

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Date of issue: 04/22/2015 Version: 1.0

1.1. Product identifier	
Product form	: Mixture
Product name	: Potassium Dichromate, 0.1N (0.0167M)
Product code	: LC18980
1.2. Relevant identified uses	of the substance or mixture and uses advised against
Use of the substance/mixture	: For laboratory and manufacturing use only.
1.3. Details of the supplier of	the safety data sheet
LabChem Inc Jackson's Pointe Commerce Park B Zelienople, PA 16063 - USA T 412-826-5230 - F 724-473-0647 <u>info@labchem.com</u> - <u>www.labchem.</u>	uilding 1000, 1010 Jackson's Pointe Court <u>com</u>
1.4. Emergency telephone nu	umber
Emergency number	: CHEMTREC: 1-800-424-9300 or 011-703-527-3887

2.1. Classification of the substance or mixture

#### Classification (GHS-US)

 Resp. Sens. 1
 H334

 Skin Sens. 1
 H317

 Muta. 1B
 H340

 Carc. 1B
 H350

 Repr. 1B
 H360

Full text of H-phrases: see section 16

2.2. Label elements	
GHS-US labeling	
Hazard pictograms (GHS-US)	: GHS08
Signal word (GHS-US)	: Danger
Hazard statements (GHS-US)	<ul> <li>H317 - May cause an allergic skin reaction</li> <li>H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled</li> <li>H340 - May cause genetic defects</li> <li>H350 - May cause cancer</li> <li>H360 - May damage fertility or the unborn child</li> </ul>
Precautionary statements (GHS-US)	<ul> <li>P201 - Obtain special instructions before use</li> <li>P202 - Do not handle until all safety precautions have been read and understood</li> <li>P261 - Avoid breathing mist</li> <li>P272 - Contaminated work clothing should not be allowed out of the workplace</li> <li>P280 - Wear protective gloves, protective clothing, eye protection, face protection</li> <li>P284 - Wear respiratory protection</li> <li>P302+P352 - IF ON SKIN: Wash with plenty of soap and water</li> <li>P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing</li> <li>P303+P313 - IF exposed or concerned: Get medical advice/attention</li> <li>P342+P311 - If experiencing respiratory symptoms: Call a poison center/doctor</li> <li>P362+P364 - Take off contaminated clothing and wash it before reuse</li> <li>P405 - Store locked up</li> <li>P501 - Dispose of contents/container to comply with local, state and federal regulations</li> </ul>
2.3. Other hazards	
Other hazards not contributing to the classification	: None under normal conditions.
04/22/2015	EN (English US) Page 1

Safety Data Sheet

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

#### 2.4. Unknown acute toxicity (GHS US)

#### Not applicable

### **SECTION 3: Composition/information on ingredients**

### 3.1. Substance

### Not applicable

Name	Product identifier	%	Classification (GHS-US)
Water	(CAS No) 7732-18-5	99.5	Not classified
Potassium Dichromate	(CAS №) 7778-50-9	0.5	Ox. Sol. 2, H272 Acute Tox. 3 (Oral), H301 Acute Tox. 4 (Dermal), H312 Acute Tox. 2 (Inhalation), H330 Skin Corr. 1B, H314 Resp. Sens. 1, H314 Resp. Sens. 1, H317 Muta. 1B, H340 Carc. 1B, H350 Repr. 1B, H360 STOT RE 1, H372 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

#### Full text of H-phrases: see section 16

SECTION 4: First aid measures	
4.1. Description of first aid measures	
First-aid measures general	: Never give anything by mouth to an unconscious person. IF exposed or concerned: Get medical advice/attention.
First-aid measures after inhalation	: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.
First-aid measures after skin contact	<ul> <li>Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse.</li> </ul>
First-aid measures after eye contact	<ul> <li>Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persist.</li> </ul>
First-aid measures after ingestion	: Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.
4.2. Most important symptoms and effe	cts, both acute and delayed
Symptoms/injuries	: May cause genetic defects. May cause cancer. May damage fertility or the unborn child.
Symptoms/injuries after inhalation	: May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction.

4.3. Indication of any immediate medical attention and special treatment needed

#### Obtain medical assistance. **SECTION 5: Firefighting measures** 5.1. **Extinguishing media** Suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray. Sand. Unsuitable extinguishing media : Do not use a heavy water stream. 5.2. Special hazards arising from the substance or mixture No additional information available 5.3. **Advice for firefighters Firefighting instructions** : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment. Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection. **SECTION 6: Accidental release measures** 6.1. Personal precautions, protective equipment and emergency procedures 6.1.1. For non-emergency personnel

	-				
Protective equipment			:	Safety glasses.	Gloves.

Emergency procedures : Evacuate unnecessary personnel.

