, Black
Odor	Alkyd oil
Odor threshold	Not Available
pH	Not Available
Melting point/freezing point	80-115°C (176-239°F) (Softening Point, R&B Method)
Initial boiling point and boiling range	Not Available
Flash point	>246.11 °C (>475 °F)(Closed Cup)
Evaporation rate	Not Available
Flammability (solid, gas)	Not Available
Upper/lower flammability or explosive limits	
Flammability limit – lower (%)	Not Available
Flammability limit – upper (%)	Not Available
Explosive limit - lower (%)	Not Available
Explosive limit - upper (%)	Not Available
Vapor pressure	Not Available
Vapor density	Not Available
Relative density (specific gravity)	1.75-2.25
Solubility(ies)	
Solubility (water)	Negligible
Partition coefficient (n-octanol/water)	Not Available
Auto-ignition temperature	Not Available
Decomposition temperature	Not Available
Viscosity	Not Available

10. Stability and reactivity

Reactivity	Not generally reactive under normal conditions.
Chemical stability	Stable at <246.11 °C (<475 °F).
Possibility of hazardous reactions	Polymerization will not occur.
Conditions to avoid	Temperatures above 260 °C (500 °F), incompatible materials.
Incompatible materials	Acids, alum, ammonium salts, mercury & hydrogen, fluorine, magnesium.
Hazardous decomposition Products	Carbon Monoxide, Carbon Dioxide.

11. Toxicological information

Information on likely routes of exposure			
Ingestion		Do not ingest.	
Inhalation		Harmful if inhaled. Overexposure may cause temporary respiratory irritation.	
Skin contact		Moderate irritation, thermal burns may occur from molten material.	
Eye contact		Particulates may cause irritation to the eyes.	
Symptoms related to the physical, chemical & toxicological characteristics		Respiratory tract irritation, thermal burns from molten material, chronic exposure may pose a silicosis risk.	
Delayed & immediate effects & chronic effects from short- & long-term exposure		Redness, pain, and inflammation of the eyelids, coughing, sneezing, dyspnea, respiratory tract irritation, chronic rhinitis.	
Numerical measures of toxicity			
Components	Test	Species	Test Results
Titanium dioxide (CAS# 13463-67-7)	Oral LD ₅₀	Rat	> 5000 mg/kg
	Inhalation LC ₅₀	Rat	>3.43 mg/l (4 Hours)

Barium sulfate (CAS# 7727-43-7)	Oral LD ₅₀	Rat	307,000 mg/kg
Skin corrosion/irritation	Based on available data, the classification criteria are not met.		
Serious eye damage/eye irritation	Causes serious eye irritation.		
Respiratory or skin sensitization			
Respiratory sensitization	No data available.		
Skin sensitization	No data available.		
Germ cell mutagenicity	Suspected of causing genetic defects.		
Carcinogenicity	May cause cancer.		
IARC Monographs. Overall Evaluation of Carcinogenicity			
Titanium dioxide (CAS#13463-67-7)	Group 2B "Possibly Carcinogenic to Humans".		
Quartz (CAS# 14808-60-7)	Group 1 "Carcinogenic to Humans".		
Carbon Black (CAS#1333-86-4)	Group 2B "Possibly Carcinogenic to Humans".		
NTP Report on Carcinogens			
Quartz (CAS# 14808-60-7)	Group Known "Known to be a Human Carcinogen".		
US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)			
None of the components in this product is listed.			
Reproductive toxicity	No data available.		
Specific target organ toxicity – single exposure	May cause respiratory irritation.		
Specific target organ toxicity – repeated exposure	Causes damage to lungs through prolonged or repeated exposure.		
Aspiration hazard	No data available.		

12. Ecological information

Numerical measures of toxicity

Components	Test	Species	Test Results
Titanium dioxide (CAS# 13463-67-7)	Crustacea EC ₅₀	Water flea (<i>Daphnia magna</i>)	>100 mg/l, 48 Hours
Persistence and degradability	Not available		
Bioaccumulative potential	Not available		
Mobility in soil	Not available		
Other adverse effects	None known		

13. Disposal considerations

Disposal instructions	Dispose of in accordance with applicable Federal, State and Local Regulations.
Hazardous waste code	
US RCRA Hazardous Waste U List :	Not available.
Contaminated packaging	Offer rinsed packaging material to local recycling facilities.

