

**2**

# Safety Data Sheet

## 2-Propanol

**CAROLINA**<sup>®</sup>  
www.carolina.com

### Section 1 Product Description

**Product Name:** 2-Propanol  
**Recommended Use:** Science education applications  
**Synonyms:** Isopropyl Alcohol; , Isopropanol; , IPA; , Sec-Propanol; , Dimethylcarbinol  
**Distributor:** Carolina Biological Supply Company  
2700 York Road, Burlington, NC 27215  
1-800-227-1150  
**Chemical Information:** 800-227-1150 (8am-5pm (ET) M-F)  
**Chemtrec:** 800-424-9300 (Transportation Spill Response 24 hours)

### Section 2 Hazard Identification

Classification of the chemical in accordance with paragraph (d) of §1910.1200;

**DANGER**



Highly flammable liquid and vapor. Causes serious eye irritation. May cause respiratory irritation. May cause drowsiness or dizziness.

**GHS Classification:**

Flammable Liquid Category 2, Serious Eye Damage/Eye Irritation Category 2, Specific Target Organ Systemic Toxicity (STOT) - Single Exposure Category 3

### Section 3 Composition / Information on Ingredients

<u>Chemical Name</u>	<u>CAS #</u>	<u>%</u>
2-Propanol	67-63-0	100

### Section 4 First Aid Measures

**Emergency and First Aid Procedures**

**Inhalation:** IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
**Eyes:** IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.  
**Skin Contact:** IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.  
**Ingestion:** If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

### Section 5 Firefighting Procedures

**Extinguishing Media:** Use dry chemical, CO2 or appropriate foam.  
**Fire Fighting Methods and Protection:** Firefighters should wear full protective equipment and NIOSH approved self-contained breathing apparatus.  
**Fire and/or Explosion Hazards:** Vapors may travel back to ignition source. Closed Containers exposed to heat may explode. Fire or excessive heat may produce hazardous decomposition products.  
**Hazardous Combustion Products:** Carbon dioxide, Carbon monoxide

### Section 6 Spill or Leak Procedures

# Safety Data Sheet

## Steps to Take in Case Material Is Released or Spilled:

Exposure to the spilled material may be irritating or harmful. Follow personal protective equipment recommendations found in Section 8 of this SDS. Additional precautions may be necessary based on special circumstances created by the spill including; the material spilled, the quantity of the spill, the area in which the spill occurred. Also consider the expertise of employees in the area responding to the spill. Ventilate the contaminated area. Prevent the spread of any spill to minimize harm to human health and the environment if safe to do so. Wear complete and proper personal protective equipment following the recommendation of Section 8 at a minimum. Dike with suitable absorbent material like granulated clay. Gather and store in a sealed container pending a waste disposal evaluation. Shut off ignition sources; including electrical equipment and flames. Do not allow smoking in the area.

## Section 7 Handling and Storage

**Handling:** Keep away from heat/sparks/open flames/hot surfaces. – No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting/.../ equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Avoid breathing dust/fume/gas/mist/vapors/spray. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection.

**Storage:** Store in a well-ventilated place. Keep container tightly closed. Store locked up. Keep cool. Keep container tightly closed in a cool, well-ventilated place.

**Storage Code:** Red - Flammables. Store in approved flammable containers. Store away from oxidizing materials.

## Section 8 Protection Information

Chemical Name	ACGIH		OSHA PEL	
	(TWA)	(STEL)	(TWA)	(STEL)
2-Propanol	200 ppm TWA	400 ppm STEL	400 ppm TWA; 980 mg/m <sup>3</sup> TWA	N/A

### Control Parameters

#### Engineering Measures:

Local exhaust ventilation or other engineering controls are normally required when handling or using this product to avoid overexposure. Ventilation should effectively remove and prevent buildup of any vapor/mist/fume generated from the handling of this product.

#### Personal Protective Equipment (PPE):

Lab coat, apron, eye wash, safety shower.

#### Respiratory Protection:

Conduct air monitoring to determine if airborne concentrations exceed an applicable exposure limit.

#### Respirator Type(s):

NIOSH approved air purifying respirator with organic vapor cartridge and HEPA filter.

#### Eye Protection:

Wear chemical splash goggles when handling this product. Have an eye wash station available.

#### Skin Protection:

Avoid skin contact by wearing chemically resistant gloves, an apron and other protective equipment depending upon conditions of use. Inspect gloves for chemical break-through and replace at regular intervals. Clean protective equipment regularly. Wash hands and other exposed areas with mild soap and water before eating, drinking, and when leaving work.

#### Gloves:

Nitrile

## Section 9 Physical Data

**Formula:** CH<sub>2</sub>CHOHCH<sub>3</sub>  
**Molecular Weight:** 60.10 g/mol  
**Appearance:** Colorless Liquid  
**Odor:** Strong Alcohol Odor  
**Odor Threshold:** No data available  
**pH:** No data available  
**Melting Point:** -89 C  
**Boiling Point:** 83 C  
**Flash Point:** 12 C  
**Flammable Limits in Air:** 2.0 - 12.7%

**Vapor Pressure:** 42 hPa at 20 °C  
**Evaporation Rate (BuAc=1):** 2.3  
**Vapor Density (Air=1):** 2.07  
**Specific Gravity:** 0.7861 at 20 °C  
**Solubility in Water:** Slightly Soluble  
**Log Pow (calculated):** 0.05  
**Autoignition Temperature:** 399 C  
**Decomposition Temperature:** No data available  
**Viscosity:** No data available  
**Percent Volatile by Volume:** 100%

## Section 10 Reactivity Data

#### Reactivity:

Not generally reactive under normal conditions.

