# Safety Data Sheet



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|---|---|---|---|
| **Document Group:** | 19-1564-4 | **Version Number:** | 4.06 |
| **Issue Date:** | 07/24/18 | **Supercedes Date:** | 02/22/18 |

## SECTION 1: Identification

### 1.1. Product identifier
3M™ Vetcast™

**Product Identification Numbers**
70-2007-1460-1, YP-2060-0076-9, YP-2060-0077-7, YP-2060-0078-5, YP-2060-0079-3

### 1.2. Recommended use and restrictions on use

**Recommended use**
Bone immobilization, Veterinary product.

### 1.3. Supplier's details

| | |
|---|---|
| **MANUFACTURER:** | 3M |
| **DIVISION:** | 3M Poland<br>Consumer & Office Business Sponsored |
| **ADDRESS:** | 3M Center, St. Paul, MN 55144-1000, USA |
| **Telephone:** | 1-888-3M HELPS (1-888-364-3577) |

### 1.4. Emergency telephone number
1-800-364-3577 or (651) 737-6501 (24 hours)

## SECTION 2: Hazard identification

### 2.1. Hazard classification
Respiratory Sensitizer: Category 1.
Skin Sensitizer: Category 1.
Specific Target Organ Toxicity (repeated exposure): Category 1.

### 2.2. Label elements
**Signal word**
Danger

**Symbols**
Health Hazard |

**Pictograms**

**Hazard Statements**
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause an allergic skin reaction.

Causes damage to organs through prolonged or repeated exposure:
respiratory system |

**Precautionary Statements**

**Prevention:**
Do not breathe dust/fume/gas/mist/vapors/spray.
In case of inadequate ventilation wear respiratory protection.
Wear protective gloves.
Do not eat, drink or smoke when using this product.
Wash thoroughly after handling.
Contaminated work clothing must not be allowed out of the workplace.

**Response:**
IF INHALED: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.
If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.
IF ON SKIN: Wash with plenty of soap and water.
If skin irritation or rash occurs: Get medical advice/attention.
Wash contaminated clothing before reuse.
Get medical advice/attention if you feel unwell.

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

**Supplemental Information:**
Persons previously sensitized to isocyanates may develop a cross-sensitization reaction to other isocyanates.

38% of the mixture consists of ingredients of unknown acute oral toxicity.

39% of the mixture consists of ingredients of unknown acute inhalation toxicity.

## SECTION 3: Composition/information on ingredients

| Ingredient | C.A.S. No. | % by Wt |
|---|---|---|
| Butylated Hydroxy Toluene | 128-37-0 | < 1 |
| 4,4'-Diphenylmethane Diisocyanate-Polypropylene Glycol Polymer | 9048-57-1 | Trade Secret * |
| Calcium Metasilicate | 13983-17-0 | Trade Secret * |
| Glass Yarn | 65997-17-3 | Trade Secret * |
| Methylenediphenyl diisocyanate | 26447-40-5 | Trade Secret * |

*The specific chemical identity and/or exact percentage (concentration) of this composition has been withheld as a trade secret.

## SECTION 4: First aid measures

**4.1. Description of first aid measures**

**Inhalation:**
Remove person to fresh air. If you feel unwell, get medical attention.

**Skin Contact:**
Immediately wash with soap and water. Remove contaminated clothing and wash before reuse. If signs/symptoms develop, get medical attention.

**Eye Contact:**
Flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. If signs/symptoms persist, get medical attention.

**If Swallowed:**
Rinse mouth. If you feel unwell, get medical attention.

**4.2. Most important symptoms and effects, both acute and delayed**
See Section 11.1. Information on toxicological effects.

**4.3. Indication of any immediate medical attention and special treatment required**
Not applicable

## SECTION 5: Fire-fighting measures

**5.1. Suitable extinguishing media**
In case of fire: Use a carbon dioxide or dry chemical extinguisher to extinguish.

**5.2. Special hazards arising from the substance or mixture**
None inherent in this product.

**5.3. Special protective actions for fire-fighters**
No special protective actions for fire-fighters are anticipated.

## SECTION 6: Accidental release measures

**6.1. Personal precautions, protective equipment and emergency procedures**
Evacuate area. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

**6.2. Environmental precautions**
Avoid release to the environment.

**6.3. Methods and material for containment and cleaning up**
Collect as much of the spilled material as possible. Place in a container approved for transportation by appropriate authorities, but do not seal the container for 48 hours to avoid pressure build-up. Clean up residue. Dispose of collected material as soon as possible in accordance with applicable local/regional/national/international regulations.

## SECTION 7: Handling and storage

**7.1. Precautions for safe handling**

For industrial or professional use only. Do not breathe dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse.