14. Transport information

In Accordance with DOT	Not regulated for transport.
In Accordance with IMDG	Not regulated for transport.
In Accordance with IATA	Not regulated for transport.

15. Regulatory information

US federal regulations	This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. All components are on the U.S. EPA TSCA Inventory List.
TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)	None of the components in this product is regulated.
US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)	
Calcium carbonate (CAS#1317-65-3)	
Titanium dioxide (CAS#13463-67-7)	

Quartz (CAS#14808-60-7)
Carbon black (CAS#1333-86-4)
Barium sulfate (CAS#7727-43-7)

CERCLA Hazardous Substance List (40 CFR 302.4) None of the components in this product is regulated.
Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories	Immediate Hazard	-	Yes
	Delayed Hazard	-	Yes
	Fire Hazard	-	Yes
	Pressure Hazard	-	No
	Reactivity Hazard	-	No

SARA 302 Extremely hazardous substance None of the components in this product is listed.
SARA 311/312 Hazardous chemical Yes
SARA 313 (TRI reporting) None of the components in this product are listed.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

None of the components in this product is listed.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

None of the components in this product is listed.

Safe Drinking Water Act (SDWA)

None of the components in this product is listed.

US State regulations WARNING: This product contains chemicals known to the state of California to cause cancer.

US. Massachusetts RTK – Substance List

Calcium carbonate (CAS #1317-65-3)
Titanium dioxide (CAS #13463-67-7)
Quartz (CAS #14808-60-7)
Carbon black (CAS #1333-86-4)
Barium sulfate (CAS # 7727-43-7)

US. New Jersey Worker and Community Right-to-Know Act

Calcium carbonate (CAS #1317-65-3)
Titanium dioxide (CAS #13463-67-7)
Quartz (CAS #14808-60-7)
Carbon black (CAS #1333-86-4)
Barium sulfate (CAS # 7727-43-7)

US. Pennsylvania Worker and Community Right-to-Know Law

Calcium carbonate (CAS #1317-65-3)
Titanium dioxide (CAS #13463-67-7)
Quartz (CAS #14808-60-7)
Carbon black (CAS #1333-86-4)
Barium sulfate (CAS # 7727-43-7)

US. California Proposition 65

US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Substance List

Quartz (CAS#14808-60-7)
Carbon black (CAS #1333-86-4)

Canada regulations

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR).

WHMIS classification D2A Materials Causing Other Toxic Effects (very toxic)



International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	No
Canada	Domestic Substances List (DSL)	Yes
Canada	Non- Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	No
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemical List (ECL)	Yes
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	United States & Puerto Rico	Yes

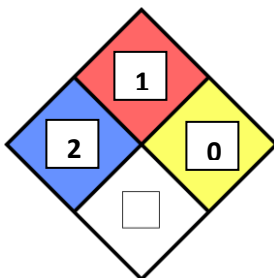
*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date	05-29-2014
Revision date	07-23-2015
Version #	1

NFPA Ratings



References

ACGIH: Documentation of the Threshold Limit Values and Biological Exposure indices
ECHA: European Chemicals Agency
HSDB: Hazardous Substances Data Bank
IARC: International Agency for Research on Cancer
NIOSH: The National Institute for Occupational Safety and Health
NTP: National Toxicology Program
NLM: Hazardous Substances Data Base
OECD : Organization for Economic Co-operation and Development
OSHA: Occupational Safety and Health Administration

Disclaimer: The information provided on this SDS 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 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. Because of conditions of use are beyond our control, no guarantee, representation or warranty expressed or implied is made. We urge each customer or recipient of this SDS to study it carefully to become aware of and understand the potential hazards associated with the product. Customary precautionary measures for handling chemicals should be followed.

Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. Since conditions for use of this product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Any use of the product not in conformance with this SDS or in combination with any other product or process is the responsibility of the user. Consult Ozark Materials, LLC for further information.