#### Chemical Stability:

Stable under normal conditions.

# Safety Data Sheet

**Conditions to Avoid:** Sparks, open flame, other ignition sources, and elevated temperatures.  
**Incompatible Materials:** Acids, Strong oxidizing agents, Strong reducing agents, Metals, Peroxides, Epoxides, Isocyanates  
**Hazardous Decomposition Products:** Carbon dioxide, Carbon monoxide  
**Hazardous Polymerization:** Will not occur

## Section 11

## Toxicity Data

**Routes of Entry:** Inhalation and ingestion.  
**Symptoms (Acute):** Central Nervous System Depression, Respiratory disorders  
**Delayed Effects:** No data available

### Acute Toxicity:

Chemical Name	CAS Number	Oral LD50	Dermal LD50	Inhalation LC50
2-Propanol	67-63-0	Oral LD50 Mouse 3600 mg/kg Oral LD50 Rat 5045 mg/kg	Not determined	INHALATION LC50 Rat 16000 ppm

### Carcinogenicity:

Chemical Name	CAS Number	IARC	NTP	OSHA
2-Propanol	67-63-0	Listed	Not listed	Not listed

### Chronic Effects:

**Mutagenicity:** No evidence of a mutagenic effect.  
**Teratogenicity:** No evidence of a teratogenic effect (birth defect).  
**Sensitization:** No evidence of a sensitization effect.  
**Reproductive:** Evidence of negative reproductive effects.  
**Target Organ Effects:**  
**Acute:** Central Nervous System  
**Chronic:** No information available

## Section 12

## Ecological Data

**Overview:** This material is not expected to be harmful to the ecology.  
**Mobility:** This material is expected to have high mobility in soil. It absorbs weakly to most soil types.  
**Persistence:** No data  
**Bioaccumulation:** No data  
**Degradability:** Biodegrades quickly.  
**Other Adverse Effects:** No data

Chemical Name	CAS Number	Eco Toxicity
2-Propanol	67-63-0	96 HR LC50 PIMEPHALES PROMELAS 11130 MG/L [STATIC] 96 HR LC50 LEPOMIS MACROCHIRUS > 1400000 µG/L 48 HR EC50 DAPHNIA MAGNA 13299 MG/L 96 HR EC50 DESMODESMUS SUBSPICATUS > 1000 MG/L 72 HR EC50 DESMODESMUS SUBSPICATUS > 1000 MG/L

## Section 13

## Disposal Information

**Disposal Methods:** Dispose in accordance with all applicable Federal, State and Local regulations. Always contact a permitted waste disposer (TSD) to assure compliance.  
**Waste Disposal Code(s):** If discarded, this product is considered a RCRA ignitable waste, D001.

## Section 14

## Transport Information

### Ground - DOT Proper Shipping Name:

UN1219  
Isopropanol  
Class 3  
P.G. II

### Air - IATA Proper Shipping Name:

UN1219  
Isopropanol  
Class 3  
P.G. II

# Safety Data Sheet

## Section 15

## Regulatory Information

**TSCA Status:** All components in this product are on the TSCA Inventory.

Chemical Name	CAS Number	§ 313 Name	§ 304 RQ	CERCLA RQ	§ 302 TPQ	CAA 112(2) TQ
2-Propanol	67-63-0	Isopropyl alcohol	No	No	No	No

**California Prop 65:** No California Proposition 65 ingredients

## Section 16

## Additional Information

**Revised: 08/21/2018**

**Replaces: 06/15/2018**

**Printed: 08-24-2018**

The information provided in this (Material) Safety Data Sheet represents a compilation of data drawn directly from various sources available to us. Carolina Biological Supply makes no representation or guarantee as to the suitability of this information to a particular application of the substance covered in the (Material) Safety Data Sheet.

### Glossary

ACGIH	American Conference of Governmental Industrial Hygienists	NTP	National Toxicology Program
CAS	Chemical Abstract Service Number	OSHA	Occupational Safety and Health Administration
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act	PEL	Permissible Exposure Limit
DOT	U.S. Department of Transportation	ppm	Parts per million
IARC	International Agency for Research on Cancer	RCRA	Resource Conservation and Recovery Act
N/A	Not Available	SARA	Superfund Amendments and Reauthorization Act
		TLV	Threshold Limit Value
		TSCA	Toxic Substances Control Act
		IDLH	Immediately dangerous to life and health

# Safety Data Sheet

2-Propanol, 70%

**CAROLINA**<sup>®</sup>  
www.carolina.com

## Section 1 Product Description

**Product Name:** 2-Propanol, 70%  
**Recommended Use:** Science education applications  
**Synonyms:** Isopropanol, Isopropyl Alcohol, IPA  
**Distributor:** Carolina Biological Supply Company  
2700 York Road, Burlington, NC 27215  
1-800-227-1150  
**Chemical Information:** 800-227-1150 (8am-5pm (ET) M-F)  
**Chemtrec:** 800-424-9300 (Transportation Spill Response 24 hours)

## Section 2 Hazard Identification

Classification of the chemical in accordance with paragraph (d) of §1910.1200;

**DANGER**



Highly flammable liquid and vapor. Causes serious eye irritation. May cause respiratory irritation. May cause drowsiness or dizziness.

