

Safety Data Sheet (SDS)

OSHA HazCom Standard 29 CFR 1910.1200(g) revised in 2012 and GHS Rev 03.

Issue date 08/11/2020

Reviewed on 08/11/2020

1 Identification

- **Product Identifier**
- **Trade Name: Substitute Ocean Water ASTM D1141-98**
- **Product Number:** 1700-0801, 1700-0807
- **Relevant identified uses of the substance or mixture and uses advised against:**
No further relevant information available.
- **Product Description:** Substitute Ocean Water ASTM D1141-98
- **Details of the Supplier of the Safety Data Sheet:**
- **Manufacturer/Supplier:**
Pickering Laboratories, Inc.
1280 Space Park Way
Mountain View, CA 94043
Phone: (650) 694-6700
Fax: (650) 968-0749
www.pickeringlabs.com
support@pickeringlabs.com
- **Emergency telephone number:**
Clean Harbors Environmental Services
1-800-645-8265

2 Hazard(s) Identification

- **Classification of the substance or mixture:** Non-Regulated Material
- **Label elements:**
- **Hazard pictograms:** Non-Regulated Material
- **Signal word:** Non-Regulated Material
- **Hazard statements:** Non-Regulated Material
- **Unknown acute toxicity:**
This value refers to knowledge of known, established toxicological or ecotoxicological values.
0 % of the mixture consists of component(s) of unknown toxicity.
- **Classification system:** NFPA/HMIS Definitions: 0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme
- **NFPA ratings (scale 0 - 4)**



- **HMIS-ratings (scale 0 - 4)**

HEALTH	0	Health = 0
FIRE	0	Fire = 0
REACTIVITY	0	Physical Hazard = 0

- **Hazard(s) not otherwise classified (HNOC):** None

3 Composition/Information on Ingredients

- **Non-hazardous components:**

CAS: 7732-18-5	Water, distilled water, deionized water	≥85%
CAS: 7647-14-5 RTECS: VZ4725000	Sodium Chloride	<5.0%
CAS: 7786-30-3	Magnesium Chloride	<1.0%
CAS: 7757-82-6	Sodium Sulphate	<0.5%

(Contd. on page 2)

Safety Data Sheet (SDS)

OSHA HazCom Standard 29 CFR 1910.1200(g) revised in 2012 and GHS Rev 03.

Issue date 08/11/2020

Reviewed on 08/11/2020

Trade Name: Substitute Ocean Water ASTM D1141-98

CAS: 7447-40-7	Potassium Chloride	<0.1%
CAS: 144-55-8	Sodium Bicarbonate	<0.1%
CAS: 10476-85-4	Strontium chloride	<0.01%

- **Chemical characterization: Substance**
- **Description:** Mixture of substances listed below with non-hazardous additions.

· **Dangerous Components:**

CAS: 10043-52-4 RTECS: EV 9800000	Calcium Chloride ⚠ Eye Irrit. 2A, H319	<0.5%
CAS: 7758-02-3	Potassium Bromide ⚠ Eye Irrit. 2A, H319	<0.1%
CAS: 10043-35-3 RTECS: ED 4550000	Boric Acid ⚠ Repr. 1B, H360	<0.01%
CAS: 7681-49-4	Sodium fluoride ⚠ Acute Tox. 3, H301; ⚠ Skin Irrit. 2, H315; ⚠ Eye Irrit. 2A, H319	<0.001%

- **Additional information:**
The exact percentages of the ingredients of this mixture are considered to be proprietary and are withheld in accordance with the provisions of paragraph (i) of §1910.1200 of 29 CFR 1910.1200 Trade Secrets.

4 First-Aid Measures

- **Description of first aid measures**
- **General information:** No special measures required.
- **After inhalation:** Not anticipated under normal use.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:**
Hold eyelids apart and flush eyes with plenty of water for at least 15 minutes. Get medical attention.
- **After swallowing:**
Rinse mouth with water ensuring that rinse is not swallowed. Drink 2 glasses of water to dilute and induce vomiting by touching finger to the back of the victims throat. Get medical assistance immediately.
- **Information for doctor**
- **Most important symptoms and effects, both acute and delayed:** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed:**
No further relevant information available.

5 Fire-Fighting Measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** No further relevant information.
- **Special hazards arising from the substance or mixture:** No further relevant information available.
- **Advice for firefighters**
- **Special protective equipment for firefighters:**
As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent) and full protective gear to prevent contact with skin and eyes.

