SDS #: 413.00

Revision Date: March 25, 2014

#### SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

#### Iodine Solution, Lugol

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word

WARNING

Pictograms

#### **SECTION 2 — HAZARDS IDENTIFICATION**

Hazard class: Skin and serious eye damage, corrosion or irritation (Category 2, 2B). Causes skin and eye irritation (H315+H320).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Iodine Potassium iodide	7553-56-2 7681-11-0	I <sub>2</sub> KI	253.81 166.01	2% 2%
Water	7732-18-5	H <sub>2</sub> O	18.00	96%

#### **SECTION 4 — FIRST AID MEASURES**

Call a POISON CENTER or physician if you feel unwell.

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

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing (P305+P351+P338). If eye irritation persists: Get medical advice or attention (P337+P313).

If on skin: Wash with plenty of water (P302+P352). If skin irritation occurs: Get medical advice or attention (P332+P313).

If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

#### **SECTION 5 — FIRE FIGHTING MEASURES**

Nonflammable, noncombustible solution.

In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE

None established

#### **SECTION 6 — ACCIDENTAL RELEASE MEASURES**

Ventilate area. Contain the spill with sand or absorbent material and deposit in a sealed bag or container. See Sections 8 and 13 for further information.

Safety Data Sheet

lodine Solution, Lugol

SDS #: 413.00

Revision Date: March 25, 2014

#### SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #2. Store with acetates, halides, sulfates, sulfates, thiosulfates and phosphates. Store away from heat and direct light.

#### SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling (P264). Will stain skin, clothing, and surfaces.

Exposure guidelines: (as iodine) Ceiling 0.1 ppm (OSHA); TLV 0.01 ppm (inhalable fraction and vapor) (ACGIH)

#### **SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES**

Deep brown liquid. Iodine odor.

Biological stain, Lugol's stain.

#### **SECTION 10 — STABILITY AND REACTIVITY**

Shelf life: Fair to poor. See Section 7 for further information.

#### **SECTION 11 — TOXICOLOGICAL INFORMATION**

Acute effects: Irritant.

Chronic effects: N.A.

Target organs: N.A.

ORL-HUM LD<sub>50</sub>: 2-4 g as iodine

IHL-RAT LC<sub>50</sub>: N.A.

SKN-RBT LD50: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

#### **SECTION 12 — ECOLOGICAL INFORMATION**

Data not yet available.

#### SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.

Flinn Suggested Disposal Method #12a is one option.

#### **SECTION 14 — TRANSPORT INFORMATION**

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

#### SECTION 15 — REGULATORY INFORMATION

Not listed.

#### **SECTION 16 — OTHER INFORMATION**

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Consult your copy of the Flinn Science Catalog/Reference Manual for additional information about laboratory chemicals.

Revision Date: March 25, 2014

SDS #: 420.00

Revision Date: March 25, 2014

#### SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

#### Isopropyl Alcohol

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word

DANGER

Pictograms

#### **SECTION 2 — HAZARDS IDENTIFICATION**

Hazard class: Flammable liquids (Category 2). Highly flammable liquid and vapor (H225). Keep away from heat, sparks, open flames, and hot surfaces. No smoking (P210).

Hazard class: Skin corrosion or irritation (Category 3), Causes mild skin irritation (H316).

Hazard class: Serious eye damage or irritation (Category 2A). Causes serious eye irritation (H319).

Hazard class: Specific target organ toxicity, single exposure; Narcotic effects (Category 3). May cause drowsiness or dizziness (H336). Avoid breathing mist, vapors or spray (P261).

The single lethal dose for a human adult is about 250 mL, although as little as 100 mL can be fatal. Although isopropyl alcohol is slightly toxic by definition, teachers should be alert to students attempting to drink this "alcohol" on a dare.



SECTION 3 -- COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Isopropyl alcohol	67-63-0	$C_3H_8O$	60.10	
Synonyms: 2-Propanol, Rubbing alcohol				

#### SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell (P312).

If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing (P304+P340).

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing (P305+P351+P338). If eye irritation persists: Get medical advice or attention (P337+P313).

If on skin (or hair): Immediately remove all contaminated clothing. Rinse skin with water (P303+P361+P353). If skin irritation occurs: Get medical advice or attention (P332+P313).

#### **SECTION 5 — FIRE FIGHTING MEASURES**

Class IB flammable liquid.

Flash point: 12 °C Flammable limits: Lower: 2.0% Upper: 12.7% Autoignition Temperature: 399 °C

When heated to decomposition, may emit toxic fumes.

F-3

In case of fire: Use a tri-class dry chemical fire extinguisher (P370+P378).

R-0

#### SECTION 6 — ACCIDENTAL RELEASE MEASURES

Remove all ignition sources and ventilate area. Contain the spill with sand or other inert absorbent material and deposit in a sealed bag or container. See Sections 8 and 13 for further information.

Safety Data Sheet

Isopropyl Alcohol

SDS #: 420.00

Revision Date: March 25, 2014

#### **SECTION 7 — HANDLING AND STORAGE**

Flinn Suggested Chemical Storage Pattern: Organic #2. Store with alcohols, glycols, amines and amides. Store in a dedicated flammables cabinet. If a flammables cabinet is not available, store in Flinn Saf-Stor<sup>TM</sup> can.

Keep container tightly closed (P233). Keep cool (P235). Use only in a hood or well-ventilated area (P271). Avoid prolonged storage (see Section 10).

#### SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling (P264). Use only in a hood or well-ventilated area (P271).

Exposure guidelines: PEL 980 mg/m<sup>3</sup> (OSHA); TLV 492 mg/m<sup>3</sup> Ceiling 984 mg/m<sup>3</sup> (ACGIH)

#### **SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES**

Clear, colorless liquid. Distinctive odor like rubbing alcohol.

Soluble: Water, alcohol, and ether

Boiling point: 83 °C Melting point: -889 °C

Specific gravity: 0.8

#### SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with strong oxidizers, acetaldehyde, chlorine, ethylene oxide, acids, and isocyanates.

Shelf life: Fair. Organic peroxides may develop if exposed to light and air, which can result in explosions, especially when distilled. Avoid prolonged storage.

#### **SECTION 11 — TOXICOLOGICAL INFORMATION**

Acute effects: Serious eye irritant, mild skin irritant, dizziness,

drowsiness, nausea, headache.

Chronic effects: N.A.

Target organs: Eyes, skin, respiratory system.