**GHS Classification:**

Flammable Liquid Category 2, Serious Eye Damage/Eye Irritation Category 2, Specific Target Organ Systemic Toxicity (STOT) - Single Exposure Category 3

## Section 3 Composition / Information on Ingredients

<u>Chemical Name</u>	<u>CAS #</u>	<u>%</u>
2-Propanol	67-63-0	70
Water	7732-18-5	30

## Section 4 First Aid Measures

**Emergency and First Aid Procedures**

**Inhalation:** IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
**Eyes:** IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.  
**Skin Contact:** IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.  
**Ingestion:** If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

## Section 5 Firefighting Procedures

**Extinguishing Media:** Use dry chemical, CO2 or appropriate foam.  
**Fire Fighting Methods and Protection:** Firefighters should wear full protective equipment and NIOSH approved self-contained breathing apparatus.  
**Fire and/or Explosion Hazards:** Vapors may travel back to ignition source. Closed Containers exposed to heat may explode.  
**Hazardous Combustion Products:** Carbon dioxide, Carbon monoxide

## Section 6 Spill or Leak Procedures

# Safety Data Sheet

## Steps to Take in Case Material Is Released or Spilled:

Exposure to the spilled material may be irritating or harmful. Follow personal protective equipment recommendations found in Section 8 of this SDS. Additional precautions may be necessary based on special circumstances created by the spill including; the material spilled, the quantity of the spill, the area in which the spill occurred. Also consider the expertise of employees in the area responding to the spill. Ventilate the contaminated area. Prevent the spread of any spill to minimize harm to human health and the environment if safe to do so. Wear complete and proper personal protective equipment following the recommendation of Section 8 at a minimum. Dike with suitable absorbent material like granulated clay. Gather and store in a sealed container pending a waste disposal evaluation. Shut off ignition sources; including electrical equipment and flames. Do not allow smoking in the area.

## Section 7 Handling and Storage

**Handling:** Keep away from heat/sparks/open flames/hot surfaces. – No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting/.../ equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Avoid breathing dust/fume/gas/mist/vapors/spray. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection.

**Storage:** Keep container tightly closed. Store in a well-ventilated place. Keep container tightly closed. Store in a well-ventilated place. Keep cool. Store locked up. Suitable for any general chemical storage.

**Storage Code:** Red - Flammables. Store in approved flammable containers. Store away from oxidizing materials.

## Section 8 Protection Information

Chemical Name	ACGIH		OSHA PEL	
	(TWA)	(STEL)	(TWA)	(STEL)
2-Propanol	200 ppm TWA	400 ppm STEL	400 ppm TWA; 980 mg/m <sup>3</sup> TWA	N/A

### Control Parameters

#### Engineering Measures:

Local exhaust ventilation or other engineering controls are normally required when handling or using this product to avoid overexposure.

#### Personal Protective Equipment (PPE):

Lab coat, apron, eye wash, safety shower.

#### Respiratory Protection:

#### Respirator Type(s):

NIOSH approved air purifying respirator with organic vapor cartridge and HEPA filter. Wear chemical splash goggles when handling this product. Have an eye wash station available.

#### Eye Protection:

#### Skin Protection:

Avoid skin contact by wearing chemically resistant gloves, an apron and other protective equipment depending upon conditions of use. Inspect gloves for chemical break-through and replace at regular intervals. Clean protective equipment regularly. Wash hands and other exposed areas with mild soap and water before eating, drinking, and when leaving work.

#### Gloves:

Nitrile

## Section 9 Physical Data

**Formula:** CH<sub>3</sub>CHOHCH<sub>3</sub>  
**Molecular Weight:** 60.10 (2-Propanol)  
**Appearance:** Colorless Liquid  
**Odor:** Strong Alcohol Odor  
**Odor Threshold:** No data available  
**pH:** No data available  
**Melting Point:** -89 C  
**Boiling Point:** 83 C  
**Flash Point:** 18 C  
**Flammable Limits in Air:** 2.0 - 12.7% (2-Propanol)

**Vapor Pressure:** 31.5 mmHg at 20 °C  
**Evaporation Rate (BuAc=1):** 2.3  
**Vapor Density (Air=1):** 2.07 (2-Propanol)  
**Specific Gravity:** approx 0.80 at 20 °C  
**Solubility in Water:** Soluble  
**Log Pow (calculated):** No data available  
**Autoignition Temperature:** No data available  
**Decomposition Temperature:** No data available  
**Viscosity:** No data available  
**Percent Volatile by Volume:** 70%

## Section 10 Reactivity Data

#### Reactivity:

Not generally reactive under normal conditions.

#### Chemical Stability:

Stable under normal conditions.

