

**Safety Data Sheet (SDS)****D-Act™ A**Reference No.:  
SDS Revision Date:925630  
06/11/2018**1. Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier****Product Identity** D-Act™ A**1.2. Relevant identified uses of the substance or mixture and uses advised against****Intended use** See Technical Data Sheet**Application Method** See Technical Data Sheet**1.3. Details of the supplier of the safety data sheet****Company Name** Adjuvants Unlimited, LLC  
3633 Charles Page Blvd.  
Tulsa, Ok. 74127**Emergency****24 hour Emergency Telephone No.** CHEMTREC (USA) (800) 424-9300**Customer Service****Adjuvants Unlimited, LLC** (918) 583-1155**2. Hazard identification of the product****2.1. Classification of the substance or mixture**Acute Tox. 4;H302 Harmful if swallowed.  
Skin Irrit. 2;H315 Causes skin irritation.  
Eye Irrit. 2;H319 Causes serious eye irritation.**2.2. Label elements**

Using the Toxicity Data listed in section 11 and 12 the product is labeled as follows.

**Warning**

H302 Harmful if swallowed.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

**[Prevention]:**

P264 Wash thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P280 Wear protective gloves / eye protection / face protection.

**[Response]:**

P301+312 IF SWALLOWED: Call a POISON CENTER or doctor / physician if you feel unwell.

P302+352 IF ON SKIN: Wash with plenty of soap and water.

P305+351+338 IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do - continue rinsing.

P330 Rinse mouth.

P332+313 If skin irritation occurs: Get medical advice / attention.

P337+313 If eye irritation persists: Get medical advice / attention.

P362 Take off contaminated clothing and wash before reuse.

**[Storage]:**

No GHS storage statements

**[Disposal]:**

P501 Dispose of contents / container in accordance with local / national regulations.

### 3. Composition/information on ingredients

This product contains the following substances that present a hazard within the meaning of the relevant State and Federal Hazardous Substances regulations.

Ingredient/Chemical Designations	Weight %	Notes
Ferrous Sulfate CAS Number: 0007782-63-0	25	[1]

[1] Substance classified with a health or environmental hazard.

[2] Substance with a workplace exposure limit.

[3] PBT-substance or vPvB-substance.

### 4. First aid measures

**4.1. Description of first aid measures**

<b>General</b>	In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person.
<b>Inhalation</b>	Remove to fresh air, keep patient warm and at rest. If breathing is irregular or stopped, give artificial respiration. If unconscious place in the recovery position and obtain immediate medical attention. Give nothing by mouth.
<b>Eyes</b>	Irrigate copiously with clean fresh water for at least 10 minutes, holding the eyelids apart and seek medical attention.
<b>Skin</b>	Remove contaminated clothing. Wash skin thoroughly with soap and water or use a recognized skin cleanser. Do NOT use solvents or thinners.
<b>Ingestion</b>	If accidentally swallowed obtain immediate medical attention. Keep at rest. Do NOT induce vomiting.

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

<b>Overview</b>	No adverse symptoms or effects anticipated under normal handling conditions See section 2 for further details.
<b>Eyes</b>	Causes serious eye irritation.
<b>Skin</b>	Causes skin irritation.
<b>Ingestion</b>	Harmful if swallowed.

### 5. Fire-fighting measures

#### 5.1. Extinguishing media

Recommended extinguishing media; alcohol resistant foam, CO<sub>2</sub>, powder, water spray. Do not use; water jet.

#### 5.2. Special hazards arising from the substance or mixture

Combustion may yield smoke, carbon monoxide, and other products of incomplete combustion. Oxides of sulfur, nitrogen or phosphorus may also be formed.

#### 5.3. Advice for fire-fighters

Evacuate area. Prevent contamination from run-off of adjacent areas, streams, drinking water and sewers. Do not flush down sewers or other drainage systems. Exposed firefighters must wear standard protective equipment and in enclosed areas self-contained breathing apparatus. Use water-spray to cool fire exposed surfaces and personnel

### 6. Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

Keep all sources of ignition away from spill/release. In case of a major spill or spillage in a confined space evacuate the area and check vapor levels.

