

Product name Clear Spa¹⁰⁴ Spa Solutions Crystal Shock Oxidizer
Revision date 6-30-15

This SDS adheres to the standards and regulatory requirements of the United States and may not meet the regulatory requirements in other countries.

Product ID: Crystal Shock Oxidizer
Chemical Name and Synonyms: Potassium Monopersulfate Compound
Chemical Formula: Proprietary
Chemical Family: Peroxygen Salt
Product Use: Safe, Effective, Shock Oxidizer Treatment

Supplier: Oreq Corporation
42306 Remington Ave.
Temecula, CA 92532
951-296-5076

Emergency Telephone# CHEMTREC 800-424-9300

Product hazard category

Acute toxicity (Oral)	Category 4
Skin corrosion	Category 1B
Serious eye damage/eye irritation	Category 1

SIGNAL WORD: DANGER

HAZARD PICTOGRAMS:



**Hazardous prevention:
measures**

P260- Do not breathe dust or mist.
P264- Wash skin thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P280 - Wear protective gloves/ protective clothing/ eye protection/ face protection.
P301+P312 - IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell.
P301+330+331- IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+361+353- IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P304+312- IF INHALED: Remove victim to fresh air and keep comfortable for breathing.
P305+351+338- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P307+311- Immediately call a POISON CENTER or doctor/ physician.
P362+364- Take off contaminated clothing and wash it before reuse.
P405- Store locked up.
P501- Dispose of contents/ container to an approved waste disposal plant.

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COMPONENT	%	CAS#
Potassium Monopersulfate	32.18%	70693-62-8
Inert ingredients	67.82%	Proprietary

The exact formulation is being withheld as a trade secret.
 While some substances are claimed as trade secret in accordance with the provision of OSHA 29 CFR 1910.12009i), all known hazards are clearly communicated within this document.

General advice : When symptoms persist or in all cases of doubt seek medical advice.

Inhalation : Move person to fresh air. If person is not breathing, call 911 or ambulance, then give artificial respiration, preferably by mouth to mouth, if possible. Call a poison control center or doctor for further treatment advice.

Skin contact : Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice. immediately. Wash contaminated clothing before re-use.

Eye contact : Hold Eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

Ingestion : Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do NOT induce vomiting. Do not give anything by mouth to an unconscious person.

Most important: symptoms/effects, acute and delayed No applicable data available.

Protection of first-aiders: No applicable data available.

Notes to physician : No applicable data available.

Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media: Carbon dioxide (CO2)

Specific hazards : The product itself does not burn.
 Hazardous decomposition products Oxygen, Sulphur dioxide, Sulfur trioxide

Special protective equipment for firefighters: Wear self-contained breathing apparatus and protective suit.

Further information : No applicable data available.

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NOTE: Review FIRE FIGHTING MEASURES and HANDLING (PERSONNEL) sections before proceeding with clean-up. Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean-up.

Safeguards (Personnel): Evacuate personnel to safe areas. Use personal protective equipment.

Environmental precautions : Try to prevent the material from entering drains or water courses.

Spill Cleanup: Sweep up and shovel into suitable containers for disposal. Avoid dust formation. After cleaning, flush away traces with water.

Accidental Release Measures: Try to prevent the material from entering drains or water courses. Dispose of in accordance with local regulations.

Handling: Use only in well-ventilated areas. Do not breathe dust. Avoid dust formation in confined areas. Avoid contact with skin and eyes. Keep away from heat and flame. Wash hands before breaks and immediately after handling the product. Handle in accordance with good industrial hygiene and safety practice

Handling (Physical Aspects): No applicable data available.

Dust explosion class: No applicable data available.

Storage: Keep in a dry, cool and well-ventilated place. Protect from contamination. Store in original container. Keep away from: Combustible material Never allow product to get in contact with water during storage. Stable under recommended storage conditions.

Storage period: No applicable data available.

Storage temperature: No applicable data available

Engineering controls: Ensure adequate ventilation.

Personal protective equipment

Respiratory protection: When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

Hand protection: Material: Impervious gloves

Eye protection : Wear safety glasses or coverall chemical splash goggles.

Skin and body protection: Where there is potential for skin contact, have available and wear as appropriate, impervious gloves, apron, pants, jacket, hood and boots. Remove and wash contaminated clothing before re-use.

Protective measures: When using do not eat or drink. Do not breathe dust.

Exposure Guidelines

Exposure Limit Values

Potassium Monopersulfate-

Pentapotassium bis(peroxymonosulphate) bis(sulphate)

AEL * (DUPONT) 1 mg/m³ 15 minute TWA

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Dipotassium peroxodisulphate
TLV (ACGIH) 0.1 mg/m³ TWA as persulfate

Potassium sulfate
AEL * (DUPONT) 10 mg/m³ 8 hr. TWA

* AEL is DuPont's Acceptable Exposure Limit. Where governmentally imposed occupational exposure limits which are lower than the AEL are in effect, such limits shall take precedence.