#### Conditions to Avoid:

Sparks, open flame, other ignition sources, and elevated temperatures.

#### Incompatible Materials:

Acids, Strong oxidizing agents, Strong reducing agents, Metals, Peroxides, Epoxides, Isocyanates, Water-reactive materials

# Safety Data Sheet

Hazardous Polymerization: Will not occur

## Section 11 Toxicity Data

**Routes of Entry:** Inhalation and ingestion.  
**Symptoms (Acute):** Central Nervous System Depression, Respiratory disorders  
**Delayed Effects:** No data available

### Acute Toxicity:

Chemical Name	CAS Number	Oral LD50	Dermal LD50	Inhalation LC50
2-Propanol	67-63-0	Oral LD50 Rat 5045 mg/kg Oral LD50 Mouse 3600 mg/kg		INHALATION LC50 Rat 16000 ppm
Water	7732-18-5	Oral LD50 Rat 90000 mg/kg		

### Carcinogenicity:

Chemical Name	CAS Number	IARC	NTP	OSHA
2-Propanol	67-63-0	Listed	Not listed	Not listed

### Chronic Effects:

**Mutagenicity:** No evidence of a mutagenic effect.  
**Teratogenicity:** No evidence of a teratogenic effect (birth defect).  
**Sensitization:** No evidence of a sensitization effect.  
**Reproductive:** No evidence of negative reproductive effects.  
**Target Organ Effects:**  
**Acute:** Central Nervous System  
**Chronic:** No information available

## Section 12 Ecological Data

**Overview:** This material is not expected to be harmful to the ecology.  
**Mobility:** This material is expected to have high mobility in soil. It absorbs weakly to most soil types.  
**Persistence:** Dissolved into water, Biodegradation, Evaporation into atmosphere  
**Bioaccumulation:** Bioconcentration is not expected to occur.  
**Degradability:** No data  
**Other Adverse Effects:** No data

Chemical Name	CAS Number	Eco Toxicity
2-Propanol	67-63-0	96 HR LC50 LEPOMIS MACROCHIRUS > 1400000 µG/L 96 HR LC50 PIMEPHALES PROMELAS 11130 MG/L [STATIC] 48 HR EC50 DAPHNIA MAGNA 13299 MG/L 72 HR EC50 DESMODESMUS SUBSPICATUS > 1000 MG/L 96 HR EC50 DESMODESMUS SUBSPICATUS > 1000 MG/L
Water	7732-18-5	

## Section 13 Disposal Information

**Disposal Methods:** Dispose in accordance with all applicable Federal, State and Local regulations. Always contact a permitted waste disposer (TSD) to assure compliance.  
**Waste Disposal Code(s):** Not Determined

## Section 14 Transport Information

**Ground - DOT Proper Shipping Name:** UN1219 ISOPROPANOL, Class 3, P.G. II  
**Air - IATA Proper Shipping Name:** UN1219 ISOPROPANOL, Class 3, P.G. II

## Section 15 Regulatory Information



# Safety Data Sheet

**TSCA Status:**

All components in this product are on the TSCA Inventory.

Chemical Name	CAS Number	§ 313 Name	§ 304 RQ	CERCLA RQ	§ 302 TPQ	CAA 112(2) TQ
2-Propanol	67-63-0	Isopropyl alcohol	No	No	No	No

**California Prop 65:**

No California Proposition 65 ingredients

**Section 16****Additional Information****Revised: 08/21/2018****Replaces: 06/15/2018****Printed: 08-25-2018**

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**Glossary**

ACGIH	American Conference of Governmental Industrial Hygienists	NTP	National Toxicology Program
CAS	Chemical Abstract Service Number	OSHA	Occupational Safety and Health Administration
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act	PEL	Permissible Exposure Limit
DOT	U.S. Department of Transportation	ppm	Parts per million
IARC	International Agency for Research on Cancer	RCRA	Resource Conservation and Recovery Act
N/A	Not Available	SARA	Superfund Amendments and Reauthorization Act
		TLV	Threshold Limit Value
		TSCA	Toxic Substances Control Act
		IDLH	Immediately dangerous to life and health

# Safety Data Sheet

## 2,6-Dichlorophenolindophenol



### Section 1 Product Description

**Product Name:** 2,6-Dichlorophenolindophenol  
**Recommended Use:** Science education applications  
**Synonyms:** 2,6-Dichlorophenolindophenol sodium salt hydrate, DPIP, Sodium 4-(3,5-dichloro-4-oxocyclohexa-2,5-dienylideneamino)phenoxide  
**Distributor:** Carolina Biological Supply Company  
2700 York Road, Burlington, NC 27215  
1-800-227-1150  
**Chemical Information:** 800-227-1150 (8am-5pm (ET) M-F)  
**Chemtrec:** 800-424-9300 (Transportation Spill Response 24 hours)

### Section 2 Hazard Identification

Classification of the chemical in accordance with paragraph (d) of §1910.1200;

Not a dangerous substance according to GHS classification criteria. No known OSHA hazards.