**7.2. Conditions for safe storage including any incompatibilities**
Keep container tightly closed to prevent contamination with water or air. If contamination is suspected, do not reseal container. Store away from strong bases. Store away from amines.

## SECTION 8: Exposure controls/personal protection

**8.1. Control parameters**

**Occupational exposure limits**
If a component is disclosed in section 3 but does not appear in the table below, an occupational exposure limit is not available for the component.

| Ingredient | C.A.S. No. | Agency | Limit type | Additional Comments |
|---|---|---|---|---|
| Butylated Hydroxy Toluene | 128-37-0 | ACGIH | TWA(inhalable fraction and vapor):2 mg/m3 | A4: Not class. as human carcin |

ACGIH : American Conference of Governmental Industrial Hygienists
AIHA : American Industrial Hygiene Association
CMRG : Chemical Manufacturer's Recommended Guidelines
OSHA : United States Department of Labor - Occupational Safety and Health Administration
TWA: Time-Weighted-Average
STEL: Short Term Exposure Limit
CEIL: Ceiling

**8.2. Exposure controls**

**8.2.1. Engineering controls**
Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapors/spray. If ventilation is not adequate, use respiratory protection equipment.

**8.2.2. Personal protective equipment (PPE)**

**Eye/face protection**
None required.

**Skin/hand protection**
Select and use gloves and/or protective clothing approved to relevant local standards to prevent skin contact based on the results of an exposure assessment. Selection should be based on use factors such as exposure levels, concentration of the substance or mixture, frequency and duration, physical challenges such as temperature extremes, and other use conditions. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible gloves/protective clothing.
Gloves made from the following material(s) are recommended: Nitrile Rubber

If this product is used in a manner that presents a higher potential for exposure (eg. spraying, high splash potential etc.), then use of protective coveralls may be necessary. Select and use body protection to prevent contact based on the results of an exposure assessment. The following protective clothing material(s) are recommended: Apron – Nitrile

**Respiratory protection**

An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure:
Half facepiece or full facepiece air-purifying respirator suitable for organic vapors and particulates

For questions about suitability for a specific application, consult with your respirator manufacturer.

## SECTION 9: Physical and chemical properties

**9.1. Information on basic physical and chemical properties**

| | |
|---|---|
| **General Physical Form:** | Solid |
| **Specific Physical Form:** | Roll of Tape |
| **Odor, Color, Grade:** | Liquid resin impregnated on knit fiberglass/slight odor; white color. |
| **Odor threshold** | *No Data Available* |
| **pH** | *Not Applicable* |
| **Melting point** | *No Data Available* |
| **Boiling Point** | *Not Applicable* |
| **Flash Point** | No flash point |
| **Evaporation rate** | Negligible |
| **Flammability (solid, gas)** | Not Classified |
| **Flammable Limits(LEL)** | *Not Applicable* |
| **Flammable Limits(UEL)** | *Not Applicable* |
| **Vapor Pressure** | Negligible |
| **Vapor Density** | *No Data Available* |
| **Density** | 1.1 g/ml |
| **Specific Gravity** | 1.1 [*Ref Std:*WATER=1] |
| **Solubility in Water** | Nil |
| **Solubility- non-water** | *No Data Available* |
| **Partition coefficient: n-octanol/ water** | *No Data Available* |
| **Autoignition temperature** | *No Data Available* |
| **Decomposition temperature** | *No Data Available* |
| **Viscosity** | 35,000 - 65,000 centipoise [@ 73.4 ºF ] |
| **Volatile Organic Compounds** | *No Data Available* |
| **Percent volatile** | Negligible |
| **VOC Less H2O & Exempt Solvents** | *No Data Available* |

## SECTION 10: Stability and reactivity

**10.1. Reactivity**
This material may be reactive with certain agents under certain conditions - see the remaining headings in this section.

**10.2. Chemical stability**
Stable.

**10.3. Possibility of hazardous reactions**
Hazardous polymerization will not occur.

**10.4. Conditions to avoid**
Sparks and/or flames

**10.5. Incompatible materials**
Strong bases
Amines
Alcohols
Water

Product reacts with atmospheric moisture or water and may become unusable.

**10.6. Hazardous decomposition products**

| Substance | Condition |
|---|---|
| Carbon monoxide | Not Specified |
| Carbon dioxide | Not Specified |
| Hydrogen Cyanide | Not Specified |
| Oxides of Nitrogen | Not Specified |

# SECTION 11: Toxicological information

**The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be present below the threshold for labeling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.**

**11.1. Information on Toxicological effects**

**Signs and Symptoms of Exposure**

**Based on test data and/or information on the components, this material may produce the following health effects:**

**Inhalation:**
Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

Allergic Respiratory Reaction: Signs/symptoms may include difficulty breathing, wheezing, cough, and tightness of chest.