#### 6.2. Environmental precautions

Do not allow spills to enter drains or watercourses.

#### 6.3. Methods and material for containment and cleaning up

Ventilate the area and avoid breathing vapors or mists. Take the personal protective measures listed in section 8. Contain and absorb spillage with non-combustible materials e.g. sand, earth, and vermiculite. Place in closed containers outside buildings and dispose of according to the Waste Regulations. (See section 13). Clean, preferably with a detergent. Do not use solvents. Do not allow spills to enter drains or watercourses. If drains, sewers, streams or lakes are contaminated, inform the local water company immediately. In the case of contamination of rivers, streams or lakes the Environmental Protection Agency should also be informed.

### 7. Handling and storage

#### 7.1. Precautions for safe handling

Do not get in eyes on skin or on clothing. Do not breathe vapors or mists. Keep container closed. Use only with adequate ventilation. Use good personal hygiene practices. Wash hands before eating, drinking, smoking. Remove contaminated clothing and clean before re-use. Destroy contaminated belts and shoes and other items that cannot be decontaminated.

See section 2 for further details. - [Prevention]:

#### 7.2. Conditions for safe storage, including any incompatibilities

Store in tightly closed containers in dry, well-ventilated area away from excessive heat and incompatibles.

Incompatible materials: Oxidizing agents

See section 2 for further details. - [Storage]:

### 7.3. Specific end use(s)

See Technical Data Sheet

## 8. Exposure controls and personal protection

### 8.1. Control parameters

#### Exposure

This product contains the following ingredient with workplace exposure limits.

CAS No.	Ingredient	Source	Value
0007782-63-0	Ferrous Sulfate	OSHA	No Established Limit
		ACGIH	No Established Limit
		NIOSH	No Established Limit

#### Carcinogen Data

This product contains no ingredients (at greater than 0.1%) that are suspected of being or known to be a carcinogen under OSHA, NTP or IARC.

CAS No.	Ingredient	Source	Value
0007782-63-0	Ferrous Sulfate	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;

### 8.2. Exposure controls

#### Respiratory

If workers are exposed to concentrations above the exposure limit they must use the appropriate, certified respirators.

#### Eyes

Wear safety eyewear, e.g. safety spectacles, goggles or visors to protect against the splash of liquids.

#### Skin

Overalls which cover the body, arms and legs should be worn. Skin should not be exposed. All parts of the body should be washed after contact.

#### Engineering Controls

Provide adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and any vapor below occupational exposure limits suitable respiratory protection must be worn.

**Other Work Practices** See Technical Data Sheet

See section 2 for further details. - [Prevention]:

## 9. Physical and chemical properties

#### Appearance

Greenish Blue Liquid

#### Odor

Slightly acrid

#### Odor threshold

Not Measured

#### pH

<2

#### Melting point / freezing point (°C)

Not Measured

#### Initial boiling point and boiling range (°C)

Not Measured

<b>Flash Point</b>	non flammable
<b>Evaporation rate (Ether = 1)</b>	Not Measured
<b>Flammability (solid, gas)</b>	Not Measured
<b>Upper/lower flammability or explosive limits</b>	<b>Lower Explosive Limit:</b> Not Measured <b>Upper Explosive Limit:</b> Not Measured
<b>Vapor pressure (Pa)</b>	Not Measured
<b>Vapor Density</b>	Not Measured
<b>Specific Gravity</b>	1.18 @ 20 C
<b>Partition coefficient n-octanol/water (Log Kow)</b>	Not Measured
<b>Auto-ignition temperature (°C)</b>	Not Measured
<b>Decomposition temperature</b>	>300 C (572 F)
<b>Viscosity (cSt)</b>	Not Measured
<b>VOC %</b>	Not Measured

**9.2. Other information**

No other relevant information.

## 10. Stability and reactivity

**10.1. Reactivity**

Not chemically reactive

**10.2. Chemical stability**

Stable under normal ambient and anticipated conditions of use.