GHS Classification:

### Section 3 Composition / Information on Ingredients

<u>Chemical Name</u>	<u>CAS #</u>	<u>%</u>
2,6-Dichlorophenolindophenol	620-45-1	100

### Section 4 First Aid Measures

#### Emergency and First Aid Procedures

**Inhalation:** In case of accident by inhalation: remove casualty to fresh air and keep at rest.  
**Eyes:** In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
**Skin Contact:** After contact with skin, wash immediately with plenty of water.  
**Ingestion:** If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

### Section 5 Firefighting Procedures

**Extinguishing Media:** Use media suitable to extinguish surrounding fire.  
**Fire Fighting Methods and Protection:** Firefighters should wear full protective equipment and NIOSH approved self-contained breathing apparatus.  
**Fire and/or Explosion Hazards:** Fire or excessive heat may produce hazardous decomposition products.  
**Hazardous Combustion Products:** Carbon dioxide, Carbon monoxide, Chlorine containing gases, Nitrogen containing gases

### Section 6 Spill or Leak Procedures

Prevent the spread of any spill to minimize harm to human health and the environment if safe to do so. Wear complete and proper personal protective equipment following the recommendation of Section 8 at a minimum. Dike with suitable absorbent material like granulated clay. Gather and store in a sealed container pending a waste disposal evaluation.

### Section 7 Handling and Storage

**Handling:** Avoid creating and inhaling dust. Do not ingest or take internally.  
**Storage:** Keep container tightly closed in a cool, well-ventilated place.  
**Storage Code:** Green - general chemical storage

# Safety Data Sheet

## Section 8

## Protection Information

### Chemical Name

2,6-Dichlorophenolindophenol, Sodium Salt

### (TWA) ACGIH

N/A

(STEL) N/A

### OSHA PEL

(TWA) N/A

(STEL) N/A

### Control Parameters

#### Engineering Measures:

No exposure limits exist for the constituents of this product. General room ventilation might be required to maintain operator comfort under normal conditions of use.

#### Personal Protective Equipment (PPE):

Lab coat, apron, eye wash, safety shower.

#### Respiratory Protection:

#### Respirator Type(s):

None required where adequate ventilation is provided. If airborne concentrations are above the applicable exposure limits, use NIOSH/MSHA approved respiratory protection. Wear chemical splash goggles when handling this product. Have an eye wash station available.

#### Eye Protection:

#### Skin Protection:

Avoid skin contact by wearing chemically resistant gloves, an apron and other protective equipment depending upon conditions of use. Inspect gloves for chemical break-through and replace at regular intervals. Clean protective equipment regularly. Wash hands and other exposed areas with mild soap and water before eating, drinking, and when leaving work.

#### Gloves:

Butyl rubber, Neoprene, Nitrile, Polyvinyl chloride

## Section 9

## Physical Data

**Formula:** C<sub>12</sub>H<sub>6</sub>Cl<sub>2</sub>NO<sub>2</sub>\*Na\*xH<sub>2</sub>O

**Molecular Weight:** 290.07

**Appearance:** Dark green Solid

**Odor:** No data available

**Odor Threshold:** No data available

**pH:** No data available

**Melting Point:** No data available

**Boiling Point:** No data available

**Flash Point:** No data available

**Flammable Limits in Air:** No data available

**Vapor Pressure:** No data available

**Evaporation Rate (BuAc=1):** No data available

**Vapor Density (Air=1):** No data available

**Specific Gravity:** No data available

**Solubility in Water:** Soluble

**Log Pow (calculated):** No data available

**Autoignition Temperature:** No data available

**Decomposition Temperature:** No data available

**Viscosity:** No data available

**Percent Volatile by Volume:** No data available

## Section 10

## Reactivity Data

#### Reactivity:

Not generally reactive under normal conditions.

#### Chemical Stability:

Stable under normal conditions.

#### Conditions to Avoid:

Exposure to moisture

#### Incompatible Materials:

Strong oxidizing agents

#### Hazardous Decomposition Products:

Nitrogen containing gases, Chlorine containing gases, Carbon dioxide, Carbon monoxide

#### Hazardous Polymerization:

Will not occur

## Section 11

## Toxicity Data

#### Routes of Entry

Ingestion, Skin contact.

#### Symptoms (Acute):

No data available

#### Delayed Effects:

No data available

#### Acute Toxicity:

##### Chemical Name

2,6-Dichlorophenolindophenol, Sodium Salt

##### CAS Number

620-45-1

##### Oral LD50

Not determined

##### Dermal LD50

Not determined

##### Inhalation LC50

Not determined

#### Carcinogenicity:

##### Chemical Name

2,6-Dichlorophenolindophenol, Sodium Salt

##### CAS Number

620-45-1

##### IARC

Not listed

##### NTP

Not listed

##### OSHA

Not listed

#### Chronic Effects:

2,6-Dichlorophenolindophenol

Page 2 of 3

# Safety Data Sheet

**Mutagenicity:** No evidence of a mutagenic effect.  
**Teratogenicity:** No evidence of a teratogenic effect (birth defect).  
**Sensitization:** No evidence of a sensitization effect.  
**Reproductive:** No evidence of negative reproductive effects.  
**Target Organ Effects:**  
**Acute:** No information available  
**Chronic:** No information available

