# SAFETY DATA SHEET

## Section 1. Identification

<table>
<thead>
<tr>
<th>Product identifier</th>
<th>MALEIC ANHYDRIDE (molten) liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Material Number</td>
<td>00018961</td>
</tr>
<tr>
<td>Chemical name</td>
<td>maleic anhydride</td>
</tr>
<tr>
<td>Chemical family</td>
<td>Furan derivative</td>
</tr>
<tr>
<td>Identified uses</td>
<td>Chemical industry</td>
</tr>
<tr>
<td>Supplier/Manufacturer</td>
<td>LANXESS Corporation</td>
</tr>
<tr>
<td></td>
<td>Product Safety &amp; Regulatory Affairs</td>
</tr>
<tr>
<td></td>
<td>111 RIDC Park West Drive</td>
</tr>
<tr>
<td></td>
<td>Pittsburgh, PA 15275-1112 USA</td>
</tr>
<tr>
<td>In case of emergency</td>
<td>Chemtrec (800) 424-9300</td>
</tr>
<tr>
<td></td>
<td>International (703) 527-3887</td>
</tr>
<tr>
<td></td>
<td>Lanxess Emergency Phone (800) 410-3063.</td>
</tr>
</tbody>
</table>

## Section 2. Hazards identification

### HAZCOM Standard Status

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

### Physical state

Liquid.

### Color

Colorless.

### Classification of the substance or mixture

- ACUTE TOXICITY: ORAL - Category 4
- SKIN CORROSION/IRRITATION - Category 1
- SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1
- RESPIRATORY SENSITIZATION. - Category 1
- SKIN SENSITIZATION. - Category 1A
- SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) [lungs] - Category 1

### Hazard pictograms

- ⚠️
- ⚠️
- ⚠️

### Signal word

Danger

### Hazard statements

Harmful if swallowed. Causes severe skin burns and eye damage. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction. Causes damage to organs. (lungs)

Causes digestive tract burns. Contact with hot material will cause thermal burns.

Wear protective gloves/clothing and eye/face protection. In case of inadequate ventilation wear respiratory protection. Do not breathe vapor or spray. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace.
Section 2. Hazards identification

Response:
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. Wash contaminated clothing before reuse. IF ON SKIN: Wash with plenty of soap and water. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.

Storage:
Store locked up.

Disposal:
Dispose of contents and container in accordance with all local, regional, national and international regulations.

Supplemental label elements:
Do not taste or swallow. Wash thoroughly after handling. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials and food and drink. Corrosive to digestive tract.

Section 3. Composition/information on ingredients

Substance/mixture: Substance
Chemical name: maleic anhydride

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>%</th>
<th>CAS number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maleic Anhydride</td>
<td>95 - 100%</td>
<td>108-31-6</td>
</tr>
</tbody>
</table>

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of first aid measures

Eye contact:
Get medical attention immediately. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. In case of contact with eyes, flush eyes with plenty of water for at least 30 minutes. Chemical burns must be treated promptly by a physician.

Inhalation:
Get medical attention immediately. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In the event of any complaints or symptoms, avoid further exposure. If not breathing, if breathing is irregular or respiratory arrest occurs, provide artificial respiration, or oxygen by a trained professional, using a pocket type respirator.

Skin contact:
In case of contact, flush skin with plenty of water for at least 30 minutes. Cool melted product on skin with plenty of water. Do not remove solidified product. Call a physician immediately. Immediately remove contaminated clothing and shoes. Wash affected areas, including hair, beneath nails and other concealed areas with Polyethylene Glycol 400. Repeat the washing with soap and water.

Ingestion:
Get medical attention immediately. Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Potential acute health effects

Eye contact: Causes serious eye damage.
Section 4. First aid measures

**Inhalation**
May give off gas, vapor or dust that is very irritating or corrosive to the respiratory system. May cause allergy or asthma symptoms or breathing difficulties if inhaled.

**Skin contact**
Causes severe burns. May cause an allergic skin reaction. Contact with hot material will cause thermal burns.

**Ingestion**
Harmful if swallowed. Corrosive to the digestive tract. Causes burns. May cause burns to mouth, throat and stomach.

**Over-exposure signs/symptoms**

**Eye contact**
Adverse symptoms may include the following:
- pain
- watering
- redness

**Inhalation**
Adverse symptoms may include the following:
- wheezing and breathing difficulties
- asthma

**Skin contact**
Corrosive with symptoms of reddening, itching, swelling, burning and possible permanent damage.
Symptoms include:
- wheezing and breathing difficulties
- Once sensitized, an allergic skin reaction may occur with reddening, swelling, and rash when subsequently exposed to very low levels.