**10.3. Possibility of hazardous reactions**

Hazardous reactions not anticipated.

**10.4. Conditions to avoid**

Extended exposure to high temperatures can cause decomposition. Avoid all possible sources of ignition.

**10.5. Incompatible materials**

Oxidizing agents

**10.6. Hazardous decomposition products**

Not anticipated under normal conditions of use.

## 11. Toxicological information

**Acute toxicity**

ATE (Acute Toxicity Estimate)

Ingredient	Oral LD50, mg/kg	Skin LD50, mg/kg	Inhalation Vapour LC50, mg/L/4hr	Inhalation Dust/Mist LC50, mg/L/4hr
D-Act™ A	500.00	>2,000.00	>20.00	>5.00

Item	Category	Hazard
Acute Toxicity (mouth)	4	Harmful if swallowed.
Acute Toxicity (skin)	---	Not Applicable

Acute Toxicity (inhalation)	---	Not Applicable
Skin corrosion/irritation	2	Causes skin irritation.
Eye damage/irritation	2	Causes serious eye irritation.
Sensitization (respiratory)	---	Not Applicable
Sensitization (skin)	---	Not Applicable
Germ toxicity	---	Not Applicable
Carcinogenicity	---	Not Applicable
Reproductive Toxicity	---	Not Applicable
Specific target organ systemic toxicity (single exposure)	---	Not Applicable
Specific target organ systemic Toxicity (repeated exposure)	---	Not Applicable
Aspiration hazard	---	Not Applicable

## 12. Ecological information

### 12.1. Toxicity

No additional information provided for this product.

### 12.2. Persistence and degradability

There is no data available on the preparation itself.

### 12.3. Bioaccumulative potential

Not Measured

### 12.4. Mobility in soil

No data available

### 12.5. Results of PBT and vPvB assessment

This product contains no PBT/vPvB chemicals.

### 12.6. Other adverse effects

No data available

## 13. Disposal considerations

### 13.1. Waste treatment methods

Do not allow into drains or water courses. Wastes and emptied containers should be disposed of in accordance with regulations made under the Control of Pollution Act and the Environmental Protection Act. Using information provided in this data sheet advice should be obtained from the Waste Regulation Authority, whether the special waste regulations apply. Dispose of contents in accordance with local and national regulations.

## 14. Transport information

**DOT Proper shipping name**

UN3264, Corrosive Liquid, Acidic, Inorganic, n.o.s.  
(Ferrous sulfate solution), 8, PG III

**DOT Hazard Class**

8

<b>DOT Packing group</b>	III
<b>DOT Label</b>	8
<b>IMDG Proper Shipping Name</b>	UN3264, Corrosive Liquid, Acidic, Inorganic, n.o.s. (Ferrous sulfate solution), 8, PG III
<b>IMDG Hazard Class</b>	8
<b>IMDG Packing Group</b>	III
<b>IMDG</b>	Marine Pollutant: no
<b>ICAO/IATA</b>	See bill of lading

## 15. Regulatory information

<b>Regulatory Overview</b>	The regulatory data in Section 15 is not intended to be all-inclusive, only selected regulations are represented.
<b>Toxic Substance Control Act ( TSCA)</b>	All ingredients of this product are listed on the TSCA (Toxic Substance Control Act) Inventory or are not required to be listed on the TSCA Inventory.
<b>WHMIS Classification</b>	D2B
<b>US EPA Tier II Hazards</b>	<p style="text-align: right;"><b>Fire:</b> No</p> <p style="text-align: right;"><b>Sudden Release of Pressure:</b> No</p> <p style="text-align: right;"><b>Reactive:</b> No</p> <p style="text-align: right;"><b>Immediate (Acute):</b> Yes</p> <p style="text-align: right;"><b>Delayed (Chronic):</b> No</p>
<b>EPCRA 311/312 Chemicals and RQs (lbs) (&gt;0.1%) :</b>	
	Ferrous Sulfate ( 1,000.00)
<b>EPCRA 302 Extremely Hazardous (&gt;0.1%):</b>	To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.
<b>EPCRA 313 Toxic Chemicals:</b>	To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.
<b>Proposition 65 - Carcinogens (&gt;0.0%):</b>	To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.
<b>Proposition 65 - Developmental Toxins (&gt;0.0%):</b>	To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.
<b>Proposition 65 - Female Repro Toxins (&gt;0.0%):</b>	To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.
<b>Proposition 65 - Male Repro Toxins (&gt;0.0%):</b>	To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.
<b>New Jersey RTK Substances (&gt;1%) :</b>	To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.
<b>Penn RTK Substances (&gt;1%) :</b>	
	Ferrous Sulfate

