



## SAFETY DATA SHEET

### Maintenance Shock

According to Appendix D, OSHA Hazard Communication Standard 29 CFR §1910.1200

#### 1. Identification

##### Product identifier

<b>Product name</b>	Maintenance Shock
<b>Chemical name</b>	Potassium Peroxymonosulfate compound
<b>Synonyms; trade names</b>	Frog Maintain
<b>EPA Registration Number</b>	California Registration No. 53735-50004-AA

##### Recommended use of the chemical and restrictions on use

<b>Application</b>	Oxidizing agent
<b>Uses advised against</b>	Use only for intended applications.

##### Details of the supplier of the safety data sheet

<b>Supplier</b>	King Technology, Inc. 530 11th Ave S Hopkins, MN 55343 United States 1+ (952) 933-6118 sdsinfo@kingtechnology.com
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##### Emergency telephone number

<b>Emergency telephone</b>	CHEMTREC 800-424-9300 (24 hours)
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#### 2. Hazard(s) identification

##### Classification of the substance or mixture

<b>OSHA Regulatory Status</b>	This Product is Hazardous under the OSHA Hazard Communication Standard.
<b>Physical hazards</b>	Not Classified
<b>Health hazards</b>	Acute Tox. 4 - H302 Skin Corr. 1B - H314 Eye Dam. 1 - H318 STOT SE 3 - H335

##### Label elements

##### Hazard symbols



<b>Signal word</b>	Danger
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<b>Hazard statements</b>	H302 Harmful if swallowed. H314 Causes severe skin burns and eye damage. H335 May cause respiratory irritation.
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## Maintenance Shock

<b>Precautionary statements</b>	<p>P260 Do not breathe dust.</p> <p>P261 Avoid breathing dust.</p> <p>P264 Wash contaminated skin thoroughly after handling.</p> <p>P270 Do not eat, drink or smoke when using this product.</p> <p>P271 Use only outdoors or in a well-ventilated area.</p> <p>P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.</p> <p>P301+P312 If swallowed: Call a poison center/ doctor if you feel unwell.</p> <p>P301+P330+P331 If swallowed: Rinse mouth. Do NOT induce vomiting.</p> <p>P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.</p> <p>P304+P340 If inhaled: Remove person to fresh air and keep comfortable for breathing.</p> <p>P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</p> <p>P310 Immediately call a poison center/ doctor.</p> <p>P321 Specific treatment (see medical advice on this label).</p> <p>P363 Wash contaminated clothing before reuse.</p> <p>P403+P233 Store in a well-ventilated place. Keep container tightly closed.</p> <p>P405 Store locked up.</p> <p>P501 Dispose of contents/ container in accordance with national regulations.</p>
<b>Contains</b>	Monopersulfate compound, Potassium hydrogensulphate, Dipotassium peroxodisulphate, Dipotassium disulphate
<b>Other hazards</b>	
<b>Other</b>	<p>No additional hazards known.</p> <p>«46»% of the mixture consists of ingredient(s) of unknown acute toxicity.</p>

### 3. Composition/information on ingredients

#### Mixtures

<b>Monopersulfate compound</b>	<b>&gt; 80%</b>
CAS number: 70693-62-8	
<b>Classification</b>	
Acute Tox. 4 - H302	
Skin Corr. 1B - H314	
Eye Dam. 1 - H318	
STOT SE 3 - H335	
<b>Sodium carbonate</b>	<b>10-15%</b>
CAS number: 497-19-8	
<b>Classification</b>	
Eye Irrit. 2A - H319	