ORL-RAT LD<sub>50</sub>: 5045 mg/kg IHL-RAT LC<sub>50</sub>: 16,000 ppm/8H SKN-RBT LD<sub>50</sub>: 12,800 mg/kg

N.A. = Not available, not all health aspects of this substance have been fully investigated.

#### **SECTION 12 — ECOLOGICAL INFORMATION**

Data not yet available.

#### **SECTION 13 — DISPOSAL CONSIDERATIONS**

Please review all federal, state and local regulations that may apply before proceeding.

Flinn Suggested Disposal Method #18a is one option.

#### **SECTION 14 — TRANSPORT INFORMATION**

Shipping name: Isopropyl alcohol. Hazard class: 3, Flammable liquid. UN number: UN1219.

N/A = Not applicable

#### **SECTION 15 — REGULATORY INFORMATION**

TSCA-listed, EINECS-listed (200-661-7), RCRA code D001.

#### **SECTION 16 — OTHER INFORMATION**

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Consult your copy of the *Flinn Science Catalog/Reference Manual* for additional information about laboratory chemicals. Revision Date: March 25, 2014

SDS #: 480.00

Revision Date: February 6, 2014

## SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

## Magnesium Sulfate Heptahydrate

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word N/A

Pictograms

### SECTION 2 — HAZARDS IDENTIFICATION

This chemical is considered nonhazardous according to GHS classifications for the Hazard Communication Standard. Treat all laboratory chemicals with caution.

Although this material is considered to be nonhazardous, unpredictable reactions among chemicals are always possible. Prudent laboratory practices should be observed.

SECTION 3 — COMPOSITION, INFORMATION ON	INGREDIENTS		···	
	CAS Number	Formula	Formula Weight	Concentration
Component Name  Magnesium sulfate heptahydrate	10034-99-8	MgSO <sub>4</sub> ·7H <sub>2</sub> O	246.50	
				-
Synonym: Epsom saits				

### SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell.

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

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing.

If on skin: Wash with plenty of water.

If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

#### SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable solid.

When heated to decomposition, may emit toxic fumes.

In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE

None established

### SECTION 6 — ACCIDENTAL RELEASE MEASURES

Ventilate area and sweep up the spill, place in a sealed bag or container, and dispose. Wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

Safety Data Sheet

Magnesium Sulfate Heptahydrate

SDS #: 480.00

Revision Date: February 6, 2014

## SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #2. Store with acetates, halides, sulfates, sulfates, thiosulfates and phosphates. Slightly hygroscopic. Store in a cool, dry place within a Flinn Chem-Saf<sup>™</sup> bag.

## SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection. Wash hands thoroughly after handling.

## SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

White powder. Odorless. Soluble: Water and glycerol Specific gravity: 1.678

## SECTION 10 — STABILITY AND REACTIVITY

Shelf life: Poor, hygroscopic. See Section 7 for further information.

## SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Irritant, abdominal pain.

Chronic effects: N.A. Target organs: Central nervous system, GI system. ORL-RAT LD50: N.A.

IHL-RAT LC50: N.A.

SKN-RBT LD50: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

## SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

## SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.

Flinn Suggested Disposal Method #26a is one option.

## SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

## SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (231-298-2).

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Consult your copy of the Flinn Science Catalog/Reference Manual for additional information about laboratory chemicals.

Revision Date: February 6, 2014



Safety Data Sheet

According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations Revision Date: 05/21/2015 Date of issue: 05/21/2015 Supersedes Date: 01/02/2014

Version: 1.0

#### SECTION 1: IDENTIFICATION

**Product Identifier** 

Product Name: NASCO-Guard® Preserved Specimens

Intended Use of the Product

Science education applications.

Name, Address, and Telephone of the Responsible Party

Nasco

901 Janesville Ave.

Fort Atkinson, WI 53538-0901

800-558-9595

**Emergency Telephone Number** 

Emergency Number: 800-558-9595 (7am-4pm CST, M-F)

24-Hour Emergency Contact — CHEMTREC 800-424-9300

#### SECTION 2: HAZARDS IDENTIFICATION

This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910,1200.

#### Classification of the Substance or Mixture

#### Classification (GHS-US)

Skin Irrit. 2

H315

Eye Irrit. 2A

H319

Skin Sens. 1

H317

Carc. 2

H351

Full text of H-phrases: see section 16

#### **Label Elements**

#### **GHS-US Labeling**

Signal Word (GHS-US): WARNING

Hazard Pictograms (GHS-US):





Hazard Statements (GHS-US):

H315 - Causes skin irritation.

H317 - May cause an allergic skin reaction.

H319 - Causes serious eye irritation.

H351 - Suspected of causing cancer.

Precautionary Statements (GHS-US):

P201 - Obtain special instructions before use.

P202 - Do not handle until all safety precautions have been read and understood.

P261 - Avoid breathing vapors, mist, or spray.

P264 - Wash hands, forearms, and other exposed areas thoroughly after handling.

P272 - Contaminated work clothing must not be allowed out of the workplace.

P280 - Wear protective gloves, protective clothing, and eye protection.

P302+P352 - IF ON SKIN: Wash with plenty of water.

P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing.

P308+P313 - If exposed or concerned: Get medical advice/attention.

P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.

P337+P313 - If eye irritation persists: Get medical advice/attention.

P362+P364 - Take off contaminated clothing and wash it before reuse.

P405 - Store locked up.

P501 - Dispose of contents/container in accordance with local, regional, national, and

international regulations.

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#### Other Hazards

Exposure may aggravate those with pre-existing eye, skin, or respiratory conditions.

#### **Unknown Acute Toxicity (GHS-US)**

No data available.

### SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

#### Substance

Not applicable.

#### Mixture

Name	Product Identifier	%	Classification (GHS-US)
1,2-Propylene glycol	(CAS No) 57-55-6	< 50	Not classified
Water	(CAS No) 7732-18-5	Balance	Not classified
Phenol	(CAS No) 108-95-2	< 1	Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311 Acute Tox. 3 (Inhalation:gas), H331 Skin Corr. 1B, H314 Eye Dam. 1, H318 Muta. 2, H341 STOT RE 2, H373 Aquatic Acute 3, H402
Formaldehyde	(CAS No) 50-00-0	0.1 - 0.5	Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311 Acute Tox. 3 (Inhalation:gas), H331 Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1, H317 Carc. 2, H351 Aquatic Acute 2, H401

Full text of H-phrases: See section 16.