## 16. Other information

**SDS Revision Date** 06/11/2018

DISCLAIMER: The information in this Safety Data Sheet is provided in good faith and believed to be accurate as of the date issued. It pertains only to the product as shipped by Adjuvants Unlimited, LLC. ADJUVANT UNLIMITED, LLC MAKES NO WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. It is the responsibility of the recipient and /or user of the product to study this Safety Data Sheet and to understand the information contained herein and any hazards associated with the product. Regulatory requirements are subject to change and may differ by jurisdiction. Therefore, it is the responsibility of the recipient and/or user of the product to insure that its activities comply with all federal and state laws. Adjuvants Unlimited, LLC assumes no responsibility for injury to the recipient and /or user or to any third party, or for damage to property.

**This is the first revision of this SDS format, changes from previous revision not applicable.**

End of Document



**Safety Data Sheet (SDS)****D-Act™ B**

Reference No.:  
SDS Revision Date:

925620  
07/05/2018

## 1. Identification of the substance/mixture and of the company/undertaking

**1.1. Product identifier**

**Product Identity** D-Act™ B

**1.2. Relevant identified uses of the substance or mixture and uses advised against**

**Intended use** See Technical Data Sheet

**Application Method** See Technical Data Sheet

**1.3. Details of the supplier of the safety data sheet**

**Company Name** Adjuvants Unlimited, LLC  
3633 Charles Page Blvd.  
Tulsa, Ok. 74127

**Emergency**

**24 hour Emergency Telephone No.** CHEMTREC (USA) (800) 424-9300

**Customer Service**

**Adjuvants Unlimited, LLC** (918) 583-1155

## 2. Hazard identification of the product

**2.1. Classification of the substance or mixture**

Ox. Liq. 2;H272	May intensify fire; oxidizer.
Acute Tox. 4;H302	Harmful if swallowed.
Acute Tox. 4;H332	Harmful if inhaled.
Skin Corr. 1B;H314	Causes severe skin burns and eye damage.
Eye Dam. 1;H318	Causes serious eye damage.
STOT SE 3;H335	May cause respiratory irritation.

**2.2. Label elements**

Using the Toxicity Data listed in section 11 and 12 the product is labeled as follows.



**Danger**

H272 May intensify fire; oxidizer.

H302 Harmful if swallowed.

H314 Causes severe skin burns and eye damage.

H318 Causes serious eye damage.

H332 Harmful if inhaled.

H335 May cause respiratory irritation.

**[Prevention]:**

P210 Keep away from heat / sparks / open flames / hot surfaces - No smoking.

P220 Keep / Store away from combustible materials.

P221 Take any precaution to avoid mixing with combustibles.

P261 Avoid breathing mist / vapors / spray.

P264 Wash thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P271 Use only outdoors or in a well-ventilated area.

P280 Wear protective gloves / eye protection / face protection.

**[Response]:**

P301+330+331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P303+361+353 IF ON SKIN (or hair): Remove / Take off immediately all contaminated clothing. Rinse skin with water / shower.

P304+340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P305+351+338 IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do - continue rinsing.

P312 Call a POISON CENTER or doctor / physician if you feel unwell.

P363 Wash contaminated clothing before reuse.

P370 In case of fire: Use water to extinguish.

