1. Identification

Product identifier: BMR™

Other means of identification: None.

Recommended use: Not available.

Recommended restrictions: None known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer: CETCO, an MTI Company

Address: 2870 Forbs Avenue

Company name: Hoffman Estates, IL 60192

Telephone: United States

Website: http://www.cetco.com/

E-mail: safetydata@mineralstech.com

Emergency phone number: Emergency 1.866.519.4752/1 760 476 3962

2. Hazard(s) identification

Physical hazards: Not classified.

Health hazards:
- Skin corrosion/irritation: Category 1
- Serious eye damage/eye irritation: Category 1

Environmental hazards: Not classified.

OSHA defined hazards: Not classified.

Label elements

Signal word: Danger

Hazard statement: Causes severe skin burns and eye damage. Causes serious eye damage.

Precautionary statement:

Prevention: Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection.

Response: If swallowed: Rinse mouth. Do NOT induce vomiting. Wash contaminated clothing before reuse.

Storage: Store locked up.

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

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

Supplemental information: None.

3. Composition/information on ingredients

Mixtures

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Common name and synonyms</th>
<th>CAS number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium bisulfate</td>
<td></td>
<td>7681-38-1</td>
<td>70 - &lt; 80</td>
</tr>
<tr>
<td>POLYETHYLENE GLYCOL</td>
<td></td>
<td>25322-68-3</td>
<td>3 - &lt; 5</td>
</tr>
<tr>
<td>Other components below reportable levels</td>
<td></td>
<td>20 - &lt; 30</td>
<td></td>
</tr>
</tbody>
</table>

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.
### 4. First-aid measures

#### Inhalation
Move to fresh air. Oxygen or artificial respiration if needed. Call a physician if symptoms develop or persist.

#### Skin contact
Take off immediately all contaminated clothing. Rinse skin with water/shower. Call a physician or poison control center immediately. Chemical burns must be treated by a physician. Wash contaminated clothing before reuse.

#### 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. Call a physician or poison control center immediately. Chemical burns must be treated by a physician. Wash contaminated clothing before reuse.

#### Ingestion
Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.

#### Most important symptoms/effects, acute and delayed

#### Indication of immediate medical attention and special treatment needed
Provide general supportive measures and treat symptomatically. Chemical burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim under observation. Symptoms may be delayed.

#### General information
Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.

### 5. Fire-fighting measures

#### Suitable extinguishing media
Water fog. Foam. Dry chemical powder. Dry chemical, CO2, water spray or regular foam. Carbon dioxide (CO2). Use any media suitable for the surrounding fires.

#### Unsuitable extinguishing media
None known.

#### Specific hazards arising from the chemical
During fire, gases hazardous to health may be formed.

#### Special protective equipment and precautions for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

#### Fire fighting equipment/instructions
In the event of fire, cool tanks with water spray.

#### General fire hazards
No unusual fire or explosion hazards noted.

### 6. Accidental release measures

#### Personal precautions, protective equipment and emergency procedures
Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained.

#### Methods and materials for containment and cleaning up
Should not be released into the environment. Stop leak if you can do so without risk. Sweep up or gather material and place in appropriate container for disposal. Avoid dust formation. Following product recovery, flush area with water.

#### Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not contaminate water. Avoid discharge into drains, water courses or onto the ground. Do not flush into surface water or sanitary sewer system.

### 7. Handling and storage

#### Precautions for safe handling
Keep away from heat and sources of ignition. Do not get this material in your eyes, on your skin, or on your clothing. Do not get this material in contact with eyes. Do not get this material in contact with skin. Avoid prolonged exposure. Do not get this material on clothing. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices. Use local exhaust ventilation.

#### Conditions for safe storage, including any incompatibilities

### 8. Exposure controls/personal protection

#### Occupational exposure limits
The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.
US. OSHA Table Z-3 (29 CFR 1910.1000)

Additional components

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>INERT OR NUISANCE DUSTS</td>
<td>TWA</td>
<td>5 mg/m³</td>
<td>Respirable fraction.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>15 mg/m³</td>
<td>Total dust.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>50 mppcf</td>
<td>Total dust.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>15 mppcf</td>
<td>Respirable fraction.</td>
</tr>
</tbody>
</table>

US. Workplace Environmental Exposure Level (WEEL) Guides

Components

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>POLYETHYLENE GLYCOL</td>
<td>TWA</td>
<td>10 mg/m³</td>
<td>Particulate.</td>
</tr>
</tbody>
</table>

Biological limit values

No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

Individual protection measures, such as personal protective equipment

Eye/face protection

Wear safety glasses with side shields (or goggles) and a face shield. Avoid contact with eyes. Eye wash fountain is recommended. Wear safety glasses; chemical goggles (if splashing is possible).