**Ingestion**
Corrosive with symptoms of coughing, burning, ulceration, and pain.
Symptoms of ingestion may include abdominal pain, nausea, vomiting, and diarrhea.

**Potential chronic health effects**
Causes damage to organs through prolonged or repeated exposure. Repeated and prolonged contact may cause an allergic respiratory reaction in sensitive individuals. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels. Potent skin sensitizer. Once sensitized, an individual may react to direct skin contact with reddening, swelling, rash and in severe cases blistering and hives. These symptoms may be immediate or delayed several hours. May cause asthma with symptoms of shortness of breath and tightness of chest. May cause pulmonary edema with symptoms of breathing difficulty and tightness of chest. Prolonged vapor contact may cause conjunctivitis. Repeated or prolonged eye contact may cause photophobia (sensitivity to light).

**Notes to physician**
Treat symptomatically. No specific treatment.
**Protection of first-aiders**
If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

**Extinguishing media**

**Suitable extinguishing media**
- Carbon dioxide blanket
- Water spray
- Water fog
- Alcohol-resistant foam

**Unsuitable extinguishing media**
- Dry chemical

**Specific hazards arising from the chemical**
In a fire or if heated, a pressure increase will occur and the container may burst. Toxic and irritating gases/fumes may be given off during burning or thermal decomposition. Water runoff from fire fighting may be corrosive.

**Hazardous thermal decomposition products**
Decomposition products may include the following materials:
- Carbon dioxide
- Carbon monoxide

**Special protective actions for fire-fighters**
Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
Section 5. Fire-fighting measures

Special protective equipment for fire-fighters: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

Environmental precautions: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up: Stop leak if without risk. Move containers from spill area. Approach release from upwind. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal. Prevent entry into sewers, water courses, basements or confined areas.

Section 7. Handling and storage

Precautions for safe handling

Protective measures: Persons with a history of skin sensitization problems or asthma, allergies or chronic or recurrent respiratory disease should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container. Remove contaminated clothing and protective equipment before entering eating areas. Workers should wash hands and face before eating, drinking and smoking. Put on appropriate personal protection equipment. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. This product is used in a molten state. Contact may cause thermal burns.

Conditions for safe storage: Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. Empty containers retain product residue and can be hazardous. Do not reuse container. Hot water or low pressure steam is required in handling molten maleic anhydride. The optimum temperature range of 131 - 140F (55 - 60C) can be maintained by the use of 30 psig steam on external heating coils. All vessels in this service should be equipped with a high temperature alarm. Provision should be made so that there is no possibility of high pressure steam being substituted accidentally. Storage tanks for molten maleic anhydride should be provided with a vertical steam coil or lance in addition to usual heating coils. The lance should extend vertically to the bottom of the tank for the purpose of melting a vent through the solid cake when remelting a solidified tank. Failure to do so could result in rupture of the tank from expansion of material around the coils. The storage tank should be equipped with a temperature indicator. Storage tank temperature should not exceed 212F (100C) since the product flash point is 215F (102C). Storage tanks should be electrically grounded.
Section 8. Exposure controls/personal protection

### Ingredient name

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>Exposure limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maleic Anhydride</td>
<td>ACGIH TLV (United States, 6/2013). Skin sensitizer. TWA: 0.01 mg/m³ 8 hours. Form: Inhalable fraction and vapor OSHA PEL (United States, 2/2013). TWA: 0.25 ppm 8 hours. TWA: 1 mg/m³ 8 hours.</td>
</tr>
</tbody>
</table>

If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

**Appropriate engineering controls**: Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

**Personal protection**

**Hygiene measures**: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

**Respiratory protection**: A NIOSH approved air purifying respirator with organic vapor cartridges and particulate prefilter can be used to minimize exposure. Maintain levels below the recommended exposure limits.

**Skin protection**: Permeation resistant gloves. Recommended: Viton gloves. Polyvinyl chloride - PVC Heat resistant gloves.

**Eye/face protection**: When directly handling liquid product, eye protection is required. Examples of eye protection include a chemical safety goggle, or chemical safety goggle in combination with a full face shield when there is a greater risk of splash.