**[Storage]:**

P403+233 Store in a well ventilated place. Keep container tightly closed.

P405 Store locked up.

**[Disposal]:**

P501 Dispose of contents / container in accordance with local / national regulations.

### 3. Composition/information on ingredients

This product contains the following substances that present a hazard within the meaning of the relevant State and Federal Hazardous Substances regulations.

Ingredient/Chemical Designations	Weight %	Notes
Hydrogen peroxide CAS Number: 0007722-84-1	27	[1][2]

[1] Substance classified with a health or environmental hazard.

[2] Substance with a workplace exposure limit.

[3] PBT-substance or vPvB-substance.

### 4. First aid measures

#### 4.1. Description of first aid measures

<b>General</b>	In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person.
<b>Inhalation</b>	Remove to fresh air, keep patient warm and at rest. If breathing is irregular or stopped, give artificial respiration. If unconscious place in the recovery position and obtain immediate medical attention. Give nothing by mouth.
<b>Eyes</b>	Irrigate copiously with clean fresh water for at least 10 minutes, holding the eyelids apart and seek medical attention.
<b>Skin</b>	Remove contaminated clothing. Wash skin thoroughly with soap and water or use a recognized skin cleanser. Do NOT use solvents or thinners.
<b>Ingestion</b>	If accidentally swallowed obtain immediate medical attention. Keep at rest. Do NOT induce vomiting.

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

<b>Overview</b>	No adverse symptoms or effects anticipated under normal handling conditions See section 2 for further details.
<b>Inhalation</b>	Harmful if inhaled. May cause respiratory irritation. May cause respiratory irritation and pulmonary edema. These effects may not be immediate.
<b>Eyes</b>	Causes serious eye damage.
<b>Skin</b>	Causes severe skin burns and eye damage.
<b>Ingestion</b>	Harmful if swallowed. In case of accidental ingestion, necrosis may result from mucous membrane burns (mouth, esophagus and stomach).

## 5. Fire-fighting measures

#### 5.1. Extinguishing media

Recommended extinguishing media; Use large amounts of water. Do not use dry chemicals or foams.

#### 5.2. Special hazards arising from the substance or mixture

Combustion may yield smoke, carbon monoxide, and other products of incomplete combustion. Oxides of sulfur, nitrogen or phosphorus may also be formed.

Cool closed containers exposed to fire with water spray as closed containers of this material may explode when subjected to heat from surrounding fire.

Take any precaution to avoid mixing with combustibles.

Avoid breathing mist / vapors / spray. Explosive when mixed with combustible material. In closed unventilated containers, risk of rupture due to the increased pressure from decomposition. Decomposition will release oxygen, which will intensify a fire.

#### 5.3. Advice for fire-fighters

Oxidizing material. In case of major fire and large quantities: Evacuate area. Fight fire remotely due to risk of explosion. Cool closed containers exposed to fire with water spray as closed containers of this material may explode when subjected to heat from surrounding fire. Prevent contamination from run-off of adjacent areas, streams, drinking water and sewers. Do not flush down sewers or other drainage systems. Exposed firefighters must wear full fire fighting turn out gear (full Bunker Gear) and self-contained breathing apparatus (pressure demand/ NIOSH approved or equivalent). Fire fighting equipment should be thoroughly decontaminated after use.

## 6. Accidental release measures

### **6.1. Personal precautions, protective equipment and emergency procedures**

Keep all sources of ignition away from spill/release. In case of a major spill or spillage in a confined space evacuate the area and check vapor levels. Evacuate area of all unnecessary personnel. Ventilate the area. Eliminate all ignition sources. Avoid generation of vapors. Avoid contact with cellulose, paper, sawdust or similar substances. Combustible materials (including packaging components) exposed to hydrogen peroxide should be immediately submerged in or rinsed with large amounts of water to ensure that all hydrogen peroxide is removed. Residual hydrogen peroxide solution that is allowed to dry on combustible, absorptive materials (such as: fiberboard, paper, fabrics, cotton, leather, wood, or other organic materials) upon evaporation can cause the material to spontaneously ignite and result in fire. This effect can occur hours, or days after the initial spill.

