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SAFETY DATA SHEET

SECTION 1: IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier:
SODIUM PERIODATE

CAS number: 7790-28-5
EC number: 232-197-6
Pre-registration number: 17-2119894395-22-xxxx

1.2. Relevant identified uses of the substance and uses advised against:
Used as laboratory chemical, and in the production of chemical substances.
For industrial, professional use.

1.3. Details of the supplier of the safety data sheet:
Vinyl Kereskedelmi és Szolgáltató Kft.
3524 Miskolc, Adler Károly út 19.
Tel: +36 46 432 633
Fax: +36 46 365 816

1.3.1. Responsible person: Ferenc Bajusz
E-mail: bajusz.ferenc@vinyl.hu

1.4. Emergency telephone number: **Public Toxicological Health Service (ETTSZ)**
1096 Budapest, Nagyvárad tér 2.
Tel.: 06 1 476 6464, 06 80 201 199 (0-24 h)

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance:

Classification according to Regulation 1272/2008/EC (CLP):
Oxid Sol. 1 – H271
Skin Corr. 1C – H314
Eye Dam. 1 – H318
STOT RE 1 – H372
Aquatic Acute 1 - H400 M-factor=1

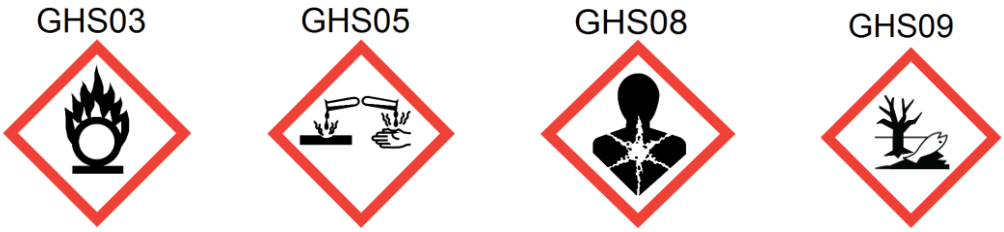
Warning **H statements:**
H271 – May cause fire or explosion; strong oxidiser.
H314 – Causes severe skin burns and eye damage.
H318 – Causes serious eye damage.
H372 – Causes damage to organs through prolonged or repeated exposure (target organ: thyroid gland) .
H400 – Very toxic to aquatic life.

Classification according to Directive 67/548/EEC:
O, Oxidizing – R8
T, Toxic – R48/25
C, Corrosive – R34
Xi, Irritant – R41
N, Dangerous for the environment – R50

R phrases referring to the hazards/risks:
R 8 - Contact with combustible material may cause fire.
R 34 - Causes burns.
R 41 - Risk of serious damage to eyes.
R 48/25 –Toxic: danger of serious damage to health by prolonged exposure if swallowed.
R 50 - Very toxic to aquatic organisms.

2.2. Label elements

CAS number: 7790-28-5
EC number: 232-197-6



DANGER

Warning **H statements:**
H271 – May cause fire or explosion; strong oxidiser.
H314 – Causes severe skin burns and eye damage.
H372 – Causes damage to organs through prolonged or repeated exposure (target organ: thyroid gland).
H400 – Very toxic to aquatic life.

Precautionary **P statements:**
P210 – Keep away from heat, sparks, open flame and hot surfaces. No smoking.
P221 – Take any precaution to avoid mixing with combustibles.
P260 – Do not breathe dust / smoke / gas / mist.
P273 – Avoid release to the environment.
P280 – Wear protective gloves/protective clothing/eye protection/face protection.
P306 + P360 – IF ON CLOTHING: rinse immediately contaminated clothing and skin with plenty of water before removing clothes.
P371 + P380 + P375 – In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.
P501 – Dispose of contents/container as hazardous waste.

2.3. Other hazards:
No other known specific hazards for human or environment.
Results of PBT and vPvB assessment: not necessary, it is an inorganic material.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substance

IUPAC name: Sodium periodate
Synonym: Periodic acid sodium salt; Sodium metaperiodate
CAS number: 7790-28-5
EC number: 232-197-6
Formula: INaO4
Molar mass: 213.89 g/mol
Purity: > 99 %

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures:
General advice: In case of occurring of symptoms or complaints, or in doubt consult a doctor. Show the safety data sheet to the doctor.
IN CASE OF INGESTION:
Measures:

- Obtain immediate medical attention and show him the label.
- Flush the mouth of the victim thoroughly with water.
- Do not induce vomiting.
- Do not give the victim anything to eat or drink, and do not induce vomiting if the victim is unconscious.

IN CASE OF INHALATION:
Measures:
- Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- If necessary administer artificial respiration.