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<b>Dipotassium disulphate</b>	<b>&lt; 5%</b>
CAS number: 7790-62-7	
<b>Classification</b>	
Acute Tox. 3 - H301	
Skin Corr. 1A - H314	
Eye Dam. 1 - H318	
<b>Dipotassium peroxodisulphate</b>	<b>&lt; 5%</b>
CAS number: 7727-21-1	
<b>Classification</b>	
Ox. Sol. 3 - H272	
Acute Tox. 4 - H302	
Skin Irrit. 2 - H315	
Eye Irrit. 2A - H319	
Resp. Sens. 1 - H334	
Skin Sens. 1 - H317	
STOT SE 3 - H335	
<b>Potassium hydrogensulphate</b>	<b>&lt; 5%</b>
CAS number: 7646-93-7	
<b>Classification</b>	
Skin Corr. 1B - H314	
STOT SE 3 - H335	

The full text for all hazard statements is displayed in Section 16.

**Ingredient notes**                      The exact percentage/concentration is withheld as a trade secret in accordance with 29 CFR 1910.1200.

#### 4. First-aid measures

##### Description of first aid measures

<b>General information</b>	Corrosive. Causes irreversible eye damage and skin burns. Harmful if swallowed. Get medical attention if any discomfort continues. Show this Safety Data Sheet to the medical personnel. Chemical burns must be treated by a physician.
<b>Inhalation</b>	Get medical attention immediately. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Maintain an open airway. Loosen tight clothing such as collar, tie or belt. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. Place unconscious person on their side in the recovery position and ensure breathing can take place.
<b>Ingestion</b>	Get medical attention immediately. Rinse mouth thoroughly with water. Give a few small glasses of water or milk to drink. Stop if the affected person feels sick as vomiting may be dangerous. Never give anything by mouth to an unconscious person. Place unconscious person on their side in the recovery position and ensure breathing can take place. Keep affected person under observation.
<b>Skin Contact</b>	Get medical attention immediately. It is important to remove the substance from the skin immediately. Rinse immediately with plenty of water. Continue to rinse for at least 15 minutes and get medical attention.

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**Eye contact** Get medical attention immediately. Rinse immediately with plenty of water. Do not rub eye. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes and get medical attention.

**Protection of first aiders** It may be dangerous for first aid personnel to carry out mouth-to-mouth resuscitation.

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

**General information** The severity of the symptoms described will vary dependent on the concentration and the length of exposure.

**Inhalation** A single exposure may cause the following adverse effects: Severe irritation of nose and throat. Symptoms following overexposure may include the following: Corrosive to the respiratory tract.

**Ingestion** May cause chemical burns in mouth, esophagus and stomach. Symptoms following overexposure may include the following: Severe stomach pain. Nausea, vomiting.

**Skin contact** Causes severe burns. Symptoms following overexposure may include the following: Pain or irritation. Redness. Blistering may occur.

**Eye contact** Causes serious eye damage. Symptoms following overexposure may include the following: Pain. Profuse watering of the eyes. Redness.

### Indication of immediate medical attention and special treatment needed

**Notes for the doctor** Treat symptomatically.

## 5. Fire-fighting measures

### Extinguishing media

**Suitable extinguishing media** The product is not flammable. Extinguish with the following media: Alcohol-resistant foam. Dry chemicals. Water spray, fog or mist. Use fire-extinguishing media suitable for the surrounding fire.

**Unsuitable extinguishing media** Carbon dioxide (CO<sub>2</sub>). Do not use water jet as an extinguisher, as this will spread the fire.

### Special hazards arising from the substance or mixture

**Specific hazards** This product is toxic. Severe corrosive hazard. Water used for fire extinguishing, which has been in contact with the product, may be corrosive. Contamination with moisture, organic matter, or other chemicals may start a chemical reaction and generate heat, hazardous gas, possible fire and explosion.

**Hazardous combustion products** Thermal decomposition or combustion products may include the following substances: Very toxic or corrosive gases or vapors. Carbon dioxide (CO<sub>2</sub>). Carbon monoxide (CO). Oxides of sulfur. Metal oxide(s).

