

## Kit Summary

**Product Code(s)** AB115345  
**Product name** Phospho S300 PDH E1 alpha protein (PDHA1) Profiling ELISA Kit

### 20X Buffer

Chemical Name	EC-No	CAS-No	Weight %	Classification (Reg. 1272/2008)	REACH Registration Number
Tris	201-064-4	77-86-1	12	STOT SE 3 (H335) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319)	-

### HRP Development Solution

Chemical Name	EC-No	CAS-No	Weight %	Classification (Reg. 1272/2008)	REACH Registration Number
Hydrogen peroxide	231-765-0	7722-84-1	0.02	Acute Tox. 4 (H302) Acute Tox. 4 (H332) Skin Corr. 1A (H314) Eye Dam. 1 (H318)	No data available

### 10X phospho S300 PDHA1 protein Detector Antibody

Chemical Name	EC-No	CAS-No	Weight %	Classification (Reg. 1272/2008)	REACH Registration Number
Tris	201-064-4	77-86-1	0.61	STOT SE 3 (H335) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319)	-
Sodium azide	247-852-1	26628-22-8	0.02	Acute Tox. 2 (H300) Acute Tox. 1 (H310) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410) (EUH032)	-

### GHS / CLP - GHS - Classification



**Signal Word**  
Warning

**Hazard statements**  
H315 - Causes skin irritation  
H319 - Causes serious eye irritation

### **Precautionary Statements - EU (§28, 1272/2008)**

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

P332 + P313 - If skin irritation occurs: Get medical advice/ attention

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

P280 - Wear protective gloves/ eye protection/ face protection

P362 - Take off contaminated clothing and wash before reuse

P264 - Wash face, hands and any exposed skin thoroughly after handling

### **2.3 Other information**

A safety datasheet follows for all potentially hazardous components – all other components are non-hazardous.

### **TRANSPORT INFORMATION**

**DOT** Not dangerous goods

**IATA** Not dangerous goods

**ADR** Not dangerous goods

# Safety Data Sheet

Issuing date No data available

Revision Date 22-May-2017

Version 2

## 1. PRODUCT AND COMPANY IDENTIFICATION

**Product name** HRP Development Solution

**Recommended use** For research use only

**Supplier Address** Abcam Inc  
1 Kendall Square, Ste 341  
Cambridge, MA 02139-1517  
USA  
Tel: (617)225-2272 or 888-77-ABCAM (22226) (US toll free)  
Fax: (866) 739-9884 or (866) 457-9616 (both US toll free)

**E-mail address** technical@abcam.com

**Emergency telephone** Tel: (617)225-2272 or 888-77-ABCAM (22226) (US toll free) - Monday-Friday 8am-9pm EST

## 2. HAZARDS IDENTIFICATION

### GHS - Classification

Ozone	Not applicable
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### GHS Label elements, including precautionary statements

Not dangerous

### Other information

No information available

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1 Substances

Chemical Name	CAS-No	Weight %	Classification (Reg. 1272/2008)
Hydrogen peroxide	7722-84-1	<0.1	Acute Tox. 4 (H302) Acute Tox. 4 (H332) Skin Corr. 1A (H314) Eye Dam. 1 (H318)

For the full text of the H-Statements mentioned in this Section, see Section 16

#### 4. FIRST AID MEASURES

<b>Eye contact</b>	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes.
<b>Skin contact</b>	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.
<b>Inhalation</b>	Move to fresh air.
<b>Ingestion</b>	Clean mouth with water. Drink plenty of water.
<b>Notes to physician</b>	Treat symptomatically.

#### 5. FIRE-FIGHTING MEASURES

<b>Flammable properties</b>	Not flammable.
<b>Flash point</b>	not determined
<b>Suitable extinguishing media</b>	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
<b>Explosion Data</b>	
<b>Sensitivity to Mechanical Impact</b>	None.
<b>Sensitivity to Static Discharge</b>	None.
<b>Protective equipment and precautions for firefighters</b>	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear to prevent contact with skin and eyes.

