



SAFETY DATA SHEET

Maintenance Shock

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

1. Identification

Product identifier

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

Recommended use of the chemical and restrictions on use

Application Oxidizing agent
Uses advised against Use only for intended applications.

Details of the supplier of the safety data sheet

Supplier King Technology, Inc.
6000 Clearwater Dr.
Minnetonka, MN 55343
United States
1+ (952) 933-6118
sdsinfo@kingtechnology.com
CHEMTREC 800-424-9300 (24 hours)

Emergency telephone number

Emergency telephone

2. Hazard(s) identification

Classification of the substance or mixture

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

Label elements

Hazard symbols



Signal word Danger

Hazard statements H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H335 May cause respiratory irritation.

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Precautionary statements	P260 Do not breathe dust. P261 Avoid breathing dust. P264 Wash contaminated skin 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/ protective clothing/ eye protection/ face protection. P301+P312 If swallowed: Call a poison center/ doctor if you feel unwell. P301+P330+P331 If swallowed: Rinse mouth. Do NOT induce vomiting. P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower. 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. P310 Immediately call a poison center/ doctor. P321 Specific treatment (see medical advice on this label). P363 Wash contaminated clothing before reuse. P403+P233 Store in a well-ventilated place. Keep container tightly closed. P405 Store locked up. P501 Dispose of contents/ container in accordance with national regulations.
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Contains	Monopersulfate compound, Potassium hydrogensulphate, Dipotassium peroxodisulphate, Dipotassium disulphate
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Other hazards

Other	No additional hazards known. «46»% of the mixture consists of ingredient(s) of unknown acute toxicity.
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3. Composition/information on ingredients

Mixtures

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

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Dipotassium disulphate < 5% CAS number: 7790-62-7
Classification Acute Tox. 3 - H301 Skin Corr. 1A - H314 Eye Dam. 1 - H318
Dipotassium peroxodisulphate < 5% CAS number: 7727-21-1
Classification 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
Potassium hydrogensulphate < 5% CAS number: 7646-93-7
Classification 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

General information	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.
Inhalation	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.
Ingestion	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.
Skin Contact	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 (CO₂). 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 (CO₂). 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.

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8. Exposure controls/Personal protection

Control parameters

Occupational exposure limits

Dipotassium peroxodisulphate (CAS 7727-21-1)

ACGIH Threshold Limit Value (TLV): 0.1 mg/m³ (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

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

10. Stability and reactivity

Reactivity	Contact with water/moisture causes exothermic reaction or decomposition.
Stability	Stable at normal ambient temperatures and when used as recommended. Stable under the prescribed storage conditions.
Possibility of hazardous reactions	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.
Conditions to avoid	Keep at temperature not exceeding 50°C/122°F. Avoid excessive heat for prolonged periods of time.
Materials to avoid	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 (SO_x).

11. Toxicological information

Information on toxicological effects

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 500.0

Species Rat

Notes (oral LD₅₀) Acute Tox. 4 - H302 Harmful if swallowed.
LD₅₀ 500 mg/kg, Oral, Rat

ATE oral (mg/kg) 534.19

Acute toxicity - dermal

Notes (dermal LD₅₀) Based on available data the classification criteria are not met.
LD₅₀ > 5000 mg/kg, Dermal, Rat

Acute toxicity - inhalation

Notes (inhalation LC₅₀) Based on available data the classification criteria are not met.
LC₅₀ > 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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Target organs	Respiratory system, lungs
<u>Specific target organ toxicity - repeated exposure</u>	
STOT - repeated exposure	Not classified as a specific target organ toxicant after repeated exposure.
<u>Aspiration hazard</u>	
Aspiration hazard	Not relevant. Solid.
General information	
	The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
Inhalation	Corrosive to the respiratory tract. Symptoms following overexposure may include the following: Severe irritation of nose and throat.
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.
Route of exposure	Ingestion Inhalation Skin and/or eye contact
Target Organs	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.

LC₅₀: Lethal concentration to 50 % of a test population.

LD₅₀: Lethal dose to 50% of a test population (median lethal dose).

EC₅₀: 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

10/24/2022

Revision

1

SDS No.

4844

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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.
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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.