Appearance (Physical state, form, colour, etc.)

Form : Solid form, granular
Color : white
Odor : none
Odor threshold : No applicable data available.
pH : 2.1 at 30 g/l 20 °C (68 °F)
Melting point/freezing point : Melting point
 Decomposes before melting.
Boiling point/boiling range : Boiling point
 Not applicable
Flash point : does not flash
Evaporation rate : No applicable data available.
Flammability (solid, gas) : The product itself does not burn, but it is slightly oxidising (active oxygen content ca. 2%).
 The product is not flammable.
Upper explosion limit : No applicable data available.
Lower explosion limit : No applicable data available.
Vapor pressure : < 0.0000017 hPa
Vapour density : No applicable data available.
Density : No applicable data available.
Specific gravity (Relative density) : 2.35 at 20 °C (68 °F)
Bulk density : 1,100 - 1,400 kg/m³
Water solubility : 297 - 357 g/l at 22 °C (72 °F)
Solubility(ies) : No applicable data available.
Partition coefficient: n-octanol/water : No applicable data available.
Ignition temperature : no data available
Auto-ignition temperature : No applicable data available.
Decomposition temperature : No applicable data available.
Viscosity : No applicable data available.
Oxidizing Substance : The substance or mixture is not classified as oxidizing.

Reactivity: Stable under recommended storage conditions.
Stability: Stable under normal conditions.

Possibility of hazardous reactions No applicable data available.

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Conditions to avoid: Temperature > 50 °C (> 122 °F) Avoid extreme heat.

Incompatibility: Halogenated compounds Cyanides, Heavy metal salts

Hazardous decomposition products: Oxygen , Sulfur dioxide, Sulfur trioxide products

Potassium Monopersulfate

Monopersulfate compound

Inhalation 4 h LC50: > 5 mg/l, rat
Skin irritation: Species: rabbit, Causes burns.
Eye irritation: Species: rabbit, Severe eye irritation
Sensitisation: Species: guinea pig, Did not cause sensitization on laboratory animals.

May cause sensitization of susceptible persons by skin contact or by inhalation of dust.

Pentapotassium bis(peroxymonosulphate) bis(sulphate)

Dermal LD50: > 11,000 mg/kg, rabbit
Oral LD50: 200 - 2,000 mg/kg, rat Gastrointestinal ulceration Internal bleeding
Repeated dose toxicity: Inhalation
Eyes, corneal damage, Reversible
Oral
Stomach, Pathologic changes

Mutagenicity: Did not cause genetic damage in cultured bacterial cells., Tests on mammalian cell cultures showed mutagenic effects., Evidence suggests this substance does not cause genetic damage in animals.

Teratogenicity: Animal testing showed effects on embryo-fetal development at levels equal to or above those causing maternal toxicity.

Dipotassium peroxodisulphate

Dermal LD50: > 10,000 mg/kg , Rabbit
Oral LD50: 1,130 mg/kg , Rat
Repeated dose toxicity: Oral Rat-
NOAEL: 131.5 mg/kg Method: OECD Test Guideline 407
No toxicologically significant effects were found.

Carcinogenicity: Not classifiable as a human carcinogen.
Animal testing did not show any carcinogenic effects. Information given is based on data obtained from similar substances.

Mutagenicity: Animal testing did not show any mutagenic effects. Tests on bacterial or mammalian cell cultures did not show mutagenic effects. Information given is based on data obtained from similar substances.

Reproductive toxicity: No toxicity to reproduction Animal testing showed no reproductive toxicity. Information given is based on data obtained from similar substances.

Teratogenicity: Animal testing showed no developmental toxicity. Information given is based on data obtained from similar substances.

Tetra[carbonato(2-)]dihydroxypentamagnesium

Oral LD50: > 2,000 mg/kg , Rat

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Repeated dose toxicity: Information given is based on data obtained from similar substances. Oral, Rat - 90 d
NOAEL: 1,531 mg/kg Method: OECD Test Guideline 408
No toxicologically significant effects were found., Information given is based on data obtained from similar substances.

Carcinogenicity: Not classifiable as a human carcinogen. Information given is based on data obtained from similar substances. Animal testing did not show any carcinogenic effects.

Mutagenicity: Tests on bacterial or mammalian cell cultures did not show mutagenic effects. Evidence suggests this substance does not cause genetic damage in animals. Information given is based on data obtained from similar substances.

Reproductive toxicity: No toxicity to reproduction Information given is based on data obtained from similar substances. Animal testing showed no reproductive toxicity.

Teratogenicity: Information given is based on data obtained from similar substances. Animal testing showed no developmental toxicity.

Carcinogenicity

None of the components present in this material at concentrations equal to or greater than 0.1% are listed by IARC, NTP, or OSHA, as a carcinogen.

Potassium Monopersulfate

Aquatic Toxicity

Pentapotassium bis(peroxymonosulphate) bis(sulphate)

96 h LC50: Cyprinodon variegatus (sheepshead minnow) 1.09 mg/l Directive 67/548/EEC, Annex V, C.1.
96 h ErC50: Selenastrum capricornutum (green algae) > 1 mg/l OECD Test Guideline 201
72 h NOEC: Selenastrum capricornutum (green algae) 0.5 mg/l
48 h EC50: Daphnia magna (Water flea) 3.5 mg/l OECD Test Guideline 202
37 d: NOEC Cyprinodon variegatus (sheepshead minnow) 0.222 mg/l
28 d: NOEC Americamysis bahia (mysid shrimp) 0.267 mg/l

Dipotassium peroxodisulphate

96 h LC50: Oncorhynchus mykiss (rainbow trout) 76.3 mg/l US EPA Test Guideline OPP 72-1
Information given is based on data obtained from similar substances.
72 h EbC50: Pseudokirchneriella subcapitata (green algae) 83.7 mg/l OECD Test Guideline 201
Information given is based on data obtained from similar substances.
72 h NOEC: Pseudokirchneriella subcapitata (green algae) 39.2 mg/l OECD Test Guideline 201
Information given is based on data obtained from similar substances.
48 h EC50: Daphnia magna (Water flea) 120 mg/l US EPA Test Guideline OPP 72-2
Information given is based on data obtained from similar substances.

Tetra[carbonato(2-)]dihydroxypentamagnesium

96 h LC50: Pimephales promelas (fathead minnow) 2,120 mg/l

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72 h EC50:

Information given is based on data obtained from similar substances.
Desmodesmus subspicatus (green algae) > 100 mg/l OECD Test Guideline 201

72 h NOEC:

Information given is based on data obtained from similar substances.
Desmodesmus subspicatus (green algae) 100 mg/l OECD Test Guideline 201

48 h EC50:

Information given is based on data obtained from similar substances.
Daphnia magna (Water flea) 140 mg/l
Information given is based on data obtained from similar substances.

**Physico-chemical
removability:**

hydrolyses

Environmental Fate

Dipotassium peroxodisulphate

Biodegradability: Readily biodegradable.

Tetra[carbonato(2-)]dihydroxypentamagnesium

Biodegradability: The methods for determining biodegradability are not applicable to inorganic substances.

Waste Disposal Methods:

Dispose of in accordance with local regulations.

Contaminated Packaging:

If recycling is not practicable, dispose of in compliance with local regulations.

DOT

UN-Number: 3260

Proper shipping name: Corrosive solid, acidic, inorganic, n.o.s.
(Monopersulfate Compound)

Class: 8

Packaging group: II

Labeling No.: 8

IATA_C

UN number: 3260

Proper shipping name: Corrosive solid, acidic, inorganic, n.o.s.
(Monopersulfate Compound,)

Class: 8

Packaging group: II

Labeling No.: 8

IMDG

UN number: 3260

Proper shipping name: CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S.
(Monopersulfate Compound,)

Class: 8

Packaging group: II

Labeling No.: 8

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TSCA : On the inventory, or in compliance with the inventory
Other regulations : Active Ingredient in this composition is POTASSIUMPEROXYMONOSULFATE, CAS. No. 10058-23-8, Concentration: 43-47% (Typical 45%) Active ingredient may also be described by the synonym POTASSIUM MONOPERSULFATE.

SARA 313 Regulated Chemical(s) : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

PA Right to Know Regulated Chemical(s) : Substances on the Pennsylvania Hazardous Substances List present at a concentration of 1% or more (0.01% for Special Hazardous Substances): Dipotassium peroxodisulphate

NJ Right to Know Regulated Chemical(s) : Substances on the New Jersey Workplace Hazardous Substance List present at a concentration of 1% or more (0.1% for substances identified as carcinogens, mutagens or teratogens): Dipotassium peroxodisulphate,

Title III hazard Classification Potassium hydrogensulphate
: Acute Health Hazard: Yes
Chronic Health Hazard: No
Fire: No
Reactivity/Physical hazard: No
Pressure: No

California Prop. 65 : Chemicals known to the State of California to cause cancer, birth defects or any other harm: none known

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