## Section 12

## Ecological Data

**Overview:** This material is not expected to be harmful to the ecology.  
**Mobility:** This material is expected to have high mobility in soil. It absorbs weakly to most soil types.  
**Persistence:** No data  
**Bioaccumulation:** Bioconcentration is not expected to occur.  
**Degradability:** Biodegrades quickly.  
**Other Adverse Effects:** No data

Chemical Name	CAS Number	Eco Toxicity
2,6-Dichlorophenolindophenol, Sodium Salt	620-45-1	

## Section 13

## Disposal Information

**Disposal Methods:** Dispose in accordance with all applicable Federal, State and Local regulations. Always contact a permitted waste disposer (TSD) to assure compliance.  
**Waste Disposal Code(s):** Not Determined

## Section 14

## Transport Information

Ground - DOT Proper Shipping Name:	Air - IATA Proper Shipping Name:
Not regulated for transport by US DOT.	Not regulated for air transport by IATA.

## Section 15

## Regulatory Information

**TSCA Status:** All components in this product are on the TSCA Inventory.

Chemical Name	CAS Number	§ 313 Name	§ 304 RQ	CERCLA RQ	§ 302 TPQ	CAA 112(2) TQ
2,6-Dichlorophenolindophenol, Sodium Salt	620-45-1	No	No	No	No	No

**California Prop 65:** No California Proposition 65 ingredients

## Section 16

## Additional Information

Revised: 08/21/2018

Replaces: 06/15/2018

Printed: 08-25-2018

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### Glossary

ACGIH	American Conference of Governmental Industrial Hygienists	NTP	National Toxicology Program
CAS	Chemical Abstract Service Number	OSHA	Occupational Safety and Health Administration
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act	PEL	Permissible Exposure Limit
DOT	U.S. Department of Transportation	ppm	Parts per million
IARC	International Agency for Research on Cancer	RCRA	Resource Conservation and Recovery Act
N/A	Not Available	SARA	Superfund Amendments and Reauthorization Act
		TLV	Threshold Limit Value
		TSCA	Toxic Substances Control Act
		IDLH	Immediately dangerous to life and health

Revision Number: 001.3

Issue date: 04/09/2018

## 1. IDENTIFICATION OF THE SUBSTANCE OR MIXTURE AND OF THE SUPPLIER

Product identifier used on the label: 20 Mule Team Borax

Recommended use of the chemical and restrictions on use: Universal

Name, address and telephone number of the chemical manufacturer:

Educational Innovations, Inc.  
5 Francis J. Clarke Cir.  
Bethel, CT 06801

Telephone: For medical emergencies 1-833-359-6299 For transportation: 1-800-424-9300

## 2. HAZARDS IDENTIFICATION

The hazards described in this Globally Harmonized System Safety Data Sheet (SDS) are not intended for consumers, and does not address consumer use of the product. For information regarding consumer applications of this product, refer to the product label.

Classification of the substance or mixture in accordance with paragraph (d) of §1910.1200

HAZARD CLASS	HAZARD CATEGORY
SKIN IRRITATION	2
EYE IRRITATION	2A
REPRODUCTIVE TOXICITY	2

Signal word, hazard statement(s), symbol(s) and precautionary statement(s) in accordance with paragraph (f) of §1910.1200

Signal word: WARNING

Hazard Statement(s):

Causes skin irritation.  
Causes serious eye irritation.  
Suspected of damaging fertility or the unborn child.

Symbol(s):



Precautionary Statements:

**Prevention:** Obtain special instructions before use.  
Do not handle until all safety precautions have been read and understood.  
Wash thoroughly after handling.  
Wear eye and face protection.  
Wear protective gloves.

**Response:** Use personal protective equipment as required.  
IF ON SKIN: Wash with plenty of water.  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
IF exposed or concerned: Get medical attention.  
If skin irritation occurs: Get medical attention.  
If eye irritation persists: Get medical attention.  
Take off contaminated clothing.

**Storage:** Store locked up.

**Disposal:** Dispose of contents and/or container according to Federal, State/Provincial and local governmental regulations.

**Hazards not otherwise classified:**

None known

Classification complies with OSHA Hazard Communication Standard (29 CFR 1910.1200) and is consistent with the provisions of the United Nations Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

See Section 11 for additional toxicological information.

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

The following chemicals are classified as health hazards in accordance with paragraph (d) of § 1910.1200.

Chemical Name*	CAS Number (Unique Identifier)	Concentration
Sodium tetraborate decahydrate	1303-96-4	60 - 100 %

\*The specific chemical identity and/or exact percentage (concentration) of composition has been withheld because a trade secret is claimed in accordance with paragraph (i) of §1910.1200.

### 4. FIRST AID MEASURES

#### Description of necessary measures

**Inhalation:** Remove from exposure area to fresh air. Treat symptomatically and supportively.  
**Skin contact:** Rinse affected area with large amounts of water until no evidence of product remains. Get medical attention if irritation persists.  
**Eye contact:** Immediately rinse eyes with plenty of water for at least 15 minutes while holding eyelids open. Get medical attention if pain or irritation develops.  
**Ingestion:** Dilution by rinsing the mouth and giving water or milk to drink is generally recommended. Contact physician or local poison control center.

#### Most important symptoms and effects, both acute and delayed

After eye contact: Moderate to strong irritation of the eyes (redness, swelling, burning, watering eyes), the occurrence of these symptoms may be delayed.