Safety Data Sheet

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

ccording to Federal Register / Vol. 77, No.	58 / Monday, March 26, 2012 / Rules and Regulations			
6.1.2. For emergency responde	rs			
Protective equipment	: Equip cleanup crew with proper protection.			
Emergency procedures	: Ventilate area.			
6.2. Environmental precautions				
Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters. Avoid release to the environment.				
6.3. Methods and material for containment and cleaning up				
Methods for cleaning up	: Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.			
6.4. Reference to other section	ne			
See Heading 8. Exposure controls an	d personal protection.			
See Heading 8. Exposure controls an SECTION 7: Handling and st	id personal protection. torage			
See Heading 8. Exposure controls an SECTION 7: Handling and st 7.1. Precautions for safe hand	id personal protection. torage			
See Heading 8. Exposure controls an SECTION 7: Handling and start of the second start	Id personal protection. <b>torage</b> Illing : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor. Avoid breathing mist. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Eliminate all ignition sources if safe to do			
See Heading 8. Exposure controls an SECTION 7: Handling and si 7.1. Precautions for safe hand Precautions for safe handling Hygiene measures	<ul> <li>d personal protection.</li> <li>torage</li> <li>Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor. Avoid breathing mist. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Eliminate all ignition sources if safe to do so.</li> <li>Contaminated work clothing should not be allowed out of the workplace. Wash contaminated</li> </ul>			
See Heading 8. Exposure controls an SECTION 7: Handling and standard stan Standard standard stand Standard standard stand Standar	Image         Storage         Storage         Storage         Image         : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor. Avoid breathing mist. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Eliminate all ignition sources if safe to do so.         : Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse.			

### 7.3. Specific end use(s)

Incompatible products

Incompatible materials

No additional information available

Potassium Dichror	mate, 0.1N (0.0167M)		
ACGIH	Not applicable		
OSHA	Not applicable		
Potassium Dichromate (7778-50-9)			
ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	0.05 mg/m³ as Cr	
OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	0.005 mg/m <sup>3</sup> as Cr(VI)	
Water (7732-18-5)	Vater (7732-18-5)		
ACGIH	Not applicable		
OSHA	Not applicable		

: Strong reducing agents. combustible materials.

: Sources of ignition. Direct sunlight.

· • • • • • • • • • • • • • • • • • • •	vicinity of any potential exposure. Ensure adequate ventilation. Material should be handled in a laboratory hood whenever possible.
Personal protective equipment	: Avoid all unnecessary exposure.
Hand protection	: Wear protective gloves.
Eye protection	: Chemical goggles or safety glasses.
Respiratory protection	: In case of inadequate ventilation wear respiratory protection.
Other information	: Do not eat, drink or smoke during use.
<b>SECTION 9: Physical and ch</b>	nemical properties
9.1. Information on basic physic	sical and chemical properties
Physical state	: Liquid

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

Odor	: None.
Odor threshold	: No data available
рН	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: No data available
Explosion limits	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
Vapor pressure	: No data available
Relative density	: No data available
Relative vapor density at 20 °C	: No data available
Specific gravity / density	: 1 g/ml
Solubility	: Soluble in water.
Log Pow	: No data available
Log Kow	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity	: No data available
Viscosity, kinematic	: 1 cSt
Viscosity, dynamic	: No data available
0.2 Other information	

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity
10.1. Reactivity
No additional information available
10.2. Chemical stability
Stable under normal conditions.
10.3. Possibility of hazardous reactions
Not established.
10.4. Conditions to avoid
Direct sunlight. Extremely high or low temperatures.
10.5. Incompatible materials
Strong reducing agents. combustible materials.
10.6. Hazardous decomposition products
Contains hexavalent chromium.
SECTION 11: Toxicological information
11.1. Information on toxicological effects

Likely routes of exposure Acute toxicity	Skin and eye contact Not classified
Potassium Dichromate, 0.1N (0.0167M)	
LD50 oral rat	5000 mg/kg
LC50 inhalation rat (mg/l)	18 mg/l/4h
ATE US (oral)	5000.000 mg/kg body weight
ATE US (vapors)	18.000 mg/l/4h
ATE US (dust, mist)	18.000 mg/l/4h

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

Potassium Dichromate (7778-50-9)	
LD50 oral rat	25 mg/kg
LD50 dermal rabbit	1150 mg/kg
LC50 inhalation rat (mg/l)	0.09 mg/l/4h
ATE US (oral)	25.000 mg/kg body weight
ATE US (dermal)	1150.000 mg/kg body weight
ATE US (gases)	100.000 ppmV/4h
ATE US (vapors)	0.090 mg/l/4h
ATE US (dust, mist)	0.090 mg/l/4h
Water (7732-18-5)	
LD50 oral rat	≥ 90000 mg/kg
ATE US (oral)	90000.000 mg/kg body weight
Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitization	: May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction.
Germ cell mutagenicity	: May cause genetic defects.
Carcinogenicity	: May cause cancer.
Potassium Dichromate, 0.1N (0.0167M)	
In OSHA Specifically Regulated Carcinogen list	Yes
Reproductive toxicity	: May damage fertility or the unborn child.
Specific target organ toxicity (single exposure)	: Not classified
Specific target organ toxicity (repeated exposure)	: Not classified
Aspiration hazard	: Not classified
Potential Adverse human health effects and symptoms	: Based on available data, the classification criteria are not met.
Symptoms/injuries after inhalation	: May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction.