IN CASE OF SKIN CONTACT:
Measures:
- Immediately remove all contaminated clothes.
- Rinse skin with water/shower.
- Contaminated clothing should be soaked in water due to the risk of spontaneous combustion!

IN CASE OF EYE CONTACT:
Measures:
- Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- Immediately call a POISON CENTER or doctor/physician.

4.2. Most important symptoms and effects, both acute and delayed:
May cause coughing, sore throat, skin or eye pain and redness. Harmful if swallowed, can be irritating, corrosive to the stomach and the intestines.

4.3. Indication of any immediate medical attention and special treatment needed:
No data available.

SECTION 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing media:

5.1.1. Suitable extinguishing media:
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
The material is not combustible, but may promote the combustion of other substances. Choose extinguishing media depending on surrounding fire.

5.1.2. Unsuitable extinguishing media:
None known.

5.2. Special hazards arising from the substance or mixture:
May cause fire or explosion; strong oxidiser.
The material is not combustible, but may promote the combustion of other substances.
In case of fire, hydrogen iodide, sodium oxide, sodium iodate, iodine may be formed, the inhalation of such combustion products can have serious adverse effects on health.

5.3. Advise for fire fighters
Wear full protective clothing and self-contained breathing apparatus.
Cool the affected, closed containers with water spray.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures:

6.1.1 For non-emergency personnel:
Keep unprotected people away, allow only well trained experts wearing suitable protective clothing to abide in the field of accident.

6.1.2. For emergency responders:
Wear appropriate personal protective equipment.
Avoid formation of dust.
Avoid breathing dust / fume / gas / mist.
Ensure adequate ventilation.
Remove the ignition sources.
Remove the unauthorized/unprotected personnel.

6.2. Environmental precautions:
Prevent further leakage or spillage if safe to do so.
Dispose of spillage and waste (product/packaging) in accordance with all applicable environmental laws. Do not allow the product and the resulting waste to enter sewers/soil/surface or ground water. Notify the respective authorities in accordance with local law in the case of environmental pollution immediately.

6.3. Methods and material for containment and cleaning up:
Collect the spilled substance mechanically, sweep up and shovel or use electrically protected vacuum cleaner or a damp cloth to collect and soak up, then place the collected waste into appropriate, labeled, closable hazardous waste container till proper removal/disposal.
Avoid generation of dust. Wash up the contaminated area with water.

6.4. Reference to other sections:
For further and detailed information see section 8 and 13.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling:

Observe conventional hygiene precautions.
Avoid contact with skin, eyes and clothing.
Avoid formation of dust.
Avoid breathing dust / fume / gas / mist.
Appropriate personal protective equipment should be used.
Frequent hand washing is required during the work, after the work thorough washing is necessary.
Do not eat, drink or smoke when using this product.
Technical measures:
Ensure adequate ventilation. In those places where dust is formed, ensure adequate aspiration.
Precautions against fire and explosion:
Keep away from heat, sparks, open flame and hot surfaces. No smoking.
Take any precaution to avoid mixing with combustibles.

7.2. Conditions for safe storage, including any incompatibilities:

Technical measures and storage condition:
Keep in original, tightly closed and appropriately labelled container.
Protect from physical damage, friction or shock.
Store in a cool, dry, well-ventilated place.
Avoid direct contact with sunlight.
Incompatible materials: flammable, combustible materials, strong acids, strong reducing agents, metal powders.
Packaging material: no special prescriptions.

7.3. Specific end use(s):

No specific instructions available.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters:

Exposure limit values:
The substance is not regulated with exposure limit value.

DNEL		Routes of exposure	Exposure frequency:	Remarks:
Worker	Consumer			
no data available	no data available	Dermal	Short term (acute) Long term (repeated)	no data available
no data available	no data available	Inhalative	Short term (acute) Long term (repeated)	no data available
no data available	no data available	Oral	Short term (acute) Long term (repeated)	no data available

PNEC			Exposure frequency:	Remarks:
Water	Soil	Air		
no data available	no data available	no data available	Short term (single use) Long term (continuous)	no data available
no data available	no data available	no data available	Short term (single use) Long term (continuous)	no data available
no data available	no data available	no data available	Short term (single use) Long term (continuous)	no data available

8.2. Exposure controls:

In case of a hazardous material with no controlled concentration limit it is the employer's duty to keep concentration levels down to a minimum achievable by existing scientific and technological means, where the hazardous substance poses no harm to workers.

