Safety Data Sheet

according to OSHA HCS (29CFR 1910.1200) and WHMIS 2015 Regulations

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1 Identification

· **Product identifier**

· **Trade name: Alkaline-Iodide Azide Reagent**
· **Product code:** AI4205-Q

· **Recommended use and restriction on use**
· **Recommended use:** Laboratory chemicals
· **Restrictions on use:** No relevant information available.

· **Details of the supplier of the Safety Data Sheet**
· **Manufacturer/Supplier:**
AquaPhoenix Scientific, Inc.
860 Gitts Run Road
Hanover, PA 17331 USA
Tel +1 (717)632-1291
Toll-Free: (866)632-1291
info@aquaphoenixsci.com
· **Distributor:**
AquaPhoenix Scientific
860 Gitts Run Road,
Hanover, PA 17331
(717) 632-1291

· **Emergency telephone number:**
ChemTel Inc.
(800)255-3924 (North America)
+1 (813)248-0585 (International)

2 Hazard(s) identification

· **Classification of the substance or mixture**

Met. Corr.1	H290	May be corrosive to metals.
Acute Tox. 4	H312	Harmful in contact with skin.
Acute Tox. 3	H331	Toxic if inhaled.
Skin Corr. 1A	H314	Causes severe skin burns and eye damage.
Eye Dam. 1	H318	Causes serious eye damage.
STOT SE 1	H370	Causes damage to the central nervous system, the heart, the blood system, the gastro-intestinal tract and the hematopoietic system.
STOT RE 1	H372-H373	Causes damage to the thyroid through prolonged or repeated exposure. Route of exposure: Oral. May cause damage to the central nervous system through prolonged or repeated exposure. Route of exposure: Oral, Inhalation, Dermal.

· **Label elements**
· **GHS label elements**
The product is classified and labeled according to the Globally Harmonized System (GHS).
· **Hazard pictograms:**

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GHS05 GHS06 GHS08

· **Signal word:** Danger

· **Hazard statements:**

H290	May be corrosive to metals.
H312	Harmful in contact with skin.
H331	Toxic if inhaled.
H314	Causes severe skin burns and eye damage.
H370	Causes damage to the central nervous system, the heart, the blood system, the gastro-intestinal tract and the hematopoietic system.
H372-H373	Causes damage to the thyroid through prolonged or repeated exposure. Route of exposure: Oral. May cause damage to the central nervous system through prolonged or repeated exposure. Route of exposure: Oral, Inhalation, Dermal.

· **Precautionary statements:**

P234	Keep only in original container.
P260	Do not breathe mist/vapors/spray.
P264	Wash thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/protective clothing/eye protection.
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/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.
P310	Immediately call a poison center/doctor.
P308+P311	IF exposed or concerned: Call a poison center/doctor.
P363	Wash contaminated clothing before reuse.
P390	Absorb spillage to prevent material damage.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
P406	Store in corrosive resistant container with a resistant inner liner.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Other hazards** There are no other hazards not otherwise classified that have been identified.

3 Composition/information on ingredients

· **Chemical characterization: Mixtures**

· **Components:**

26628-22-8	sodium azide Acute Tox. 2, H300; Acute Tox. 1, H310; Acute Tox. 2, H330 STOT SE 1, H370-H371; STOT RE 2, H373 Skin Irrit. 2, H315; Eye Irrit. 2A, H319	1%

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7681-11-0	potassium iodide STOT RE 1, H372	15%
1310-73-2	Sodium hydroxide Met. Corr.1, H290; Skin Corr. 1A, H314; Eye Dam. 1, H318	32.08%
7732-18-5	Water	51.92%

· **Additional information:** For the wording of the listed Hazard Statements, refer to section 16.

4 First-aid measures

· **Description of first aid measures**

· **General information:** Immediately remove any clothing soiled by the product.

· **After inhalation:**
Supply fresh air.
Call a doctor immediately.
Provide oxygen treatment if affected person has difficulty breathing.

· **After skin contact:**
Immediately remove any clothing soiled by the product.
Immediately wash with water and soap and rinse thoroughly.
If skin irritation is experienced, consult a doctor.
Seek immediate help for blistering or open wounds.

· **After eye contact:**
Protect unharmed eye.
Remove contact lenses if worn.
Rinse opened eye for several minutes under running water. Then consult a doctor.

