Section 1. Product and Company Identification

Product Name: Natural Maltol
CAS Number: 118-71-8

Parchem - fine & specialty chemicals
415 Huguenot Street
New Rochelle, NY 10801
(914) 654-6800 (914) 654-6899
parchem.com info@parchem.com

Section 2. Hazards Identification

Classification of the substance or mixture
Physical hazards: Not classified.
Health hazards: Acute toxicity, oral Category 4
Skin corrosion/irritation: Category 2
Serious eye damage/eye irritation: Category 2A
Specific target organ toxicity, single exposure: Category 3 respiratory tract irritation
Environmental hazards: Not classified.

GHS Label Elements
Pictograms:

Signal word: WARNING

Hazard and precautionary statements
Hazard Statements
H302 Harmful if swallowed.
H315 Causes skin irritation.
H315 + H320 Causes skin and eye irritation.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.

Precautionary Statements
Prevention
P261 Avoid breathing dust.
P264 Wash thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves.
P280 Wear eye/face protection.

Response
P301 + P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
P302 + P352 IF ON SKIN: Wash with plenty of water.
P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312 Call a POISON CENTER/doctor if you feel unwell.
P330 Rinse mouth.
P332 + P313 If skin irritation occurs: Get medical advice/attention.
P337 + P313 If eye irritation persists: Get medical advice/attention.
P362 + P364 Take off contaminated clothing and wash it before reuse.

Storage
P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
P405 Store locked up.

Disposal
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard(s) not otherwise classified (HNOC): WARNING! May form combustible dust concentrations in air. Avoid breathing dust.

Supplemental information: None

Section 3. Composition / Information on Ingredients

<table>
<thead>
<tr>
<th>Common Name</th>
<th>Synonym(s)</th>
<th>CAS Number</th>
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<tbody>
<tr>
<td>Natural Maltol</td>
<td>3-Hydroxy-2-methyl-4-pyranone; 3-Hydroxy-2-methyl-4-pyrene; 3-Hydroxy-2-methylpyran-4-one; 2-Methyl pyromeconic acid; 2-Methyl-3-hydroxy-4-pyrene</td>
<td>118-71-8</td>
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</table>

<table>
<thead>
<tr>
<th>COMPONENT</th>
<th>CAS NUMBER</th>
<th>CONCENTRATION</th>
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</thead>
<tbody>
<tr>
<td>Natural Maltol</td>
<td>118-71-8</td>
<td>100%</td>
</tr>
</tbody>
</table>

Section 4. First Aid Measures

Inhalation: If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. For breathing difficulties, oxygen may be necessary. Call a physician if symptoms develop or persist.

Skin contact: Take off immediately all contaminated clothing. Get medical attention if irritation develops and persists. Wash skin thoroughly with soap and water for several minutes.
**Eye contact:** Remove contact lenses, if present and easy to do. Get medical attention if irritation develops and persists. Promptly wash eyes with plenty of water while lifting the eye lids.

**Ingestion:** Call a physician or poison control center immediately. If swallowed, rinse mouth with water (only if the person is conscious). Do not induce vomiting. If vomiting occurs, the head should be kept low so that stomach vomit doesn’t enter the lungs.

**Most important symptoms/effects, acute and delayed:** Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Dusts may irritate the respiratory tract, skin and eyes. Skin irritation. May cause redness and pain.

**Indication of immediate medical attention and special treatment needed:** Not available.

**General information:** Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.

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**Section 5. Firefighting Measures**

**Suitable extinguishing media:** Water spray, fog, CO₂, dry chemical, or alcohol resistant foam.

**Unsuitable extinguishing media:** Do not use a solid water stream as it may scatter and spread fire.

**Specific hazards arising from the chemical:** Fire may produce irritating, corrosive and/or toxic gases.

**Explosion hazard:** Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.

**Special protective equipment and precautions for firefighters:** Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. Structural firefighters protective clothing will only provide limited protection. Wear self-contained breathing apparatus with a full face piece operated in the positive pressure demand mode when fighting fires.

**Firefighting equipment/instructions:** In case of fire and/or explosion do not breathe fumes. Use standard firefighting procedures and consider the hazards of other involved materials. Move containers from fire area if you can do so without risk. Water runoff can cause environmental damage. Ventilate closed spaces before entering them. Keep run-off water out of sewers and water sources. Dike for water control.

