SAFETY DATA SHEET

Sodium Persulfate

SECTION 1: IDENTIFICATION

Product identifier used on a label:	**Sodium Persulfate**
Product code:	1507
CAS-No.:	7775-27-1
Synonyms:	Sodium Persulphate Sodium peroxodisulfate Sodium peroxodisulphate Sodium peroxydisulfate
Recommended use of the chemical and restrictions on use:	Sodium peroxydisulphate Oxidizing agent, etchant, cleaner. Metal finishing. Textile industry. Chemical synthesis. Industrial use.
Chemical family:	Oxidizer
Chemical formula:	$Na_2S_2O_8$
Name, address and phone # of supplier:	Aqua Bond Inc. PO Box 63635 Toronto, ON, M1V 5K2 (416) 754-7211
24 Hr. Emergency phone #	**CANUTEC (613) 996-6666**

SECTION 2: HAZARDS IDENTIFICATION

Classification of the chemical:	This material is classified as hazardous under U.S. OSHA regulations (29CFR 1910.1200) (Hazcom 2012) and Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015).
Hazard classification:	GHS Classification Oxidizing solids (Category 3) Acute toxicity, Oral (Category 4) Skin corrosion/irritation (Category 2) Serious eye damage/eye irritation (Category 2A) Respiratory sensitisation (Category 1) Skin sensitisation (Category 1) Specific target organ toxicity - single exposure (Category 3), Respiratory system
Label elements:	

Signal word:	DANGER
Hazard statements:	H272 May intensify fire; oxidizer. H302 Harmful if swallowed. H315 Causes skin irritation. H317 May cause an allergic skin reaction. H319 Causes serious eye irritation. H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled. H335 May cause respiratory irritation.
Precautionary statements:	P220 Keep away from clothing and other combustible materials. P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray. P280 Wear protective gloves. P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P342 + P311 If experiencing respiratory symptoms: Call a POISON CENTER or doctor/ physician.
Other hazards:	Risk of decomposition by heat or by contact with incompatible materials

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient name	CAS Number	Concentration (wt. %)
Sodium Persulfate	7775-27-1	≥ 99.0 %

SECTION 4: FIRST-AID MEASURES

Description of first aid measures:

Ingestion	Do NOT induce vomiting. Call a physician or poison control center immediately. Rinse mouth. Drink 1 or 2 glasses of water.
Inhalation	Remove from exposure, lie down. If breathing is irregular or stopped, administer artificial respiration. Call a physician immediately.
Skin contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get medical attention if irritation develops and persists.
Eye contact	Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Consult a physician.

Most important symptoms and effects, both acute and delayed:
Itching; Redness; Coughing and/ or wheezing.
Inhalation: Causes respiratory tract irritation.
Skin: Harmful if absorbed through skin. Causes skin irritation.
Eyes: Causes eye irritation.
Ingestion: Harmful if swallowed.

Indication of any immediate medical attention and special treatment needed: Treat symptomatically

SECTION 5: FIRE-FIGHTING MEASURES

Extinguishing media:	Use media appropriate for the surrounding fire.
Suitable:	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Unsuitable:	Do NOT use water jet.
Flash point:	Not Available.
Autoignition Temperature:	Not Available.
Special hazards arising from the substance:	Decomposes under fire conditions to release sulfur oxides, nitrogen oxides, toxic pyrolysis products.
Hazardous thermal decomposition products:	Nitrogen oxides (NOx), Sulphur oxides (SOx).
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.
Additional Information:	The product is not combustible. Contact with combustible materials may intensify fires. Adjust fire fighting measures to surrounding fire, if possible. Cool endangered containers with water spray and move away from danger area. Collect contaminated fire extinguishing water separately. Do not discharge runoff into drains. Fire residues and contaminated fire extinguishing water must be disposed of according to local regulations.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:	Use personal protective equipment. Avoid breathing vapours, mist or gas. Avoid dust formation. Ensure adequate ventilation.
Environmental precautions:	Should not be released into environment. Prevent from reaching drains, sewer, or waterway. Report releases as required by local and national authorities.
Methods and materials for containment and cleaning up:	Wear protective eyeware, gloves, and clothing. Refer to Section 8. Vacuum, shovel or pump waste into a drum and label contents for disposal. Avoid dust formation. Store in closed container. Always obey local regulations. Keep in suitable closed containers for disposal. Refer to Section 13. If necessary use trained response staff or contractor. **Never add other substances or combustible waste to product residues.**
Special spill response procedures:	In case of transportation accident, contact CHEMTREC at 1-800-424-9300.

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling:	Keep away from heat and sources of ignition. No smoking. Put on appropriate personal protective equipment. Avoid exposure – obtain special instructions before use. Do not get in eyes or on skin or clothing. Do not ingest. Do not breathe vapor or mist. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Use clean plastic or stainless steel scoops only.
Conditions for safe storage:	Heat sensitive, may decompose when heated. Do not store near combustible materials. Keep container tightly closed in a dry and well-ventilated place. Store in accordance with local regulations. Store in a segregated and approved area. Separate from acids, bases, reducing agents and combustibles. Store protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials, food and drink. Containers that have been opened must be resealed and kept upright. Do not store in unlabeled containers.
Incompatible materials:	Acids, alkalis, halides (fluorides, chlorides, bromides), combustible materials, reducing agents and organic compounds.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredient	**Exposure limits**
Sodium Persulfate (CAS No. 7775-27-1)	TWAEV 0.100000 mg/m^3 Canada. Ontario OELs TWA 0.100000 mg/m^3 Canada. British Columbia OEL TWA 0.100000 mg/m^3 Canada. Alberta, Occupational Health and Safety Code TWA 0.1 mg/m^3 USA. ACGIH Threshold Limit Values (TLV)

Engineering controls:	Ensure adequate ventilation, especially in confined areas. Use mechanical exhaust or laboratory fumehood to avoid exposure. Emergency shower and eyewash must be available and tested in accordance with regulations and be in close proximity.
Individual protection measures:	**Respiratory protection:** Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or

CEN (EU).