#### **SECTION 4: FIRST AID MEASURES**

#### **Description of First-Aid Measures**

General First-Aid Measures: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label if possible).

Inhalation: Remove to fresh air and keep at rest in a position comfortable for breathing. Obtain medical attention if breathing difficulty persists.

Skin Contact: Remove contaminated clothing. Gently wash skin with plenty of soap and water followed by rinsing with water for at least 15 minutes. Call a POISON CENTER or doctor if you feel unwell. Wash contaminated clothing before reuse.

Eye Contact: Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention.

Ingestion: Do NOT induce vomiting. Rinse mouth. Immediately call a POISON-CENTER or doctor.

#### Most Important Symptoms and Effects, Both Acute and Delayed

General Symptoms/Injuries: Causes skin irritation. Causes serious eye irritation. May cause an allergic skin reaction.

Inhalation: May cause respiratory irritation. Suspected of causing cancer by inhalation. Formaldehyde has been classified as a known human carcinogen. The risk of injury depends on duration and level of exposure. This product contains a small amount of formaldehyde; exposures during expected use conditions are expected to be low.

Skin Contact: Causes skin irritation. Redness, pain, swelling, itching, burning, dryness, and dermatitis. May cause an allergic skin reaction.

Eye Contact: Causes serious eye irritation. Redness, pain, swelling, itching, burning, tearing, and blurred vision.

Ingestion: Ingestion is likely to be harmful or have adverse effects. Ingestion of this product is unlikely, however, if ingested in sufficient quantities, it may cause metabolic acidosis.

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Chronic Symptoms: Suspected of causing cancer by inhalation. May cause an allergic skin reaction.

Indication of Any Immediate Medical Attention and Special Treatment Needed

If you feel unwell, seek medical advice (show the label where possible).

### SECTION 5: FIRE-FIGHTING MEASURES

**Extinguishing Media** 

Suitable Extinguishing Media: Water spray, fog, alcohol-resistant foam, carbon dioxide (CO<sub>2</sub>), dry chemical.

Unsuitable Extinguishing Media: Do not use a heavy water stream. Use of heavy stream of water may spread fire.

Special Hazards Arising from the Substance or Mixture

Fire Hazard: Not considered flammable but may burn at high temperatures.

Explosion Hazard: Product is not explosive.

Reactivity: Hazardous reactions will not occur under normal conditions.

**Advice for Firefighters** 

Precautionary Measures Fire: Exercise caution when fighting any chemical fire.

Firefighting instructions: Use water spray or fog for cooling exposed containers. In case of major fire and large quantities:

Evacuate area.

Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

Hazardous Combustion Products: Under expected usage conditions, hazardous decomposition products are not expected.

Hazardous decomposition products such as carbon monoxide, aldehydes, alcohols, ethers, organic acids, and other compounds may be generated when material is subjected to high

temperatures or fires.

Other Information: Refer to Section 9 for flammability properties.

#### SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures

General Measures: Avoid all contact with skin, eyes, or clothing. Avoid breathing (vapor, mist, spray).

For Non-Emergency Personnel

Emergency Procedures: Evacuate unnecessary personnel.

For Emergency Responders

Protective Equipment: Equip cleanup crew with proper protection.

Emergency Procedures: Stop leak if safe to do so. Eliminate ignition sources. Ventilate area.

**Environmental Precautions** 

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

Methods and Material for Containment and Cleaning Up

For Containment: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

Methods for Cleaning Up: Clean up spills immediately and dispose of waste safely. Spills should be contained with mechanical barriers. Transfer spilled material to a suitable container for disposal. Contact competent authorities

after a spill.

Reference to Other Sections

See Heading 8. Exposure controls and personal protection. For further disposal information refer to section 13.

#### SECTION 7: HANDLING AND STORAGE

Precautions for Safe Handling

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed

areas with mild soap and water before eating, drinking, or smoking and when leaving work.

Conditions for Safe Storage, Including Any Incompatibilities

Technical Measures: Comply with applicable regulations.

Storage Conditions: Store in a dry, cool, and well-ventilated place. Keep container closed when not in use. Keep/store away

from direct sunlight, extremely high or low temperatures, and incompatible materials.

Incompatible Products: Strong acids. Strong bases. Strong oxidizers.

Specific End Use(s) Science education applications.

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#### ECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

#### **Control Parameters**

For substances listed in section 3 that are not listed here, there are no established exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), NIOSH (REL), or OSHA (PEL).

	, , , , , , , , , , , , , , , , , , , ,	
Formaldehyd		
USA ACGIH	ACGIH Ceiling (ppm)	0.3 ppm
USA ACGIH	ACGIH chemical category	Sensitizer, Suspected Human Carcinogen
USA NIOSH	NIOSH REL (TWA) (ppm)	0.016 ppm
USA NIOSH	NIOSH REL (ceiling) (ppm)	0.1 ppm
USA IDLH	US IDLH (ppm)	20 ppm
USA OSHA	OSHA PEL (TWA) (ppm)	0.75 ppm
USA OSHA	OSHA PEL (STEL) (ppm)	2 ppm (see 29 CFR 1910.1048)
Phenol (108-	95-2)	
USA ACGIH	ACGIH TWA (ppm)	5 ppm
USA ACGIH	ACGIH chemical category	Skin - potential significant contribution to overall exposure by the
		cutaneous route, Not Classifiable as a Human Carcinogen
USA NIOSH	NIOSH REL (TWA) (mg/m³)	19 mg/m³
USA NIOSH	NIOSH REL (TWA) (ppm)	5 ppm
USA NIOSH	NIOSH REL (ceiling) (mg/m³)	60 mg/m <sup>3</sup>
USA NIOSH	NIOSH REL (ceiling) (ppm)	15.6 ppm
USA IDLH	US IDLH (ppm)	250 ppm
USA OSHA	OSHA PEL (TWA) (mg/m³)	19 mg/m³
USA OSHA	OSHA PEL (TWA) (ppm)	5 ppm
USA OSHA	Limit value category (OSHA)	prevent or reduce skin absorption

**Exposure Controls** 

**Appropriate Engineering Controls:** 

Ensure adequate ventilation, especially in confined areas. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any

potential exposure. Ensure all national/local regulations are observed.

Personal Protective Equipment:

Protective goggles. Gloves. Protective clothing. Insufficient ventilation: Wear

respiratory protection.