Skin protection

Hand protection

Wear appropriate chemical resistant gloves.

Other

Wear appropriate chemical resistant clothing. Use of butyl rubber or nitrile gloves is recommended. Remove and wash contaminated clothing before re-use.

Respiratory protection

In case of insufficient ventilation, wear suitable respiratory equipment.

Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

Avoid contact with eyes. Keep away from food and drink. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance

Granular.

Physical state

Solid.

Form

Solid. Beaded material

Color

White. Off-white.

Odor

None.

Odor threshold

Not available.

pH

1.5 (2% solution)

Melting point/freezing point

350 °F (176.67 °C)

Initial boiling point and boiling range

Not available.

Flash point

Not available.

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

0.00001 hPa estimated

Vapor density

Not available.
Relative density
Solubility(ies)
  Solubility (water)
Partition coefficient
  (n-octanol/water)
Auto-ignition temperature
Decomposition temperature
  806 °F (430 °C)
Viscosity
Other information
  Bulk density
  83 lb/ft³
Percent volatile
  0 % estimated
VOC
  CARB

10. Stability and reactivity
Reactivity
  The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability
  Stable at normal conditions.
Possibility of hazardous reactions
  Will not occur.
Conditions to avoid
  Avoid temperatures exceeding the decomposition temperature. Reacts violently with strong alkaline substances. This product may react with reducing agents. Do not mix with other chemicals. Contact with incompatible materials. This material forms a strongly acidic aqueous solution, and this property may cause adverse environmental effects.
Incompatible materials
  Strong oxidizing agents. This product may react with reducing agents. Incompatible with bases. This product may react with strong alkalies.
Hazardous decomposition products
  Sulphur oxides

11. Toxicological information
Information on likely routes of exposure
  Inhalation
  Prolonged inhalation may be harmful. May cause irritation to the respiratory system.
  Skin contact
  Causes severe skin burns.
  Eye contact
  Causes serious eye damage.
  Ingestion
  Causes digestive tract burns.
Symptoms related to the physical, chemical and toxicological characteristics
  Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.
Information on toxicological effects
Acute toxicity
  Corrosive effects. Contact with liquid can cause severe burns.

<table>
<thead>
<tr>
<th>Product</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMR™</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acute</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oral</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LD50</td>
<td>Rat</td>
<td>3308 mg/kg</td>
</tr>
<tr>
<td>Components</td>
<td>Species</td>
<td>Test Results</td>
</tr>
<tr>
<td>POLYETHYLENE GLYCOL (CAS 25322-68-3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acute</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dermal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LD50</td>
<td>Rabbit</td>
<td>20000 mg/kg</td>
</tr>
<tr>
<td>Oral</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LD50</td>
<td>Rat</td>
<td>28000 mg/kg</td>
</tr>
</tbody>
</table>

Material name: BMR™
4161    Version #: 15    Revision date: 09-August-2018    Issue date: 31-October-2014
**Components** | **Species** | **Test Results**
--- | --- | ---
Sodium bisulfate (CAS 7681-38-1) |  |  
**Acute**  
**Oral**  
LD50 | Rat | 2490 mg/kg

* Estimates for product may be based on additional component data not shown.

**Skin corrosion/irritation**  
Causes severe skin burns and eye damage.

**Serious eye damage/eye irritation**  
Causes serious eye damage.

**Respiratory or skin sensitization**  
Not available.

**Respiratory sensitization**  
This product is not expected to cause skin sensitization.

**Skin sensitization**  
No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

**Germ cell mutagenicity**

**Carcinogenicity**  
This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

**IARC Monographs. Overall Evaluation of Carcinogenicity**
Not listed.

Not regulated.

