MATERIAL SAFETY DATA SHEET

Alkaline-Iodide-Azide APHA Alsterberg Method

SECTION 1 . Product and Company Idenfication

Product Name and Synonym: Alkaline-Iodide-Azide APHA Alsterberg Method

Product Code: 0220

Material Uses:

Manufacturer: Science Stuff
1104 Newport Ave

Austin, TX 78753
(512) 837-6020

Entry Date : 6/7/2013

Print Date: 6/7/2013

24 Hour Emergency Assistance : Chemtrec 800-424-9300
Canutec 613-996-6666

Health:	3
Flammability:	0
Reactivity:	0

Hazard Rating:
Least 0 Slight 1 Moderate 2 High 3 Extreme 4

NA=Not Applicable NE=Not Established

SECTION 2 HAZARD IDENTIFICATION

Causes severe irritation and burns. Harmful if swallowed. Avoid breathing vapor or dust. Use with adequate ventilation. Avoid contact with eyes, skin, and clothes. Wash thoroughly after handling. Keep container closed.

SECTION 3 MIXTURE COMPONENTS

SARA 313	Component	CAS Number	Percent Comp.	Dimension	Exposure Limits
☐	Potassium Iodide	CAS# 7681-11-0	15%	W/V	TXDS: orl-hmn LDLo: 1862 mg/Kg
☑	Sodium Azide (Sodium Trinitride)	CAS# 26628-22-8	1%	W/V	ACGIH (C) 0.11 ppm (0.29 mg/m*f*)
☑	Sodium Hydroxide	CAS# 1310-73-2	50%	W/V	OSHA PEL 2 mg/m*f* ACGIH 2mg/m*f*
☐	Water, Deionized ASTM Type II	CAS# 7732-18-5	Balance	V/V	None Established

SECTION 4 FIRST AID MEASURES

Causes severe irritation and burns. Harmful if swallowed. Avoid breathing vapor or dust. Use with adequate ventilation. Avoid contact with eyes, skin, and clothes. Wash thoroughly after handling. Keep container closed.

FIRST AID: CALL A PHYSICIAN. SKIN: In case of contact, immediately flush skin with water for at least 15 minutes while removing contaminated clothing and shoes. Thoroughly clean clothing and shoes before reuse.

EYES: Wash eyes with plenty of water for at least 15 minutes, lifting lids occasionally. Seek Medical Aid. INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen

INGESTION: Give several glasses of milk or water. Vomiting may occur spontaneously, but DO NOT INDUCE! Never give anything by mouth to an

unconscious person.

SECTION 5 FIRE FIGHTING MEASURES

Fire Extinguisher Type:	Any means suitable for extinguishing surrounding fire
Fire / Explosion Hazards:	Thermal decomposition produces highly toxic fumes.
Fire Fighting Procedure:	Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and clothing.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Absorb spill with inert material, then place in a chemical waste container. Neutralize carefully with a weak acid.

SECTION 7 HANDLING AND STORAGE

Store in a cool, dry, well-ventilated place away from incompatible materials. Wash thoroughly after handling.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Respiratory Protection:	NIOSH/MSHA-approved respirator
Ventilation	
	Local Exhaust ☑
	Mechanical ☐
Protective Gloves:	Gloves to prevent skin exposure as rubber or vinyl
Eye Protection:	Splash Goggles
Other Protective Equipment:	Wear appropriate clothing to prevent skin exposure

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Melting Point:	information not available	Percent Volatile by Volume:	~45%
Boiling Point:	information not available	Evaporation Rate	N/E
Vapor Pressure:	N/E	Evaporation Standard	
Vapor Density:	information not available	Auto Ignition Temp	N/E
Solubility in Water:	Soluble	Lower Flamm. Limit in Air	N/A
Appearance /Odors:	Colorless odorless liquid	Upper Flamm. Limit in Air	N/A
Flash Point:	N/A		
Specific Gravity:	>1		

SECTION 10 STABILITY AND REACTIVITY INFORMATION

Stability:	Stable
Conditions to Avoid:	Avoid contact with incompatible materials.