After skin contact: May cause moderate to severe irritation. After Ingestion: Ingestion may cause pain, burning, swelling and redness in the mouth and throat. Nausea and vomiting may occur. After inhalation: Dust may cause mucous membrane irritation with coughing and shortness of breath.

#### Indication of any immediate medical attention and special treatment needed

After eye contact: Rinse eyes immediately with plenty of water, occasionally lifting upper and lower lids, until no evidence of product remains. After skin contact: Rinse affected area with large amounts of water until no evidence of product remains. After ingestion: May be fatal if swallowed and enters airways. Dilution by rinsing the mouth and giving a glass of water to drink is generally recommended. After inhalation: Remove from exposure area to fresh air. Contact physician or local poison control center.

### 5. FIRE FIGHTING MEASURES

#### Suitable (and unsuitable) extinguishing media

**Suitable extinguishing media:** Extinguish using agent suitable for type of surrounding fire. Product is fire retardant.

**Unsuitable extinguishing media:** None known

### Specific hazards arising from the chemical

Thermal decomposition products may include toxic oxides of sodium and boron.

### Special protective equipment and precautions for fire-fighters

In case of fire, wear a full-face positive-pressure self-contained breathing apparatus and protective suit. Apply cooling water to sides of containers that are exposed to flames until well after fire is out. Avoid breathing vapors, keep upwind. Isolate area. Keep unnecessary personnel away.

## 6. ACCIDENTAL RELEASE MEASURES

### Personal precautions, protective equipment and emergency procedures

Wear skin, eye and respiratory protection as recommended in Section 8. Stop leak if you can do it without risk. Spills present a slipping hazard. Keep unnecessary personnel away. Ensure clean-up is conducted by trained personnel only. Ventilate spill area if possible. Make sure area is slip-free before re-opening to traffic.

### Environmental precautions

Small or household quantities may be disposed in regular domestic trash. For larger quantities check with your local disposal authorities.

### Methods and materials for containment and cleaning up

SMALL SPILLS: Sweep or scoop up and place into containers for later disposal. Wash site of spillage thoroughly with water.  
LARGE SPILLS: Sweep or scoop up and place into suitable clean, dry containers for reclamation or later disposal. Dispose in suitable waste container. Keep unnecessary people away from spill.

## 7. HANDLING AND STORAGE

### Precautions for safe handling

Do not get in eyes, on skin, on clothing Do not take internally. Use with adequate ventilation.

### Conditions for safe storage, including any incompatibilities

Store in original containers in a cool dry area. Storage areas for large quantities (warehouse) should be well ventilated. Keep the containers tightly closed when not in use.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

OSHA permissible exposure limit (PEL), American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Value (TLV), and any other exposure limit used or recommended by the chemical manufacturer, importer, or employer preparing the safety data sheet, where available.

Hazardous Component(s)	ACGIH TLV	OSHA PEL	AIHA WEEL	OTHER
Sodium tetraborate decahydrate	2 mg/m3 TWA Inhalable fraction. 6 mg/m3 STEL Inhalable fraction.	None	None	None

### Appropriate engineering controls

Provide local exhaust or general dilution ventilation to keep exposure to airborne contaminants below the permissible exposure limits where mists or vapors may be generated.

### Individual protection measures

**Respiratory:** If respiratory protection is required, it must be based on the contamination levels found in the workplace, must not exceed the working limits of the respirator and be jointly approved by the National Institute for Occupational Safety and Health and the Mine Safety and Health Administration (NIOSH-MSHA).

**Eye:** Safety glasses are required to prevent eye contact where dusty conditions may occur.

**Hand/Body:** Protective gloves are required where repeated or prolonged skin contact may occur. Protective clothing is required where repeated or prolonged skin contact may occur.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance:</b>	solid white
<b>Odor:</b>	odourless
<b>Odor threshold:</b>	Not available.
<b>pH:</b>	9.3 Aqueous solution
<b>Melting point/ range:</b>	Not available.
<b>Boiling point/range:</b>	Not available.
<b>Flash point:</b>	Not applicable
<b>Evaporation rate:</b>	Not available.
<b>Flammable/Explosive limits - lower:</b>	Not available.
<b>Flammable/Explosive limits - upper:</b>	Not available.
<b>Vapor pressure:</b>	Not available.
<b>Vapor density:</b>	Not available.
<b>Solubility in water:</b>	Not available.
<b>Partition coefficient (n-octanol/water):</b>	Not available.
<b>Autoignition temperature:</b>	Not available.
<b>Decomposition temperature:</b>	Not available.
<b>Viscosity:</b>	Not available.
<b>VOC content:</b>	Not available.

## 10. STABILITY AND REACTIVITY

<b>Reactivity:</b>	This product may react with strong oxidizing agents.
<b>Chemical stability:</b>	Stable under normal ambient temperature (70°F, 21°C) and pressure (1 atm).
<b>Possibility of hazardous reactions:</b>	Hazardous polymerization has not been reported to occur under normal temperatures and pressures.
<b>Conditions to avoid:</b>	Avoid storing in direct sunlight and avoid extremes of temperature.
<b>Incompatible materials:</b>	Strong oxidizers, acids, zirconium.
<b>Hazardous decomposition products:</b>	Thermal decomposition products may include toxic oxides of sodium and boron.