· **After swallowing:**
Rinse out mouth and then drink plenty of water.
Do not induce vomiting; immediately call for medical help.

· **Most important symptoms and effects, both acute and delayed:**
Dizziness
Vomiting.
Strong caustic effect on skin and mucous membranes.
Danger of severe eye injury.
Gastric or intestinal disorders when ingested.
Nausea in case of ingestion.

· **Danger:**
Toxic if inhaled.
Harmful in contact with skin.
Danger of gastric perforation.
Causes serious eye damage.
Causes damage to the central nervous system, the heart, the blood system, the gastro-intestinal tract and the hematopoietic system.
Causes damage to the thyroid through prolonged or repeated exposure. Route of exposure: Oral.
May cause damage to the central nervous system through prolonged or repeated exposure. Route of exposure: Oral, Inhalation, Dermal.

· **Indication of any immediate medical attention and special treatment needed:**
Medical supervision for at least 48 hours.
If medical advice is needed, have product container or label at hand.

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5 Fire-fighting measures

· **Extinguishing media**
· **Suitable extinguishing agents:**
The product is not flammable.
Use fire fighting measures that suit the environment.
· **For safety reasons unsuitable extinguishing agents:** None.
· **Special hazards arising from the substance or mixture**
During heating or in case of fire poisonous gases are produced.
· **Advice for firefighters**
· **Protective equipment:**
Wear self-contained respiratory protective device.
Wear fully protective suit.

6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures**
For large spills, use respiratory protective device against the effects of fumes/dust/aerosol.
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation.
· **Environmental precautions**
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
· **Methods and material for containment and cleaning up**
Absorb with non-combustible liquid-binding material (sand, diatomite, acid binders, universal binders).
Send for recovery or disposal in suitable receptacles.
· **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.

7 Handling and storage

· **Handling**
· **Precautions for safe handling:**
Prevent formation of aerosols.
Avoid splashes or spray in enclosed areas.
Use only in well ventilated areas.
· **Information about protection against explosions and fires:** No special measures required.

· **Conditions for safe storage, including any incompatibilities**
· **Requirements to be met by storerooms and receptacles:**
Store only in the original receptacle.
Avoid storage near extreme heat.
Unsuitable material for receptacle: aluminium.
Unsuitable material for receptacle: steel.
Unsuitable material for receptacle: glass or ceramic.
· **Information about storage in one common storage facility:**

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Store away from foodstuffs.
Do not store together with acids.
Store away from oxidizing agents.
Store away from metals.

· **Further information about storage conditions:** Keep containers tightly sealed.

· **Specific end use(s)** No relevant information available.

8 Exposure controls/personal protection

· **Control parameters**

· **Components with limit values that require monitoring at the workplace:**
The following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.

26628-22-8 sodium azide (1%)	
PEL (USA)	Long-term value: 1 mg/m³
REL (USA)	Long-term value: 1 mg/m³
TLV (USA)	Long-term value: 0.2* mg/m³ *as thoracic fraction
EL (Canada)	Long-term value: 0.2 mg/m³ ACGIH A2; IARC 1
EV (Canada)	Long-term value: 0.2 mg/m³
LMPE (Mexico)	Long-term value: 0.2* mg/m³ A2;*fracción torácica
7681-11-0 potassium iodide (15.0%)	
TLV (USA)	Long-term value: NIC-0.015** mg/m³, (0.01*) ppm NIC-Skin; *inhalable fraction & vapor **inhal.;
1310-73-2 Sodium hydroxide (32.08%)	
PEL (USA)	Long-term value: 2 mg/m³
REL (USA)	Ceiling limit value: 2 mg/m³
TLV (USA)	Ceiling limit value: 2 mg/m³
EL (Canada)	Ceiling limit value: 2 mg/m³
EV (Canada)	Ceiling limit value: 2 mg/m³
LMPE (Mexico)	Ceiling limit value: 2 mg/m³

· **Exposure controls**

· **General protective and hygienic measures:**
The usual precautionary measures for handling chemicals should be followed.
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.

· **Engineering controls:** Provide adequate ventilation.

· **Breathing equipment:**
Not required under normal conditions of use.
Use suitable respiratory protective device when aerosol or mist is formed.