SECTION 12: Ecological information			
12.1. Toxicity			
cology - water : Toxic to aquatic life.			
Potassium Dichromate, 0.1N (0.0167M)			
EC50 Daphnia 1 280 mg/l 48 h			
Potassium Dichromate (7778-50-9)			
LC50 fish 1	12.3 mg/l 96 hr.		
EC50 Daphnia 1	1.4 mg/l 24 hr.		
12.2. Persistence and degradability			
Potassium Dichromate, 0.1N (0.0167M)			
Persistence and degradability	Not readily biodegradable in water.		
Potassium Dichromate (7778-50-9)			
Persistence and degradability	Not established.		
Water (7732-18-5)			
Persistence and degradability	Not established.		
12.3. Bioaccumulative potential			
Potassium Dichromate, 0.1N (0.0167M)			
Bioaccumulative potential	oaccumulative potential Not established.		
Potassium Dichromate (7778-50-9)			
ioaccumulative potential Not established.			

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

	1	
Bioaccumulative potential	Not established.	
2.4. Mobility in soil		
o additional information available		
2.5. Other adverse effects		
ffect on the global warming	: No known ecological damage caused by this product	
Other information	: Avoid release to the environment.	
SECTION 13: Disposal considerations	3	
3.1. Waste treatment methods		
Vaste disposal recommendations	: Dispose in a safe manner in accordance with local/na contents/container to comply with local, state and fed	
Ecology - waste materials	: Avoid release to the environment.	
SECTION 14: Transport information		
Department of Transportation (DOT)		
n accordance with DOT		
Not regulated for transport		
Additional information		
Other information	: No supplementary information available.	
ransport by sea lo additional information available sir transport		
No additional information available		
5.1. US Federal regulations		
5.1. US Federal regulations Potassium Dichromate, 0.1N (0.0167M)	Immediate (acute) health bazard	
5.1. US Federal regulations Potassium Dichromate, 0.1N (0.0167M)	Immediate (acute) health hazard Delayed (chronic) health hazard	
5.1. US Federal regulatory information 5.1. US Federal regulations Potassium Dichromate, 0.1N (0.0167M) SARA Section 311/312 Hazard Classes All components of this product are listed, or exclusubstances Control Act (TSCA) inventory	( )	rotection Agency Toxic
5.1. US Federal regulations Potassium Dichromate, 0.1N (0.0167M) SARA Section 311/312 Hazard Classes All components of this product are listed, or exclu Substances Control Act (TSCA) inventory	Delayed (chronic) health hazard	
5.1. US Federal regulations Potassium Dichromate, 0.1N (0.0167M) SARA Section 311/312 Hazard Classes All components of this product are listed, or exclu Substances Control Act (TSCA) inventory Chemical(s) subject to the reporting requirement 1986 and 40 CFR Part 372.	Delayed (chronic) health hazard uded from listing, on the United States Environmental P	
5.1. US Federal regulations Potassium Dichromate, 0.1N (0.0167M) SARA Section 311/312 Hazard Classes All components of this product are listed, or exclu Substances Control Act (TSCA) inventory Chemical(s) subject to the reporting requirement	Delayed (chronic) health hazard uded from listing, on the United States Environmental P s of Section 313 or Title III of the Superfund Amendmer	nts and Reauthorization Act (SARA) of
5.1. US Federal regulations Potassium Dichromate, 0.1N (0.0167M) SARA Section 311/312 Hazard Classes All components of this product are listed, or exclu Substances Control Act (TSCA) inventory Chemical(s) subject to the reporting requirement 1986 and 40 CFR Part 372. Potassium Dichromate Potassium Dichromate (7778-50-9)	Delayed (chronic) health hazard uded from listing, on the United States Environmental P s of Section 313 or Title III of the Superfund Amendmer	nts and Reauthorization Act (SARA) of
5.1. US Federal regulations Potassium Dichromate, 0.1N (0.0167M) SARA Section 311/312 Hazard Classes All components of this product are listed, or exclu Substances Control Act (TSCA) inventory Chemical(s) subject to the reporting requirement 1986 and 40 CFR Part 372. Potassium Dichromate	Delayed (chronic) health hazard uded from listing, on the United States Environmental P s of Section 313 or Title III of the Superfund Amendmer	nts and Reauthorization Act (SARA) of

CANADA		
Potassium Dichromate, 0.1N (0.0167M)		
WHMIS Classification	Class D Division 2 Subdivision A - Very toxic material causing other toxic effects Class D Division 2 Subdivision B - Toxic material causing other toxic effects	

Safety Data Sheet

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

Potassium Dichromate (7778-50-9)			
Listed on the Canadian DSL (Domestic Substances List)			
WHMIS Classification	Class C - Oxidizing Material Class D Division 1 Subdivision A - Very toxic material causing immediate and serious toxic effects Class D Division 2 Subdivision A - Very toxic material causing other toxic effects Class D Division 2 Subdivision B - Toxic material causing other toxic effects Class E - Corrosive Material		
Water (7732-18-5)			
Listed on the Canadian DSL (Dome	isted on the Canadian DSL (Domestic Substances List)		
WHMIS Classification Uncontrolled product according to WHMIS classification criteria			