### Advice for firefighters

**Protective actions during firefighting** Avoid breathing fire gases or vapors. Evacuate area. Keep upwind to avoid inhalation of gases, vapors, fumes and smoke. Ventilate closed spaces before entering them. Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. Cool containers exposed to flames with water until well after the fire is out.

**Special protective equipment for firefighters** Regular protection may not be safe. Wear chemical protective suit. Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Standard Firefighter's clothing including helmets, protective boots and gloves will provide a basic level of protection for chemical incidents.

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### 6. Accidental release measures

#### Personal precautions, protective equipment and emergency procedures

**Personal precautions** Wear protective clothing as described in Section 8 of this safety data sheet. No action shall be taken without appropriate training or involving any personal risk. Avoid contact with skin and eyes. Avoid inhalation of dust. Do not touch or walk into spilled material. Use suitable respiratory protection if ventilation is inadequate.

#### Environmental precautions

**Environmental precautions** Avoid or minimize the creation of any environmental contamination.

#### Methods and material for containment and cleaning up

**Methods for cleaning up** Wear protective clothing as described in Section 8 of this safety data sheet. Clear up spills immediately and dispose of waste safely. This product is corrosive. Provide adequate ventilation. Collect powder using special dust vacuum cleaner with particle filter or carefully sweep into suitable waste disposal containers and seal securely. Flush contaminated area with plenty of water. Wash thoroughly after dealing with a spillage. Dangerous for the environment. Do not empty into drains. For waste disposal, see Section 13.

**Reference to other sections** For personal protection, see Section 8. See Section 11 for additional information on health hazards. See Section 12 for additional information on ecological hazards. For waste disposal, see Section 13.

### 7. Handling and storage

#### Precautions for safe handling

**Usage precautions** Do not handle until all safety precautions have been read and understood. Wear protective clothing as described in Section 8 of this safety data sheet. This product is corrosive. Avoid contact with skin and eyes. Avoid breathing dust. Harmful if swallowed. Immediate first aid is imperative. Do not mix with other chemicals. Never add water to product; add product to large quantities of water. Wash hands thoroughly after handling. Keep away from food, drink and animal feeding stuffs. Keep container tightly sealed when not in use. Do not handle broken packages without protective equipment. Do not reuse empty containers.

**Advice on general occupational hygiene** Wash promptly if skin becomes contaminated. Take off contaminated clothing and wash before reuse. Wash contaminated clothing before reuse.

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

**Storage precautions** Store away from incompatible materials (see Section 10). Store locked up. Store in tightly-closed, original container in a dry, cool and well-ventilated place. Keep containers upright. Protect containers from damage. Keep at temperature not exceeding 50°C/122°F.

**Storage class** Corrosive storage.

#### Specific end uses(s)

**Specific end use(s)** The identified uses for this product are detailed in Section 1.

## Maintenance Shock

### 8. Exposure controls/Personal protection

#### Control parameters

#### Occupational exposure limits

Dipotassium peroxodisulphate (CAS 7727-21-1)

ACGIH Threshold Limit Value (TLV): 0.1 mg/m<sup>3</sup> (as persulfate)

#### Exposure controls

#### Protective equipment



#### Appropriate engineering controls

Provide adequate general and local exhaust ventilation. Ensure the ventilation system is regularly maintained and tested. Good general ventilation should be adequate to control worker exposure to airborne contaminants. Observe any occupational exposure limits for the product or ingredients. Eye wash facilities and emergency shower must be available when handling this product.

#### Eye/face protection

Wear tight-fitting, chemical splash goggles or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

#### Hand protection

Wear protective gloves. The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material. To protect hands from chemicals, gloves should comply with OSHA 1910.138 and be demonstrated to be impervious to the chemical and resist degradation. Considering the data specified by the glove manufacturer, check during use that the gloves are retaining their protective properties and change them as soon as any deterioration is detected. Frequent changes are recommended.

#### Other skin and body protection

Wear appropriate clothing to prevent any possibility of skin contact.