8.2.1 Appropriate engineering controls

In pursuance of work is proper foresight needed to avoid spilling onto clothes and floors and to avoid contact with eyes and skin.
Ensure adequate ventilation.
Do not eat or smoke at work or at the place of use. Wash hands at beginning of every work break and at the end of the working day. Take off immediately all contaminated, soiled clothing, it must be soaked in water due to the risk of spontaneous combustion! Wash the affected skin surface with plenty of water.
Emergency eyewash stations and safety showers must be available at the workplace.

8.2.2. Individual protection measures, such as personal protective equipment:

1. Eye/face protection: wear appropriate protective glasses or face protection (EN 166).
2. Skin protection:

a. Hand protection: use appropriate protective gloves (EN 374). Inspect the gloves before the use. Remove the gloves without touching the outer part to avoid contact with skin. Dispose the contaminated gloves observing the applicable regulations. Wash and dry your hands. Use protective cream to avoid the drying of the skin.
b. Other: use appropriate protective clothing (boots and full protective clothing against chemicals). The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

3. Respiratory protection: where the respiratory apparatus is required according to the risk assessment, use full face mask supplied with P3 (EN 143) gas filter during the engineering supervision. If the respiratory protection is the single tool of protection, use respiratory protection tested and approved under appropriate government standards.

4. Thermal hazard: none known.

8.2.3. Environmental exposure controls:
Avoid discharge of the product into sewers, watercourses, soil.
A risk assessment must be carried out at the place of use.
The requirements detailed in Section 8 assume skilled work under normal conditions and usage of the product for appropriate aims. If conditions differ from normal or work is carried out under extreme conditions an expert's advice should be sought out before deciding upon further protective measures.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties:

Parameter		Test method:	Remarks:
1. **Appearance:**	white or pale yellow solid powder		
2. **Odour:**	odourless		
3. Odour threshold:	no data available		
4. pH value:	3,5-5,5	107 g/l; 25 °C	
5. Melting point/ freezing point:	300 °C		during decomposition
6. Initial boiling point/boiling range:	no data available		
7. Flash point:	no data available		
8. Evaporation rate:	no data available		
9. Flammability:	no data available		
10. Upper/lower flammability or explosive limits:	no data available		
11. Vapour pressure:	no data available		
12 Vapour density:	no data available		
13. Relative density:	no data available		
14. Solubility(ies):	in water: 107 g/l (20 °C) completely soluble 389 g/l (51,5 °C) soluble in acetic acid, sulphuric acid, nitric acid		
15. Partition coefficient: n-octanol/water:	no data available		
16. Self-ignition temperature:	no data available		
17. Degradation temperature:	> 300 °C		
18. Viscosity:	no data available		
19. Explosive properties:	no data available		
20. Oxidizing properties:	strongly oxidising		

9.2. Other information:
The substance is non-combustible, may intensify fire.
Density: 3.9-4.1 g/cm^3 (20 °C)
Bulk density: 2000-2400 kg/m^3

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity:
Reacts violently with reducing agents, combustible materials, and metal powder.

10.2. Chemical stability:
Stable within normal temperature and general work conditions.

10.3. Possibility of hazardous reactions:
Strong oxidant. Contact with combustible materials, reducing agents or powdered metals may cause fire.

10.4. Conditions to avoid:
Do not expose to heat and direct sunlight.
Protect from physical damage, friction or shock.
Keep away from reactive or flammable materials and moisture. Avoid contact with strong reducing agents and finely divided metals.

10.5. Incompatible materials:

Flammable, combustible materials, strong acids, strong reducing agents, metal powders.

10.6. Hazardous decomposition products:
Hydrogen iodide, sodium oxide, sodium iodate, iodine.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects:
Acute toxicity: none known.
Skin corrosion/irritation: causes severe burns.
Serious eye damage/eye irritation: causes serious eye damage.
Respiratory or skin sensitisation: none known.
Germ cell mutagenicity: none known.
Carcinogenicity: none known.
Reproductive toxicity: none known.
STOT-single exposure: none known.
STOT-repeated exposure: causes damage to organs through prolonged or repeated exposure (target organ: thyroid gland)
.
Aspiration hazard: none known.

11.1.1. For substances subject to registration, brief summaries of the information derived from the test conducted:
No data available.

11.1.2. Relevant toxicological properties of the hazardous substances:
LD50 (oral, rat): 264 mg/kg
LD50 (dermal, rat): 1492 mg/kg
LC50 (inhalation, rat): no data available.
LD50 (intraperitoneal, mouse): 58 mg/kg
May be harmful if absorbed through skin.
Irritating to mucous membranes and upper respiratory tract.
Carcinogenity: the substance is not carcinogenic.

