

SAFETY DATA SHEET

TSCA Listed

Date Prepared : 11/03/2015
MSDS No : 400-301-1-EA

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1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Kleen Screen Stencil Remover Crystals

MANUFACTURER: cf.

Lawson Screen Products
5110 Penrose St.
St. Louis, MO, 63115

Phone: (314) 382-9300

E-Mail: info@golawson.com

24 HR. EMERGENCY TELEPHONE NUMBERS

CANUTEC (Canadian Transportation): (613) 996 - 6666

CHEMTREC (INT'L Transportation): (703) 527 - 3887

CHEMTREC (US Transportation): (800) 424 - 9300

2. HAZARDS IDENTIFICATION

GHS CLASSIFICATIONS

Health:

Skin Corrosion, Category 1C
Serious Eye Damage, Category 1
Target Organ Toxicity (Repeated exposure), Category 1

Environmental:

Aquatic Toxicity, Category 1

Physical:

Oxidizing Solids, Category 1

GHS LABEL

GHS Classification in accordance with the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)



Flame over
circle



Corrosion



Health
hazard



Environment

SIGNAL WORD: DANGER

HAZARD STATEMENTS

H271: May cause fire or explosion; strong oxidizer.

H314: Causes severe skin burns and eye damage.

H318: Causes serious eye damage.

H372: Causes damage to organs (thyroid gland) through prolonged or repeated exposure.

H400: Very toxic to aquatic life.

PRECAUTIONARY STATEMENT(S)

SODIUM META PERIODATE

Prevention:

- P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 P220: Keep away from clothing and other combustible materials.
 P221: Take any precaution to avoid mixing with combustibles...
 P260: Do not breathe dust/fume/gas/mist/vapours/spray.
 P264: Wash ... thoroughly after handling.
 P270: Do not eat, drink or smoke when using this product.
 P273: Avoid release to the environment.
 P280: Wear protective gloves/protective clothing/eye protection/face protection.
 P283: Wear fire resistant or flame retardant clothing.

Response:

- 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 [or 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.
 P306+P360: IF ON CLOTHING: Rinse immediately contaminated clothing and skin with plenty of water before removing clothes.
 P310: Immediately call a POISON CENTER/doctor/...
 P314: Get medical advice/attention if you feel unwell.
 P363: Wash contaminated clothing before reuse.
 P370+P378: In case of fire: Use water fog, dry chemical, foam or carbon dioxide to extinguish.
 P371+P380+P375: In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.
 P391: Collect spillage.

Storage:

- P405: Store locked up.

Disposal:

- P501: Dispose of contents/container to a facility that complies with all Local, State, Regional, Federal, National, and International regulations.

ROUTES OF ENTRY: Inhalation, skin and ingestion.

3. COMPOSITION / INFORMATION ON INGREDIENTS

CHEMICAL NAME	Wt.%	CAS
SODIUM META PERIODATE	99	7790-28-5

4. FIRST AID MEASURES

- EYES:** Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. **GET IMMEDIATE MEDICAL ATTENTION.**
- SKIN:** After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water. Wash skin thoroughly with soap and water. Continue to rinse for at least 15 minutes and **GET IMMEDIATE MEDICAL ATTENTION.**
- INGESTION:** Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Rinse mouth thoroughly with water. Never give anything by mouth to an unconscious person. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. **GET IMMEDIATE MEDICAL ATTENTION.**
- INHALATION:** Unlikely route of exposure as the product does not contain volatile substances. Remove affected person from source of contamination. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. **GET IMMEDIATE MEDICAL ATTENTION.**

SIGNS AND SYMPTOMS OF OVEREXPOSURE

SODIUM META PERIODATE

EYES: Causes serious eye damage. Immediate first aid is imperative.

SKIN: Causes severe burns.

INGESTION: Causes severe burns. Gastrointestinal symptoms, including upset stomach. Nausea, vomiting. Immediate first aid is imperative.

INHALATION: A single exposure may cause the following adverse effects: Severe irritation of nose and throat. Corrosive to the respiratory tract.

