

| Section 1: Product Information | |
|---------------------------------------|---------------------------|
| Name: | M-555-BE |
| Description: | Synthetic rubber |
| Use: | Hot melt adhesive sealant |
| MSDS number: | YHAHM-019 |
| Appearance and odor: | Black solid, rubber odor |
| Emergency telephone: | 1-800-424-9300 CHEMTREC |
| Product information: | 859-879-2853 |
| Effective date: | 5/20/2011 |
| Supersedes date: | 8/1/2008 |

| Section 2: Hazardous Ingredients | | |
|--|--------------------------|-----------------------------|
| A hazard evaluation of this product has been performed. The component listed below is identified as hazardous chemicals under the criteria of the OSHA hazard communication standard (29 CFR 1910.1200). | | |
| <u>Common name / Chemical name</u> | <u>CAS number</u> | <u>Approximate %</u> |
| Silica, amorphous | 63231-67-4 | 1% - 5% |
| Silicon dioxide, amorphous | | |

| Section 3: Emergency and First Aid Procedure | |
|---|--|
| Eye contact: | Flush eyes with water for at least 15 minutes. If irritation develops, consult a physician. |
| Skin contact: | Medical attention is not normally required. |
| Inhalation: | Medical attention is not normally required. |
| Ingestion: | Seek medical attention. Unless advised otherwise, induce vomiting by giving either syrup of ipecac followed by 2 glasses of water or by sticking finger down throat. |
| <i>Note to physician:</i> | Treatment should be directed at preventing absorption, administering to the symptoms as they occur, and providing supportive therapy. |

| Section 4: Health Effects Summary | | | |
|--|--|-------------------|------------------------|
| Primary route(s) of exposure: | Eye - yes | Skin - yes | Inhalation - no |
| Eye contact: | Can cause mild to moderate irritation, the severity of reaction depends on duration of exposure and first aid procedures administered. | | |
| Skin contact: | Molten material can cause thermal burns. Caution should be taken in handling hot material | | |
| Inhalation: | Processing vapors can possibly cause irritation to the upper respiratory tract. | | |

M-555-BE Hot melt Adhesive**Ingestion:**

Adverse effects are not expected

Additional effects (target organs):

None known

Aggravation of existing conditions:

Exposure to this product is not expected to contribute to, worsen, or aggravate any existing medical condition.

Section 5: Toxicologic Information**Silica, amorphous****Toxic effects:**

May cause mechanical irritation to the eyes. Prolonged contact with the skin may cause dryness. Prolonged and repeated exposure to amorphous silica dusts can lead to the development of pneumoconiosis (deposition of particles in the lungs)

Acute toxicity studies:

Oral-rat LD 50: greater than 3g/kg

Carcinogenicity - listed by:

ACGIH: no IARC monographs: no NTP annual report: no OSHA: no

Section 6: Occupational Control Procedures**Eye protection:**

Wear chemical splash goggles or safety glasses with side shields.

An eye wash facility should be readily available.

Skin protection:

Wear protective clothing and appropriate impervious gloves. Because a variety of protective gloves exist, always consult glove manufacturer to determine the proper type for specific operation.

Respiratory protection:

Respiratory protection is not usually required.

Industrial hygiene consultation is recommended because airborne exposure levels may vary depending on the nature of the operation being performed.

Ventilation:

Maintain airborne concentration below the established exposure limits. (See airborne exposure limits in this section).

General (dilution) ventilation may be acceptable. However, local exhaust ventilation is recommended when vapors, mists or dusts can be released.

Personal hygiene:

Wash thoroughly after handling, especially before eating, drinking, smoking, or using restroom facilities. Wash contaminated goggles, faceshield, and gloves. Professionally launder contaminated clothing. Discard contaminated shoes.

M-555-BE Hot melt Adhesive**Airborne exposure limits****Silica, amorphous**

| | |
|----------------|----------------------------|
| ACGIH TLV-TWA: | 10 mg/m3 total particulate |
| OSHA PEL: | 6 mg/m3 total particulate |

Note: Because of this product's physical composition, the release or generation of a dust is not expected to occur under normal conditions of use.

Section 7: Fire Protection Information

| | | |
|--------------------------|--------------------------|--------------------------|
| Flash point: | 450 Fahrenheit, 232 C | Test method: other |
| Explosive limits: | LEL (%) - not applicable | UEL (%) - not applicable |

Extinguishing media:

Small fires: use foam, carbon dioxide, halon, dry chemical, or water spray.

Large fires: use foam, water spray, or alcohol foam.

Special fire fighting procedures:

Fire fighters and others who may be exposed to the products of combustion should be equipped with NIOSH approved positive pressure self-contained breathing apparatus (SCBA) and full protective clothing.

Unusual fire and explosion hazards:

May liberate irritating or toxic vapors during combustion or decomposition.

Section 8: Reactivity Data

Stable under normal conditions of storage and use: yes

Materials to avoid:

Oxidizing agents.

Hazardous polymerization:

Hazardous polymerization will not occur.

Thermal decomposition products:

If heated to high temperatures, this product may emit the following compounds:

Smoke, soot, & toxic fumes (e.g. carbon dioxide & carbon monoxide).

Section 9: Spill and Leak Procedures**Response to spills:**

Shovel or scoop spilled product and place in closed containers for further handling and disposal.