Materials for Protective Clothing:

Chemically resistant materials and fabrics.

Hand Protection:

Wear chemically resistant protective gloves.

**Eve Protection:** 

Chemical safety goggles.

Skin and Body Protection:

Wear suitable protective clothing.

Respiratory Protection:

If exposure limits are exceeded or irritation is experienced, approved respiratory

protection should be worn.

**Environmental Exposure Controls:** 

Do not allow the product to be released into the environment.

Consumer Exposure Controls:

Do not eat, drink, or smoke during use.

#### SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on Basic Physical and Chemical Properties

**Physical State:** 

Liquid.

Appearance:

Clear, colorless liquid.

Odor:

Faint disinfectant-like odor.

Odor Threshold:

No data available.

pH:

No data available.

**Evaporation Rate:** 

No data available.

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Melting Point: No data available.

Freezing Point: No data available.

Boiling Point: No data available.

Flash Point: No data available.

Auto-ignition Temperature: No data available.

Decomposition Temperature: No data available.

Flammability (solid, gas):

Vapor Pressure:

No data available.

No data available.

Vapor Pressure: No data available.

Relative Vapor Density at 20° C: No data available.

Relative Vapor Density at 20°C: No data available.

Relative Density: No data available.

Solubility: No data available.

Partition Coefficient; N-Octanol/Water: No data available.

Viscosity: No data available.

Other Information No additional information available.

#### SECTION 10: STABILITY AND REACTIVITY

Reactivity: Hazardous reactions will not occur under normal conditions.

Chemical Stability: Stable under recommended handling and storage conditions (see section 7).

Possibility of Hazardous Reactions: Hazardous polymerization will not occur.

Conditions to Avoid: Direct sunlight. Extremely high or low temperatures. Ignition sources. Incompatible materials.

Incompatible Materials: Strong acids. Strong bases. Strong oxidizers.

Hazardous Decomposition Products: Under expected usage conditions, hazardous decomposition products are not expected. Hazardous decomposition products such as carbon monoxide, aldehydes, alcohols, ethers, organic acids, and other compounds may be generated when material is subjected to high temperatures or fires.

#### SECTION 11: TOXICOLOGICAL INFORMATION

#### Information on Toxicological Effects

Acute Toxicity: Not classified.

1,2-Propylene glycol (57-55-6)	
LD50 Oral Rat	20000 mg/kg
LD50 Dermal Rabbit	20800 mg/kg
Formaldehyde (50-00-0)	
LD50 Oral Rat	100 mg/kg
LD50 Dermal Rat	270 mg/kg
ATE (Gases)	700.00 ppmV/4h
Phenol (108-95-2)	
LD50 Oral Rat	340 mg/kg
LD50 Dermal Rabbit	630 mg/kg
LC50 Inhalation Rat	0.316 mg/l/4h (reported as 316 mg/m3/4h)
ATE (Oral)	100.00 mg/kg body weight
ATE (Gases)	700.00 ppmV/4h
ATE (Vapors)	0.32 mg/l/4h
ATE (Dust/Mist)	0.32 mg/l/4h

Skin Corrosion/Irritation: Causes skin irritation.

Serious Eye Damage/Irritation: Causes serious eye irritation.

Respiratory or Skin Sensitization: May cause an allergic skin reaction.

Germ Cell Mutagenicity: Not classified.

Carcinogenicity: Suspected of causing cancer.

Safety Data Sheet

scording to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Formaldehyde (50-00-0)	,
IARC group	1
National Toxicology Program (NTP) Status	Known Human Carcinogens.
OSHA Hazard Communication Carcinogen List	In OSHA Hazard Communication Carcinogen list.
OSHA Specifically Regulated Carcinogen List	In OSHA Specifically Regulated Carcinogen list.
Phenol (108-95-2)	
IARC group	3
National Toxicology Program (NTP) Status	Twelfth Report - Items under consideration.

Reproductive Toxicity: Not classified.

Specific Target Organ Toxicity (Single Exposure): Not classified.

Specific Target Organ Toxicity (Repeated Exposure): Not classified.

Aspiration Hazard: Not classified.

Inhalation Symptoms/Injuries: May cause respiratory irritation. Suspected of causing cancer by inhalation. Formaldehyde has been classified as a known human carcinogen. The risk of injury depends on duration and level of exposure. This product contains a small amount of formaldehyde; exposures during expected use conditions are expected to be low.

Skin Contact Symptoms/injuries: Causes skin irritation. Redness, pain, swelling, itching, burning, dryness, and dermatitis. May cause an allergic skin reaction.

Eye Contact Symptoms/Injuries: Causes serious eye irritation. Redness, pain, swelling, itching, burning, tearing, and blurred

Ingestion Symptoms/Injuries: Ingestion is likely to be harmful or have adverse effects. Ingestion of this product is unlikely, however, if ingested in sufficient quantities, it may cause metabolic acidosis.

Chronic Symptoms: Suspected of causing cancer by inhalation. May cause an allergic skin reaction.

#### SECTION 12: ECOLOGICAL INFORMATION

Toxicity			
1,2-Propylene glycol (57-55-6)			
LC50 Fish 1	51600 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [static])		
EC50 Daphnia 1	10000 mg/l (Exposure time: 24 h - Species: Daphnia magna)		
EC50 Daphnia 2	1000 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])		
Formaldehyde (50-00-0)			
LC50 Fish 1	22.6 - 25.7 mg/l (Exposure time: 96 h - Species: Pimephales promeias [flow-through])		
EC50 Daphnia 1	30 Daphnia 1 2 mg/l (Exposure time: 48 h - Species: Daphnia magna)		
LC 50 Fish 2	D Fish 2 1510 μg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])		
EC50 Daphnia 2	11.3 - 18 mg/l (Exposure time: 48 h - Species: Daphnia magna [static])		
Phenol (108-95-2)			
LC50 Fish 1	11.9 - 50.5 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])		
EC50 Daphnia 1	4.24 - 10.7 mg/l (Exposure time: 48 h - Species: Daphnia magna [static])		
LC 50 Fish 2			
EC50 Daphnia 2	10.2 - 15.5 mg/l (Exposure time: 48 h - Species: Daphnia magna)		

Persistence and Degradability No additional information available.

#### **Bioaccumulative Potential**

1,2-Propylene glycol (57-55-6)		
BCF fish 1	<1	
Log Pow	-0.92	
Formaldehyde (50-00-0)		
Log Pow	0,35 (at 25 °C)	
Phenol (108-95-2)		
BCF fish 1	(no significant bloaccumulation)	
Log Pow	1.47	

Mobility in Soil No additional information available.