#### **EU-Regulations**

No additional information available

Classification according to Regulation (EC) No. 1272/2008 [CLP] No additional information available

Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD] Not classified

#### **National regulations**

	Potassium Dichromate (7778-50-9)	
	Listed on the Canadian IDL (Ingredient Disclosure List)	
	Water (7732-18-5)	
ſ	Not listed on the Canadian IDL (Ingredient Disclosure List)	

#### 15.3. US State regulations

California Proposition 65 - This product contains, or may contain, trace quantities of a substance(s) known to the state of California to cause cancer and/or reproductive toxicity

Potassium Dichromate (7778-50-9)				
U.S California - Proposition 65 - Carcinogens List	U.S California - Proposition 65 - Developmental Toxicity	U.S California - Proposition 65 - Reproductive Toxicity - Female	U.S California - Proposition 65 - Reproductive Toxicity - Male	No significance risk level (NSRL)
Yes	Yes	Yes	Yes	

**SECTION 16: Other information** 

Other information

: None.

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

Note: The procession of the second	Full tex	t of H-phrases: see section 16:			
Acute Tox, 4 (Oran)       Acute toxicity (oran) Category 3         Acute Tox, 4 (Dermal)       Acute toxicity (dermal) Category 4         Aquatic Acute 1       Hazardous to the aquate environment - Acute Hazard Category 1         Aquatic Acute 1       Hazardous to the aquate environment - Acute Hazard Category 1         Aquatic Chronic 1       Hazardous to the aquate environment - Acute Hazard Category 1         Carc. 18       Carcinogenicity Category 18         Muta. 18       Germ cell mutagenicity Category 18         Rep. 18       Reproductive toxicity category 11         Resp. Sens. 1       Skin corresion/intration Category 1         Skin Corr. 18       Skin corresion/intration Category 1         Stor TRE 1       Specific target organ toxicity (repeated exposure) Category 1         H272       May intensify fire; oxicizer         H301       Toxicit fire; oxicizer         H314       Causes severe skin burns and eye damage         H317       May cause anlergy or asthma symptoms or breathing difficulties if inhaled         H330       Fatal if haled         H340       May cause genetic defects         H350       May cause genetic defects         H360       May cause genetic defects         H372       Causes damage to organs through prolonged or repeated exposure         H400       Very t				Acute toxicity (inhalation) Category 2	
Acute Tox. 4 (Dermal)       Acute toxicity (dermal) (category 4         Aquatic Acute 1       Hazardous to the aquatic environment - Acute Hazard Category 1         Aquatic Chronic 1       Carcinogenicity Category 1B         Carc. 18       Carcinogenicity Category 1B         Muta 18       Gern cell mutagenicity Category 1B         Ox. Sol. 2       Oxidizing solids Category 1B         Rep. 18       Reproductive toxicity Category 1B         Resp. Sens. 1       Reproductive toxicity Category 1B         Skin Corr. 19       Skin Corr. 19         Skin Sens. 1       Skin sensitization Category 1         Stin Corr. 19       Skin Corr. 10         Stin Corr. 10       Skin Corr. 10         Stin Corr. 11       Specific target organ toxicity (repeated exposure) Category 1         Harrow 11       Caces severe skin Dumas and eye damage         H312       Harrow 11       Causes severe skin Dumas and eye damage         H314       Causes severe skin Dumas and eye damage         H324       May cause an altergic skin reaction         H330       Fatal if inhaled         H330       May cause analer organ strong eye damage         H330       May cause analer organ strong eye damage         H330       Causes damage to organs through prolonged or repeated exposure         H40					
Aquatic Acute 1     Hazardous fo the aquatic environment - Acute Hazard Category 1       Aquatic Chronic 1     Hazardous to the aquatic environment - Chronic Hazard Category 1       Carc: 18     Carcingenicity Category 18       Muta. 18     Germ cell mutagenicity Category 18       Ox, Sol. 2     Oxidizing solids Category 1       Repr. 18     Reproductive toxicity Category 18       Skin Corr. 18     Skin corroston/irritation Category 1       Skin Corr. 18     Skin corroston/irritation Category 1       Skin Sens. 1     Skin sensitization Category 1       Stor RE 1     Specific target organ toxicity (repeated exposure) Category 1       H272     May intensity fire; oxidizer       H301     Toxic if smallowed       H312     Harring incontact with skin       H313     Causes severe skin burns and eye damage       H314     Causes genetic defects       H334     May cause genetic defects       H350     May cause genetic defects       H360     May cause genetic defects       H372     Cause damage to organs through prolonged or repeated exposure       H400     Very toxic to aquatic life       H410     Ve					
Aquatic Chronic 1       Hazardous to the equatic environment - Chronic Hazard Category 1         Carc. 18       Carcinogenicity Category 18         Muta 18       Germ cell mutagenicity Category 18         Ox. Sol. 2       Oxidizing solids Category 18         Rep. 18       Reproductive toxicity Category 18         Resp. 5ens. 1       Reproductive toxicity Category 18         Skin Sens. 1       Skin corresion/irritation Category 1         Stor RE 1       Specific target organ toxicity (repeated exposure) Category 1         H272       May intensity free; oxidizer         H301       Toxic if swallowed         H312       Harmful in contact with skin         H314       Causes severe skin burns and eye damage         H330       Fatal if inhaled         H330       Fatal if inhaled         H340       May cause allergy or asthma symptoms or breathing difficulties if inhaled         H360       May cause fertility or the unborn child         H372       Causes damage to riggans through prolonged or repeated exposure         H400       Very toxic to aquatic life with long lasting effects         NFPA fine hazard       : 2 - Intense or continued exposure conditions, and are not reactive with water.         NFPA fine hazard       : 2 - Intense or continued exposure conditions, and are not reactive with water.		· · · · · · · · · · · · · · · · · · ·			
