# MATERIAL SAFETY DATA SHEET (MSDS)

Date: 03-01-2017

## 1. Identification

| | |
|---|---|
| **Product identifier** | THERMOPLASTIC LIQUID MILE MARK™ LMM 100 White |
| **Synonyms** | Thermoplastic Road Marking Compound, Hot-Applied |
| **Recommended use** | Traffic Marking |
| **Recommended restrictions** | None known |


| | |
|---|---|
| **Manufacturer** | Regent TEK Industries Inc.<br>202 Mastic Blvd East<br>Shirley, NY 11967 |
| **General Assistance** | 516-888-0878 |
| **E-Mail** | info@regenttek.com |
| **Contact Person** | Dan Torkos |
| **Emergency Telephone** | 347-788-0448 |


## 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

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|---|---|
| **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

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|---|---|
| **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

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| **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

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| **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)<br>%$SiO_2$+2<br>30 mg/m$^3$ (Total dust)<br>%$SiO_2$+2 |

**US. ACGIH Threshold Limit Values**

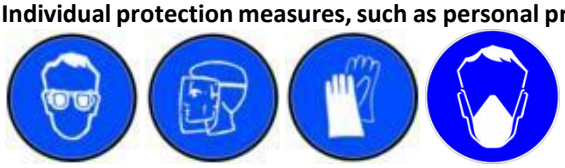
| Components | Type | Value |
|---|---|---|
| *Titanium dioxide* *(CAS#13463-67-7)* | TLV | 10 mg/m$^3$ (total dust) |
| *Carbon black* *(CAS#1333-86-4)* | TLV | 3 mg/m$^3$ (Inhalable) |
| *Barium sulfate* *(CAS#7727-43-7)* | TLV | 5 mg/m$^3$ |

**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 Evaporation** | 575°F(Open Cup) |
| **rate Flammability (solid,** | Not Available |
| **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

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|---|---|
| **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 (*Daphnia magna* ) | >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 |

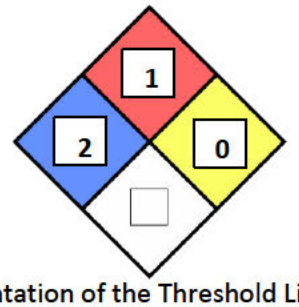
*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

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

**Issue date** 03-01-2017

**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 is in compliance with the Federal Hazard Communication standard 29CFR1910.1200, to give warning of actual and assumed hazards, and to inform of generally applicable precautions and control measures which are known to Regent TEK Industries Inc. Hazard information is based on available scientific evidence, but is not always obtained from sources under the direction or control of Regent TEK Industries Inc. Regent TEK Industries Inc. makes no warranty or representation that the information is accurate, reliable, complete or representative and Buyer may rely thereon only at Buyer's own risk. Regent TEK Industries Inc. warrants only that it has made no effort to censor, other than trade secret information or to conceal hazards of its products. The data shown on these pages in no way modifies, amends or enlarges any specification or warranty.