NOTES TO PHYSICIAN: Treat symptomatically and supportively. No specific recommendations.

COMMENTS: First aid personnel should wear appropriate protective equipment during any rescue. Immediate first aid is imperative. Keep affected person under observation. Treat symptomatically. Chemical burns must be treated by a physician. Show this Safety Data Sheet to the medical personnel.

5. FIRE FIGHTING MEASURES

GENERAL HAZARD: May cause or intensify fire; oxidiser. May ignite other combustible materials. Thermal decomposition or combustion products may include the following substances: Very toxic or corrosive gases or vapours.

EXTINGUISHING MEDIA: Water spray, dry powder or carbon dioxide. Use fire-extinguishing media suitable for the surrounding fire.

HAZARDOUS COMBUSTION PRODUCTS: Iodine

FIRE FIGHTING PROCEDURES: Keep upwind to avoid inhalation of gases, vapours, fumes and smoke. Avoid breathing fire gases or vapours. Thermal decomposition or combustion products may include the following substances: Toxic and corrosive gases or vapours. Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. Control run-off water by containing and keeping it out of sewers and watercourses. Inform the relevant authorities if environmental pollution occurs (sewers, waterways, soil or air).

FIRE FIGHTING EQUIPMENT: Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Wear chemical protective suit.

6. ACCIDENTAL RELEASE MEASURES

ENVIRONMENTAL PRECAUTIONS

WATER SPILL: Avoid the spillage or runoff entering drains, sewers or watercourses. The product contains a substance which is very toxic to aquatic organisms.

GENERAL PROCEDURES: Keep combustible materials away from spillage. No smoking, sparks, flames or other sources of ignition near spillage. Do not use sawdust or other combustible material. Wear suitable protective equipment, including gloves, goggles/face shield, respirator, boots, clothing or apron, as appropriate. Do not touch or walk into spilled material. Avoid generation and spreading of dust. Wash thoroughly after dealing with a spillage. Collect and place in suitable waste disposal containers and seal securely. Label the containers containing waste and contaminated materials and remove from the area as soon as possible. Small Spillages: <10 kgs Collect spillage with a shovel and broom, or similar and reuse, if possible. Collect and place in suitable waste disposal containers and seal securely. For waste disposal, see Section 13. Flush contaminated area with plenty of water. Avoid releasing into the environment. Large Spillages: >10 kgs Inform authorities if large amounts are involved. Avoid the spillage or runoff entering drains, sewers or watercourses. Collect and place in suitable waste disposal containers and seal securely. Label the containers containing waste and contaminated materials and remove from the area as soon as possible. Dispose of waste via a licensed waste disposal contractor.

RELEASE NOTES: Evacuate area. Keep unnecessary and unprotected personnel away from the spillage. Avoid inhalation of dust and contact with skin and eyes. Wear suitable protective equipment, including gloves, goggles/face shield, respirator, boots, clothing or apron, as appropriate. No smoking, sparks, flames or other sources of ignition near spillage. Ensure procedures and training for emergency decontamination and disposal are in place. Follow precautions for safe handling described in this safety data sheet. No action shall be taken without appropriate training or involving any personal risk.

SPECIAL PROTECTIVE EQUIPMENT: For personal protection, see Section 8. See Section 11 for additional information on health hazards. For waste disposal, see Section 13.

SODIUM META PERIODATE

7. HANDLING AND STORAGE

GENERAL PROCEDURES: Keep away from heat, sparks and open flame. Take any precaution to avoid mixing with combustibles, alkalis and organic materials. **WARNING:** When subject to intense compression at temperatures above 140°C Sodium Metaperiodate can undergo violent decomposition to form Sodium Iodate with the release of gaseous oxygen. This is significantly lower than the normal decomposition temperature of 270°C.

Where there is a potential for extreme compression during processing e.g. during milling, tableting or agitated pan-drying operations the maximum processing temperature should be kept well below 140°C to minimize the risk of decomposition. Do not subject to grinding/shock/friction. Container must be kept tightly closed when not in use. Keep away from acid halides eg hydrochloric acid, may release highly toxic halogen. Reacts violently with amines & ammonia.