#### Hygiene measures

Wash after use and before eating, smoking and using the toilet. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash it before reuse.

#### Respiratory protection

Ensure all respiratory protective equipment is suitable for its intended use and is NIOSH approved. Check that the respirator fits tightly and the filter is changed regularly. Gas and combination filter cartridges should comply with OSHA 1910.134. Full face mask respirators with replaceable filter cartridges should comply with OSHA 1910.134. Half mask and quarter mask respirators with replaceable filter cartridges should comply with OSHA 1910.134.

#### Environmental exposure controls

Keep container tightly sealed when not in use. Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

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### 9. Physical and chemical properties

#### Information on basic physical and chemical properties

<b>Appearance</b>	Solid. Granules.
<b>Color</b>	White.
<b>Odor</b>	Odorless.
<b>Odor threshold</b>	No information available.
<b>pH</b>	pH (diluted solution): 2.1 3%
<b>Melting point</b>	Decomposes prior to melting
<b>Initial boiling point and range</b>	No information available.
<b>Flash point</b>	No information available.
<b>Evaporation rate</b>	No information available.
<b>Evaporation factor</b>	No information available.
<b>Flammability (solid, gas)</b>	Non-flammable
<b>Upper/lower flammability or explosive limits</b>	No information available.
<b>Other flammability</b>	No information available.
<b>Vapor pressure</b>	<0.0001 hPa @ 25°C
<b>Vapor density</b>	No information available.
<b>Relative density</b>	2.35 g/m <sup>3</sup> @ 20°C
<b>Bulk density</b>	1300 - 1500 kg/m <sup>3</sup>
<b>Solubility(ies)</b>	297 to 357 g/l water @ °C
<b>Partition coefficient</b>	No information available on the product mixture. Main component Log Pow <0.3.
<b>Auto-ignition temperature</b>	No information available.
<b>Decomposition Temperature</b>	> 50°C/> 122°F
<b>Viscosity</b>	Not applicable.

### 10. Stability and reactivity

<b>Reactivity</b>	Contact with water/moisture causes exothermic reaction or decomposition.
<b>Stability</b>	Stable at normal ambient temperatures and when used as recommended. Stable under the prescribed storage conditions.
<b>Possibility of hazardous reactions</b>	Strong oxidizing agent. Contamination with moisture, organic matter, or other chemicals may start a chemical reaction and generate heat, hazardous gas, possible fire and explosion.
<b>Conditions to avoid</b>	Keep at temperature not exceeding 50°C/122°F. Avoid excessive heat for prolonged periods of time.
<b>Materials to avoid</b>	Halogens and halogenated compounds. Inorganic cyanides. Organic cyanides (nitriles). Heavy metal compounds. Flammable/combustible materials. Water, moisture. Alkalis.

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**Hazardous decomposition products** Does not decompose when used and stored as recommended. Thermal decomposition or combustion products may include the following substances: Corrosive gases or vapors. Sulfurous gases (SOx).

### 11. Toxicological information

#### Information on toxicological effects

##### Acute toxicity - oral

**Acute toxicity oral (LD<sub>50</sub> mg/kg)** 500.0

**Species** Rat

**Notes (oral LD<sub>50</sub>)** Acute Tox. 4 - H302 Harmful if swallowed.  
LD<sub>50</sub> 500 mg/kg, Oral, Rat

**ATE oral (mg/kg)** 534.19

##### Acute toxicity - dermal

**Notes (dermal LD<sub>50</sub>)** Based on available data the classification criteria are not met.  
LD<sub>50</sub> > 5000 mg/kg, Dermal, Rat

##### Acute toxicity - inhalation

**Notes (inhalation LC<sub>50</sub>)** Based on available data the classification criteria are not met.  
LC<sub>50</sub> > 5 mg/l, 4 hour, Dust/Mist Rat

##### Skin corrosion/irritation

**Animal data** Skin Corr. 1B - H314 Causes severe burns. Corrosive. Rabbit

##### Serious eye damage/irritation

**Serious eye damage/irritation** Eye Dam. 1 - H318 Corrosive to skin. Corrosivity to eyes is assumed.

##### Respiratory sensitization

**Respiratory sensitization** Based on available data the classification criteria are not met.

##### Skin sensitization

**Skin sensitization** Based on available data the classification criteria are not met.  
Guinea pig maximization test (GPMT) - Guinea pig: Not sensitizing.