### **6.2. Environmental precautions**

Do not allow spills to enter drains or watercourses.

### **6.3. Methods and material for containment and cleaning up**

Dike to collect large liquid spills. Prevent further leakage or spillage if you can do so without risk. Ventilate the area and avoid breathing vapors or mists. Small spillage: Dilute with large quantities of water. Take the personal protective measures listed in section 8. Contain and absorb spillage with non-combustible materials e.g. sand, earth, and vermiculite. Place in closed containers outside buildings and dispose of according to the Waste Regulations. (See section 13). Clean, preferably with a detergent. Do not use solvents. Do not allow spills to enter drains or watercourses. If drains, sewers, streams or lakes are contaminated, inform the local water company immediately. In the case of contamination of rivers, streams or lakes the Environmental Protection Agency should also be informed.

## **7. Handling and storage**

### **7.1. Precautions for safe handling**

Do not get in eyes on skin or on clothing. Avoid breathing vapors or mists. Keep container closed. Use only with adequate ventilation. Use good personal hygiene practices. Wash hands before eating, drinking, smoking. Remove contaminated clothing and clean before re-use. Destroy contaminated belts and shoes and other items that cannot be decontaminated. Use proper eye/face protection and rubber gloves when handling this product.

See section 2 for further details. - [Prevention]:

### **7.2. Conditions for safe storage, including any incompatibilities**

Store in tightly closed containers in dry, well-ventilated area away from excessive heat and any sources of ignition. Store only at temperatures below 52°C (125°F). Store away from combustibles and incompatible materials. Store and handle in accordance with National Fire Protection Association (NFPA) 430, Code for the Storage of Solid and Liquid Oxidizers. Leaking packages should be removed from stacks and isolated away from combustible and incompatible materials and rinsed with large amounts of water to dilute. Combustible materials exposed to hydrogen peroxide should be immediately submerged in or rinsed with large amounts of water to ensure that all hydrogen peroxide is removed. Residual hydrogen peroxide that is allowed to dry (upon evaporation hydrogen peroxide can concentrate) on organic materials such as paper, fabrics, cotton, leather, wood or other combustibles can cause the material to ignite and result in fire. NFPA 430 contains quantity limitation for various storage conditions for this material dependent on facility type, construction, fire protective equipment, other stored materials. This can include site safety plans and employee training programs.

Incompatible materials: Oxidizing agents, Combustible materials. Copper alloys, galvanized iron. Strong reducing agents. Heavy metals. Iron. Contact with metals, metallic ions, alkalis, reducing agents and organic matter (such as alcohols and terpenes) may produce self-accelerated thermal decomposition.

See section 2, - [Storage]: for further information.

### **7.3. Specific end use(s)**

Use only in combination with Ferrous Sulfate, 25% Solution for the specified Spray System Cleaner and for no other reason. Use according to the mix use instructions on the product label.

## 8. Exposure controls and personal protection

### 8.1. Control parameters

#### Exposure

This product contains the following ingredient with workplace exposure limits.

CAS No.	Ingredient	Source	Value
0007722-84-1	Hydrogen peroxide	OSHA	TWA 1 ppm (1.4 mg/m3)
		ACGIH	TWA: 1 ppm
		NIOSH	TWA 1 ppm (1.4 mg/m3)

#### Carcinogen Data

This product contains the following ingredients (at greater than 0.1%) that are suspected of being or known to be a carcinogen under OSHA, NTP or IARC.

CAS No.	Ingredient	Source	Value
0007722-84-1	Hydrogen peroxide	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: Yes; Group 4: No;

### 8.2. Exposure controls

#### Respiratory

If workers are exposed to concentrations above the exposure limit they must use the appropriate, certified respirators.

#### Eyes

Wear safety eyewear, e.g. safety spectacles, goggles or visors to protect against the splash of liquids.