· **Protection of hands:**

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Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

· **Material of gloves**
Nitrile rubber, NBR
Neoprene gloves
Butyl rubber, BR
Fluorocarbon rubber (Viton)
Natural rubber, NR
Sensibilization by the components in the glove materials is possible.

· **Not suitable are gloves made of the following materials:** PVA gloves

· **Eye protection:**

Safety glasses

· **Body protection:** Alkaline resistant protective clothing

· **Limitation and supervision of exposure into the environment**
No relevant information available.

· **Risk management measures** No relevant information available.

9 Physical and chemical properties

· **Information on basic physical and chemical properties**	
· **Appearance:**	
Form:	Liquid
Color:	Colorless
· **Odor:**	Acrid
· **Odor threshold:**	Not determined.
· **pH-value at 20 °C (68 °F):**	>13
· **Melting point/Melting range:**	Not determined.
· **Boiling point/Boiling range:**	Not determined.
· **Flash point:**	The product is not flammable. Not applicable.
· **Flammability (solid, gaseous):**	Not applicable.
· **Auto-ignition temperature:**	Not determined.
· **Decomposition temperature:**	Not determined.
· **Danger of explosion:**	Product does not present an explosion hazard.
· **Explosion limits**	
Lower:	Not determined.
Upper:	Not determined.
· **Oxidizing properties:**	Not determined.

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· **Vapor pressure:**	Not determined.
· **Density:**	
Relative density:	Not determined.
Vapor density:	Not determined.
Evaporation rate:	Not determined.
· **Solubility in / Miscibility with**	
Water:	Soluble.
· **Partition coefficient (n-octanol/water):**	Not determined.
· **Viscosity**	
Dynamic:	Not determined.
Kinematic:	Not determined.
· **Other information**	No relevant information available.

10 Stability and reactivity

· **Reactivity:** Corrosive action on metals.
· **Chemical stability:** Stable under normal temperatures and pressures.
· **Thermal decomposition / conditions to be avoided:**
No decomposition if used and stored according to specifications.
· **Possibility of hazardous reactions**
Strong exothermic reaction with acids.
Corrosive action on metals.
Reacts with strong oxidizing agents.
Toxic fumes may be released if heated above the decomposition point.
· **Conditions to avoid** No relevant information available.
· **Incompatible materials**
Metals.
Acids.
Oxidizers
· **Hazardous decomposition products**
Under fire conditions only:
Nitrogen oxides (NOx)
Iodine compounds

11 Toxicological information

· **Information on toxicological effects**
· **Acute toxicity:**
Toxic if inhaled.
Harmful in contact with skin.

· **LD/LC50 values that are relevant for classification:**		
26628-22-8 sodium azide		
Oral	LD50	27 mg/kg (rat)

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Dermal	LD50	20 mg/kg (rabbit)
7681-11-0 potassium iodide		
Oral	LD50	3118 mg/kg (rat)

· **Primary irritant effect:**
· **On the skin:** Strong caustic effect on skin and mucous membranes.
· **On the eye:** Strong caustic effect.
· **Sensitization:** Based on available data, the classification criteria are not met.

· **IARC (International Agency for Research on Cancer):**
None of the ingredients are listed.

· **NTP (National Toxicology Program):**
None of the ingredients are listed.

· **OSHA-Ca (Occupational Safety & Health Administration):**
None of the ingredients are listed.

· **Probable route(s) of exposure:**
Ingestion.
Inhalation.
Eye contact.
Skin contact.
· **Acute effects (acute toxicity, irritation and corrosivity):**
Causes severe skin burns and eye damage.
Harmful in contact with skin.
Toxic if inhaled.
Causes damage to the central nervous system, the heart, the blood system, the gastro-intestinal tract and the hematopoietic system.
· **Repeated dose toxicity:** Danger of very serious irreversible effects.
· **Germ cell mutagenicity:** Based on available data, the classification criteria are not met.
· **Carcinogenicity:** Based on available data, the classification criteria are not met.
· **Reproductive toxicity:** Based on available data, the classification criteria are not met.
· **STOT-single exposure:**
Causes damage to the central nervous system, the heart, the blood system, the gastro-intestinal tract and the hematopoietic system.
· **STOT-repeated exposure:**
Causes damage to the thyroid through prolonged or repeated exposure. Route of exposure: Oral.
May cause damage to the central nervous system through prolonged or repeated exposure. Route of exposure: Oral, Inhalation, Dermal.
· **Aspiration hazard:** Based on available data, the classification criteria are not met.