#### 6. ACCIDENTAL RELEASE MEASURES

<b>Personal precautions</b>	Ensure adequate ventilation.
<b>Environmental precautions</b>	Try to prevent the material from entering drains or water courses.
<b>Methods for containment</b>	Prevent further leakage or spillage if safe to do so.
<b>Methods for cleaning up</b>	Pick up and transfer to properly labeled containers.

#### 7. HANDLING AND STORAGE

<b>Advice on safe handling</b>	Handle in accordance with good industrial hygiene and safety practice.
<b>Technical measures/Storage conditions</b>	Keep containers tightly closed in a dry, cool and well-ventilated place.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Exposure Guidelines** This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Hydrogen peroxide 7722-84-1	TWA: 1 ppm	TWA: 1 ppm TWA: 1.4 mg/m <sup>3</sup> (vacated) TWA: 1 ppm (vacated) TWA: 1.4 mg/m <sup>3</sup>	IDLH: 75 ppm TWA: 1 ppm TWA: 1.4 mg/m <sup>3</sup>

*NIOSH IDLH: Immediately Dangerous to Life or Health*

**Other Exposure Guidelines** Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

**Engineering measures**  
Showers  
Eyewash stations  
Ventilation systems

### Personal protective equipment

**Eye/face protection**

No special protective equipment required.

**Skin and body protection**

No special protective equipment required.

**Respiratory protection**

If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

**Hygiene measures** Handle in accordance with good industrial hygiene and safety practice.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance</b>	No information available.	<b>Odor</b>	No information available.
<b>Odor Threshold</b>	No information available	<b>Physical State @20°C</b>	No information available
<b>pH</b>	No information available	<b>Autoignition temperature</b>	No information available
<b>Flash point</b>	No information available	<b>Boiling point/boiling range</b>	No information available
<b>Decomposition temperature</b>	No information available	<b>Flammability Limits in Air</b>	No information available
<b>Melting point/range</b>	No information available	<b>solubility</b>	No information available.
<b>Explosion limits</b>	No information available	<b>Vapor Pressure @20°C (kPa)</b>	No information available
<b>Specific Gravity</b>	No data available	<b>VOC Content(%)</b>	Not applicable
<b>Evaporation rate</b>	No information available		
<b>Vapor density</b>	No data available		

## 10. STABILITY AND REACTIVITY

<b>Stability</b>	Stable under recommended storage conditions.
<b>Incompatible products</b>	None known based on information supplied.
<b>Conditions to avoid</b>	None known based on information supplied.
<b>Hazardous decomposition products</b>	None known based on information supplied.
<b>Hazardous polymerization</b>	Hazardous polymerization does not occur.

**11. TOXICOLOGICAL INFORMATION**

**Acute toxicity**

**Product Information** Product does not present an acute toxicity hazard based on known or supplied information

**Chronic toxicity**

**carcinogenicity** This product contains one or more substances which are classified by IARC as carcinogenic to humans (Group I), probably carcinogenic to humans (Group 2A) or possibly carcinogenic to humans (Group 2B)

Chemical Name	ACGIH	IARC	NTP	OSHA
Hydrogen peroxide	A3	Group 3		

**Target Organ Effects** None known.

**12. ECOLOGICAL INFORMATION**

**Ecotoxicity**

The environmental impact of this product has not been fully investigated.

Chemical Name	Toxicity to algae	Toxicity to fish	Toxicity to microorganisms	Toxicity to daphnia and other aquatic invertebrates
Hydrogen peroxide	2.5: 72 h Chlorella vulgaris mg/L EC50	16.4: 96 h Pimephales promelas mg/L LC50 18-56: 96 h Lepomis macrochirus mg/L LC50 static 10.0-32.0: 96 h Oncorhynchus mykiss mg/L LC50 static		7.7: 24 h Daphnia magna mg/L EC50 18 - 32: 48 h Daphnia magna mg/L EC50 Static