#### Skin

Chemical Protective Clothing (CPC) which cover the body, arms and legs should be worn. Skin should not be exposed. All parts of the body should be washed after contact.

#### Engineering Controls

Provide adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and any vapor below occupational exposure limits suitable respiratory protection must be worn.

#### Other Work Practices

Wear chemically resistant rubber gloves when handling. Refer to manufacture guidelines on compatible gloves. DO NOT use cotton, wool or leather for these materials react rapidly with higher concentrations of hydrogen peroxide. Train employees handling this product according to NFPA 430 in the chemical and physical hazards of oxidizers in facilities where they are stored. Damaged or leaking packages should be removed from other stored product and moved to another area in accordance with the handling instructions for the product in accordance with local/state/federal regulations.

See section 2 for further details. - [Prevention]:

## 9. Physical and chemical properties

#### Appearance

Clear, Colorless Liquid

#### Odor

Odorless

#### Odor threshold

Not Measured

#### pH

<3.0

#### Melting point / freezing point (°C)

Not Measured

#### Initial boiling point and boiling range (°C)

114 C

<b>Flash Point</b>	Not flammable
<b>Evaporation rate (Ether = 1)</b>	>1 (n-butyl acetate=1)
<b>Flammability (solid, gas)</b>	Not Measured
<b>Upper/lower flammability or explosive limits</b>	<b>Lower Explosive Limit:</b> Not Measured <b>Upper Explosive Limit:</b> Not Measured
<b>Vapor pressure (Pa)</b>	18 mm Hg @ 30 C
<b>Vapor Density</b>	Not Measured
<b>Specific Gravity</b>	1.1 @ 20 C
<b>Partition coefficient n-octanol/water (Log Kow)</b>	Not Measured
<b>Auto-ignition temperature (°C)</b>	Not combustible
<b>Decomposition temperature</b>	100 C (adiabatic)
<b>Viscosity (cSt)</b>	1.17 @ 20 C
<b>VOC %</b>	Not Measured

**9.2. Other information**

No other relevant information.

## 10. Stability and reactivity

**10.1. Reactivity**

Reactive and oxidizing agent.

**10.2. Chemical stability**

Stable under normal conditions. Decomposes on heating. Stable under recommended storage conditions.

**10.3. Possibility of hazardous reactions**

Contact with organic substances may cause fire or explosion. Contact with metals, metallic ions, alkalis, reducing agents and organic matter (such as alcohols or terpenes) may produce self-accelerated thermal decomposition.

**10.4. Conditions to avoid**

Extended exposure to high temperatures can cause decomposition. Avoid all possible sources of ignition. Contact with incompatible materials.

**10.5. Incompatible materials**

Oxidizing agents, Combustible materials. Copper alloys, galvanized iron. Strong reducing agents. Heavy metals. Iron. Contact with metals, metallic ions, alkalis, reducing agents and organic matter (such as alcohols and terpenes) may produce self-accelerated thermal decomposition.

**10.6. Hazardous decomposition products**

Oxygen which supports combustion. Liable to produce overpressure in container.

## 11. Toxicological information

**Acute toxicity**

ATE (Acute Toxicity Estimate)

Ingredient	Oral LD50, mg/kg	Skin LD50, mg/kg	Inhalation Vapour LC50, mg/L/4hr	Inhalation Dust/Mist LC50, mg/L/4hr
D-Act™ B	500.00	>2,000.00	11.00	1.50

Item	Category	Hazard
Acute Toxicity (mouth)	4	Harmful if swallowed.
Acute Toxicity (skin)	---	Not Applicable
Acute Toxicity (inhalation)	4	Harmful if inhaled.
Skin corrosion/irritation	1B	Causes severe skin burns and eye damage.
Eye damage/irritation	1	Causes serious eye damage.
Sensitization (respiratory)	---	Not Applicable
Sensitization (skin)	---	Not Applicable
Germ toxicity	---	Not Applicable
Carcinogenicity	---	Not Applicable
Reproductive Toxicity	---	Not Applicable
Specific target organ systemic toxicity (single exposure)	3	May cause respiratory irritation.
Specific target organ systemic toxicity (single exposure)	3	May cause respiratory irritation.
Specific target organ systemic Toxicity (repeated exposure)	---	Not Applicable
Aspiration hazard	---	Not Applicable

## 12. Ecological information

### 12.1. Toxicity

No additional information provided for this product.