##### Germ cell mutagenicity

**Genotoxicity - in vitro** Based on available data the classification criteria are not met.

##### Carcinogenicity

**Carcinogenicity** Based on available data the classification criteria are not met.

**IARC carcinogenicity** None of the ingredients are listed.

**NTP carcinogenicity** None of the ingredients are listed.

**OSHA Carcinogenicity** None of the ingredients are listed.

##### Reproductive toxicity

**Reproductive toxicity - fertility** Based on available data the classification criteria are not met.

**Reproductive toxicity - development** Based on available data the classification criteria are not met.

##### Specific target organ toxicity - single exposure

**STOT - single exposure** STOT SE 3 - H335 May cause respiratory irritation.

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<b>Target organs</b>	Respiratory system, lungs
<b><u>Specific target organ toxicity - repeated exposure</u></b>	
<b>STOT - repeated exposure</b>	Not classified as a specific target organ toxicant after repeated exposure.
<b><u>Aspiration hazard</u></b>	
<b>Aspiration hazard</b>	Not relevant. Solid.
<b>General information</b>	
	The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
<b>Inhalation</b>	Corrosive to the respiratory tract. Symptoms following overexposure may include the following: Severe irritation of nose and throat.
<b>Ingestion</b>	May cause chemical burns in mouth, esophagus and stomach. Symptoms following overexposure may include the following: Severe stomach pain. Nausea, vomiting.
<b>Skin Contact</b>	Causes severe burns. Symptoms following overexposure may include the following: Pain or irritation. Redness. Blistering may occur.
<b>Eye contact</b>	Causes serious eye damage. Symptoms following overexposure may include the following: Pain. Profuse watering of the eyes. Redness.
<b>Route of exposure</b>	Ingestion Inhalation Skin and/or eye contact
<b>Target Organs</b>	Respiratory system, lungs

### 12. Ecological information

#### **Persistence and degradability**

**Persistence and degradability** The degradability of the product is not known.

#### **Bioaccumulative potential**

**Bio-Accumulative Potential** No information available on the product mixture. Data on components indicates low potential.

#### **Partition coefficient**

No information available on the product mixture. Main component Log Pow <0.3.

#### **Mobility in soil**

**Mobility** No data available.

#### **Other adverse effects**

**Other adverse effects** None known.

### 13. Disposal considerations

#### **Waste treatment methods**

**General information** The generation of waste should be minimized or avoided wherever possible. When handling waste, the safety precautions applying to handling of the product should be considered. This material and its container must be disposed of in a safe way. Do not reuse or refill container. Rinse thoroughly with water before discarding. Care should be taken when handling emptied containers that have not been thoroughly cleaned or rinsed out. Empty containers or liners may retain some product residues and hence be potentially hazardous.

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### Disposal methods

Waste should be dissolved, diluted, and disposed of in accordance with federal, state, and local regulations. Solutions of greater than 3% will have a pH less than 2.0 and may be considered RCRA hazardous, due to the low pH. Neutralization with caustic soda or soda ash may be necessary before disposal. Do not empty into drains. Dispose of surplus products and those that cannot be recycled via a licensed waste disposal contractor. Waste, residues, empty containers, discarded work clothes and contaminated cleaning materials should be collected in designated containers, labeled with their contents. Incineration or landfill should only be considered when recycling is not feasible.

### 14. Transport information

#### General

In small packages, such as most consumer sizes, the products may be eligible for limited quantity exceptions. Details depend on package and mode of transport. If shipped in larger quantities, product is fully regulated as defined below.