6 Accidental Release Measures

- **Personal precautions, protective equipment and emergency procedures:**
Wear protective equipment. Keep unprotected persons away.
- **Methods and material for containment and cleaning up:**
Ensure adequate ventilation.

(Contd. on page 3)

Safety Data Sheet (SDS)

OSHA HazCom Standard 29 CFR 1910.1200(g) revised in 2012 and GHS Rev 03.

Issue date 08/11/2020

Reviewed on 08/11/2020

Trade Name: Substitute Ocean Water ASTM D1141-98

Absorb with liquid-binding material (i.e. sand, diatomite, acid binders, universal binders, sawdust).
 Dispose of the collected material according to regulations.

· **Reference to other sections:**

See Section 7 for information on safe handling.
 See Section 8 for information on personal protection equipment.
 See Section 13 for disposal information.

· **Protective Action Criteria for Chemicals**

· **PAC-1:**

7786-30-3	Magnesium Chloride	11 mg/m ³
7757-82-6	Sodium Sulphate	9.8 mg/m ³
10043-52-4	Calcium Chloride	12 mg/m ³
144-55-8	Sodium Hydrogencarbonate	13 mg/m ³
7758-02-3	Potassium Bromide	9.2 mg/m ³
10476-85-4	Strontium chloride	8 mg/m ³
10043-35-3	Boric Acid	6 mg/m ³
7681-49-4	Sodium fluoride	17 mg/m ³

· **PAC-2:**

7786-30-3	Magnesium Chloride	120 mg/m ³
7757-82-6	Sodium Sulphate	110 mg/m ³
10043-52-4	Calcium Chloride	130 mg/m ³
144-55-8	Sodium Hydrogencarbonate	140 mg/m ³
7758-02-3	Potassium Bromide	100 mg/m ³
10476-85-4	Strontium chloride	88 mg/m ³
10043-35-3	Boric Acid	23 mg/m ³
7681-49-4	Sodium fluoride	90 mg/m ³

· **PAC-3:**

7786-30-3	Magnesium Chloride	550 mg/m ³
7757-82-6	Sodium Sulphate	650 mg/m ³
10043-52-4	Calcium Chloride	790 mg/m ³
144-55-8	Sodium Hydrogencarbonate	840 mg/m ³
7758-02-3	Potassium Bromide	610 mg/m ³
10476-85-4	Strontium chloride	360 mg/m ³
10043-35-3	Boric Acid	830 mg/m ³
7681-49-4	Sodium fluoride	1,100 mg/m ³

7 Handling and Storage

· **Handling**

· **Precautions for safe handling:**

Ensure good ventilation/exhaustion at the workplace.
 Avoid contact with skin, eyes and clothing
 Avoid breathing fumes.
 Use personal protection equipment as outlined in section 8.

· **Information about protection against explosions and fires:** No special measures required.

(Contd. on page 4)

Safety Data Sheet (SDS)

OSHA HazCom Standard 29 CFR 1910.1200(g) revised in 2012 and GHS Rev 03.

Issue date 08/11/2020

Reviewed on 08/11/2020

Trade Name: Substitute Ocean Water ASTM D1141-98

- **Conditions for safe storage, including any incompatibilities**
- **Storage**
- **Requirements to be met by storerooms and receptacles:** Store refrigerated
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep receptacle tightly sealed.
- **Specific end use(s):** No further relevant information available.

8 Exposure Controls/Personal Protection

- **Additional information about design of technical systems:** No further data; see section 7.
- **Control parameters:**
- **Components with occupational exposure limits:**
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **Additional information:** The lists that were valid during the creation of this SDS were used as basis.
- **Exposure controls:**
- **Personal protective equipment**
- **General protective and hygienic measures:**
Use adequate exhaust ventilation to prevent inhalation of product vapors.
Do not eat or drink while handling product.
Immediately remove all soiled and contaminated clothing.
- **Breathing equipment:**
Respiratory protection is not required unless handling of the material produces nuisance airborne concentrations.
- **Protection of hands:**



Protective gloves

- **Material of gloves:** Latex or vinyl
- **Penetration time of glove material:**
The exact break-through time has to be determined and observed by the manufacturer of the protective gloves.
- **Eye protection:**



Tightly sealed goggles

- **Body protection:** Lab coat
- **Limitation and supervision of exposure into the environment:** None

9 Physical and Chemical Properties

- **Information on basic physical and chemical properties**
- **General Information**
- **Appearance:**

Form:	Liquid
Color:	Colorless
Odor:	Odorless
Odor threshold:	Not determined.