**Medical Surveillance**: Not available.

Section 9. Physical and chemical properties

**Physical state**: Liquid. [hot melt]

**Color**: Colorless.

**Odor**: Pungent smelling.

**Odor threshold**: Not available.

**pH**: [Conc. (% w/w): 55%]

**Boiling point**: 200 °C (1013 hPa)

**Melting point**: 53 to 58°C (127.4 to 136.4°F)

**Flash point**: Closed cup: >93.3°C (>199.9°F)

**Evaporation rate**: Not available.

**Explosion limits**: Lower: 1.4% Upper: 7.1%

**Vapor pressure**: 0.33 hPa (25°C) 4.4 hPa (59°C)

**Density**: 1.48 g/cm³ [20°C (68°F)] 1.3

**Specific gravity (Relative density)**: 1.3
Section 9. Physical and chemical properties

- **Solubility**: 400 g/l (water)
- **Partition coefficient: n-octanol/water**: Not available.
- **Vapor density**: Not available.
- **Viscosity**: Not available.
- **Auto-ignition temperature**: 476.67°C (890°F)
- **Decomposition temperature**: Not available.

Section 10. Stability and reactivity

- **Reactivity**: No specific test data related to reactivity available for this product or its ingredients.
- **Chemical stability**: Contact with alkali metals, caustics, and amines may cause polymerization if temperature is greater than 150F (66C). The product is stable.
- **Possibility of hazardous reactions**: Hazardous reactions or instability may occur under certain conditions of storage or use.
- **Conditions to avoid**: Avoid contact with moisture / water.
- **Incompatible materials**: amines, alkalis Metal.
- **Hazardous decomposition products**: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

- **Information on the likely routes of exposure**: Dermal contact. Eye contact. Inhalation. Ingestion.

**Potential acute health effects**

- **Eye contact**: Causes serious eye damage.
- **Inhalation**: May give off gas, vapor or dust that is very irritating or corrosive to the respiratory system. May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- **Skin contact**: Causes severe burns. May cause an allergic skin reaction. Contact with hot material will cause thermal burns.
- **Ingestion**: Harmful if swallowed. Corrosive to the digestive tract. Causes burns. May cause burns to mouth, throat and stomach.

**Symptoms related to the physical, chemical and toxicological characteristics**

- **Eye contact**: Adverse symptoms may include the following: pain, watering, redness
- **Inhalation**: Adverse symptoms may include the following: wheezing and breathing difficulties, asthma
- **Skin contact**: Corrosive with symptoms of reddening, itching, swelling, burning and possible permanent damage. Symptoms include: wheezing and breathing difficulties. Once sensitized, an allergic skin reaction may occur with reddening, swelling, and rash when subsequently exposed to very low levels.
- **Ingestion**: Corrosive with symptoms of coughing, burning, ulceration, and pain. Symptoms of ingestion may include abdominal pain, nausea, vomiting, and diarrhea.

**Potential chronic health effects**

- **Short term exposure**: Not available.
- **Potential immediate effects**: Not available.
- **Long term exposure**: Not available.
- **Potential delayed effects**: Not available.
Section 11. Toxicological information

**General**
- Causes damage to organs through prolonged or repeated exposure. Repeated and prolonged contact may cause an allergic respiratory reaction in sensitive individuals. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels. Potent skin sensitizer. Once sensitized, an individual may react to direct skin contact with reddening, swelling, rash and in severe cases blistering and hives. These symptoms may be immediate or delayed several hours. May cause asthma with symptoms of shortness of breath and tightness of chest. May cause pulmonary edema with symptoms of breathing difficulty and tightness of chest. Prolonged vapor contact may cause conjunctivitis. Repeated or prolonged eye contact may cause photophobia (sensitivity to light).

**Carcinogenicity**
- No known significant effects or critical hazards.

**Mutagenicity**
- No known significant effects or critical hazards.

**Teratogenicity**
- No known significant effects or critical hazards.

**Developmental effects**
- No known significant effects or critical hazards.

**Fertility effects**
- No known significant effects or critical hazards.

### Information on toxicological effects

#### Acute toxicity

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Dose</th>
<th>Exposure</th>
<th>Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maleic Anhydride</td>
<td>LD50 Oral</td>
<td>Rat - Male, Female</td>
<td>1090 mg/kg</td>
<td>-</td>
<td>OECD 401 Acute Oral Toxicity</td>
</tr>
<tr>
<td>Maleic Anhydride</td>
<td>LD50 Dermal</td>
<td>Rabbit - Female</td>
<td>2620 mg/kg</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