### 12.2. Persistence and degradability

Hydrogen peroxide in the aquatic environment is subject to various reduction or oxidation processes and decomposes into water and oxygen. Hydrogen peroxide half-life in freshwater ranged from 8 hours to 20 days, in air from 10 - 20 hours, and in soils from minutes to hours depending upon microbiological activity and metal contamination.

### 12.3. Bioaccumulative potential

Material may have some potential to bioaccumulate but will likely degrade in most environments before accumulation can occur.

### 12.4. Mobility in soil

Will likely be mobile in the environment due to its water solubility but will likely degrade over time.

### 12.5. Results of PBT and vPvB assessment

This product contains no PBT/vPvB chemicals.

### 12.6. Other adverse effects

Decomposes into oxygen and water. No adverse effects.

## 13. Disposal considerations

### 13.1. Waste treatment methods

Do not allow into drains or water courses. Wastes and emptied containers should be disposed of in accordance with regulations made under the Control of Pollution Act and the Environmental Protection Act. Using information provided

in this data sheet advice should be obtained from the Waste Regulation Authority, whether the special waste regulations apply. Dispose of contents in accordance with local and national regulations.

## 14. Transport information

<b>DOT Proper shipping name</b>	UN2014 Hydrogen Peroxide, Aqueous Solution, 5.1 (8), PG II
<b>DOT Hazard Class</b>	5.1 (8)
<b>DOT Packing group</b>	II
<b>DOT Label</b>	5.1
<b>IMDG Proper Shipping Name</b>	UN2014 Hydrogen Peroxide, Aqueous Solution, 5.1 (8), PG II
<b>IMDG Hazard Class</b>	5.1 (8)
<b>IMDG Packing Group</b>	II
<b>IMDG</b>	Marine Pollutant: no ( Hydrogen peroxide )
<b>ICAO/IATA</b>	Hydrogen Peroxide is forbidden for air transport.

## 15. Regulatory information

<b>Regulatory Overview</b>	The regulatory data in Section 15 is not intended to be all-inclusive, only selected regulations are represented.
<b>Toxic Substance Control Act ( TSCA )</b>	All ingredients of this product are listed on the TSCA (Toxic Substance Control Act) Inventory or are not required to be listed on the TSCA Inventory.
<b>WHMIS Classification</b>	D1B E C
<b>US EPA Tier II Hazards</b>	<p style="text-align: right;"><b>Fire:</b> No</p> <p style="text-align: right;"><b>Sudden Release of Pressure:</b> No</p> <p style="text-align: right;"><b>Reactive:</b> Yes</p> <p style="text-align: right;"><b>Immediate (Acute):</b> Yes</p> <p style="text-align: right;"><b>Delayed (Chronic):</b> No</p>
<b>EPCRA 311/312 Chemicals and RQs (&gt;0.1%):</b>	To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.
<b>EPCRA 302 Extremely Hazardous (&gt;.1%) :</b>	Hydrogen peroxide
<b>EPCRA 313 Toxic Chemicals:</b>	To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.
<b>Proposition 65 - Carcinogens (&gt;0.0%):</b>	To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.
<b>Proposition 65 - Developmental Toxins (&gt;0.0%):</b>	To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.
<b>Proposition 65 - Female Repro Toxins (&gt;0.0%):</b>	To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.



**Proposition 65 - Male Repro Toxins (>0.0%):**

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

**N.J. RTK Substances (>1%) :**

Hydrogen peroxide

**Penn RTK Substances (>1%) :**

Hydrogen peroxide

## 16. Other information

**SDS Revision Date** 07/05/2018

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**This is the first revision of this SDS format, changes from previous revision not applicable.**

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