Skin protection: Handle with gloves. Protective gloves: Neoprene gloves, Polyvinylchloride, Natural Rubber. Gloves must be inspected prior to use. Wear appropriate protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Eye protection

Face shield and safety glasses. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Hygiene measures: Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product. When using, do not eat, drink or smoke.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Crystalline white powder
Odor:	odorless
Odor threshold:	Not available.
pH:	Not available.
Melting point:	Decomposes on heating (180 °C)
Flash point:	Not available.
Density:	1.68 g/cm^3
Oxidizing properties:	oxidizer
Evaporation rate:	Not available.
Solubility in water:	730 g/L at 25 °C (77 °F)
Flammability:	Not flammable.
Upper and lower flammability limits:	Not available.
Vapour pressure:	< 0.0001 hPa (< 0.0001 mmHg)
Vapour density:	Not available.
Partition coefficient n-octanol/water:	Not available.
Auto-ignition temperature:	> 600 °C (> 1,112 °F)
Decomposition temperature:	81 °C
Viscosity:	Not available.

SECTION 10: STABILITY AND REACTIVITY

Reactivity:	Stable at ambient temperature and under normal conditions of use
Chemical stability:	Stable at standard temperature and pressure.
Possibility of hazardous reactions:	Not available.

Conditions to avoid:	Excess heat, ignition sources, moisture, and incompatible materials.
Incompatible materials:	Alcohol, Strong reducing agents, Strong bases, Powdered metals, Organic materials, halides (fluorides, chlorides, bromides).
Hazardous decomposition products:	Hazardous decomposition products formed under fire conditions: Sulfur oxides, Sodium oxides.

SECTION 11: TOXICOLOGICAL INFORMATION

Toxicity data:	LD50 Dermal: Sodium Persulfate: > 10 g/kg
Acute toxicity:	LD50 Oral: Sodium Persulfate: 895 mg/kg (rat) LC50 Inhalation: Sodium Persulfate: > 5.10 mg/L (4h) (rat)
Information on the likely routes of exposure:	Skin, Eyes, Inhalation, Ingestion
Potential health effects (acute):	Skin Contact: Irritating to skin. Eye Contact: Irritating to eyes. Inhalation: Respiratory sensitizer. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause irritation of respiratory tract. Ingestion: May be harmful if swallowed.
Target organ effects:	Eyes, Respiratory System.
Potential chronic health effects:	Allergy, Repeated exposure may cause asthma. May cause sensitization by inhalation and skin contact.
Teratogenicity:	No information available.
Developmental effects:	No information available.
Fertility effects:	No information available.
Irritation/corrosion:	Irritation to eyes, skin and respiratory tract.

SECTION 12: ECOLOGICAL INFORMATION

Toxicity	Toxicity to fish: LC50 - Oncorhynchus mykiss (rainbow trout) - 163 mg/l - 96 h. Toxicity to daphnia and other aquatic invertebrates: EC50 - Daphnia magna (Water flea) - 133 mg/l - 48 h. Toxicity to algae: EC50 - Pseudokirchneriella subcapitata (green algae) - 116 mg/l - 72 h (Method OECD Test Guideline 201).
Persistence and degradability:	Biodegradability does not pertain to inorganic substances.
Bioaccumulative	Does not bioaccumulate.

potential:
Mobility in soil: Dissociates into ions.
Other adverse effects: No information available.

SECTION 13: DISPOSAL CONSIDERATIONS

Disposal methods: **Product:** The generation of waste should be avoided or minimized wherever possible. This material, as supplied, is a hazardous waste according to federal regulations (40 CFR 261). It must undergo special treatment, e.g. at suitable disposal site, to comply with local regulations. Dispose of surplus and nonrecyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.
Contaminated packaging: Empty remaining contents. Dispose of as unused product.

SECTION 14: TRANSPORT INFORMATION

UN Number:	1505 (DOT, IMDG, IATA)
UN proper shipping name:	Sodium persulfate (DOT, IATA) SODIUM PERSULPHATE (IMDG)
Transport hazard class:	5.1 (DOT, IMDG, IATA)
Packing group:	III (DOT, IMDG, IATA)
Special precautions for user:	Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident.

SECTION 15: REGULATORY INFORMATION

Canada WMIS Statement:	This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations.
WHMIS Classification	C - Oxidizing Material Oxidizer D2A - Very Toxic Material Causing Other Toxic Effects Respiratory sensitiser D2B - Toxic Material Causing Other Toxic Effects Moderate skin irritant Moderate eye irritant Skin sensitiser

SECTION 16: OTHER INFORMATION

Revision date: August 16, 2023
UN = United Nations

Disclaimer

While the information and recommendations set forth are believed to be accurate as of data hereof, Aqua Bond Inc., makes no warranty with respect thereto and disclaims all liability from reliance thereon.