**13. DISPOSAL CONSIDERATIONS**

**Waste disposal methods** This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements.

**Contaminated packaging** Do not re-use empty containers.

This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name	California Hazardous Waste Status
Hydrogen peroxide	Toxic Corrosive Ignitable Reactive

**14. TRANSPORT INFORMATION**

**DOT** Not dangerous goods

**IATA** Not dangerous goods

**ADR** Not dangerous goods

**15. REGULATORY INFORMATION**

**U.S. Federal Regulations**

**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

**SARA 311/312 Hazard Categories**

<b>Acute Health Hazard</b>	no
<b>Chronic Health Hazard</b>	no
<b>Fire Hazard</b>	no
<b>Sudden Release of Pressure Hazard</b>	no
<b>Reactive Hazard</b>	no

**Clean Water Act**

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

**CERCLA**

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	RQ
Hydrogen peroxide		1000 lb	

**U.S. State Regulations**

**California Proposition 65**

This product does not contain any Proposition 65 chemicals.

**U.S. State Right-to-Know Regulations**

Chemical Name	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Hydrogen peroxide	X	X	X		X

**International Regulations**

Chemical Name	Carcinogen Status	Exposure limits
Hydrogen peroxide	A3	Mexico: TWA 1 ppm Mexico: TWA 1.5 mg/m <sup>3</sup> Mexico: STEL 2 ppm Mexico: STEL 3 mg/m <sup>3</sup>

**WHMIS Note:**

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

**16. OTHER INFORMATION****Full text of H-Statements referred to under sections 2 and 3**

H302 - Harmful if swallowed H332 - Harmful if inhaled H314 - Causes severe skin burns and eye damage H318 - Causes serious eye damage

**Revision Date** 22-May-2017  
**Revision Note** No information available.

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

**End of MSDS**



# Safety Data Sheet

**Issuing date** No data available

**Revision Date** 22-May-2017

**Version** 2

## 1. PRODUCT AND COMPANY IDENTIFICATION

**Product name** 10X phospho S300 PDHA1 protein Detector Antibody

**Recommended use** For research use only

**Supplier Address** Abcam Inc  
1 Kendall Square, Ste 341  
Cambridge, MA 02139-1517  
USA  
Tel: (617)225-2272 or 888-77-ABCAM (22226) (US toll free)  
Fax: (866) 739-9884 or (866) 457-9616 (both US toll free)

**E-mail address** technical@abcam.com

**Emergency telephone** Tel: (617)225-2272 or 888-77-ABCAM (22226) (US toll free) - Monday-Friday 8am-9pm EST

## 2. HAZARDS IDENTIFICATION

### GHS - Classification

Ozone	Not applicable
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### GHS Label elements, including precautionary statements

Not dangerous

### Other information

No information available

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### 3.1 Substances

Chemical Name	CAS-No	Weight %	Classification (Reg. 1272/2008)
Tris	77-86-1	0.1-1	STOT SE 3 (H335) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319)
Sodium azide	26628-22-8	<0.1	Acute Tox. 2 (H300) Acute Tox. 1 (H310) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410) (EUH032)

For the full text of the H-Statements mentioned in this Section, see Section 16

### 4. FIRST AID MEASURES

<b>Eye contact</b>	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes.
<b>Skin contact</b>	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.
<b>Inhalation</b>	Move to fresh air.
<b>Ingestion</b>	Clean mouth with water. Drink plenty of water.
<b>Notes to physician</b>	Treat symptomatically.

### 5. FIRE-FIGHTING MEASURES

<b>Flammable properties</b>	Not flammable.
<b>Flash point</b>	not determined
<b>Suitable extinguishing media</b>	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
<b>Explosion Data</b>	
<b>Sensitivity to Mechanical Impact</b>	None.
<b>Sensitivity to Static Discharge</b>	None.
<b>Protective equipment and precautions for firefighters</b>	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear to prevent contact with skin and eyes.