11.1.3. Information on likely routes of exposure:
Ingestion, inhalation, skin contact, eye contact.

11.1.4. Symptoms related to the physical, chemical and toxicological characteristics:
No data available.

11.1.5. Delayed and immediate effects as well as chronic effects from short and long-term exposure:
Causes severe skin burns and eye damage.
Causes damage to organs through prolonged or repeated exposure (target organ: thyroid gland).

11.1.6. Interactive effects:
No data available.

11.1.7. Absence of specific data:
No information.

11.1.8. Other information:
Classification of the substance based on the information specified in the REACH registration.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity:
Very toxic to aquatic life.
Classification of the substance based on the information specified in the REACH registration.
Dangerous for the environment. Do not allow to enter water courses, drainage systems, soil.

12.2. Persistence and degradability
Inorganic material does not degrade.

12.3. Bioaccumulation potential:
No data available.

12.4. Mobility in soil
No data available.

12.5. Results of PBT and vPvB assessment
Results of PBT and vPvB assessment: not necessary, it is an inorganic material.

12.6. Other adverse effects:
No data available.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods:
Disposal according to the local regulations.

13.1.1. Information regarding the disposal of the product:
Dispose of contents/container as waste according to the local regulations.
Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material can increase the intensity of the fire; it is an oxidiser. Dispose via officially licensed organization.
It has to be treated as hazardous waste.

No appropriate EWC code can be given for the substance, since the identification of the proper code can be done with the method of use defined by the user of the substance. The European waste code number has to be determined after a discussion with a specialist dealing with waste disposal.

13.1.2. Information regarding the disposal of the packaging:
Treat as unused product.

13.1.3. Physical/chemical properties that may affect waste treatment options shall be specified:
None known.

13.1.4. Sewage disposal:
None known.

13.1.5. Special precautions for any recommended waste treatment:
No data available.

SECTION 14: TRANSPORT INFORMATION

14.1. UN Number:
3085

14.2. UN proper shipping name:
OXIDIZING SOLID, CORROSIVE, N.O.S. (Sodium periodate)

14.3. Transport hazard class(es)
5.1 + 8
EmS: F-A, S-Q

14.4. Packaging group
II

14.5. Environmental hazard
Marine Pollutant: yes

14.6. Special precautions for user:
No relevant information available.

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:
Not applicable.

SECTION 15: REGULATORY INFORMATION

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture:
REGULATION (EC) No 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC

REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006

COMMISSION REGULATION (EU) No 453/2010 of 20 May 2010 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

15.2. Chemical safety assessment: no information available.

SECTION 16: OTHER INFORMATION

Information regarding the revision of the safety data sheet:
The safety data sheet has been revised according to Regulation 453/2010/EU (Section 1-16).
Compared to the previous version (15.10.2014. Version 2) the classification has been amended according to the information available the REACH registration.
Full text of the abbreviations in the safety data sheet:
DNEL: Derived no effect level. PNEC: Predicted no effect concentration. CMR effects: carcinogenity, mutagenicity and toxicity for reproduction. PBT: Persistent, bioaccumulative and toxic. vPvB: very persistent and very bioaccumulative. n.d.: not defined. n.a.: not applicable.
Data sources: ECHA Database of registered substances

Relevant R-Phrases (number and full text) of Section 2 and 3:
R 8 - Contact with combustible material may cause fire.
R 34 - Causes burns.
R 41 - Risk of serious damage to eyes.
R 48/25 –Toxic: danger of serious damage to health by prolonged exposure if swallowed.
R 50 - Very toxic to aquatic organisms.

Relevant H-Phrases (number and full text) of Section 2 and 3:
H271 – May cause fire or explosion; strong oxidiser.
H314 – Causes severe skin burns and eye damage.
H318 – Causes serious eye damage.
H372 – Causes damage to organs through prolonged or repeated exposure (target organ: thyroid gland).
H400 – Very toxic to aquatic life.

Training advice: no data available.
This safety data sheet had been prepared on the basis of information provided by the manufacturer/supplier and conform to the relevant regulations.
The information, data and recommendations contained herein are provided in good faith, obtained from reliable sources and believed to be true and accurate as of the date issued; however, no representation is made as to the comprehensiveness of the information. The SDS shall be used only as a guide for handling the product; in the course of handling and using the product other considerations may arise or be required.
Users are cautioned to determine the appropriateness and applicability of the above information to their particular circumstances and purposes and assume all risk associated with the use of this product. It is the responsibility of the user to fully comply with local, national and international regulations concerning the use of this product.

Safety data sheet was prepared by: ToxInfo Ltd.

Professional help regarding the explanation of the safety data sheet:
+36 70 335 8480; info@msds-europe.hu

Download of safety data sheet: