

Safety Data Sheet

according to 29CFR1910/1200 and GHS Rev. 3

Initial preparation date: : 01.06.2015**Winkler's Solution #2****SECTION 1: Identification of the substance/mixture and of the supplier****Product name:** Winkler's Solution #2**Manufacturer/Supplier Article number:** S25625**Recommended uses of the product and restrictions on use:** Laboratory chemicals**Manufacturer Details:**

AquaPhoenix Scientific
860 Gitts Run Road,
Hanover, PA 17331
(717) 632-1291

Supplier Details:

Fisher Science Education
6771 Silver Crest Road, Nazareth, PA 18064
800 955-1177

Emergency telephone number:

Emergency Telephone No.: 800-255-3924

SECTION 2: Hazards identification**Classification of the substance or mixture:****Corrosive**

Skin corrosion, category 1A
Corrosive to metals, category 1
Serious eye damage, category 1

**Environmentally Damaging**

Acute hazards to the aquatic environment, category 3

Corrosive to Metals 1.
Skin corr. 1A.
Eye irrit. cat 1.
Acute aquatic toxicity 3.

Signal word: Danger**Hazard statements:**

May be corrosive to metals.
Causes severe skin burns and eye damage.
Causes serious eye damage.
Harmful to aquatic life.

Precautionary statements:

If medical advice is needed have product container or label at hand.
Keep out of reach of children.
Read label before use.
Keep only in original container.
Do not breathe dust/fume/gas/mist/vapors/spray.
Wash thoroughly after handling.
Avoid release to the environment.
Wear protective gloves/protective clothing/eye protection/face protection.

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Wash contaminated clothing before reuse.

Absorb spillage to prevent material damage.

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do.

Continue rinsing.

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

Immediately call a POISON CENTER or doctor/physician.

Specific treatment (see supplemental first aid instructions on this label).

Store in a corrosive resistant container with a resistant inner liner.

Store locked up.

Dispose of contents/container.

Other Non-GHS Classification: None**SECTION 3: Composition/information on ingredients****Ingredients:**

Ingredients:		
CAS 1310-73-2	Sodium Hydroxide 50% w/w	99.41 %
CAS 7732-18-5	Deionized Water	-15.41 %
CAS 7681-11-0	Potassium Iodide, ACS	16 %
Percentages are by weight		

SECTION 4: First aid measures**Description of first aid measures****After inhalation:**

Move exposed individual to fresh air. Loosen clothing as necessary and position individual in a comfortable position. Seek medical advice if discomfort or irritation persists. Give artificial respiration if necessary. If breathing is difficult give oxygen.

After skin contact:

Wash affected area with soap and water. Seek medical attention immediately.

After eye contact:

Protect unexposed eye. Rinse or flush exposed eye gently using water for 15-20 minutes. Remove contact lenses, if present and easy to do, and continue rinsing. Immediately get medical assistance.

After swallowing:

Do not induce vomiting. Have exposed individual drink sips of water. Seek medical attention immediately.

Most important symptoms and effects, both acute and delayed:

Shortness of breath. Irritation. Nausea. Headache.

Indication of any immediate medical attention and special treatment needed:

If seeking medical attention provide SDS document to physician. Physician should treat symptomatically.

SECTION 5: Firefighting measures**Extinguishing media**

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Use water, dry chemical, chemical foam, carbon dioxide, or alcohol-resistant foam.

Unsuitable extinguishing agents: None**Special hazards arising from the substance or mixture:**

Not considered to be a fire or explosion hazard.

Advice for firefighters:**Protective equipment:**

Wear protective eyewear, gloves, and clothing. Refer to Section 8.

Additional information (precautions):

Avoid contact with skin, eyes and clothing.

SECTION 6: Accidental release measures**Personal precautions, protective equipment and emergency procedures:**

Ensure adequate ventilation. Use under a fume hood.

Environmental precautions:

Prevent from reaching drains, sewer or waterway. Do not release into environment.

Methods and material for containment and cleaning up:

Collect liquid and dilute with water. Refer to Section 13. Neutralize with dilute acid solutions. Decant water to drain with excess water. Absorb with suitable material. Dispose of remaining solid as normal refuse. Always obey local regulations. Wear protective eyewear, gloves, and clothing. Follow proper disposal methods. Refer to Section 8.

Reference to other sections: None**SECTION 7: Handling and storage****Precautions for safe handling:**

Avoid contact with skin, eyes and clothing. Do not inhale gases, fumes, dust, mist, vapor, and aerosols. Wear protective eyewear, gloves, and clothing. Do not mix with acids. Do not eat, drink, smoke, or use personal products when handling chemical substances. Refer to Section 8. Use only in well ventilated areas.

Conditions for safe storage, including any incompatibilities:

Keep container tightly closed in a cool, dry, well-ventilated area. Store as a corrosive. Protect from freezing and physical damage.

SECTION 8: Exposure controls/personal protection**Control parameters:**

1310-73-2, Sodium Hydroxide, OSHA 2 mg/m³.
1310-73-2, Sodium Hydroxide, ACGIH NIOSH 10 mg/m³.

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Appropriate engineering controls:	It is recommended that all dust control equipment such as local exhaust ventilation and material transport systems involved in handling of this product contain explosion relief vents or an explosion suppression system or an oxygen deficient environment. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or handling. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor and mists below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above.
Respiratory protection:	Use under a fume hood.
Protection of skin:	Select glove material impermeable and resistant to the substance. Select glove material based on rates of diffusion and degradation. Wear protective clothing.
Eye protection:	Safety glasses with side shields or goggles.
General hygienic measures:	Wash hands before breaks and immediately after handling the product. Avoid contact with the eyes and skin. Before re-wearing, wash contaminated clothing. Perform routine housekeeping. Wash hands and exposed skin with soap and plenty of water.

SECTION 9: Physical and chemical properties

Appearance (physical state, color):	Clear colorless liquid	Explosion limit lower:	Non Explosive
		Explosion limit upper:	Non Explosive
Odor:	Odorless	Vapor pressure at 20°C:	14 mmHg at 20°C
Odor threshold:	Not applicable	Vapor density:	>1
pH-value:	Alkaline	Relative density:	Not available
Melting/Freezing point:	Approx. 0°C	Solubilities:	Soluble in water.
Boiling point/Boiling range:	Approx. 100°C	Partition coefficient (n-octanol/water):	Not available
Flash point (closed cup):	Not applicable	Auto/Self-ignition temperature:	Not applicable
Evaporation rate:	Not available	Decomposition temperature:	Not available
Flammability (solid, gaseous):	Not available	Viscosity:	a. Kinematic: Not available b. Dynamic: Not available
Density at 20°C:	Not available		

SECTION 10: Stability and reactivity**Reactivity:**

None under normal processing.

Chemical stability:

Stable under normal conditions.

Possible hazardous reactions: None**Conditions to avoid:**

Incompatible materials. Excessive heat.

Incompatible materials:

Acids. Organic halogen compounds. Metals such as aluminum, tin, and zinc.

Hazardous decomposition products:

Sodium oxides. Decomposition by reaction with certain metals releases flammable and explosive hydrogen gas.

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Hydrogen iodide.

SECTION 11: Toxicological information**Acute Toxicity:** No additional information.**Chronic Toxicity:** No additional information.**Skin corrosion/irritation:** No additional information.**Serious eye damage/irritation:** No additional information.**Respiratory or skin sensitization:** No additional information.**Carcinogenicity:** No additional information.**Germ cell mutagenicity:** No additional information.**Reproductive Toxicity:** No additional information.**STOT-single and repeated exposure:** No additional information.**Additional toxicological information:**

No additional information.

SECTION 12: Ecological information**Ecotoxicity:**

Toxicity to aquatic life: , Sodium Hydroxide has high acute and chronic toxicity to aquatic life influenced by hardness and alkalinity of the receiving water.

Persistence and degradability: No additional information.**Bioaccumulative potential:** No additional information.**Mobility in soil:** No additional information.**Other adverse effects:** No additional information.**SECTION 13: Disposal considerations****Waste disposal recommendations:**

Do not allow product to reach sewage system or open water. It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities (US 40CFR262.11).
Neutralize with dilute acid solutions. Comply with all local, state, and federal regulations.

SECTION 14: Transport information**US DOT****UN Number:**

ADR, ADN, DOT, IMDG, IATA

Not regulated

Limited Quantity Exception:

None

Bulk:**RQ (if applicable):** None**Proper shipping Name:** Not regulated.**Hazard Class:** None**Packing Group:** Not regulated.**Marine Pollutant (if applicable):** No**Comments:** None**Non Bulk:****RQ (if applicable):** None**Proper shipping Name:** Not regulated.**Hazard Class:** None**Packing Group:** Not regulated.**Marine Pollutant (if applicable):** No**Comments:** None

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None of the ingredients are listed.

SARA Section 313 (Specific toxic chemical listings):

None of the ingredients are listed.

RCRA (hazardous waste code):

None of the ingredients are listed.

TSCA (Toxic Substances Control Act) :

All ingredients are listed.

CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act):

1310-73-2 Sodium Hydroxide 50% w/w 2000.

Proposition 65 (California):**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.

Canada**Canadian Domestic Substances List (DSL) :**

All ingredients are listed.

SECTION 16: Other information

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations. Note. The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations applicable to this material.

NFPA: 3-0-0**HMIS:** 3-0-0**GHS Full Text Phrases:** None**Abbreviations and Acronyms:**

IMDG International Maritime Code for Dangerous Goods.

PNEC Predicted No-Effect Concentration (REACH).

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CFR	Code of Federal Regulations (USA)
SARA	Superfund Amendments and Reauthorization Act (USA).
RCRA.	Resource Conservation and Recovery Act (USA).
TSCA.	Toxic Substances Control Act (USA).
NPRI	National Pollutant Release Inventory (Canada).
DOT	US Department of Transportation.
IATA	International Air Transport Association.
GHS	Globally Harmonized System of Classification and Labelling of Chemicals.
ACGIH	American Conference of Governmental Industrial Hygienists
CAS	Chemical Abstracts Service (division of the American Chemical Society).
NFPA	National Fire Protection Association (USA).
HMIS	Hazardous Materials Identification System (USA).
WHMIS	Workplace Hazardous Materials Information System (Canada).
DNEL	Derived No-Effect Level (REACH).