**Specific methods:** Use water spray to cool unopened containers.

**General fire hazards:** Static charges generated by emptying package in or near flammable vapor may cause flash fire.

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**Section 6. Accidental Release Measures**

**Personal precautions, protective equipment, and emergency procedures:** Keep unnecessary personnel away. Eliminate all sources of ignition. Avoid contact with skin or inhalation of spillage, dust, or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them.
Methods and materials for containment and cleaning up: Eliminate all ignition sources (no smoking, flares, sparks or flames in immediate area). Sweep up and place in a clearly labeled container for chemical waste. Wash contaminated area with water. Use only non-sparking tools. Avoid the generation of dusts during clean-up. Never return spills in original containers for re-use. This material and its container must be disposed of as hazardous waste. Collect and dispose of spillage as indicated in section 13 of the SDS.

Environmental precautions: Prevent further leakage or spillage if safe to do so. Do not contaminate water. Avoid release to the environment. Retain and dispose of contaminated wash water. Contact local authorities in case of spillage to drain/aquatic environment.

Section 7. Handling and Storage

Precautions for safe handling: Do not handle or store near an open flame, heat or other sources of ignition. Take precautionary measures against static discharges when there is a risk of dust explosion. Avoid breathing dust. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Wash thoroughly after handling. Minimize dust generation and accumulation. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. Dry powders can build static electricity charges when subjected to the friction of transfer and mixing operations. Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres. Assume that this material is capable of producing a dust explosion if ignited as a dust cloud.

Conditions for safe storage, including any incompatibilities: Keep container closed. Handle containers with care. Open slowly in order to control possible pressure release. Store in a cool, well-ventilated area.

Section 8. Exposure Controls / Personal Protection

Occupational exposure limits: No exposure limits noted for ingredient(s).
Biological limit values: No biological exposure limits noted for the ingredient(s).
Appropriate engineering controls: Use only appropriately classified electrical equipment and powered industrial trucks. Use explosion-proof ventilation equipment to stay below exposure limits. It is recommended that all dust control equipment such as local exhaust ventilation and material transport systems involved in handling of this product contain explosion relief vents or an explosion suppression system or an oxygen-deficient environment. Ensure that dust-handling systems (such as exhaust ducts, dust collectors, vessels, and processing equipment) are designed in a manner to prevent the escape of dust into the work area (i.e., there is no leakage from the equipment).

Individual protection measures, such as personal protective equipment
Eye/face protection: Wear safety glasses with side shields (or goggles).

Skin protection
Hand protection: Chemical resistant gloves.
Other: Not available
Respiratory protection: Dust mask.
Thermal hazards: Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations: When using, do not eat, drink or smoke. 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.

Section 9. Physical and Chemical Properties

Appearance: Refer to Spec Sheet
Physical state: Powder/Crystal.
Form: Powder. Crystalline powder.
Color: Refer to Spec Sheet
Odor: Characteristic.
Odor threshold: Not available.
PpH: Not available.
Melting point/freezing point: 318.2 - 323.6°F (159 - 162°C)
Initial boiling point and boiling Range: 544.46°F (284.7°C)
Flash point (Closed Cup): > 200.0°F (> 93.3°C)
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 kPa at 25°C
Vapor density: 3.8
Relative density: Not available.

Solubility(ies)
Solubility (water): Insoluble
Partition coefficient (n-Octanol/water): Not available.
Auto-ignition temperature: Not available.
Decomposition temperature: Not available.
Viscosity: Not available.
Molecular weight: 126.11 g/mol
**Section 10. Stability and Reactivity**

**Reactivity:** The product is stable and non-reactive under normal conditions of use, storage and transport.

**Chemical stability:** Material is stable under normal conditions.

**Possibility of hazardous Reactions:** No dangerous reaction known under conditions of normal use.

**Conditions to avoid:** Keep away from heat, sparks and open flame. Avoid temperatures exceeding the flash point. Minimize dust generation and accumulation. Contact with incompatible materials.