Carc. 18       Carcinogenicity Category 18         Muta. 18       Oem cell mutagenicity Category 18         Ox. Sol. 2       Oxdizing solids Category 2         Repr. 18       Respraductive toxicity category 18         Skin Corr. 18       Skin corrosion/initiation Category 1         Skin Sens. 1       Skin corrosion/initiation Category 1         Skin Sens. 1       Skin corrosion/initiation Category 1         Skin Sens. 1       Specific target organ toxicity (repeated exposure) Category 1         Stor TRE 1       Specific target organ toxicity (repeated exposure) Category 1         H272       May intensify fire, oxidizer         H301       Toxic if swallowed         H314       Causes evere skin burns and eye damage         H314       Causes evere skin burns and eye damage         H330       Fatal if inhaled         H330       Fatal if inhaled         H330       May cause genetic defects         H360       May cause ganetic if exists         H360       May cause ganetic if exists         H372       Causes damage for tilly or the unborn child         H372       Causes damage for tilly or the unborn child         H372       Causes damage for tilly or the unborn child         H372       Causes damage for tilly or the unborn child					
Muta. 1B       Germ cell mutagenicity Category 1B         Ox. Sol. 2       Oxidizing solids Category 2         Repr. 1B       Reproductive toxicity Category 1B         Resp. Sens. 1       Respiratory sensitization Category 1         Skin Corr. 1B       Skin sensitization Category 1B         Skin Sens. 1       Skin sensitization Category 1B         Strip TRE 1       Specific target organ toxicity (repeated exposure) Category 1         H301       Toxic if swallowed         H312       Harmful in contact with skin         H314       Causes severe skin burns and eye damage         H330       Fatal if inhaled         H330       Fatal if inhaled         H330       May cause allergic skin reaction         H330       May cause genetic defects         H360       May cause genetic defects         H360       May cause genetic defects         H360       May cause denergy or asthma symptoms or treathing difficulties if inhaled         H372       Causes damage to organs through prolonged or repeated exposure         H400       May cause genetic defects         H360       May cause genetic defects         H360       NEPA keatth hazard         NFPA fire hazard       : 2 - Intense or continued exposure could cause temporary incagaacitation or possible residual injury u					
Ox. Sol. 2     Oxidizing solids Category 2       Repr. 1B     Reproductive toxicity Category 1B       Resp. Sens. 1     Resprintication Category 1       Skin Corr. 1B     Skin corrosion/inflation Category 1       Skin Sens. 1     Skin sorrosion/inflation Category 1       Stor TRE 1     Specific target organ toxicity (repeated exposure) Category 1       H272     May intensify fire; oxidizer       H301     Toxic if swallowed       H312     Harmful in contact with skin       H314     Causes severe skin burns and eye damage       H330     Fatal if inhaled       H334     May cause ganger or asthma symptoms or breathing difficulties if inhaled       H330     Fatal if inhaled       H340     May cause genetic defects       H350     May cause admage to organs through prolonged or repeated exposure       H400     Very toxic to aquatic life       H410     Very toxic to aquatic life       H410     Very toxic to aquatic life       NFPA fire hazard     : 2 - Intense or continued exposure could cause temporary incapacitation or possure could cause temporary or more injury may occur       H410     : 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.       MIS III Rating     : 2 Moderate Hazard - Temporary or mino					
Repr. 1B       Reproductive toxicly Category 1B         Resp. Sens. 1       Respiratory sensitization Category 1         Skin Corr. 1B       Skin corresion/irritation Category 1         Stor RE 1       Specific target organ toxicity (repeated exposure) Category 1         H272       May intensify fire; oxidizer         H301       Toxic if swallowed         H312       Harmful in contact with skin         H314       Causes severe skin burns and eye damage         H330       Fatal if inhaled         H330       Fatal if inhaled         H330       May cause an allergic skin reaction         H330       May cause genetic defects         H360       May cause genetic defects         H360       May cause genetic defects         H360       May cause genetic defects         H372       Causes damage to organs through prolonged or repeated exposure         H400       Very toxic to aquatic life with long lasting effects         NFPA health hazard       : 2 - Intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical attention is given.         NFPA fire hazard       : 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.         NFPA reactivity       : 0 - Normally stable, even under fire conditions, and will NOT react with water. </td <td></td> <td></td> <td></td> <td></td>					
Resp. Sens. 1     Respiratory sensitization Category 1       Skin Corr. 1B     Skin corrosion/irritation Category 1       Skin Sens. 1     Skin sens.sitzation Category 1       STOT RE 1     Specific target organ toxicity (repeated exposure) Category 1       H272     May intensity fire; oxidizer       H301     Toxic if swallowed       H314     Causes severe skin burns and eye damage       H317     May cause an allergic skin reaction       H330     Fatal if inhaled       H334     May cause an allergic skin reaction       H330     Fatal if inhaled       H334     May cause genetic defects       H350     May cause genetic defects       H360     May cause genetic life with long lasting effects       H360     Way cause gange to organs through prolonged or repeated exposure       H400     Very toxic to aquatic life with long lasting effects       NFPA health hazard     2 - Intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical attention is given.       NFPA fire hazard     2 - Intense or continued exposure conditions, and are not reactive with water.       NFPA fire hazard     2 - Moderate Hazard - Temporary or minor injury may occur       * - Chronic (ong-term) health effects may result from repeated overexposure       Flammability     0 Minimal Hazard - Materials that will not burn       Physical					