STORAGE: Keep away from flammable and combustible materials. Avoid contact with strong reducing agents. Store in tightly-closed, original container in a dry and cool place.

Storage class: Oxidiser storage.

COMMENTS: Do not eat, drink or smoke when using this product. Wash contaminated skin thoroughly after handling. Remove contaminated clothing and wash the skin thoroughly with soap and water after work. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS: Observe any occupational exposure limits for the product or ingredients. Provide adequate general and local exhaust ventilation. Ensure operatives are trained to minimise exposure. Ensure control measures are regularly inspected and maintained. In case of insufficient ventilation, wear suitable respiratory equipment.

PERSONAL PROTECTIVE EQUIPMENT

EYES AND FACE: Chemical splash goggles or face shield.

SKIN: It is recommended that chemical-resistant, impervious gloves are worn. Wear protective gloves made of the following material: Nitrile rubber.

RESPIRATORY: Where risk assessment shows air-purifying respirators are appropriate use a dust mask type N95 (US) or type P2 (EN 143) respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

PROTECTIVE CLOTHING: Wear appropriate protective clothing to minimize contact with skin. Always wear long pants, long sleeved shirt.

WORK HYGIENIC PRACTICES: Provide eyewash station and safety shower. When using do not eat, drink or smoke. Wash hands at the end of each work shift and before eating, smoking and using the toilet. Change work clothing daily before leaving workplace. Promptly remove any clothing that becomes contaminated. Wash promptly with soap and water if skin becomes contaminated. Wash contaminated clothing before reuse.

OTHER USE PRECAUTIONS: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. Keep container tightly sealed when not in use. Residues and empty containers should be taken care of as hazardous waste according to local and national provisions. The risk management measures that adequately control exposure of the environment are set out in the exposure scenarios in the annex to this Safety Data Sheet.

COMMENTS: Occupational exposure limits:

OSHA PEL: Particals not otherwise regulated: Total Dust: 10mg/m³; Respirable fraction: 5mg/m³

Long-term exposure limit (8-hour TWA): WEL 4 mg/m³ resp. dust 10 mg/m³ total dust

WEL = Workplace Exposure Limit

DNEL: Workers - Dermal; Short term systemic effects: 0.2 mg/kg/day Workers - Dermal; Long term systemic effects: 0.06 mg/kg/day Workers - Inhalation; Short term systemic effects: 0.3 mg/m³ Workers - Inhalation;

SODIUM META PERIODATE

Long term systemic effects: 0.1 mg/m³ General population - Dermal; Short term local effects: 0.09 mg/kg/day General population - Dermal; Long term systemic effects: 0.03 mg/kg/day General population - Inhalation; Short term systemic effects: 0.09 mg/m³ General population - Inhalation; Long term systemic effects: 0.03 mg/m³ General population - Oral; Short term systemic effects: 0.03 mg/kg/day General population - Oral; Long term systemic effects: 0.01 mg/kg/day

PNEC: Fresh water; 0.00018 mg/l - Marine water; 0.000018 mg/l - Intermittent release; 0.0018 mg/l - Sediment (Freshwater); 0.000702 mg/kg - Sediment (Marinewater); 0.0000702 mg/kg - STP; 2.2 mg/l - Soil; 0.000035 mg/kg

9. PHYSICAL AND CHEMICAL PROPERTIES

ODOR: ODORLESS

APPEARANCE: WHITE POWDER

pH: 3.5-4.5 @ 5% (diluted solution)

FLASHPOINT AND METHOD: Not determined

FLAMMABLE LIMITS: Not determined

AUTOIGNITION TEMPERATURE: 262°C

VAPOR PRESSURE: Not Determined

VAPOR DENSITY: NOT APPLICABLE

THERMAL DECOMPOSITION: 270°C

SOLUBILITY IN WATER: ~9.1 g/100 g water @ 20° C

PARTITION COEFFICIENT: N-OCTANOL/WATER: Not determined

EVAPORATION RATE: NOT APPLICABLE

DENSITY: ~2900 kg/m³ (Bulk Density)

PARTICLE SIZE: 300 (D50, typical) µm

VISCOSITY: Not relevant

MOLECULAR WEIGHT: 213.89 g/mol

OXIDIZING PROPERTIES: Strong oxidising agent

10. STABILITY AND REACTIVITY

REACTIVITY: The following materials may react strongly with the product: Reducing agents. Organic compounds. Flammable/combustible materials. Powdered metal.