**Incompatible materials:** Alkaline metals.

**Hazardous decomposition products:** No hazardous decomposition products if stored and handled as indicated.

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**Section 11. Toxicological Information**

**Information on likely routes of exposure**

**Inhalation:** Irritating to respiratory system.

**Skin contact:** Causes skin irritation.

**Eye contact** Causes serious eye irritation.

**Ingestion** Harmful if swallowed.

**Symptoms related to the physical, chemical and toxicological characteristics:** Severe eye irritation. Dusts may irritate the respiratory tract, skin and eyes. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain.

**Information on toxicological effects**

**Acute toxicity** Harmful if swallowed. May cause respiratory irritation.

Acute Dermal LD50 - Rabbit: > 5000 mg/kg

Acute Oral LD50 - Rat: 1410 mg/kg

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

**Skin corrosion/irritation:** Causes skin irritation. Skin - rabbit - Irritating to skin. - 24 h

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

**Respiratory or skin sensitization**

**Respiratory sensitization:** Not a respiratory sensitizer.

**Skin sensitization:** This product is not expected to cause skin sensitization.

**Germ cell mutagenicity:** No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

**Carcinogenicity**


**Reproductive toxicity:** This product is not expected to cause reproductive or developmental effects.
Specific target organ toxicity – single exposure: May cause respiratory irritation.
Specific target organ toxicity – repeated exposure: Not classified.
Aspiration hazard: Not an aspiration hazard.

Section 12. Ecological Information

Ecotoxicity: The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
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.

Section 13. Disposal Considerations

Waste Treatment Methods: Dispose of product and contaminated packaging in accordance with all local, state, and federal environmental control regulations.

Section 14. Transport Information

ADN: Not regulated as dangerous goods.
ADR: Not regulated as dangerous goods.
RID: Not regulated as dangerous goods.
DOT - BULK: Not regulated as dangerous goods.
DOT - NON-BULK: Not regulated as dangerous goods.
IATA: Not regulated as dangerous goods.
IMDG: Not regulated as dangerous goods.

Section 15. Regulatory Information

US Federal Regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
SARA 304 Emergency release notification: Not regulated.
Superfund Amendments and Reauthorization Act of 1986 (SARA)
Hazard categories
Immediate Hazard: Yes
Delayed Hazard: No
Fire Hazard: No
Pressure Hazard: No
Reactivity Hazard: No

SARA 302 Extremely hazardous substance: Not listed.
SARA 311/312 Hazardous chemical: Yes
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.

US state regulations
US Massachusetts RTK - Substance List: Not regulated.
US New Jersey Worker and Community Right-to-Know Act: Not listed.
US Pennsylvania Worker and Community Right-to-Know Law: Not listed.
US Rhode Island RTK: Not regulated.
US California Proposition 65

International Inventories

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<thead>
<tr>
<th>Country(s) or region</th>
<th>Inventory name</th>
<th>On inventory (yes/no)*</th>
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<tbody>
<tr>
<td>Australia</td>
<td>Australian Inventory of Chemical Substances (AICS)</td>
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<tr>
<td>Canada</td>
<td>Domestic Substances List (DSL)</td>
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<tr>
<td>Canada</td>
<td>Non-Domestic Substances List (NDLS)</td>
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<tr>
<td>China</td>
<td>Inventory of Existing Chemical Substances in China (IECSC)</td>
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<tr>
<td>Europe</td>
<td>European Inventory of Existing Commercial Chemical Substances (EINECS)</td>
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<tr>
<td>Europe</td>
<td>European List of Notified Chemical Substances (ELINCS)</td>
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<td>Japan</td>
<td>Inventory of Existing and New Chemical Substances (ENCS)</td>
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<td>Korea</td>
<td>Existing Chemicals List (ECL)</td>
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New Zealand Inventory

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<td>New Zealand</td>
<td>New Zealand Inventory</td>
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<tr>
<td>Philippines</td>
<td>Philippine Inventory of Chemicals and Chemical Substances (PICCS)</td>
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<tr>
<td>United States &amp; Puerto Rico</td>
<td>Toxic Substances Control Act (TSCA) Inventory</td>
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</tbody>
</table>

**HMIS Rating**

**Health:** 1

**Flammability:** 1

**Reactivity:** 0

**Disclaimer:** The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product.

**REVISION DATE:** 3/6/2017