May cause additional health effects (see below).

**Skin Contact:**
Mild Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, and dryness. Allergic Skin Reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

**Eye Contact:**
Vapors released during curing may cause eye irritation. Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

**Ingestion:**
May be harmful if swallowed.
Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

**Additional Health Effects:**

**Prolonged or repeated exposure may cause target organ effects:**
Respiratory Effects: Signs/symptoms may include cough, shortness of breath, chest tightness, wheezing, increased heart rate, bluish colored skin (cyanosis), sputum production, changes in lung function tests, and/or respiratory failure.

**Carcinogenicity:**

| Ingredient | CAS No. | Class Description | Regulation |
|---|---|---|---|
| Generic: GLASS FILAMENTS | 65997-17-3 | Anticipated human carcinogen | National Toxicology Program Carcinogens |

**Additional Information:**
Persons previously sensitized to isocyanates may develop a cross-sensitization reaction to other isocyanates.

**Toxicological Data**
If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or the data are not sufficient for classification.

**Acute Toxicity**

| Name | Route | Species | Value |
|---|---|---|---|
| Overall product | Inhalation-Vapor(4 hr) | | No data available; calculated ATE >50 mg/l |
| Overall product | Ingestion | | No data available; calculated ATE2,000 - 5,000 mg/kg |
| Glass Yarn | Dermal | | LD50 estimated to be > 5,000 mg/kg |
| Glass Yarn | Ingestion | | LD50 estimated to be 2,000 - 5,000 mg/kg |
| 4,4'-Diphenylmethane Diisocyanate-Polypropylene Glycol Polymer | Dermal | | LD50 estimated to be > 5,000 mg/kg |
| 4,4'-Diphenylmethane Diisocyanate-Polypropylene Glycol Polymer | Ingestion | | LD50 estimated to be 2,000 - 5,000 mg/kg |
| Methylenediphenyl diisocyanate | Dermal | Rabbit | LD50 > 5,000 mg/kg |
| Methylenediphenyl diisocyanate | Inhalation-Dust/Mist (4 hours) | Rat | LC50 0.368 mg/l |
| Methylenediphenyl diisocyanate | Ingestion | Rat | LD50 31,600 mg/kg |
| Calcium Metasilicate | Dermal | | LD50 estimated to be > 5,000 mg/kg |
| Calcium Metasilicate | Ingestion | | LD50 estimated to be 2,000 - 5,000 mg/kg |
| Butylated Hydroxy Toluene | Dermal | Rat | LD50 > 2,000 mg/kg |
| Butylated Hydroxy Toluene | Ingestion | Rat | LD50 > 2,930 mg/kg |

ATE = acute toxicity estimate

**Skin Corrosion/Irritation**

| Name | Species | Value |
|---|---|---|
| Glass Yarn | Professional judgement | No significant irritation |
| Methylenediphenyl diisocyanate | official classification | Irritant |
| Butylated Hydroxy Toluene | Human and animal | Minimal irritation |

**Serious Eye Damage/Irritation**

| Name | Species | Value |
|---|---|---|
| Glass Yarn | Professional judgement | No significant irritation |
| Methylenediphenyl diisocyanate | official classification | Severe irritant |
| Butylated Hydroxy Toluene | Rabbit | Mild irritant |

**Skin Sensitization**

| Name | Species | Value |
|---|---|---|
| Methylenediphenyl diisocyanate | official classification | Sensitizing |
| Butylated Hydroxy Toluene | Human | Not classified |

**Respiratory Sensitization**

| Name | Species | Value |
|---|---|---|
| Methylenediphenyl diisocyanate | Human | Sensitizing |

### Germ Cell Mutagenicity

| Name | Route | Value |
|---|---|---|
| Glass Yarn | In Vitro | Some positive data exist, but the data are not sufficient for classification |
| Methylenediphenyl diisocyanate | In Vitro | Some positive data exist, but the data are not sufficient for classification |
| Calcium Metasilicate | In Vitro | Not mutagenic |
| Butylated Hydroxy Toluene | In Vitro | Not mutagenic |
| Butylated Hydroxy Toluene | In vivo | Not mutagenic |

### Carcinogenicity

| Name | Route | Species | Value |
|---|---|---|---|
| Glass Yarn | Inhalation | Multiple animal species | Some positive data exist, but the data are not sufficient for classification |
| Methylenediphenyl diisocyanate | Inhalation | Rat | Some positive data exist, but the data are not sufficient for classification |
| Butylated Hydroxy Toluene | Ingestion | Multiple animal species | Some positive data exist, but the data are not sufficient for classification |