(Contd. on page 5)

Safety Data Sheet (SDS)

OSHA HazCom Standard 29 CFR 1910.1200(g) revised in 2012 and GHS Rev 03.

Issue date 08/11/2020

Reviewed on 08/11/2020

Trade Name: Substitute Ocean Water ASTM D1141-98

- **pH-value:** 8.2
- **Change in condition**
 - Melting point/Melting range:** Not determined.
 - Boiling point/Boiling range:** Not determined.
- **Flash point:** None
- **Flammability (solid, gaseous):** Not applicable.
- **Ignition temperature:** Not applicable
- **Decomposition temperature:** Not determined.
- **Auto igniting:** Product is not self-igniting.
- **Danger of explosion:** Product does not present an explosion hazard.
- **Explosion limits:**
 - Lower:** Not determined.
 - Upper:** Not determined.
- **Vapor pressure:** Not determined.
- **Density:**
 - Relative density:** Not determined.
 - Vapor density:** Not determined.
 - Evaporation rate:** Not determined.
- **Solubility in / Miscibility with:**
 - Water:** Aqueous solution
- **Partition coefficient (n-octanol/water):** Not determined.
- **Viscosity:**
 - Dynamic:** Not determined.
 - Kinematic:** Not determined.
- **Other information:** No further relevant information available.

10 Stability and Reactivity

- **Reactivity:** No further relevant information available.
- **Chemical stability:** Stable under normal conditions.
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions:** No dangerous reactions known.
- **Conditions to avoid:** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological Information

- **Information on toxicological effects:**
- **Acute toxicity:**
- **LD/LC50 values that are relevant for classification:** No data available.
- **Primary irritant effect:**
- **On the skin:** No irritating effect.
- **On the eye:** No irritating effect.

(Contd. on page 6)

Safety Data Sheet (SDS)

OSHA HazCom Standard 29 CFR 1910.1200(g) revised in 2012 and GHS Rev 03.

Issue date 08/11/2020

Reviewed on 08/11/2020

Trade Name: Substitute Ocean Water ASTM D1141-98

· **Additional toxicological information:**

The product is not subject to classification according to internally approved calculation methods for preparations.
When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

· **Carcinogenic categories:**

· **IARC (International Agency for Research on Cancer):**

- Group 1 - Carcinogenic to humans
- Group 2A - Probably carcinogenic to humans
- Group 2B - Possibly carcinogenic to humans
- Group 3 - Not classifiable as to its carcinogenicity to humans
- Group 4 - Probably not carcinogenic to humans

7681-49-4	Sodium fluoride	3
-----------	-----------------	---

· **NTP (National Toxicology Program):**

None of the ingredients are listed.

· **OSHA-Ca (Occupational Safety & Health Administration):**

None of the ingredients are listed.

12 Ecological Information

· **Toxicity:**

- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability:** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential:** No further relevant information available.
- **Mobility in soil:** No further relevant information available.
- **Additional ecological information:**
- **General notes:** Generally not hazardous for water.
- **Results of PBT and vPvB assessment:**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects:** No further relevant information available.

13 Disposal Considerations

· **Waste treatment methods**

· **Recommendation:**

This product may be mixed with a combustible solvent and burned in a chemical incinerator equipped with an after burner and scrubber. This product can also be sent to an EPA approved waste disposal facility.

· **Uncleaned packaging**

· **Recommendation:** Disposal must be made according to official regulations.

14 Transport Information

· **UN-Number:**

· **DOT, ADR/ADN, ADN, IMDG, IATA** Non-Regulated Material

· **UN proper shipping name:**

· **DOT, ADR/ADN, ADN, IMDG, IATA** Non-Regulated Material

· **Transport hazard class(es):**

· **DOT, ADR/ADN, ADN, IMDG, IATA**

· **Class:** Non-Regulated Material

(Contd. on page 7)

Safety Data Sheet (SDS)

OSHA HazCom Standard 29 CFR 1910.1200(g) revised in 2012 and GHS Rev 03.

