

SAFETY DATA SHEET

Section 1. Identification

Product Name: 1505-1507, 3109, 3160 NUCLO OXIDIZING SHOCK

Chemical Name: Oxone(TM), Monopersulfate Compound

Manufacturer: LANXESS Corporation

Product Safety & Regulatory Affairs

111 RI DC Park West Drive

Pittsburgh, PA 15275-1112

Emergency: 1-(800) 424 9300 (ChemTrec)

Supplied by: QUALCO, Inc.

225 Passaic Street.

Passaic, NJ 07055

Telephone: 973-473-1222

Fax: 973-473-0535

Emergency: 1-800-424-9300 (ChemTrec)

Section 2. Hazards identification

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

Physical state : Solid.

Color : White.

Classification of the substance or mixture : ACUTE TOXICITY (oral) - Category 4
SKIN CORROSION - Category 1B
SERIOUS EYE DAMAGE - Category 1

Hazard pictograms :



Signal word : Danger

Hazard statements : Harmful if swallowed. Causes severe skin burns and eye damage.

Hazard Not Otherwise Classified (HNOC) : Causes digestive tract burns. Causes respiratory tract burns.

Precautionary statements

Prevention : Wear protective gloves/clothing and eye/face protection. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling.

Response : Get medical attention if you feel unwell. 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 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 : Mixture
 Chemical name : Nucleo Oxidizing Shock

Ingredient name	%	CAS number
Pentapotassium bis(peroxymonosulphate) bis(sulphate)	86-96	70693-62-8
Potassium hydrogen sulphate	≤5	7646-93-7
Dipotassium peroxodisulphate	≤5	7727-21-1
Dipotassium disulphate	≤5	7790-62-7

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. 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. Get medical attention immediately. Immediately remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- 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.
- Inhalation** : May give off gas, vapor or dust that is very irritating or corrosive to the respiratory system.
- Skin contact** : Causes severe burns.
- Ingestion** : Harmful if swallowed. Corrosive to the digestive tract. May cause burns to mouth, throat and stomach.

Over-exposure signs/symptoms

- Eye contact** : Corrosive with symptoms of reddening, tearing, swelling, burning and possible permanent damage.
- Inhalation** : Corrosive with symptoms of coughing, burning, ulceration, and pain. May cause pulmonary edema with symptoms of breathing difficulty and tightness of chest.

Section 4. First aid measures

- Skin contact : Corrosive with symptoms of reddening, itching, swelling, burning and possible permanent damage.
- 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

No known significant effects or critical hazards.

- 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 : In case of fire, use water spray (fog), foam or dry chemical.
- Unsuitable extinguishing media : Carbon dioxide (CO₂).
- Specific hazards arising from the chemical : 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
sulfur oxides
metal oxide/oxides
- 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.
- 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. 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 : Move containers from spill area. Approach release from upwind. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Dispose of via a licensed waste disposal contractor. 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 : Do not get in eyes or on skin or clothing. Do not ingest. Use only with adequate ventilation. 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.

Conditions for safe storage : Store locked up. Contact with water/moisture causes exothermic reaction or decomposition. Do not store above the following temperature: 50°C (122°F). 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.

Section 8. Exposure controls/personal protection

Occupational exposure limits

Ingredient name	Exposure limits
Pentapotassium bis(peroxymonosulphate) bis(sulphate)	None
Potassium hydrogen sulphate	None
Dipotassium peroxodisulphate	ACGIH TLV (United States, 3/2016). TWA: 0.1 mg/m ³ , (as persulfate) 8 hours.
Dipotassium disulphate	None

Recommended monitoring procedures

Appropriate engineering controls : 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. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Respiratory protection : Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Skin protection : Wear suitable protective clothing and gloves. Suitable protective footwear.

Eye-face protection : chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead. If contact with product is possible, wear safety glasses with side shields.

Medical Surveillance : Not available.

Section 9. Physical and chemical properties

Physical state	: Solid. [Granular solid.]
Color	: White.
Odor	: Odorless.
Odor threshold	: Not available.
pH	: 2.1 [Conc. (% w/w): 3%]
Boiling point	: Not available.
Melting point	: Decomposition temperature: >50°C (>122°F)
Flash point	: Not available.
Evaporation rate	: Not available.
Explosion limits	: Not available.
Vapor pressure	: <0.0001 hPa (25°C)
Density	: 2.35 g/cm ³
Specific gravity (Relative density)	: Not available.
Bulk density	: 1100 to 1400 kg/m ³
Solubility in water	: 297 to 357 g/l
Partition coefficient, n-octanol/water	: Not available.
Vapor density	: Not available.
Viscosity	: Not available.
Auto-ignition temperature	: Not available.
Decomposition temperature	: >50°C

Section 10. Stability and reactivity

Reactivity	: Contact with water/moisture causes exothermic reaction or decomposition.
Chemical stability	: The product is stable.
Possibility of hazardous reactions	: Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	: temperature > 50C (122F) Avoid extreme heat.
Incompatible materials	: halogenated compounds, cyanides, heavy metal compounds (salts), Combustible material., hydrated materials, and alkaline materials
Hazardous decomposition products	: Hazardous decomposition products oxygen Sulphur dioxide sulphur trioxide

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.
Skin contact	: Causes severe burns.
Ingestion	: Harmful if swallowed. Corrosive to the digestive tract. May cause burns to mouth, throat and stomach.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact	: Corrosive with symptoms of reddening, tearing, swelling, burning and possible permanent damage.
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Section 11. Toxicological information

- Inhalation : Corrosive with symptoms of coughing, burning, ulceration, and pain.
May cause pulmonary edema with symptoms of breathing difficulty and tightness of chest.
- Skin contact : Corrosive with symptoms of reddening, itching, swelling, burning and possible permanent damage.
- 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

- Potential immediate effects : Not available.

Long term exposure

- Potential delayed effects : Not available.
- General : No known significant effects or critical hazards.
- 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

Product/ingredient name	Result	Species	Dose	Exposure	Test
Oxone(TM) PS-16	LD50 Oral	Rat - Male, Female	500 mg/kg	-	OECD 423 Acute Oral toxicity - Acute Toxic Class Method
Oxone(TM) PS-16	LD50 Dermal	Rat - Male, Female	>5000 mg/kg Extrapolation according to Regulation (EC) No. 440/2008	-	402 Acute Dermal Toxicity
Oxone(TM) PS-16	LC50 Inhalation Dusts and mists	Rat - Male, Female	>5 mg/l Expert judgement Dosage caused no mortality	4 hours	OECD 403 Acute Inhalation Toxicity

Irritation/Corrosion

Conclusion/Summary

- Skin : Corrosive. tested on rabbits (OECD404)
- Eyes : Risk of serious damage to eyes. (OECD404)

Sensitization

Product/ingredient name	Route of exposure	Species	Result
Oxone(TM) PS-16	skin Respiratory	Guinea pig Mammal - species unspecified	Not sensitizing Not sensitizing

Chronic toxicity

Section 11. Toxicological information

Product/ingredient name	Result	Species	Dose	Exposure
Pentapotassium bis (peroxymonosulphate) bis (sulphate)	Sub-acute NOEL Oral	Rat - Male, Female	>1000 mg/kg bw/day	28 days
	Sub-chronic LOAEL Oral	Rat - Male, Female	600 mg/kg bw/day	90 days; 7 days per week daily

Mutagenicity

Product/ingredient name	Test	Experiment	Result
Pentapotassium bis (peroxymonosulphate) bis (sulphate)	OECD 476 <i>In vitro</i> Mammalian Cell Gene Mutation Test	Experiment: In vitro Subject: Mammalian-Animal Cell: Somatic Metabolic activation: +/-	Positive
	OECD 473 <i>In vitro</i> Mammalian Chromosomal Aberration Test	Experiment: In vitro Subject: Mammalian-Human Cell: Somatic Metabolic activation: +/-	Positive
	OECD 471 Bacterial Reverse Mutation Test	Experiment: In vitro Subject: Bacteria Metabolic activation: +/-	Negative
	OECD 474 Mammalian Erythrocyte Micronucleus Test	Experiment: In vivo Subject: Mammalian-Animal	Negative

Conclusion/Summary : Dipotassium peroxodisulphate:Not mutagenic in a standard battery of genetic toxicological tests.

Carcinogenicity

Product/ingredient name	CAS #	IARC	NTP	OSHA
Pentapotassium bis (peroxymonosulphate) bis(sulphate)	70693-62-8	Not classified.	Not classified.	Not classified.
Potassium hydrogen sulphate	7646-93-7	Not classified.	Not classified.	Not classified.
Dipotassium peroxodisulphate	7727-21-1	Not classified.	Not classified.	Not classified.
Dipotassium disulphate	7790-62-7	Not classified.	Not classified.	Not classified.

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
Pentapotassium bis(peroxymonosulphate) bis(sulphate)	Category 3	Not applicable.	Respiratory tract irritation
Potassium hydrogen sulphate	Category 3	Not applicable.	Respiratory tract irritation
Dipotassium peroxodisulphate	Category 3	Not applicable.	Respiratory tract irritation

Acute toxicity estimates

Route	ATE value (Acute Toxicity Estimates)
Not available.	

Section 12. Ecological information

Toxicity

Section 12. Ecological information

Product/ingredient name	Test	Result	Species	Exposure
Pentapotassium bis (peroxymonosulphate) bis (sulphate)	OECD 201 Alga, Growth Inhibition Test	Acute EC50 >1 mg/l Fresh water	Algae - Pseudokirchneriella subcapitata	72 hours
	OECD 202 <i>Daphnia</i> sp. Acute Immobilization Test	Acute EC50 3.5 mg/l Fresh water	Daphnia - <i>Daphnia magna</i>	48 hours
	OECD 203 Fish, Acute Toxicity Test	Acute LC50 53 mg/l Fresh water	Fish - <i>Oncorhynchus mykiss</i>	96 hours
	OECD 201 Alga, Growth Inhibition Test	Chronic NOEC 0.5 mg/l Fresh water	Algae - Pseudokirchneriella subcapitata	72 hours
Dipotassium peroxodisulphate	OECD 201 Alga, Growth Inhibition Test	Acute EC50 83.7 mg/l	Algae - Pseudokirchneriella subcapitata	72 hours
	-	Acute EC50 120 mg/l	Daphnia - <i>Daphnia magna</i>	48 hours
	-	Acute LC50 76.3 mg/l	Fish - <i>Oncorhynchus mykiss</i>	96 hours
Dipotassium disulphate	-	Acute EC10 656 mg/l Read-across from CAS # 7778-80-5 Fresh water	Algae - Pseudokirchneriella subcapitata	96 hours
	-	Acute EC50 1492 mg/l Read-across from CAS # 7778-80-5 Fresh water	Algae - Pseudokirchneriella subcapitata	96 hours
	-	Acute EC50 720 mg/l Read-across from CAS # 7778-80-5 Fresh water	Daphnia - <i>Daphnia magna</i>	48 hours
	-	Acute LC50 680 mg/l Read-across from CAS # 7778-80-5 Fresh water	Fish - <i>Pimephales promelas</i>	96 hours
	-	Chronic NOEC 790 mg/l Read-across from CAS # 7757-82-6 Fresh water	Daphnia - <i>Daphnia dubia</i> (water flea)	7 days
	-	Chronic NOEC >595 mg/l Read-across from CAS # 7757-82-6 Fresh water	Fish - <i>Pimephales promelas</i>	7 days
	-	-	-	-

Conclusion/Summary : Not available.

Persistence and degradability

Conclusion/Summary : The methods for determining the biological degradability are not applicable to inorganic substances.

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
Pentapotassium bis (peroxymonosulphate) bis (sulphate)	<0.3	-	low

Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

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

Section 13. Disposal considerations

Disposal methods : Waste product should be dissolved, diluted, and disposed of in accordance with federal, state, and local regulations. Solutions of greater than 3% of this product 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. 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.

Section 14. Transport information

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
DOT Classification	UN3260	CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S. (MONOPERSULFATE COMPOUND)	8	II		IB8, IP2, IP4, T3, TP33
IMDG Class	UN3260	CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S. (MONOPERSULFATE COMPOUND)	8	II		Emergency schedules (EmS) F-A, S-B
IATA-DGR Class	UN3260	CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S. (MONOPERSULFATE COMPOUND)	8	II		Passenger aircraft 859: 15 kg Cargo aircraft 863: 50 kg

PG* : Packing group

RQ : 0 lbs

Section 15. Regulatory information

SARA 311/312 : Immediate (acute) health hazard

SARA Title III Section 302 : None

Extremely Hazardous Substances

SARA Title III Section 313 : None

Toxic Chemicals

US EPA CERCLA : None

Hazardous Substances (40 CFR 302.4)

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.

<u>Ingredient name</u>	<u>CAS number</u>	<u>State Code</u>	<u>Concentration (%)</u>
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Section 15. Regulatory information

Dipotassium peroxodisulphate	7727-21-1	MA - S, NJ - HS, PA - RTK HS	≤5
Potassium hydrogen sulphate	7646-93-7	NJ - HS	≤5
Pentapotassium bis (peroxymonosulphate) bis(sulphate)	70693-62-8		75 - 90
Dipotassium disulphate	7790-62-7		≤5
tetra[carbonato(2-)] dihydroxypentamagnesium	7760-50-1		≤5

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 : Listed on the TSCA Inventory.
Control Act

Section 16. Other information

Hazardous Material
Information System



0=Insignificant 1=Slight 2=Moderate 3=High 4=Extreme
*=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.)



0= Minimal 1=Slight 2=Moderate 3=Serious 4=Severe

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

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