#### Irritation/Corrosion

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Score</th>
<th>Exposure</th>
<th>Observation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maleic Anhydride</td>
<td>Eyes - Cornea opacity</td>
<td>Rabbit</td>
<td>3.8</td>
<td>-</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Eyes - Iris lesion</td>
<td>Rabbit</td>
<td>2</td>
<td>-</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Eyes - Redness of the conjunctivae</td>
<td>Rabbit</td>
<td>2.5</td>
<td>-</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Eyes - Edema of the conjunctivae</td>
<td>Rabbit</td>
<td>4</td>
<td>-</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Skin - Edema</td>
<td>Rabbit</td>
<td>3.6</td>
<td>4 hours</td>
<td>7 days</td>
</tr>
<tr>
<td></td>
<td>Skin - Edema</td>
<td>Rabbit</td>
<td>4</td>
<td>4 hours</td>
<td>7 days</td>
</tr>
</tbody>
</table>

#### Conclusion/Summary

**Skin**
- Maleic Anhydride: corrosive

**Eyes**
- Maleic Anhydride: corrosive

#### Sensitization

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Route of exposure</th>
<th>Species</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maleic Anhydride</td>
<td>Respiratory skin</td>
<td>Rat, Guinea pig</td>
<td>Sensitizing</td>
</tr>
</tbody>
</table>

#### Chronic toxicity
Section 11. Toxicological information

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Dose</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maleic Anhydride</td>
<td>Chronic NOAEL Oral</td>
<td>Rat - Male, Female</td>
<td>10 mg/kg</td>
<td>2 years; 7 days per week</td>
</tr>
<tr>
<td></td>
<td>Sub-chronic NOAEL Oral</td>
<td>Rat - Male, Female</td>
<td>40 mg/kg</td>
<td>90 days; 7 days per week</td>
</tr>
<tr>
<td></td>
<td>Sub-chronic NOAEC</td>
<td>Rat - Male, Female</td>
<td>3.3 mg/m³</td>
<td>6 months; 5 days per week</td>
</tr>
<tr>
<td></td>
<td>Inhalation Vapor</td>
<td>Rat - Male, Female</td>
<td>0.01 mg/l</td>
<td>1 months; 6 hours per day</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Test</th>
<th>Experiment</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>OECD 471 Bacterial Reverse Mutation Test</td>
<td>Experiment: In vitro Subject: Bacteria</td>
<td>Negative</td>
</tr>
<tr>
<td>OECD 475 Mammalian Bone Marrow Chromosomal Aberration Test</td>
<td>Experiment: In vivo Subject: Mammalian-Animal Cell: Somatic</td>
<td>Negative</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Test</th>
<th>Experiment</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maleic Anhydride</td>
<td>OECD 471 Bacterial Reverse Mutation Test</td>
<td>Experiment: In vitro Subject: Bacteria</td>
<td>Negative</td>
</tr>
<tr>
<td></td>
<td>OECD 475 Mammalian Bone Marrow Chromosomal Aberration Test</td>
<td>Experiment: In vivo Subject: Mammalian-Animal Cell: Somatic</td>
<td>Negative</td>
</tr>
</tbody>
</table>

Conclusion/Summary: Maleic Anhydride: No known significant effects or critical hazards.

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>CAS #</th>
<th>IARC</th>
<th>NTP</th>
<th>OSHA</th>
</tr>
</thead>
</table>

Section 12. Ecological information

Toxicity
Section 12. Ecological information

### Bioaccumulative potential

Maleic Anhydride: No known significant effects or critical hazards. Not available.

### Product/ingredient name

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Test</th>
<th>Result</th>
<th>Species</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maleic Anhydride</td>
<td>OECD 201 Alga, Growth Inhibition Test</td>
<td>IC10 11.8 mg/l</td>
<td>Algae - Pseudokirchneriella subcapitata</td>
<td>72 hours</td>
</tr>
<tr>
<td></td>
<td>DIN 38412 part 8 (growth rate)</td>
<td>Acute EC50 &gt;44.6 mg/l</td>
<td>Bacteria - Pseudomonas putida</td>
<td>18 hours</td>
</tr>
<tr>
<td></td>
<td>OECD 202 Daphnia sp. Acute Immobilization Test</td>
<td>Acute EC50 42.81 mg/l</td>
<td>Daphnia - Daphnia magna</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>OECD 201 Alga, Growth Inhibition Test</td>
<td>Acute IC50 74.35 mg/l</td>
<td>Algae - Pseudokirchneriella subcapitata</td>
<td>72 hours</td>
</tr>
<tr>
<td></td>
<td>-</td>
<td>Acute LC50 75 mg/l</td>
<td>Fish - Salmo gairdneri</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>-</td>
<td>Chronic NOEC 10 mg/l</td>
<td>Daphnia - Daphnia magna</td>
<td>21 days</td>
</tr>
</tbody>
</table>

**Conclusion/Summary** : Not available.

### Persistence and degradability

**Test** | **Result** | **Species** | **Exposure**
---|---|---|---
OECD 301B Ready Biodegradability - CO₂ Evolution Test | >90 % - Readily - 25 days | - | -

**Conclusion/Summary** : Not available.

### Product/ingredient name

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Aquatic half-life</th>
<th>Photolysis</th>
<th>Biodegradability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maleic Anhydride</td>
<td>-</td>
<td>50%; 0.175 day(s)</td>
<td>Readily</td>
</tr>
</tbody>
</table>

### Bioaccumulative potential

Not available.