Issue date 08/11/2020

Reviewed on 08/11/2020

Trade Name: Substitute Ocean Water ASTM D1141-98

- **Packing group:** Non-Regulated Material
- **DOT, ADR/ADN, IMDG, IATA** Non-Regulated Material
- **Environmental hazards:** Not applicable.
- **Special precautions for user:** Not applicable.
- **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:** Not applicable.
- **UN "Model Regulation":** Non-Regulated Material

15 Regulatory Information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture:**
- **SARA (Superfund Amendments and Reauthorization):**

· Section 355 (extremely hazardous substances):		
None of the ingredients are listed.		
· Section 313 (Specific toxic chemical listings):		
None of the ingredients are listed.		
· TSCA (Toxic Substances Control Act):		
All components have the value ACTIVE.		
· Hazardous Air Pollutants		
None of the ingredients are listed.		
· California Proposition 65:		
· Chemicals known to cause cancer:		
None of the ingredients are listed.		
· Chemicals known to cause reproductive toxicity for females:		
None of the ingredients are listed.		
· Chemicals known to cause reproductive toxicity for males:		
None of the ingredients are listed.		
· Chemicals known to cause developmental toxicity:		
None of the ingredients are listed.		
· New Jersey Right-to-Know List:		
7681-49-4	Sodium fluoride	
· New Jersey Special Hazardous Substance List:		
7681-49-4	Sodium fluoride	TE
· Pennsylvania Right-to-Know List:		
7757-82-6	Sodium Sulphate	
7681-49-4	Sodium fluoride	
· Pennsylvania Special Hazardous Substance List:		
7757-82-6	Sodium Sulphate	E
7681-49-4	Sodium fluoride	E
· Carcinogenic categories:		
· EPA (Environmental Protection Agency):		
10043-35-3	Boric Acid	I (oral)
· TLV (Threshold Limit Value established by ACGIH):		
10043-35-3	Boric Acid	A4

Safety Data Sheet (SDS)

OSHA HazCom Standard 29 CFR 1910.1200(g) revised in 2012 and GHS Rev 03.

Issue date 08/11/2020

Reviewed on 08/11/2020

Trade Name: Substitute Ocean Water ASTM D1141-98

7681-49-4	Sodium fluoride	A4
<p>· NIOSH-Ca (National Institute for Occupational Safety and Health): None of the ingredients are listed.</p>		
<p>· GHS label elements Non-Regulated Material · Hazard pictograms: Non-Regulated Material · Signal word: Non-Regulated Material · Hazard statements: Non-Regulated Material</p>		
<p>· National regulations: None of the ingredients are listed.</p>		
<p>· Chemical safety assessment: A Chemical Safety Assessment has not been carried out.</p>		

16 Other Information

The information and recommendations in this safety data sheet are, to the best of our knowledge, accurate as of the date of issue. Nothing herein shall be deemed to create warranty, expressed or implied, and shall not establish a legally valid contractual relationship. It is the responsibility of the user to determine applicability of this information and the suitability of the material or product for any particular purpose.

- **Date of last revision/ revision number:** 08/11/2020 / 3
- **Abbreviations and acronyms:**
 ADR: The European Agreement concerning the International Carriage of Dangerous Goods by Road
 ADN: The European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
 IMDG: International Maritime Code for Dangerous Goods
 DOT: US Department of Transportation
 IATA: International Air Transport Association
 ACGIH: American Conference of Governmental Industrial Hygienists
 EINECS: European Inventory of Existing Commercial Chemical Substances
 ELINCS: European List of Notified Chemical Substances
 CAS: Chemical Abstracts Service (division of the American Chemical Society)
 NFPA: National Fire Protection Association (USA)
 HMIS: Hazardous Materials Identification System (USA)
 LC50: Lethal concentration, 50 percent
 LD50: Lethal dose, 50 percent
 PBT: Persistent, Bioaccumulative and Toxic
 vPvB: very Persistent and very Bioaccumulative
 NIOSH: National Institute for Occupational Safety and Health
 OSHA: Occupational Safety & Health Administration
 TLV: Threshold Limit Value
 PEL: Permissible Exposure Limit
 REL: Recommended Exposure Limit
 Acute Tox. 3: Acute toxicity – Category 3
 Skin Irrit. 2: Skin corrosion/irritation – Category 2
 Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A
 Repr. 1B: Reproductive toxicity – Category 1B
- *** Data compared to the previous version altered.**
 SDS created by MSDS Authoring Services www.msdsauthoring.com +1-877-204-9106