STABILITY: Stable under normal temperature conditions. WARNING: When subject to intense compression at temperatures above 140°C Sodium Metaperiodate can undergo violent decomposition to form Sodium Iodate with the release of gaseous oxygen. This is significantly lower than the normal decomposition temperature of 270°C. Where there is a potential for extreme compression during processing e.g. during milling, tableting or agitated pan-drying operations the maximum processing temperature should be kept well below 140°C to minimize the risk of decomposition.

CONDITIONS TO AVOID: Do not subject to grinding/shock/friction. Avoid exposure to high temperatures or direct sunlight.

POSSIBILITY OF HAZARDOUS REACTIONS: Organic compounds. Strong reducing agents. Acids. Powdered metal. Keep away from acid halides eg hydrochloric acid, may release highly toxic halogen. Reacts violently with amines & ammonia.

HAZARDOUS DECOMPOSITION PRODUCTS: Iodine, Oxygen.

INCOMPATIBLE MATERIALS: Flammable/combustible material. Strong acids. Strong reducing agents. Powdered metal.

11. TOXICOLOGICAL INFORMATION

ACUTE

SODIUM META PERIODATE

DERMAL LD₅₀: Corrosive to skin. Causes severe burns.

ORAL LD₅₀: Corrosive to skin. Causes severe burns.

INHALATION LC₅₀: Corrosive to the respiratory tract. Causes severe burns.

EYE EFFECTS: Causes serious eye damage.

SKIN EFFECTS: Human skin model test: Cell Viability 12.9% 4 hours Corrosive to skin. Causes severe burns.

CARCINOGENICITY

Notes: No information available. There is no evidence that the product can cause cancer.

IRRITATION: Dust may irritate the respiratory system.

CORROSIVITY: Corrosive to skin and eyes. Causes damage to organs through prolonged or repeated exposure if swallowed.

SENSITIZATION: Corrosive to skin: causes severe burns. Corrosive to the respiratory tract: causes severe burns.

REPRODUCTIVE EFFECTS: Fertility - NOAEL 90 mg/kg/day, Oral, Rat Based on available data the classification criteria are not met. Does not contain any substances known to be toxic to reproduction.
Developmental toxicity: - NOAEL: 90 mg/kg/day, Oral, Rat Based on available data the classification criteria are not met. This substance has no evidence of toxicity to reproduction.

TARGET ORGANS: NOAEL 3 mg/kg/day, Oral, Rat: Causes damage to organs (thyroid gland) through prolonged or repeated exposure if swallowed.

MUTAGENICITY: Genotoxicity - in vivo

Gene mutation: Negative. Read across data. Test item: Potassium Iodide Does not contain any substances known to be mutagenic.

GENERAL COMMENTS: The following pre-existing or historic medical conditions of the worker may lead to an increased risk of adverse health effects following exposure to this product: Thyroid disorders. Skin disorders and allergies.

Symptoms of thyroid disorders include: Irritability. Tiredness. Restlessness.

COMMENTS: Toxicokinetics: Sodium periodate is a water soluble reactive oxidizing agent which is reduced in biological media to form iodate and subsequently iodide. Iodate is quantitatively reduced to iodide by non-enzymatic reactions, and thus becomes available to the body as iodide. Both are forms of iodine that are an essential component of diet and are commonly used as fortification of foodstuffs. The toxicological effects of iodate in the human body need to be considered when assessing the effects of periodate. Absorbed iodate or iodide will be incorporated into thyroid hormones and tissue physiology.