12 Ecological information

· **Toxicity**
· **Aquatic toxicity** No relevant information available.
· **Persistence and degradability** No relevant information available.
· **Bioaccumulative potential:** No relevant information available.
· **Mobility in soil:** No relevant information available.
· **Additional ecological information**
· **General notes:**
Must not reach bodies of water or drainage ditch undiluted or unneutralized.

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Rinse off of bigger amounts into drains or the aquatic environment may lead to increased pH-values. A high pH-value harms aquatic organisms. In the dilution of the use-level the pH-value is considerably reduced, so that after the use of the product the aqueous waste, emptied into drains, is only low water-dangerous.

· **Other adverse effects** No relevant information available.

13 Disposal considerations

· **Waste treatment methods**

· **Recommendation:**

Must not be disposed of together with household garbage. Do not allow product to reach sewage system. The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes. Residual materials should be treated as hazardous.

· **Uncleaned packagings**

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

14 Transport information

· **UN-Number**	
· **DOT, ADR/RID/ADN, IMDG, IATA**	UN1824
· **UN proper shipping name**	
· **DOT**	Sodium hydroxide solution
· **ADR/RID/ADN**	SODIUM HYDROXIDE SOLUTION SODIUM HYDROXIDE SOLUTION
· **IMDG, IATA**	SODIUM HYDROXIDE SOLUTION
· **Transport hazard class(es)**	
· **DOT**	

· **Class**	8
· **Label**	8
· **ADR/RID/ADN**	

· **Class**	8 (C5)
· **Label**	8

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· **IMDG, IATA**

· **Class**	8
· **Label**	8
· **Packing group**	
· **DOT, ADR/RID/ADN, IMDG, IATA**	II
· **Environmental hazards**	Not applicable.
· **Special precautions for user**	Warning: Corrosive substances
· **Hazard identification number (Kemler code):**	80
· **EMS Number:**	F-A,S-B
· **Segregation groups**	Acids
· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**	Not applicable.

15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**

· **United States (USA)**

· **SARA**

· **Section 302 (extremely hazardous substances):**	
26628-22-8	sodium azide

· **Section 313 (Specific toxic chemical listings):**	
26628-22-8	sodium azide

· **TSCA (Toxic Substances Control Act)**

All ingredients are listed or exempt.

· **Proposition 65 (California)**

· **Chemicals known to cause cancer:**

None of the ingredients are listed.

· **Chemicals known to cause developmental toxicity for females:**

None of the ingredients are listed.

· **Chemicals known to cause developmental toxicity for males:**

None of the ingredients are listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients are listed.

· **EPA (Environmental Protection Agency):**

None of the ingredients are listed.

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

None of the ingredients are listed.

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

None of the ingredients are listed.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Abbreviations and acronyms:**

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
CAS: Chemical Abstracts Service (division of the American Chemical Society)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
OSHA: Occupational Safety & Health Administration
Met. Corr.1: Corrosive to metals – Category 1
Acute Tox. 2: Acute toxicity – Category 2
Acute Tox. 1: Acute toxicity – Category 1
Acute Tox. 4: Acute toxicity – Category 4
Acute Tox. 3: Acute toxicity – Category 3
Skin Corr. 1A: Skin corrosion/irritation – Category 1A
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Dam. 1: Serious eye damage/eye irritation – Category 1
Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A
STOT SE 1: Specific target organ toxicity (single exposure) – Category 1
STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1
STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2

· **Sources**

Website, European Chemicals Agency (echa.europa.eu)
Website, US EPA Substance Registry Services (ofmpub.epa.gov/sor internet/registry/substreg/home/overview/home.do)
Website, Chemical Abstracts Registry, American Chemical Society (www.cas.org)
Patty's Industrial Hygiene, 6th ed., Rose, Vernon, ed. ISBN: 978-0-470-07488-6
Casarett and Doull's Toxicology: The Basic Science of Poisons, 8th Ed., Klaasen, Curtis D., ed., ISBN: 978-0-07-176923-5.
Safety Data Sheets, Individual Manufacturers