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

#### **Other Adverse Effects**

Other Information: Avoid release to the environment.

### SECTION 13: DISPOSAL CONSIDERATIONS

**Waste Treatment Methods** 

Waste Disposal Recommendations: Dispose of waste material in accordance with all local, regional, national, and international regulations.

### SECTION 14: TRANSPORT INFORMATION

Not regulated for transport. In Accordance with DOT Not regulated for transport. In Accordance with IMDG Not regulated for transport. In Accordance with IATA

## SECTION 15: REGULATORY INFORMATION

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OJ Federal MeBaladiono				
NASCO-Guard® Preserved Specimens				
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard.			
	Delayed (chronic) health hazard.			
1,2-Propylene glycol (57-55-6)				
Listed on the United States TSCA (Toxic Substances Control	ol Act) Inventory			
EPA TSCA Regulatory Flag	Y2 - Y2 - Indicates an exempt polymer that is a polyester and is made			
· •	only from reactants included in a specified list of low concern			
	reactants that comprises one of the eligibility criteria for the			
	exemption rule.			
Formaldehyde (50-00-0)				
Listed on the United States TSCA (Toxic Substances Contr	ol Act) Inventory			
Listed on the United States SARA Section 302				
Listed on United States SARA Section 313				
SARA Section 302 Threshold Planning Quantity (TPQ)	500			
SARA Section 311/312 Hazard Classes	Delayed (chronic) health hazard.			
	Immediate (acute) health hazard.			
	Fire hazard.			
SARA Section 313 - Emission Reporting	0.1 %			
Phenol (108-95-2)				
Listed on the United States TSCA (Toxic Substances Contr	ol Act) Inventory.			
Listed on the United States SARA Section 302.				
Listed on United States SARA Section 313.				
EPA TSCA Regulatory Flag	T - T - Indicates a substance that is the subject of a Section 4 test rule			
	under TSCA.			
SARA Section 302 Threshold Planning Quantity (TPQ)	≤ 10000			
SARA Section 313 - Emission Reporting	1.0 %			
Water (7732-18-5)				
Listed on the United States TSCA (Toxic Substances Conti	rol Act) Inventory			

#### **US State Regulations**

Formaldehyde (50-00-0)	
U.S California - Proposition 65 - Carcinogens List	WARNING: This product contains chemicals known to the State of
,	California to cause cancer.
1,2-Propylene glycol (57-55-6)	
U.S New Jersey - Right to Know Hazardous Substance	List
U.S Pennsylvania - RTK (Right to Know) List	
Formaldehyde (50-00-0)	
U.S Massachusetts - Right To Know List	
U.S New Jersey - Right to Know Hazardous Substance	List

05/21/2015

EN (English US)

Safety Data Sheet

ccording to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

- U.S. Pennsylvania RTK (Right to Know) Environmental Hazard List
- U.S. Pennsylvania RTK (Right to Know) Special Hazardous Substances
- U.S. Pennsylvania RTK (Right to Know) List

#### Phenol (108-95-2)

- U.S. Massachusetts Right To Know List
- U.S. New Jersey Right to Know Hazardous Substance List
- U.S. Pennsylvania RTK (Right to Know) Environmental Hazard List
- U.S. Pennsylvania RTK (Right to Know) List

#### SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

**Revision Date:** 

05/21/2015

Other Information:

This document has been prepared in accordance with the SDS requirements of the OSHA Hazard

Communication Standard 29 CFR 1910.1200.

#### **GHS Full Text Phrases:**

	· · · · · · · · · · · · · · · · · · ·
Acute Tox. 3 (Dermal)	Acute Toxicity (dermal) Category 3
Acute Tox. 3 (Inhalation: gas)	Acute Toxicity (inhalation: gas) Category 3
Acute Tox. 3 (Oral)	Acute Toxicity (oral) Category 3
Aquatic Acute 2	Hazardous to the Aquatic Environment - Acute Hazard Category 2
Aquatic Acute 3	Hazardous to the Aquatic Environment - Acute Hazard Category 3
Carc. 2	Carcinogenicity Category 2
Eye Dam. 1	Serious Eye Damage/Eye Irritation Category 1
Eye Irrit, 2A	Serious Eye Damage/Eye Irritation Category 2A
Muta. 2	Germ Cell Mutagenicity Category 2
Skin Corr. 1B	Skin Corrosion/Irritation Category 1B
Skin Irrit. 2	Skin Corrosion/Irritation Category 2
Skin Sens. 1	Skin Sensitization Category 1
STOT RE 2	Specific Target Organ Toxicity (repeated exposure) Category 2
H301	Toxic if swallowed.
H311	Toxic in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317 .	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H341	Suspected of causing genetic defects.
H351	Suspected of causing cancer.
H373	May cause damage to organs through prolonged or repeated exposure.
H401	Toxic to aquatic life.
H402	Harmful to aquatic life.

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety, and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

SDS US (GHS HazCom)

SDS #: 584.00

Revision Date: March 21, 2014

#### SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

#### Petroleum Ether

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word

DANGER

Pictograms

#### **SECTION 2 — HAZARDS IDENTIFICATION**

Hazard class: Flammable liquids (Category 2). Highly flammable liquid and vapor (H225). Keep away from heat, sparks, open flames, and hot surfaces (P210).

Hazard class: Aspiration hazard (Category 2). May be fatal if swallowed and enters airways (H304).

Hazard class: Germ cell mutagenicity (Category 1). May cause genetic defects (H340). Obtain special instructions before use (P201). Do not handle until all safety precautions have been read and understood (P202). Use personal protective equipment as required (P281).

Hazard class: Carcinogenicity (Category 1). May cause cancer (H350). Obtain special instructions before use (P201).



SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Petroleum ether	8032-32-4	Unspecified	Unspecified	
Synonyms: Ligroine; Naphtha				

#### **SECTION 4 — FIRST AID MEASURES**

Immediately call a POISON CENTER or physician.

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

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing.

If on skin: Immediately remove all contaminated clothing. Rinse skin with water (P303+P361+P353).

If swallowed: Rinse mouth, Immediately call a POISON CENTER or physician. Do NOT induce vomiting (P331).

#### **SECTION 5 — FIRE FIGHTING MEASURES**

Class IA flammable liquid.