### Mobility in soil

**Soil/water partition coefficient (KOC)** : Not available.

**Other adverse effects** : No known significant effects or critical hazards.

Section 13. Disposal considerations

**Disposal methods** : The generation of waste should be avoided or minimized wherever possible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Waste disposal should be in accordance with existing federal state, provincial and or local environmental controls laws.

**RCRA classification** : U147: When discarded in its purchased form, this product is a listed RCRA hazardous waste and should be managed as a hazardous waste. (40 CFR 261.20-24) Under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product, should be classified as a hazardous waste. (40 CFR 261.20-24)
Section 14. Transport information

<table>
<thead>
<tr>
<th>Regulatory information</th>
<th>UN number</th>
<th>Proper shipping name</th>
<th>Classes</th>
<th>PG*</th>
<th>Label</th>
<th>Additional information</th>
</tr>
</thead>
<tbody>
<tr>
<td>DOT Classification</td>
<td>UN2215</td>
<td>MALEIC ANHYDRIDE, MOLTEN</td>
<td>8</td>
<td>III</td>
<td>IB8, IP3, T4, TP1, T1</td>
<td></td>
</tr>
<tr>
<td>IMDG Class</td>
<td>UN2215</td>
<td>MALEIC ANHYDRIDE, MOLTEN</td>
<td>8</td>
<td>III</td>
<td>Emergency schedules (EmS)</td>
<td>F-A, S-B</td>
</tr>
<tr>
<td>IATA-DGR Class</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>Forbidden</td>
<td></td>
</tr>
</tbody>
</table>

PG* : Packing group
RQ : 5011 lbs

Section 15. Regulatory information

SARA 311/312 : Immediate (acute) health hazard
SARA Title III Section 302 Extremely Hazardous Substances : None

SARA Title III Section 313 Toxic Chemicals
US EPA CERCLA Hazardous Substances (40 CFR 302)

State regulations
The following chemicals are specifically listed by individual states; other product specific health and safety data in other sections on the SDS may also be applicable for state requirements. For details on your regulatory requirements you should contact the appropriate agency in your state.

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>CAS number</th>
<th>State Code</th>
<th>Concentration (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maleic Anhydride</td>
<td>108-31-6</td>
<td>MA - S, NJ - HS, PA - RTK HS</td>
<td>95 - 100%</td>
</tr>
</tbody>
</table>

Massachusetts Substances: MA - S
Massachusetts Extraordinary Hazardous Substances: MA - Extra HS
New Jersey Hazardous Substances: NJ - HS
Pennsylvania RTK Hazardous Substances: PA - RTK HS
Pennsylvania Special Hazardous Substances: PA - Special HS

California Prop. 65
To the best of our knowledge, this product does not contain any of the listed chemicals, which the state of California has found to cause cancer, birth defects or other reproductive harm.

U.S. Toxic Substances Control Act : Listed on the TSCA Inventory.
Section 16. Other information

Hazardous Material Information System

<table>
<thead>
<tr>
<th>Hazard Category</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health</td>
<td>3</td>
</tr>
<tr>
<td>Flammability</td>
<td>1</td>
</tr>
<tr>
<td>Physical hazards</td>
<td>1</td>
</tr>
</tbody>
</table>

0=Insignificant 1=Slight 2=Moderate 3=Serious 4=Severe
*=Chronic

The customer is responsible for determining the PPE code for this material. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

National Fire Protection Association (U.S.A.)

<table>
<thead>
<tr>
<th>Hazard Category</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health</td>
<td>3</td>
</tr>
<tr>
<td>Flammability</td>
<td>1</td>
</tr>
<tr>
<td>Instability/Reactivity</td>
<td>1</td>
</tr>
<tr>
<td>Special</td>
<td></td>
</tr>
</tbody>
</table>

LANXESS' method of hazard communication is comprised of Product Labels and Safety Data Sheets. HMIS and NFPA ratings are provided by LANXESS as a customer service.

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Version : 1.04

Product Safety and Regulatory Affairs

⚠ Indicates information that has changed from previously issued version.

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