## 11. TOXICOLOGICAL INFORMATION

### Likely routes of exposure including symptoms related to characteristics

<b>Inhalation:</b>	Dust may cause mucous membrane irritation with coughing, dryness and sore throat.
<b>Skin contact:</b>	Prolonged and/or repeated skin contact with this product may cause irritation.
<b>Eye contact:</b>	May cause moderate to severe irritation, with possibility of corneal injury if not removed promptly.
<b>Ingestion:</b>	May cause mild gastrointestinal irritation with nausea, vomiting, diarrhea and abdominal pain.
<b>Physical/Chemical:</b>	The product is irritant to skin and mucous membranes.

**Other relevant toxicity information:** This product is a laundry care product. The use of this product by consumers is safe under normal and reasonable foreseen use.

### Numerical measures of toxicity, including delayed and immediate effect

Hazardous Component(s)	LD50s and LC50s	Immediate and Delayed Health Effects
Sodium tetraborate decahydrate	Oral LD50 (RAT) = 396 - 689 mg/kg Oral LD50 (RAT) = 5,660 mg/kg Oral LD50 (RAT) = 396 mg/kg Oral LD50 (RAT) = 5.66 g/kg Dermal LD50 (RABBIT) = > 10,000 mg/kg Inhalation LC50 (RAT, 4 h) = > 0.002 mg/l	Irritant, Reproductive, Skin, Less weight gain and food intake.

### Carcinogenicity information

Hazardous Component(s)	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen
Sodium tetraborate decahydrate	No	No	No



<b>Carcinogenicity</b>	None of the ingredients in this product are listed as carcinogens by the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP) or the Occupational Safety and Health Administration (OSHA).
<b>Mutagenicity</b>	None of the ingredients in this product are known to cause mutagenicity.
<b>Toxicity for reproduction</b>	Sodium borate and boric acid interfere with sperm production, damage the testes and interfere with male fertility when given to animals by mouth at high doses.

## 12. ECOLOGICAL INFORMATION

### Aquatic Toxicity:

This product is anticipated to be safe for the environment at concentrations predicted in household settings under normal use conditions. The following toxicity information is available for the hazardous ingredient(s) when used as technical grade and is provided as reference for the occupational settings.

#### Toxicity to fish:

The aquatic toxicity profile of this product has not been determined.

#### Toxicity to aquatic invertebrates:

The aquatic toxicity profile of this product has not been determined.

#### Toxicity to algae:

The aquatic toxicity profile of this product has not been determined.

### Persistence and degradability

The persistence and degradability of this product has not been determined.

### Bioaccumulative potential

The bioaccumulation potential of this product has not been determined.

### Mobility in soil

The mobility of this product (in soil and water) has not been determined.

## 13. DISPOSAL CONSIDERATIONS

### Description of waste residues:

**Hazardous waste number:** Not regulated

### Safe handling and disposal methods:

**Recommended method of disposal:** This product is not a RCRA hazardous waste and can be disposed of in accordance with federal, state and local regulations.

**Disposal of uncleaned packages:** Place in trash.

## 14. TRANSPORT INFORMATION

The information in this section is for reference only and should not take the place of a shipping paper (bill of lading) specific to an order. Please note that the proper shipping classification may vary by packaging, properties, and mode of transportation.

### U.S. Department of Transportation Ground (49 CFR)

<b>Proper shipping name:</b>	Not regulated
<b>Hazard class or division:</b>	None
<b>Identification number:</b>	None
<b>Packing group:</b>	None

**International Air Transportation (ICAO/IATA)**

**Proper shipping name:** Not regulated  
**Hazard class or division:** None  
**Identification number:** None  
**Packing group:** None

**Water Transportation (IMO/IMDG)**

**Proper shipping name:** Not regulated  
**Hazard class or division:** None  
**Identification number:** None  
**Packing group:** None

<b>15. REGULATORY INFORMATION</b>
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**Occupational safety and health act:** Hazard Communication Standard, 29 CFR 1910.1200(g) Appendix D: The Occupational Safety and Health Administration (OSHA) require that the Safety Data Sheets (SDSs) are readily accessible to employees for all hazardous chemicals in the workplace. Since the use pattern and exposure in the workplace are generally not consistent with those experienced by consumers, this SDS may contain health hazard information not relevant to consumer use.

**United States Regulatory Information**

**TSCA 8 (b) Inventory Status:** All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.  
**TSCA 12 (b) Export Notification:**  
**CERCLA/SARA Section 302 EHS:** None above reporting de minimis.  
**CERCLA/SARA Section 311/312:** Not available.  
**CERCLA/SARA Section 313:** None above reporting de minimis.  
**California Proposition 65:** No California Proposition 65 listed chemicals are known to be present.

**Canada Regulatory Information**

**CEPA DSL/NDL Status:** All components are listed on or are exempt from listing on the Canadian Domestic Substances List.

<b>16. OTHER INFORMATION</b>
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**This safety data sheet contains changes from the previous version in sections:** New Safety Data Sheet format.

**Prepared by:** R&D Support Services

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