Flash point: -40 °C Flammable limits: Lower: 1.1% Upper: 5.9% Autoignition Temperature: 288 °C

When heated to decomposition, may emit toxic fumes.

In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA Code

H-1

F-4

R-0

#### **SECTION 6 — ACCIDENTAL RELEASE MEASURES**

Remove all ignition sources and ventilate area. Contain spill with sand or other inert absorbent material; deposit in sealed bag or container. See Sections 8 and 13 for further information.

Safety Data Sheet

Petroleum Ether

SDS #: 584.00

Revision Date: March 21, 2014

#### SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Organic #3. Store with hydrocarbons, oils, esters and aldehydes.

Store in a dedicated flammables cabinet. If a flammables cabinet is not available, store in Flinn Saf-Stor can.

Keep container tightly closed (P233). Keep cool (P235). Take precautionary measures against static discharge (P243). Use only in a hood or well-ventilated area (P271).

#### SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling. Use only in a hood or well-ventilated area (P271).

#### SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Clear, colorless liquid. Natural gas-like odor.

Soluble: Insoluble in water. Miscible with many organic solvents.

Not an ether, a low boiling fraction of petroleum distillate.

Boiling point: 36-60 °C

Specific gravity: 0.640 Vapor density: 2.5

Vapor pressure: 400 mmHg

#### **SECTION 10 — STABILITY AND REACTIVITY**

Avoid contact with strong oxidizers.

Shelf life: Indefinite, if stored properly.

#### SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Toxic, irritant Chronic effects: Possible mutagen Target organs: Central nervous system

ORL-RAT LD<sub>50</sub>: >5 g/kg IHL-RAT LC<sub>50</sub>: N.A. SKN-RBT LD<sub>50</sub>: >3 g/kg

N.A. = Not available, not all health aspects of this substance have been fully investigated.

#### **SECTION 12 — ECOLOGICAL INFORMATION**

Data not yet available.

#### **SECTION 13 — DISPOSAL CONSIDERATIONS**

Please review all federal, state and local regulations that may apply before proceeding.

Flinn Suggested Disposal Method #18b is one option.

#### **SECTION 14 — TRANSPORT INFORMATION**

Shipping name: Petroleum Distillates, N.O.S. Hazard class: 3, Flammable liquid. UN number: UN1268.

N/A = Not applicable

#### **SECTION 15 — REGULATORY INFORMATION**

TSCA-listed, EINECS-listed (232-453-7), RCRA code D001.

#### **SECTION 16 — OTHER INFORMATION**

This Safety Data Sheet (SDS) is for guidance and is based upon information and tests believed to be reliable. Finn Scientific, Inc. makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration, investigation, and verification. The data should not be confused with local, state, federal or insurance mandates, regulations, or requirements and CONSTITUTE NO WARRANTY. Any use of this data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling, storage, use and disposal of the product(s) described are beyond the control of Film Scientific, inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).

Consult your copy of the Flinn Science Catalog/Reference Manual for additional information about laboratory chemicals.

Revision Date: March 21, 2014

SDS #: 313.01

Revision Date: March 21, 2014

#### SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

#### **Sodium Dodecyl Sulfate Solution**

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word

WARNING

Pictograms

#### **SECTION 2 — HAZARDS IDENTIFICATION**

Hazard class: Skin and serious eye damage, corrosion or irritation (Category 2, 2A). Causes skin and serious eye irritation (H315+H319).

	-

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Dodecyl sulfate, sodium salt Water	151-21-3 7732-18-5	CH <sub>3</sub> (CH <sub>2</sub> ) <sub>11</sub> OSO <sub>3</sub> Na H <sub>2</sub> O	288.38 18.00	10% 90%
Synonyms: SDS solution; Sodium lauryl sulfate solution; SLS solution				

#### SECTION 4 — FIRST AID MEASURES

If exposed or concerned: Get medical advice or attention (P308+P313). If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing (P305+P351+P338). If eye irritation persists: Get medical advice or attention (P337+P313). If on skin: Rinse cautiously with water for several minutes (P351). If on skin: Rinse cautiously with water for several minutes (P302+P351). Immediately remove all contaminated clothing (P361). Wash contaminated clothing before reuse (P363). If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell (P301+P330+P312).

#### **SECTION 5 — FIRE FIGHTING MEASURES**

Nonflammable, noncombustible solution.

In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA Code None

established

#### SECTION 6 — ACCIDENTAL RELEASE MEASURES

Ventilate area. Contain spill with sand or absorbent material; deposit in sealed bag or container. See Sections 8 and 13 for further information.

Safety Data Sheet

**Sodium Dodecyl Sulfate Solution** 

SDS #: 313.01

Revision Date: March 21, 2014

#### **SECTION 7 — HANDLING AND STORAGE**

Flinn Suggested Chemical Storage Pattern: Organic #4. Store with ethers, ketones, halogenated hydrocarbons and ethylene oxide.

#### SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling (P264). Use only in a hood or well-ventilated area (P271).

#### SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Clear, colorless liquid. Odorless.

#### SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with strong oxidizers.

Shelf life: Indefinite, if stored properly.

#### **SECTION 11 — TOXICOLOGICAL INFORMATION**

cute effects: Irritant, strong sensitizer.

Chronic effects: N.A.

Target organs: N.A.

ORL-RAT LD<sub>50</sub>: 1288mg/kg (as Dodecyl sulfate, sodium

salt)

IHL-RAT LC<sub>50</sub>: N.A. SKN-RBT LD<sub>50</sub>: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

#### SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

#### **SECTION 13 — DISPOSAL CONSIDERATIONS**

Please review all federal, state and local regulations that may apply before proceeding.

Flinn Suggested Disposal Method #26b is one option.

#### SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

#### **SECTION 15 — REGULATORY INFORMATION**

TSCA-listed, EINECS-listed (205-788-1).

#### **SECTION 16 — OTHER INFORMATION**

This Safety Data Sheet (SDS) is for guidance and is based upon information and tests believed to be reliable. Flinn Scientific, Inc. makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration, investigation, and verification. The data should not be confused with local, state, federal or insurance mandates, regulations, or requirements and CONSTITUTE NO WARRANTY. Any use of this data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling, storage, use and disposal of the product(s) described are beyond the control of Flinn Scientific, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).

Consult your copy of the Flinn Science Catalog/Reference Manual for additional information about laboratory chemicals.