Skin Corr. 1B       Skin Sens. 1         Skin Sens. 1       Skin sensitization Category 1         STOT RE 1       Specific target organ toxicity (repeated exposure) Category 1         H272       May intensify fire; oxidizer         H301       Toxic if swallowed         H312       Harmful in contact with skin         H314       Causes severe skin burns and eye damage         H317       May cause an allergic skin reaction         H330       Fatal if inhaled         H330       Fatal if inhaled         H340       May cause genetic defects         H350       May cause genetic defects         H360       May cause genetic defects         H372       Causes damage to organs through prolonged or repeated exposure         H400       Very toxic to aquatic life         H410       Very toxic to aquatic life         H410       Very toxic to aquatic life         NFPA health hazard       £ 2 - Intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical attention is given.         NFPA fire hazard       £ 0 - Materials that will not burn.         NFPA reactivity       £ 2 - Intense or continued exposure coulditions, and are not reactive with water.         HMIS III Rating       £ 2 Moderate Hazard - Temporary or minor injury may occcur </td <td></td> <td>•</td> <td></td> <td></td>		•			
Skin Sens. 1       Skin sensitization Category 1         STOT RE 1       Specific target torgan toxicily (repeated exposure) Category 1         H272       May intensify fire; oxidizer         H301       Toxic if swallowed         H312       Harmful in contract with skin         H314       Causes severe skin burns and eye damage         H317       May cause an allergic skin reaction         H330       Fatal if inhaled         H334       May cause an allergic skin reaction         H330       Fatal if inhaled         H330       Fatal of inhaled         H330       May cause angenetic defects         H350       May cause acneer         H360       May cause acneer         H372       Causes damage to organs through prolonged or repeated exposure         H400       Very toxic to aquatic life         H410       Very toxic to aquatic life         H410       Very toxic to aquatic life         NFPA health hazard       : 2 - Intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical attention is given.         NFPA fire hazard       : 0 - Materials that will not burn.         NFPA fire hazard       : 0 - Materials that will not burn.         NFPA fire hazard       : 0 - Normally stable, even under fire expo		•			
STOT RE 1       Specific target organ toxicity (repeated exposure) Category 1         H272       May intensify fire; oxiciar         H301       Toxic if swallowed         H312       Harmful in contact with skin         H314       Causes severe skin burns and eye damage         H317       May cause an allergic skin reaction         H330       Fatal if inhaled         H334       May cause genetic defects         H350       May cause genetic defects         H360       May cause genetic defects         H360       May cause in allergic skin reaction         H372       Causes damage to organs through prolonged or repeated exposure         H400       Very toxic to aquatic life         H410       O - Materials that will not burn.         NFPA fire hazard       : 0 - Normally stable, e					
H272       May intensify fire; oxidizer         H301       Toxic if swallowed         H312       Harmful in contact with skin         H314       Causes severe skin burns and eye damage         H317       May cause an allergic skin reaction         H330       Fatal if inhaled         H330       Fatal if inhaled         H330       May cause allergy or asthma symptoms or breathing difficulties if inhaled         H340       May cause genetic defects         H350       May cause cancer         H360       May cause damage to organs through prolonged or repeated exposure         H400       Very toxic to aquatic life         H410       Very toxic to aquatic life with long lasting effects         NFPA fire hazard       : 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.         NFPA fire hazard       : 2 Moderate Hazard - Temporary or minor injury may occur         * - Chronic (long-term) health effects may result from repeated overexposure         Flammability       : 0 Minimal Hazard - Materials that will not burn         Physical       : 0 Minim		STOT RE 1			
H301       Toxic if swallowed         H312       Harmful in contact with skin         H314       Causes severe skin burns and eye damage         H317       May cause an allergic skin reaction         H330       Fatal if inhaled         H334       May cause genetic defects         H350       May cause genetic defects         H360       May cause genetic defects         H360       May cause genetic defects         H360       May cause damage to organs through prolonged or repeated exposure         H400       Very toxic to aquatic life         H410       Very toxic to aquatic life         H410       Very toxic to aquatic life         NFPA health hazard       : 2 - Intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical attention is given.         NFPA fire hazard       : 0 - Materials that will not burn.         NFPA reactivity       : 0 - Intense or continued exposure conditions, and are not reactive with water.         HMIS III Rating       : 2 Moderate Hazard - Temporary or minor injury may occur         * - Chronic (long-term) health effects may result from repeated overexposure         Flammability       : 0 Minimal Hazard - Materials that will not burn         Physical       : 0 Minimal Hazard - Materials that are normaly stable, even under fire conditions, and will					
H314       Causes severe skin burns and eye damage         H317       May cause an allergic skin reaction         H330       Fatal if inhaled         H334       May cause allergy or asthma symptoms or breathing difficulties if inhaled         H340       May cause genetic defects         H350       May cause genetic defects         H350       May cause cancer         H360       May cause damage to organs through prolonged or repeated exposure         H400       Very toxic to aquatic life         H410       Very toxic to aquatic life with long lasting effects         NFPA health hazard       : 2 - Intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical attention is given.         NFPA fire hazard       : 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.         HMIS III Rating       : 2 Moderate Hazard - Temporary or minor injury may occur         * - Chronic (long-term) health effects may result from repeated overexposure         Flammability       : 0 Minimal Hazard - Materials that will not burn         Physical       : 0 Minimal Hazard - Material		H301			
H317       May cause an allergic skin reaction         H330       Fatal if inhaled         H330       Fatal if inhaled         H334       May cause allergy or asthma symptoms or breathing difficulties if inhaled         H340       May cause genetic defects         H350       May cause genetic defects         H360       May damage fertility or the unborn child         H372       Causes damage to organs through prolonged or repeated exposure         H400       Very toxic to aquatic life         H410       Very toxic to aquatic life         NFPA health hazard       : 2 - Intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical attention is given.         NFPA fire hazard       : 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.         HMIS III Rating       : 2 Moderate Hazard - Temporary or minor injury may occur         + - Chronic (long-term) health effects may result from repeated overexposure         Flammability       : 0		H312		Harmful in contact with skin	
H317       May cause an allergic skin reaction         H330       Fatal if inhaled         H330       Fatal if inhaled         H334       May cause allergy or asthma symptoms or breathing difficulties if inhaled         H340       May cause genetic defects         H350       May cause genetic defects         H360       May damage fertility or the unborn child         H372       Causes damage to organs through prolonged or repeated exposure         H400       Very toxic to aquatic life         H410       Very toxic to aquatic life         NFPA health hazard       : 2 - Intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical attention is given.         NFPA fire hazard       : 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.         HMIS III Rating       : 2 Moderate Hazard - Temporary or minor injury may occur         + - Chronic (long-term) health effects may result from repeated overexposure         Flammability       : 0		H314		Causes severe skin burns and eve damage	
H330       Fatal if inhaled         H334       May cause allergy or asthma symptoms or breathing difficulties if inhaled         H340       May cause genetic defects         H350       May cause genetic defects         H360       May cause cancer         H360       May damage forlility or the unborn child         H372       Causes damage to organs through prolonged or repeated exposure         H400       Very toxic to aquatic life         H410       Very toxic to aquatic life with long lasting effects         NFPA health hazard       : 2 - Intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical altention is given.         NFPA fire hazard       : 0 - Materials that will not burn.         NFPA reactivity       : 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.         HMIS III Rating       :         Health       : 2 Moderate Hazard - Temporary or minor injury may occur         * - Chronic (long-term) health effects may result from repeated overexposure         Flammability       :       0 Minimal Hazard - Materials that will not burn         Physical       :       0 Minimal Hazard - Materials that re normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, or self-react. Non-Explosives.		H317			
Inhaled       inhaled         H340       May cause genetic defects         H350       May cause cancer         H360       May cause cancer         H360       May cause cancer         H360       May cause cancer         H360       May cause cancer         H372       Causes damage to organs through prolonged or repeated exposure         H400       Very toxic to aquatic life         H410       Very toxic to aquatic life         NFPA health hazard       : 2 - Intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical attention is given.         NFPA fire hazard       : 0 - Materials that will not burn.         NFPA reactivity       : 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.         HMIS III Rating       : 2 Moderate Hazard - Temporary or minor injury may occur * - Chronic (long-term) health effects may result from repeated overexposure         Flammability       : 0 Minimal Hazard - Materials that will not burn         Physical       : 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.         Personal Protection       : G		H330			
H350       May cause cancer         H360       May damage fertility or the unborn child         H372       Causes damage to organs through prolonged or repeated exposure         H400       Very toxic to aquatic life         H410       Very toxic to aquatic life         NFPA health hazard       : 2 - Intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical attention is given.         NFPA fire hazard       : 0 - Materials that will not burn.         NFPA reactivity       : 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.         HMIS III Rating       : 2 Moderate Hazard - Temporary or minor injury may occur         + - Chronic (long-term) health effects may result from repeated overexposure         Flammability       : 0 Minimal Hazard - Materials that will not burn         Physical       : 0 Minimal Hazard - Materials that re normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.         Personal Protection       : G		H334			