## 6. ACCIDENTAL RELEASE MEASURES

<b>Personal precautions</b>	Ensure adequate ventilation.
<b>Environmental precautions</b>	Try to prevent the material from entering drains or water courses.
<b>Methods for containment</b>	Prevent further leakage or spillage if safe to do so.
<b>Methods for cleaning up</b>	Pick up and transfer to properly labeled containers.

## 7. HANDLING AND STORAGE

<b>Advice on safe handling</b>	Handle in accordance with good industrial hygiene and safety practice.
<b>Technical measures/Storage conditions</b>	Keep containers tightly closed in a dry, cool and well-ventilated place.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Exposure Guidelines** This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Sodium azide 26628-22-8	Ceiling: 0.29 mg/m <sup>3</sup> NaN <sub>3</sub> Ceiling: 0.11 ppm Hydrazoic acid vapor	(vacated) S* (vacated) Ceiling: 0.1 ppm HN <sub>3</sub> (vacated) Ceiling: 0.3 mg/m <sup>3</sup> NaN <sub>3</sub>	Ceiling: 0.1 ppm HN <sub>3</sub> Ceiling: 0.3 mg/m <sup>3</sup> NaN <sub>3</sub>

*NIOSH IDLH: Immediately Dangerous to Life or Health*

**Other Exposure Guidelines** Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

**Engineering measures** Showers  
Eyewash stations  
Ventilation systems

**Personal protective equipment**

**Eye/face protection**

No special protective equipment required.

**Skin and body protection**

No special protective equipment required.

**Respiratory protection**

If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

**Hygiene measures** Handle in accordance with good industrial hygiene and safety practice.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance</b>	No information available.	<b>Odor</b>	No information available.
<b>Odor Threshold</b>	No information available	<b>Physical State @20°C</b>	No information available
<b>pH</b>	No information available	<b>Autoignition temperature</b>	No information available
<b>Flash point</b>	No information available	<b>Boiling point/boiling range</b>	No information available
<b>Decomposition temperature</b>	No information available	<b>Flammability Limits in Air</b>	No information available
<b>Melting point/range</b>	No information available	<b>solubility</b>	No information available.
<b>Explosion limits</b>	No information available	<b>Vapor Pressure @20°C (kPa)</b>	No information available
<b>Specific Gravity</b>	No data available	<b>VOC Content(%)</b>	Not applicable
<b>Evaporation rate</b>	No information available		
<b>Vapor density</b>	No data available		

## 10. STABILITY AND REACTIVITY

<b>Stability</b>	Stable under recommended storage conditions.
<b>Incompatible products</b>	None known based on information supplied.
<b>Conditions to avoid</b>	None known based on information supplied.
<b>Hazardous decomposition products</b>	None known based on information supplied.
<b>Hazardous polymerization</b>	Hazardous polymerization does not occur.

## 11. TOXICOLOGICAL INFORMATION

### Acute toxicity

**Product Information**                      Product does not present an acute toxicity hazard based on known or supplied information

### Chronic toxicity

**Target Organ Effects**                      None known.

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

The environmental impact of this product has not been fully investigated.

Chemical Name	Toxicity to algae	Toxicity to fish	Toxicity to microorganisms	Toxicity to daphnia and other aquatic invertebrates
Sodium azide		0.8: 96 h Oncorhynchus mykiss mg/L LC50 0.7: 96 h Lepomis macrochirus mg/L LC50 5.46: 96 h Pimephales promelas mg/L LC50 flow-through		

### 13. DISPOSAL CONSIDERATIONS

**Waste disposal methods** This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements.

**Contaminated packaging** Do not re-use empty containers.

**US EPA Waste Number** P105

Chemical Name	RCRA - Halogenated Organic Compounds	RCRA - P Series Wastes	RCRA - F Series Wastes	RCRA - K Series Wastes
Sodium azide - 26628-22-8		P105		

This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name	California Hazardous Waste Status
Sodium azide	Ignitable Reactive