12. ECOLOGICAL INFORMATION

ENVIRONMENTAL DATA: Dangerous for the environment. The product contains a substance which is very toxic to aquatic organisms.

BIOACCUMULATION/ACCUMULATION: The product contains only inorganic substances which are not biodegradable.

DISTRIBUTION: Mobility: The product is miscible with water and may spread in water systems.

AQUATIC TOXICITY (ACUTE)

96-HOUR LC₅₀: > 0.17 mg/l, *Onchorhynchus mykiss* (Rainbow trout)

48-HOUR EC₅₀: 0.18 mg/L (*Daphnia-magna*)

Notes:

EC₅₀, 72 hours: 1.1 mg/l, *Pseudokirchneriella subcapitata* NOEC, 72 hours: 0.1 mg/l, Freshwater algae
LE(C)₅₀, 0.1 < L(E)C₅₀ = < 1

M factor (Acute) 1

GENERAL COMMENTS: Adsorption/desorption coefficient: Expected to have a low potential for adsorption.

COMMENTS: This product does not contain any substances classified as PBT or vPvB.

SODIUM META PERIODATE**13. DISPOSAL CONSIDERATIONS**

DISPOSAL METHOD: Waste is classified as hazardous waste. Disposal of this product, process solutions, residues and by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any local authority requirements. Care should be taken when handling emptied containers that have not been thoroughly cleaned or rinsed out. Dispose of waste via a licensed waste disposal contractor. The generation of waste should be minimised or avoided wherever possible. When handling waste, the safety precautions applying to handling of the product should be considered.

PRODUCT DISPOSAL: Reuse or recycle products wherever possible. Collect and place in suitable waste disposal containers and seal securely. Dispose of waste to a licensed waste disposal site in accordance with State, Regional, Federal, National, and International regulations.

14. TRANSPORT INFORMATION**DOT (DEPARTMENT OF TRANSPORTATION)**

PROPER SHIPPING NAME: OXIDIZING SOLID, CORROSIVE, N.O.S. (SODIUM PERIODATE)

PRIMARY HAZARD CLASS/DIVISION: 5.1

SECONDARY HAZARD CLASS/DIVISION: 8

UN/NA NUMBER: 3085

PACKING GROUP: I

MARINE POLLUTANT #1: YES

AIR (ICAO/IATA)

SHIPPING NAME: OXIDIZING SOLID, CORROSIVE, N.O.S. (SODIUM PERIODATE)

UN/NA NUMBER: 3085

PRIMARY HAZARD CLASS/DIVISION: 5.1

SECONDARY HAZARD CLASS/DIVISION: 8

PACKING GROUP: I

VESSEL (IMO/IMDG)

SHIPPING NAME: OXIDIZING SOLID, CORROSIVE, N.O.S. (SODIUM PERIODATE)

UN/NA NUMBER: 3085

PRIMARY HAZARD CLASS/DIVISION: 5.1

SECONDARY HAZARD CLASS/DIVISION: 8

PACKING GROUP: I

EmS: F-A, S-Q

15. REGULATORY INFORMATION**UNITED STATES****DOT LABEL SYMBOL AND HAZARD CLASSIFICATION**

Oxidizing



Corrosive

TSCA (TOXIC SUBSTANCE CONTROL ACT)

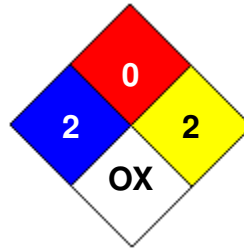
TSCA REGULATORY: Listed on the TSCA Public Inventory.

16. OTHER INFORMATION

APPROVED BY: Judy Cummings **TITLE:** Product Stewardship Manager

SODIUM META PERIODATE**Date Prepared:** 11/03/2015**INFORMATION CONTACT:** Product Stewardship Analyst**HMIS RATING**

HEALTH	<input type="checkbox"/>	2
FLAMMABILITY		0
PHYSICAL HAZARD		2
PERSONAL PROTECTION		J

NFPA CODES

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