Do not flush to sewer, stream, or other bodies of water.

Precautions:

If the airborne concentration exceeds established exposure limits (TLV or PEL), or if high airborne concentrations can occur, evacuate employees and ventilate the area.

A supplied air respirator or self-contained breathing apparatus (SCBA), should be used for entry into enclosed spaces, or in areas with inadequate ventilation.

Disposal methods:

If discarded in its original unused form, this product should be managed (stored/treated/disposed/etc.) at an authorized facility, in compliance with all applicable federal, state, and local requirements. Be sure to contact appropriate government environmental agencies if further disposal guidance is required.

Of the methods of disposal currently available, it is recommended that an alternative be selected according to the waste management hierarchy.

M-555-BE Hot melt Adhesive MSDS**Section 10: Special Precautions****Recommended storage practice and conditions:**

Store in cool, dry, well ventilated area. Do not store above 120 degrees Fahrenheit, 49 degrees Celsius

Container use procedures:

No special precautions are needed. Follow good manufacturing and handling practices.

Empty container precautions:

This container can be hazardous when empty, because it can retain product residues. Therefore, do not re-use container for food, clothing, or products for human or animal consumption or where skin contact may occur.

Supplemental section 10 information:

HMIS / NFPA classification - health: 1; flammability: 1; reactivity: 0.

Section 11: Physical Data

| | |
|---|-----------------------|
| % Non-volatile (by weight): | 100 |
| pH: | not applicable |
| Vapor density (air=1): | not applicable |
| Solubility in water: | insoluble |
| Evaporation rate: | not applicable |
| Vapor pressure (mmHg @25oC): | not established |
| Specific gravity (water=1); | 0.98 |
| Approximate boiling point: | not applicable |
| <i>Supplemental section 11 information:</i> | VOC = not established |

Note: The physical data presented above are typical values and should not be construed as a specification.

Section 12: Label and Transportation Information

| | |
|----------------------------------|----------------|
| DOT proper shipping name: | non-regulated |
| DOT label: | not applicable |
| DOT identification No.: | not applicable |

Supplemental section 12 information:

Non-regulated by HM-181, IATA/ICAO, IMO

M-555-BE Hot melt Adhesive MSDS

Section 13: Regulatory Information

Toxic substance control act (TSCA)

Chemical component(s) in this product are on (b) chemical substance inventory listing (40 CFR 710).

SARA title III information

Section 313 - toxic chemicals

Pursuant to section 313, this product does not contain a toxic chemical in excess of 1 percent of the mixture (0.1 percent, if the listed toxic chemical is a carcinogen).

Section 302 - extremely hazardous substances

Pursuant to section 302, this product does not contain an extremely hazardous substance.

Section 311/312 - hazard categories

Pursuant to section 311/312, the physical and health hazard categories for this product are identified below:

| | |
|---|-----|
| Fire hazard: | no |
| Sudden release of pressure hazard: | no |
| Reactivity hazard: | no |
| Immediate (acute) health hazard: | yes |
| Delayed (chronic) health hazard: | no |

Hazardous materials information review regulation - Canada

This material safety data sheet provides information that complies with the requirements set forth under the Canadian workplace hazardous materials information system (WHMIS).

Claim for exemption registry No.: not applicable

Filing date for claim: not applicable

Section 14: Users Responsibility

A bulletin such as this cannot be expected to cover all possible individual situations. As the user has the responsibility to provide a safe workplace, all aspects of an individual operation should be examined to determine if, or where, precautions - in addition to those described herein - are required. Any health hazard and safety information contained herein should be passed on to your customers or employees, as the case may be.

Disclaimer of liability

The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by use of this material. All chemicals may present unknown health hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist. Final determination of suitability of the chemical is the sole responsibility of the user. No representations of warranties, either expressed or implied, of merchantability, fitness for a particular purpose or any other nature are made hereunder with respect to the information contained herein or the chemical to which the information refers. It is the responsibility of the user to comply with all applicable federal, state and local laws and regulations.

If you have questions with regard to health effects, or other information presented in this document, contact:

Neil Dalton

Director of Environment, Health and Safety

Yokohama Tire Corporation

1500 Indiana Avenue

Salem, VA 24153

Tel.) 540-375-8209
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M-555-BE Hot melt Adhesive MSDS

State of California addendum to the material safety data sheet

Product name: M-555-BE
Effective date: 5/20/2011

The California safe drinking water and toxic enforcement act of 1986, otherwise known as proposition 65, requires that persons potentially exposed to certain substances be made aware of the chronic effects of the substances specified by the state of California.

This product contains no substances known to the state of California to cause cancer, birth defects, or other reproductive harm

M-555-BE Hot melt Adhesive MSDSCommonwealth of Pennsylvania addendum to the material safety data sheet

Product name: M-555-BE
Effective date: 5/20/2011

All of the materials in this product that are required by the Commonwealth of Pennsylvania to be identified are listed below. In addition, some of the materials identified may have been placed by the Commonwealth of Pennsylvania on their hazardous substance list.

| <u>Ingredients</u> | <u>CAS Number</u> | <u>Weight %</u> |
|---|-------------------|-----------------|
| Non-hazardous trade secret ingredient(s) | Proprietary | 90 to 100 |
| Silica, amorphous/ Silicon dioxide, amorphous | 63231-67-4 | 1 to 5 |