### 14. TRANSPORT INFORMATION

**DOT** Not dangerous goods

**IATA** Not dangerous goods

**ADR** Not dangerous goods

### 15. REGULATORY INFORMATION

**U.S. Federal Regulations**

**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

**SARA 311/312 Hazard Categories**

<b>Acute Health Hazard</b>	no
<b>Chronic Health Hazard</b>	no
<b>Fire Hazard</b>	no
<b>Sudden Release of Pressure Hazard</b>	no
<b>Reactive Hazard</b>	no

**Clean Water Act**

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

**CERCLA**

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	RQ
Sodium azide	1000 lb	1000 lb	RQ 1000 lb final RQ RQ 454 kg final RQ

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### U.S. State Regulations

#### **California Proposition 65**

This product does not contain any Proposition 65 chemicals.

### U.S. State Right-to-Know Regulations

Chemical Name	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Sodium azide	X	X	X		X

### International Regulations

#### **WHMIS Note:**

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

## 16. OTHER INFORMATION

#### **Full text of H-Statements referred to under sections 2 and 3**

H300 - Fatal if swallowed H310 - Fatal in contact with skin H400 - Very toxic to aquatic life H410 - Very toxic to aquatic life with long lasting effects H335 - May cause respiratory irritation H315 - Causes skin irritation H319 - Causes serious eye irritation

#### **Revision Date**

22-May-2017

#### **Revision Note**

No information available.

#### **Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

**End of MSDS**

# Safety Data Sheet

Issuing date No data available

Revision Date 22-May-2017

Version 3

## 1. PRODUCT AND COMPANY IDENTIFICATION

**Product name** 20X Buffer

**Recommended use** For research use only

**Supplier Address** Abcam Inc  
1 Kendall Square, Ste 341  
Cambridge, MA 02139-1517  
USA  
Tel: (617)225-2272 or 888-77-ABCAM (22226) (US toll free)  
Fax: (866) 739-9884 or (866) 457-9616 (both US toll free)

**E-mail address** technical@abcam.com

**Emergency telephone** Tel: (617)225-2272 or 888-77-ABCAM (22226) (US toll free) - Monday-Friday 8am-9pm EST

## 2. HAZARDS IDENTIFICATION

### GHS - Classification

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2
Ozone	Not applicable

### GHS Label elements, including precautionary statements



### Signal Word

Warning

### Hazard statements

H315 - Causes skin irritation

H319 - Causes serious eye irritation

**Precautionary Statements - EU (§28, 1272/2008)**

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

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

P332 + P313 - If skin irritation occurs: Get medical advice/ attention

P264 - Wash face, hands and any exposed skin thoroughly after handling

P280 - Wear protective gloves/ eye protection/ face protection

P362 - Take off contaminated clothing and wash before reuse

**Other information**

No information available

**3. COMPOSITION/INFORMATION ON INGREDIENTS****3.1 Substances**

Chemical Name	CAS-No	Weight %	Classification (Reg. 1272/2008)
Tris	77-86-1	7-13	STOT SE 3 (H335) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319)

For the full text of the H-Statements mentioned in this Section, see Section 16

**4. FIRST AID MEASURES**

<b>General advice</b>	If symptoms persist, call a physician.
<b>Eye contact</b>	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. If symptoms persist, call a physician.
<b>Skin contact</b>	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. If symptoms persist, call a physician.
<b>Inhalation</b>	Move to fresh air. If symptoms persist, call a physician.
<b>Ingestion</b>	Rinse mouth. If symptoms persist, call a physician.
<b>Notes to physician</b>	Treat symptomatically.

**5. FIRE-FIGHTING MEASURES**

<b>Flammable properties</b>	Not flammable.
<b>Flash point</b>	not determined
<b>Suitable extinguishing media</b>	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
<b>Explosion Data</b>	
<b>Sensitivity to Mechanical Impact</b>	None.
<b>Sensitivity to Static Discharge</b>	None.



**Protective equipment and precautions for firefighters** As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear to prevent contact with skin and eyes.