**US. National Toxicology Program (NTP) Report on Carcinogens**
Not listed.

**Reproductive toxicity**  
This product is not expected to cause reproductive or developmental effects.

**Specific target organ toxicity - single exposure**  
Not classified.

**Specific target organ toxicity - repeated exposure**  
Not classified.

**Aspiration hazard**  
Not available.

**Chronic effects**  
Prolonged inhalation may be harmful. Repeated or prolonged exposure may cause irritation of eyes and skin.

**12. Ecological information**

**Ecotoxicity**
Components of this product have been identified as having potential environmental concerns. Because of the low pH of this product, it would be expected to produce significant ecotoxicity upon exposure to aquatic organisms and aquatic systems.

**Components** | **Species** | **Test Results**
--- | --- | ---
POLYETHYLENE GLYCOL (CAS 25322-68-3) |  |  
**Aquatic**  
Fish | LC50 | Atlantic salmon (Salmo salar) | > 1000 mg/L, 96 hours

Sodium bisulfate (CAS 7681-38-1) |  |  
**Aquatic**  
Crustacea | EC50 | Daphnia | 190 mg/L, 48 Hours

* Estimates for product may be based on additional component data not shown.

**Persistence and degradability**  
No data is available on the degradability of this product.

**Bioaccumulative potential**  
No data available.

**Mobility in soil**  
No data available.

**Other adverse effects**  
No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

**13. Disposal considerations**

**Disposal instructions**
Collect and reclaim or dispose in sealed containers at licensed waste disposal site. This material and its container must be disposed of as hazardous waste. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.
Local disposal regulations
Dispose in accordance with all applicable regulations.

Hazardous waste code
The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products
Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging
Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT
Not regulated as dangerous goods.

IATA
Not regulated as dangerous goods.

IMDG
Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not available.

15. Regulatory information

US federal regulations
OSHA Process Safety Standard: This material is not known to be hazardous by the OSHA Highly Hazardous Process Safety Standard, 29 CFR 1910.119. This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)
Not listed.

SARA 304 Emergency release notification
Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)
Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)
SARA 302 Extremely hazardous substance
Not listed.

SARA 311/312 Hazardous chemical
No (Exempt)

SARA 313 (TRI reporting)
Not regulated.

Other federal regulations
Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List
Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)
Not regulated.

Safe Drinking Water Act (SDWA)
Not regulated.

US state regulations
This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

California Proposition 65
California Safe Drinking Water and Toxic Enforcement Act of 2016 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins. For more information go to www.P65Warnings.ca.gov.

International Inventories

<table>
<thead>
<tr>
<th>Country(s) or region</th>
<th>Inventory name</th>
<th>On inventory (yes/no)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>Australian Inventory of Chemical Substances (AICS)</td>
<td>No</td>
</tr>
</tbody>
</table>
Country(s) or region | Inventory name | On inventory (yes/no)*
--- | --- | ---
Canada | Domestic Substances List (DSL) | No
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) | No
Korea | Existing Chemicals List (ECL) | No
New Zealand | New Zealand Inventory | No
Philippines | Philippine Inventory of Chemicals and Chemical Substances (PICCS) | No
Taiwan | Taiwan Chemical Substance Inventory (TCSI) | No
United States & Puerto Rico | Toxic Substances Control Act (TSCA) Inventory | Yes

*A “Yes” indicates that all components of this product comply 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: 31-October-2014
Revision date: 09-August-2018
Version #: 15

HMIS® ratings
Health: 3
Flammability: 0
Physical hazard: 0

NFPA ratings
Health: 3
Flammability: 0
Instability: 0

Disclaimer
The manufacturer expressly does not make any representations, warranties, or guarantees as to its accuracy, reliability or completeness nor assumes any liability, for its use. It is the user’s responsibility to verify the suitability and completeness of such information for each particular use. The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication.

Third party materials: Insofar as materials not manufactured or supplied by this manufacturer are used in conjunction with, or instead of this product, it is the responsibility of the customer to obtain, from the manufacturer or supplier, all technical data and other properties relating to these and other materials and to obtain all necessary information relating to them. No liability can be accepted in respect of the use of this product in conjunction with materials from another supplier. The information in the sheet was written based on the best knowledge and experience currently available.

Revision information
Hazard(s) identification: Hazard statement
Hazard(s) identification: Response
Exposure controls/personal protection: Occupational exposure limits
Regulatory information: California Proposition 65