### Reproductive Toxicity

### Reproductive and/or Developmental Effects

| Name | Route | Value | Species | Test Result | Exposure Duration |
|---|---|---|---|---|---|
| Methylenediphenyl diisocyanate | Inhalation | Not classified for development | Rat | NOAEL 0.004 mg/l | during organogenesis |
| Butylated Hydroxy Toluene | Ingestion | Not classified for female reproduction | Rat | NOAEL 500 mg/kg/day | 2 generation |
| Butylated Hydroxy Toluene | Ingestion | Not classified for male reproduction | Rat | NOAEL 500 mg/kg/day | 2 generation |
| Butylated Hydroxy Toluene | Ingestion | Not classified for development | Rat | NOAEL 100 mg/kg/day | 2 generation |

### Target Organ(s)

### Specific Target Organ Toxicity - single exposure

| Name | Route | Target Organ(s) | Value | Species | Test Result | Exposure Duration |
|---|---|---|---|---|---|---|
| Methylenediphenyl diisocyanate | Inhalation | respiratory irritation | May cause respiratory irritation | official classification | NOAEL Not available | |

### Specific Target Organ Toxicity - repeated exposure

| Name | Route | Target Organ(s) | Value | Species | Test Result | Exposure Duration |
|---|---|---|---|---|---|---|
| Glass Yarn | Inhalation | respiratory system | Not classified | Human | NOAEL not available | occupational exposure |
| Methylenediphenyl diisocyanate | Inhalation | respiratory system | Causes damage to organs through prolonged or repeated exposure | Rat | LOAEL 0.004 mg/l | 13 weeks |
| Calcium Metasilicate | Inhalation | respiratory system | Not classified | Human | NOAEL Not available | occupational exposure |
| Calcium Metasilicate | Inhalation | pulmonary fibrosis | Not classified | Human and animal | NOAEL Not available | |
| Butylated Hydroxy | Ingestion | liver | Some positive data exist, but the | Rat | NOAEL 250 | 28 days |

| | | | | | | |
|---|---|---|---|---|---|---|
| Toluene | | | data are not sufficient for classification | | mg/kg/day | |
| Butylated Hydroxy Toluene | Ingestion | kidney and/or bladder | Not classified | Rat | NOAEL 500 mg/kg/day | 2 generation |
| Butylated Hydroxy Toluene | Ingestion | blood | Not classified | Rat | LOAEL 420 mg/kg/day | 40 days |
| Butylated Hydroxy Toluene | Ingestion | endocrine system | Not classified | Rat | NOAEL 25 mg/kg/day | 2 generation |
| Butylated Hydroxy Toluene | Ingestion | heart | Not classified | Mouse | NOAEL 3,480 mg/kg/day | 10 weeks |

**Aspiration Hazard**
For the component/components, either no data are currently available or the data are not sufficient for classification.

**Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.**

## SECTION 12: Ecological information

### Ecotoxicological information

Please contact the address or phone number listed on the first page of the SDS for additional ecotoxicological information on this material and/or its components.

### Chemical fate information

Please contact the address or phone number listed on the first page of the SDS for additional chemical fate information on this material and/or its components.

## SECTION 13: Disposal considerations

**13.1. Disposal methods**
Dispose of contents/ container in accordance with the local/regional/national/international regulations.

Dispose of completely cured (or polymerized) material in a permitted industrial waste facility. As a disposal alternative, incinerate uncured product in a permitted waste incineration facility. Proper destruction may require the use of additional fuel during incineration processes. If no other disposal options are available, waste product that has been completely cured or polymerized may be placed in a landfill properly designed for industrial waste. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

**EPA Hazardous Waste Number (RCRA):** Not regulated

## SECTION 14: Transport Information

For Transport Information, please visit http://3M.com/Transportinfo or call 1-800-364-3577 or 651-737-6501.

## SECTION 15: Regulatory information

**15.1. US Federal Regulations**
Contact 3M for more information.

**EPCRA 311/312 Hazard Classifications:**

| Physical Hazards |
|---|
| Not applicable |

| Health Hazards |
|---|
| Respiratory or Skin Sensitization |
| Specific target organ toxicity (single or repeated exposure) |

**15.2. State Regulations**
Contact 3M for more information.

**15.3. Chemical Inventories**
The components of this product are in compliance with the chemical notification requirements of TSCA. Commercial use of this material is regulated by the FDA.

Contact 3M for more information.

**15.4. International Regulations**
Contact 3M for more information.

**This SDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.**

## SECTION 16: Other information

**NFPA Hazard Classification**
**Health:** 2 **Flammability:** 1 **Instability:** 0 **Special Hazards:** None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

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|---|---|---|---|
| **Document Group:** | 19-1564-4 | **Version Number:** | 4.06 |
| **Issue Date:** | 07/24/18 | **Supercedes Date:** | 02/22/18 |

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