**6. ACCIDENTAL RELEASE MEASURES**

**Personal precautions** Ensure adequate ventilation.

**Environmental precautions** Try to prevent the material from entering drains or water courses.

**Methods for containment** Prevent further leakage or spillage if safe to do so.

**Methods for cleaning up** Pick up and transfer to properly labeled containers.

**7. HANDLING AND STORAGE**

**Advice on safe handling** Handle in accordance with good industrial hygiene and safety practice.

**Technical measures/Storage conditions** Keep containers tightly closed in a dry, cool and well-ventilated place.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Exposure Guidelines** This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

**Engineering measures** Showers  
Eyewash stations  
Ventilation systems

**Personal protective equipment**

**Eye/face protection** No special protective equipment required.

**Skin and body protection** No special protective equipment required.

**Respiratory protection** If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

**Hygiene measures** Handle in accordance with good industrial hygiene and safety practice.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>Appearance</b>	No information available.	<b>Odor</b>	No information available.
<b>Odor Threshold</b>	No information available	<b>Physical State @20°C</b>	No information available
<b>pH</b>	7.40	<b>Autoignition temperature</b>	No information available
<b>Flash point</b>	No information available	<b>Boiling point/boiling range</b>	No information available
<b>Decomposition temperature</b>	No information available	<b>Flammability Limits in Air</b>	No information available
<b>Melting point/range</b>	No information available	<b>solubility</b>	No information available.
<b>Explosion limits</b>	No information available	<b>Vapor Pressure @20°C (kPa)</b>	No information available
<b>Specific Gravity</b>	No data available	<b>VOC Content(%)</b>	Not applicable
<b>Evaporation rate</b>	No information available		
<b>Vapor density</b>	No data available		

## 10. STABILITY AND REACTIVITY

<b>Stability</b>	Stable under recommended storage conditions.
<b>Incompatible products</b>	None known based on information supplied.
<b>Conditions to avoid</b>	None known based on information supplied.
<b>Hazardous decomposition products</b>	None known based on information supplied.
<b>Hazardous polymerization</b>	Hazardous polymerization does not occur.

## 11. TOXICOLOGICAL INFORMATION

### Acute toxicity

<b>Product Information</b>	Irritating to skin, eyes and / or respiratory tract.
<b>Inhalation</b>	May cause irritation of respiratory tract
<b>Eye contact</b>	May cause irritation
<b>Skin contact</b>	May cause irritation
<b>Ingestion</b>	Ingestion may cause irritation to mucous membranes

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Tris	5900 mg/kg ( Rat )		

### Chronic toxicity

<b>Target Organ Effects</b>	None known.
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## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

The environmental impact of this product has not been fully investigated.

## 13. DISPOSAL CONSIDERATIONS

<b>Waste disposal methods</b>	This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements.
<b>Contaminated packaging</b>	Do not re-use empty containers.

## 14. TRANSPORT INFORMATION

<b><u>DOT</u></b>	Not dangerous goods
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IATA Not dangerous goods

ADR Not dangerous goods

## 15. REGULATORY INFORMATION

### U.S. Federal Regulations

#### **SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

#### **SARA 311/312 Hazard Categories**

<b>Acute Health Hazard</b>	yes
<b>Chronic Health Hazard</b>	no
<b>Fire Hazard</b>	no
<b>Sudden Release of Pressure Hazard</b>	no
<b>Reactive Hazard</b>	no

#### **Clean Water Act**

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

#### **CERCLA**

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

### **U.S. State Regulations**

#### **California Proposition 65**

This product does not contain any Proposition 65 chemicals.

### **U.S. State Right-to-Know Regulations**

### **International Regulations**

#### **WHMIS Note:**

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

**16. OTHER INFORMATION****Full text of H-Statements referred to under sections 2 and 3**

H335 - May cause respiratory irritation H315 - Causes skin irritation H319 - Causes serious eye irritation

**Hazard statements**

H315 - Causes skin irritation

H319 - Causes serious eye irritation

**Revision Date** 22-May-2017

**Revision Note** No information available.

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

**End of MSDS**