H360       May damage fertility or the unborn child         H372       Causes damage to organs through prolonged or repeated exposure         H400       Very toxic to aquatic life         H410       Very toxic to aquatic life with long lasting effects         NFPA health hazard       : 2 - Intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical attention is given.         NFPA fire hazard       : 0 - Materials that will not burn.         NFPA reactivity       : 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.         HMIS III Rating       : 2 Moderate Hazard - Temporary or minor injury may occur         + - Chronic (long-term) health effects may result from repeated overexposure         Flammability       : 0 Minimal Hazard - Materials that will not burn         Physical       : 0 Minimal Hazard - Materials that at more normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.		H340		May cause genetic defects	
H372       Causes damage to organs through prolonged or repeated exposure         H400       Very toxic to aquatic life         H410       Very toxic to aquatic life         NFPA health hazard       : 2 - Intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical attention is given.         NFPA fire hazard       : 0 - Materials that will not burn.         NFPA reactivity       : 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.         HMIS III Rating       : 2 Moderate Hazard - Temporary or minor injury may occur         + - Chronic (long-term) health effects may result from repeated overexposure         Flammability       : 0 Minimal Hazard - Materials that will not burn         Physical       : 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.		H350		May cause cancer	
H400       Very toxic to aquatic life         H410       Very toxic to aquatic life         H410       Very toxic to aquatic life with long lasting effects         NFPA health hazard       : 2 - Intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical attention is given.         NFPA fire hazard       : 0 - Materials that will not burn.         NFPA reactivity       : 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.         HMIS III Rating       : 2 Moderate Hazard - Temporary or minor injury may occur         + - Chronic (long-term) health effects may result from repeated overexposure         Flammability       : 0 Minimal Hazard - Materials that will not burn         Physical       : 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.         Personal Protection       : G		H360		May damage fertility or the unborn child	
H410       Very toxic to aquatic life with long lasting effects         NFPA health hazard       : 2 - Intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical attention is given.         NFPA fire hazard       : 0 - Materials that will not burn.         NFPA reactivity       : 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.         HMIS III Rating         Health       : 2 Moderate Hazard - Temporary or minor injury may occur         * - Chronic (long-term) health effects may result from repeated overexposure         Flammability       : 0 Minimal Hazard - Materials that will not burn         Physical       : 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.         Personal Protection       : G		H372		Causes damage to organs through prolonged or repeated exposure	
NFPA health hazard       : 2 - Intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical attention is given.         NFPA fire hazard       : 0 - Materials that will not burn.         NFPA reactivity       : 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.         HMIS III Rating         Health       : 2 Moderate Hazard - Temporary or minor injury may occur         * - Chronic (long-term) health effects may result from repeated overexposure         Flammability       : 0 Minimal Hazard - Materials that will not burn         Physical       : 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.         Personal Protection       : G		H400		Very toxic to aquatic life	
Incapacitation or possible residual injury unless prompt medical attention is given.         NFPA fire hazard       : 0 - Materials that will not burn.         NFPA reactivity       : 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.         HMIS III Rating       : 2 Moderate Hazard - Temporary or minor injury may occur         + - Chronic (long-term) health effects may result from repeated overexposure         Flammability       : 0 Minimal Hazard - Materials that will not burn         Physical       : 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.         Personal Protection       : G		H410		Very toxic to aquatic life with long lasting effects	
Health: 2 Moderate Hazard - Temporary or minor injury may occur * - Chronic (long-term) health effects may result from repeated overexposureFlammability: 0 Minimal Hazard - Materials that will not burnPhysical: 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.Personal Protection: G	NFPA fire hazard       :       0 - Materials that will no         NFPA reactivity       :       0 - Normally stable, eve		incapacitation or possible medical attention is giver : 0 - Materials that will not : 0 - Normally stable, even	e residual injury unless prompt burn. under fire exposure conditions,	
* - Chronic (long-term) health effects may result from repeated overexposure         Flammability       : 0 Minimal Hazard - Materials that will not burn         Physical       : 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.         Personal Protection       : G		II Rating			
Flammability       : 0 Minimal Hazard - Materials that will not burn         Physical       : 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.         Personal Protection       : G	Health				
Physical       : 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.         Personal Protection       : G			* - Chronic (long-term) h	health effects may result from repeated overexposure	
react with water, polymerize, decompose, condense, or self-react. Non-Explosives.         Personal Protection       : G	Flamm	Flammability : 0 Minimal Hazard - Mat		erials that will not burn	
	Persor	al Protection		ves, Vapor respirator	

SDS US (GHS HazCom 2012)

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