Materials to Avoid:	Acids, acid chlorides, metals, oxidizers, halogenated solvents
Hazardous Decomposition Products:	See Section 11
Hazardous polymerization:	Will Not Occur
Conditions to Avoid:	None known

SECTION 11 Toxicological Information

Sodium Azide:
Routes of Entry: Eye contact. Inhalation. Ingestion.
Toxicity to Animals:
Acute oral toxicity (LD50): 27 mg/kg [Mouse]. Acute dermal toxicity (LD50): 20 mg/kg [Rabbit].
Chronic Effects on Humans: Not available.
Other Toxic Effects on Humans:
Very hazardous in case of skin contact (irritant). Hazardous in case of ingestion, of inhalation. Slightly hazardous in case of
skin contact (permeator).

Sodium Hydroxide

Test	Route	Species	Result
LDLo	Oral	Rabbit	500 mg/kg

Carcinogenic effects: No known significant effects or critical hazards
Mutagenic effects: No known significant effects or critical hazards
Teratogenicity/Reproductive toxicity: No known significant effects or critical hazards

Potassium Iodide

LDLo	Intravenous	Rat	167 mg/kg
LDLo	Oral	Rabbit	916 mg/kg
LDLo	Oral	Mouse	1862 mg/kg

Carcinogenic effects: No known significant effects or critical hazards
Mutagenic effects: No known significant effects or critical hazards
Teratogenicity/Reproductive toxicity: No known significant effects or critical hazards

SECTION 12 Ecological Information

Aquatic toxicity

Product/ ingredient name
Sodium Hydroxide

Result	Species	Exposure
Acute EC50 40.38 to 47.13 mg/L fresh water	Daphnia- water flea Ceriodaphnia dudia- neonate - < 24 hours	48 hours
Acute LC50 33000 to 100000 ug/L marine water	Crustaceans- Common shrimp, sand shrimp- crangon adult	48 hours
Acute LC50 125000 Ug/L fresh water	Fish- western mosquitofish- gambusia affinis- adult	96 hours

Potassium Iodide

Acute LC50 2190 mg/L Fresh water Fish - Rainbow trout, donaldson trout - Oncorhynchus mykiss 96 hours
Acute LC50 896 mg/L Fish 96 hours
Acute LC50 896000 ug/: Fresh water Fish - Rainbow trout, donaldson trout - Oncorhynchus mykiss - 50 mm 96 hours

Environmental effects : No known significant effects or critical hazards.
Other adverse effects : No known significant effects or critical hazards.

SECTION 13 Disposal Considerations

The information presented only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and

physical properties of the material generated to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. Disposal should be in accordance with applicable regional, national and local laws and regulations.

SECTION 14 Transport Information

DOT Classification: UN2922, Corrosive Liquid, Toxic, NOS (Sodium Hydroxide, Sodium Azide), 8,(6.1), PG II

DOT Regulations may change from time to time. Please consult the most recent D.O.T. regulations.

SECTION 15 Regulatory Information

Federal and State Regulations:
Pennsylvania RTK: Sodium azide Massachusetts RTK: Sodium azide TSCA 8(b) inventory: Sodium azide SARA
302/304/311/312 extremely hazardous substances: Sodium azide SARA 313 toxic chemical notification and release reporting:
Sodium azide CERCLA: Hazardous substances.: Sodium azide
Other Regulations: OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).
Other Classifications:
WHMIS (Canada): CLASS D-1A: Material causing immediate and serious toxic effects (VERY TOXIC).
DSCL (EEC):
R38- Irritating to skin. R41- Risk of serious damage to eyes.