#### UN Number

UN No. (DOT) UN3260

#### UN proper shipping name

Proper shipping name (DOT) CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S. (CONTAINS Monopersulfate compound)

#### Transport hazard class(es)

DOT hazard class 8

DOT hazard label 8

#### DOT transport labels



#### Packing group

DOT packing group II

#### Environmental hazards

##### Environmentally Hazardous Substance

No.

#### Special precautions for user

Not applicable.

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

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### 15. Regulatory information

**Safety, hygiene and environmental regulations / legislation specific for the substance or mixture:**

#### US Federal Regulations

**SARA Section 302 Extremely Hazardous Substances Tier II Threshold Planning Quantities**

Not applicable.

**CERCLA/Superfund, Hazardous Substances/Reportable Quantities (EPA)**

Not applicable.

**SARA Extremely Hazardous Substances EPCRA Reportable Quantities**

Not applicable.

**SARA 313 Emission Reporting**

Not applicable.

*Dipotassium peroxodisulphate*

1.0 %

**CAA Accidental Release Prevention**

Not applicable.

**FDA - Essential Chemical**

Not applicable.

**FDA - Precursor Chemical**

Not applicable.

**SARA (311/312) Hazard Categories**

Acute

Skin corrosion or irritation

Serious eye damage or eye irritation

Specific target organ toxicity (single or repeated exposure)

**OSHA Highly Hazardous Chemicals**

Not applicable.

#### US State Regulations

**California Proposition 65 Carcinogens and Reproductive Toxins**

None of the ingredients are listed.

**California Air Toxics "Hot Spots" (A-I)**

Not applicable.

**California Air Toxics "Hot Spots" (A-II)**

Not applicable.

**California Directors List of Hazardous Substances**

Not applicable.

**Massachusetts "Right To Know" List**

Not applicable.

*Dipotassium peroxodisulphate*

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### Rhode Island "Right To Know" List

Not applicable.

*Dipotassium peroxodisulphate*

### Minnesota "Right To Know" List

Not applicable.

### New Jersey "Right To Know" List

Not applicable.

*Dipotassium peroxodisulphate*

*Potassium hydrogensulphate*

### Pennsylvania "Right To Know" List

Not applicable.

*Dipotassium peroxodisulphate*

### Inventories

#### US - TSCA

All the ingredients are listed or exempt.

#### US - TSCA 12(b) Export Notification

Not applicable.

### 16. Other information

#### Abbreviations and acronyms used in the safety data sheet

TDG: The transport of dangerous goods act

IATA: International air transport association.

ICAO: Technical instructions for the safe transport of dangerous goods by air.

IMDG: International maritime dangerous goods.

CAS: Chemical abstracts service.

ATE: Acute toxicity estimate.

LC<sub>50</sub>: Lethal concentration to 50 % of a test population.

LD<sub>50</sub>: Lethal dose to 50% of a test population (median lethal dose).

EC<sub>50</sub>: 50% of maximal effective concentration.

PBT: Persistent, bioaccumulative and toxic substance.

vPvB: Very persistent and very bioaccumulative.

#### Classification abbreviations and acronyms

Acute Tox. = Acute toxicity

Eye Dam. = Serious eye damage

Skin Corr. = Skin corrosion

STOT SE = Specific target organ toxicity-single exposure

#### Revision date

3/12/2020

#### Revision

0

#### SDS No.

4844

## Maintenance Shock

### Hazard statements in full

H272 May intensify fire; oxidizer.

H301 Toxic if swallowed.

H302 Harmful if swallowed.

H314 Causes severe skin burns and eye damage.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H318 Causes serious eye damage.

H319 Causes serious eye irritation.

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H335 May cause respiratory irritation.

The information provided on the SDS is correct to the best of our knowledge, information, and belief at the date of this publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal, and release, and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.