Revision Date: March 21, 2014

SDS #: 734.00

Revision Date: March 25, 2014

#### SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

#### Sodium Hydroxide

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word

DANGER

Pictograms

#### **SECTION 2 — HAZARDS IDENTIFICATION**

Hazard class: Skin corrosion or irritation (Category 1). Causes severe skin burns and eye damage (H314). Do not breathe mist, vapors or spray (P260).

Hazard class: Corrosive to metals (Category 1). May be corrosive to metals (H290).

	No.
J.E	Z)
William .	

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Sodium hydroxide	1310-73-2	NaOH	39.997	

#### **SECTION 4 — FIRST AID MEASURES**

Immediately call a POISON CENTER or physician (P310).

If inhaled: Remove victim to fresh air in a position comfortable for breathing (P304+P340).

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing (P305+P351+P338). If on skin (or hair): Immediately remove all contaminated clothing. Rinse skin with water (P303+P361+P353). Wash contaminated clothing before reuse (P363).

If swallowed: Rinse mouth. Do NOT induce vomiting (P301+P330+P331).

#### **SECTION 5 — FIRE FIGHTING MEASURES**

Noncombustible solid.

Hot molten sodium hydroxide can react violently with water. Contact with aluminum, tin, and zinc liberates

hydrogen gas. When heated to decomposition, may emit toxic fumes.

NFPA CODE H-3

F-0

In case of fire: Use a tri-class dry chemical fire extinguisher.

R-1

#### **SECTION 6 — ACCIDENTAL RELEASE MEASURES**

Sweep up, place in sealed bag or container and dispose. Ventilate area and wash spill site after material pickup is complete. Absorb spills to prevent material damage (P390). See Sections 8 and 13 for further information.

Safety Data Sheet

Sodium Hydroxide

SDS #: 734.00

Revision Date: March 25, 2014

#### SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #4. Store with hydroxides, oxides, silicates and carbonates. Absorbs CO<sub>2</sub> and water from air. Keep container tightly closed. Keep only in original container (P234).

#### SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling (P264). Exposure guidelines: PEL 2 mg/m³ (OSHA); Ceiling 2 mg/m³ (ACGIH); IDLH 10 mg/m³

#### **SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES**

White pellets or flakes. Absorbs CO<sub>2</sub> and water from air.

Odorless.

Soluble: Water and alcohol

Boiling point: 1388 °C Melting point: 323 °C

pH: basic

Specific gravity: 2.13

#### **SECTION 10 — STABILITY AND REACTIVITY**

Contact with aluminum, tin, and zinc liberates, hydrogen gas. Avoid contact with strong oxidizers, strong acids, organic material, chlorinated solvents.

Shelf life: Good, if kept tightly closed. See Section 7 for further information.

#### SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Eye and skin burns. Mucous membrane irritant.

oneumonitis.

Chronic effects: N.A.

Target organs: Eyes, skin, respiratory system.

ORL-RBT LDL<sub>0</sub>: 500 mg/kg

IHL-RAT LC<sub>50</sub>: N.A.

SKN-RBT LD<sub>50</sub>: 50 mg/24H

N.A. = Not available, not all health aspects of this substance have been fully investigated.

#### **SECTION 12 — ECOLOGICAL INFORMATION**

Data not yet available.

#### **SECTION 13 — DISPOSAL CONSIDERATIONS**

Please review all federal, state and local regulations that may apply before proceeding.

Flinn Suggested Disposal Method #10 is one option.

#### **SECTION 14 — TRANSPORT INFORMATION**

Shipping name: Sodium hydroxide, solid. Hazard class: 8, Corrosive. UN number: UN1823.

N/A = Not applicable

#### **SECTION 15 — REGULATORY INFORMATION**

TSCA-listed, EINECS-listed (215-185-5), RCRA code D002, D003.

#### **SECTION 16 — OTHER INFORMATION**

This Safety Data Sheet (SDS) is for guidance and is based upon information and tests believed to be reliable. Flinn Scientific, Inc. makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration, investigation, and verification. The data should not be confused with local, state, federal or insurance mandates, regulations, or requirements and CONSTITUTE NO WARRANTY. Any use of this data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling, storage, use and disposal of the product(s) described are beyond the control of Film Scientific, Inc. ma may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).

Consult your copy of the Flinn Science Catalog/Reference Manual for additional information about laboratory chemicals.

Revision Date: March 25, 2014

SDS #: 778.00

Revision Date: March 26, 2014

SECTION 1 — CHEMICAL	. PRODUCT AND CO	MPANY IDENTIFICATION
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#### Starch

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word

N/A

Pictograms

#### **SECTION 2 — HAZARDS IDENTIFICATION**

This chemical is considered nonhazardous according to GHS classifications for the Hazard Communication Standard. Treat all laboratory chemicals with caution.

Although this material is considered to be nonhazardous, unpredictable reactions among chemicals are always possible. Prudent laboratory practices should be observed.

Product should be treated as a chemical and is not for consumption as it has been stored with other nonfoodgrade chemicals.

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Starch (Potato or Corn)	9005-84-9	Unspecified	Unspecified	
			<u>.</u>	]

#### **SECTION 4 — FIRST AID MEASURES**

Call a POISON CENTER or physician if you feel unwell.

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

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing.

If on skin: Wash with plenty of water.

If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

#### **SECTION 5 — FIRE FIGHTING MEASURES**

Nonflammable solid.

NFPA CODE

When heated to decomposition, may emit toxic fumes.

None established

In case of fire: Use a tri-class dry chemical fire extinguisher.

#### SECTION 6 — ACCIDENTAL RELEASE MEASURES

Sweep up, place in sealed bag or container and dispose. Wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

Safety Data Sheet

Starch

SDS #: 778.00

Revision Date: March 26, 2014

#### **SECTION 7 — HANDLING AND STORAGE**

Flinn Suggested Chemical Storage Pattern: Organic Miscellaneous

Keep container tightly closed. Store in a cool, dry place.

#### SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Avoid contact with eyes. Wash hands thoroughly after handling.

Exposure guidelines: PEL 15 mg/m³ (as total dust)(OSHA); TLV 10 mg/m³ (ACGIH)

#### SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

White amorphous powder. Odorless.

Melting point: 256-258 °C (decomposes)

Soluble: Hot water Not for human consumption.

#### **SECTION 10 — STABILITY AND REACTIVITY**

Avoid contact with strong oxidizers.

Shelf life: Indefinite, if kept dry.

#### SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Nuisance dust, an allergen.

Chronic effects: N.A. Target organs: N.A.

ORL-RAT LD<sub>50</sub>: N.A.

IHL-RAT LC<sub>50</sub>: N.A.

SKN-RBT LD<sub>50</sub>: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

#### **SECTION 12 — ECOLOGICAL INFORMATION**

Data not yet available.

#### **SECTION 13 — DISPOSAL CONSIDERATIONS**

Please review all federal, state and local regulations that may apply before proceeding.

Flinn Suggested Disposal Method #26a is one option.

#### SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

#### **SECTION 15 — REGULATORY INFORMATION**

TSCA-listed, EINECS-listed (232-686-4).

#### SECTION 16 — OTHER INFORMATION

This Safety Data Sheet (SDS) is for guidance and is based upon information and tests believed to be reliable. Flinn Scientific, Inc. makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration, investigation, and verification. The data should not be confused with local, state, federal or insurance mandates, regulations, or requirements and CONSTITUTE NO WARRANTY. Any use of this data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling, storage, use and disposal of the product(s) described are beyond the control of Flinn Scientific, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).

Consult your copy of the Flinn Science Catalog/Reference Manual for additional information about laboratory chemicals.

Revision Date: March 26, 2014

SDS #: 789.00

Revision Date: March 25, 2014

#### SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

#### Sucrose

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word

N/A

Pictograms

#### **SECTION 2 — HAZARDS IDENTIFICATION**

This chemical is considered nonhazardous according to GHS classifications for the Hazard Communication Standard. Treat all laboratory chemicals with caution.

Although this material is considered to be nonhazardous, unpredictable reactions among chemicals are always possible. Prudent laboratory practices should be observed.

Product should be treated as a chemical and is not for consumption as it has been stored with other nonfood-grade chemicals.

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Sucrose	57-50-1	$C_{12}H_{22}O_{11}$	342.31	
Synonyms: Sugar; Table sugar; Food sprinkles; Cane sugar;				
Sanding sugar				

#### **SECTION 4 — FIRST AID MEASURES**

Call a POISON CENTER or physician if you feel unwell.

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

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing.

If on skin: Wash with plenty of water.

If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

#### **SECTION 5 — FIRE FIGHTING MEASURES**

Nonflammable solid.

NFPA CODE

When heated to decomposition, may emit toxic fumes.

None established

In case of fire: Use a tri-class dry chemical fire extinguisher.

#### SECTION 6 — ACCIDENTAL RELEASE MEASURES

Sweep up, place in sealed bag or container and dispose. Wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

Safety Data Sheet

Sucrose

SDS #: 789.00

Revision Date: March 25, 2014

#### **SECTION 7 — HANDLING AND STORAGE**

Flinn Suggested Chemical Storage Pattern: Organic #2. Store with alcohols, glycols, amines and amides. Store in a cool, dry place. Store in a Flinn Chem-Saf $^{TM}$  bag.

#### SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Avoid contact with eyes. Wash hands thoroughly after handling.

Exposure guidelines: (as total dust) PEL 15 mg/m³ (OSHA); TLV 10 mg/m³ (ACGIH)

#### SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Hard, white crystals or colored spheres or cylinders. Malt-like odor.

Soluble: Water. Slightly in alcohol.

Melting point: 185-187 °C (decomposes)

Specific gravity: 1.5877 Not for human consumption.

#### SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with strong oxidizers.

Shelf life: Indefinite, if stored properly and kept dry.

#### SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: N.A.

Chronic effects: N.A. Target organs: N.A.

ORL-RAT LD<sub>50</sub>: 29,700 mg/kg

IHL-RAT LC<sub>50</sub>: N.A. SKN-RBT LD50: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

#### SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

#### **SECTION 13 — DISPOSAL CONSIDERATIONS**

Please review all federal, state and local regulations that may apply before proceeding.

Flinn Suggested Disposal Method #26a is one option.

#### **SECTION 14 — TRANSPORT INFORMATION**

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

#### **SECTION 15 — REGULATORY INFORMATION**

TSCA-listed, EINECS-listed (200-334-9)

#### SECTION 16 — OTHER INFORMATION

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Consult your copy of the Flinn Science Catalog/Reference Manual for additional information about laboratory chemicals.

Revision Date: March 25, 2014

SDS #: 793.00

Revision Date: March 21, 2014

## SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION Sudan IV Solution

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word

DANGER

Pictograms

## SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Flammable liquids (Category 2). Highly flammable liquid and vapor (H225). Keep away from heat, sparks, open flames, and hot surfaces. No smoking (P210).

Hazard class: Acute toxicity, oral (Category 4). Harmful if swallowed (H302). Do not eat, drink or smoke when using this product (P270). Do not eat, drink or smoke when using this product (P270).

Hazard class: Skin and serious eye damage, corrosion or irritation (Category 2, 2A). Causes skin and serious

Hazard class: Specific target organ toxicity, single exposure; respiratory tract irritation (Category 3). May cause respiratory irritation (H335). Avoid breathing mist, vapors or spray (P261).

Hazard class: Specific target organ toxicity, single exposure (Category 1). Causes damage to organs (H370).





SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	EDIENTS			
Sudan IV Ethyl alcohol, denatured Water	CAS Number 85-83-6 64-17-5 7732-18-5	Formula $C_{24}H_{20}N_4O$ $C_2H_5OH$ $H_2O$	Formula Weight 380.5 46.07 18.00	Concentration 0.01% 75% 24%
SECTION 4 — FIRST AID MEASURES  If exposed or concerned: Call a POISON CENTER.				

If exposed or concerned: Call a POISON CENTER or physician (P307+P311).

If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing (P304+P340). If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing (P305+P351 +P338). If eye irritation persists: Get medical advice or attention (P337+P313). If on skin (or hair): Immediately remove all contaminated clothing. Rinse skin with water (P303+P361+P353). If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell (P302+P301+P312). SECTION 5 — FIRE FIGHTING MEASURES

Class IB flammable liquid due to ethyl alcohol content. Flash point: 21 °C

When heated, releases flammable fumes.

In case of fire: Use a tri-class dry chemical fire extinguisher (P370+P378).

NFPA CODE

H-2

F-3

R-0

## SECTION 6 — ACCIDENTAL RELEASE MEASURES

Remove all ignition sources and ventilate area. Contain the spill with sand or other inert absorbent material and deposit in a sealed