U.S. Federal regulations:

United States inventory (TSCA 8b): This material is listed or exempted.
TSCA (Toxic Substance Control Act): This product is listed on the TSCA Inventory.
SARA 302/304/311/312 extremely hazardous substances: No products were found.
SARA 302/304 emergency planning and notifications: No products were found.
SARA 302/304/311/312 hazardous chemicals: Sodium Hydroxide
SARA 311/312 MSDS distribution- Chemical inventory- hazard identification: Sodium Hydroxide: Immediate (acute) health hazard.
Clean Water Act (CWA) 307: No products were found.
Clean Water Act (CWA) 311: Sodium Hydroxide
Clean Air Act (CAA) 112 accidental release prevention: No products were found.
Clean Air Act (CAA) 112 regulated flammable substance: No products were found.
Clean Air Act (CAA) 112 regulated toxic substance: No products were found.

DEA List I Chemicals : not listed
(Precursor Chemicals)
DEA List II Chemicals : not listed
(essential Chemicals)

Massachusetts Substance : This material is listed.
New Jersey Hazardous Substances : This material is listed.
New York Acutely Hazardous Substances : This material is listed.
Pennsylvania RTK Hazardous Substances : This material is listed.

Canada
WHMIS (Canada)
Class D-1B: Material causing immediate and serious toxic effects (Toxic)
Class E: Corrosive material
Canadian lists : CEPA Toxic Substance: This material is not listed.
Canadian ARET: This material is not listed.
Canadian NPRI: This material is not listed.
Alberta Designated Substances: This material is not listed.
Ontario Designated Substances: This material is not listed.
Quebec Designated Substances: This material is not listed.

CEPA DSL/ CEPA NDSL : CEPA DSL: This material is not listed.
This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

EU regulations:
Risk phrases: This product is not classified according to EU legislation

International regulations
International lists: Australia inventory (AICS): This material is listed or exempted.
China inventory (IECSC): This material is listed or exempted.
Japan inventory (ENCS): This material is listed or exempted.
Japan inventory (ISHL): Not determined.
Korea inventory (KECI): This material is listed or exempted.
New Zealand Inventory of Chemicals (NZIoC): This material is listed or exempted.
Philippians inventory (PICCS): This material is listed or exempted.

United States

HCS Classification:
Irritating material

U.S. Federal regulations:

United States inventory (TSCA 8b): listed
TSCA (Toxic Substance Control Act): This product is listed on the TSCA Inventory.
SARA 302/304/311/312 extremely hazardous substances: No products were found.
SARA 302/304 emergency planning and notifications: No products were found.
SARA 302/304/311/312 hazardous chemicals: Potassium Iodide
SARA 311/312 MSDS distribution- Chemical inventory- hazard identification: Potassium Iodide
Immediate (acute) health hazard, Delayed (chronic) health hazard
Clean Water Act (CWA) 307: No products were found
Clean Water Act (CWA) 311: No products were found
Clean Air Act (CAA) 112 accidental release prevention: No products were found
Clean Air Act (CAA) 112 regulated flammable substance: No products were found
Clean Air Act (CAA) 112 regulated toxic substance: No products were found.

DEA List I Chemicals : not listed
(Precursor Chemicals)
DEA List II Chemicals : not listed
(essential Chemicals)

Canada
WHMIS (Canada) : Not controlled under WHMIS (Canada).

Canadian lists :
CEPA Toxic Substance: This material is not listed.
Canadian ARET: This material is not listed.
Canadian NPRI: This material is not listed.
Alberta Designated Substances: This material is not listed.
Ontario Designated Substances: This material is not listed.
Quebec Designated Substances: This material is not listed.

CEPA DSL/ CEPA NDSL : CEPA DSL:
This material is listed or exempted.
This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

SECTION 16 Additional Information

Flammability

Health

Reactivity

NFPA

Revisions

10/24/2012	0.1	Revised to 16 sections LS
10/24/2012	0	Creation date 8/1/2007 LS

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