HUANYU

Battery pack containing sealed lead acid batteries
MATERIAL SAFETY DATASHEET

Version: 1
Review date: January, 13th2019

SECTION 1: Identification of the Substance/Mixture and of the Company/Undertaking

GHS product identifier:	Battery pack containing sealed lead acid batteries
Other Names:	Battery pack or accumulator pack with Valve Regulated Lead Acid Battery - Wet, Non - Spillable
Model Numbers:	HYC XXYYYY whee XX is the volt of battery (6 or 12) ,YYYY is the battery capacity
Country:	CHINA
Product Type:	Battery pack is a manufactured article consisting of a plastic and metal sealed case containing one or more sealed lead acid battery connected by wires. Solid.

Identified uses
Relevant identified use(s): Electric Storage Battery
Use(s) advised against: Transportation

Manufacturer

Supplier/Manufacturer:	SHENZHEN HUANYU POWER SOURCE LTD.
Address:	Building2 xintang Industrial park,Fuyong town,Baoan district,Shenzhen city,China
Telephone:	86-755-23071981
Website:	www.jyhybattery.com

Emergency telephone number (with hours of operation)

86-755-23071981

SECTION 2: Hazards identification

United States (US)

According to OSHA 29 CFR 1910.1200 HCS

2.1 Classification of the substance or mixture:
Skin Corrosion 1A - H314
Serious Eye Damage 1 - H318
Carcinogenicity 2 - H351
Reproductive Toxicity 1A - H360
Specific Target Organ Toxicity Repeated Exposure 1 - H372

2.2 GHS label elements:
Signal Word: DANGER



Hazard Statements:

H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H351	Suspected of causing cancer.
H360	May damage fertility or the unborn child.
H372	Causes damage to organs - nervous system/blood/liver/kidneys through prolonged or repeated exposure.

Precautionary statements
Prevention

P201	Obtain special instructions before use
P202	Do not handle until all safety precautions have been read and understood.
P260	Do not breathe mist/vapours/spray
P264	Wash thoroughly after handling
P270	Do not eat, drink or smoke when using this product.
P280	Do not eat, drink or smoke when using this product. -

Response

P304+P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. -
P310	Immediately call a POISON CENTER or doctor/physician
P321	Specific treatment, see supplemental first aid information.
P363	Wash contaminated clothing before reuse.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting
P308+P313	IF exposed or concerned: Get medical advice/attention.
P314	Get medical advice/attention if you feel unwell

Storage/Disposal

P405	Store locked up.
P501	Dispose of content and/or container in accordance with local, regional, national, and/or international regulations

2.3 Other hazards

OSHA HCS 2012: Under United States Regulations (29 CFR 1910.1200- Hazard Communication Standard), this product is considered hazardous.

Canada

According to WHMIS

2.1 Classification of the substance or mixture:

Very Toxic - D1A
Other Toxic Effects - D2A
Corrosive - E

2.2 GHS label elements:



2.3 Other Hazards

In Canada, the product mentioned above is considered hazardous under the Workplace Hazardous Materials Information System (WHMIS).

2.4 Other Information

Acid batteries used in APC by Schneider Electric Replacement Battery Cartridges (RBCs) are contained within cartridges and are sealed, non-spillable design. Under normal use and handling, there is no contact with the internal components of the battery or the chemical hazards. Under normal use and handling, these products do not emit regulated or hazardous substances. Misuse of the product, such as overcharging, may result in a discharge of battery electrolyte. Classification provided is for the battery electrolyte and are only applicable in the event that the electrolyte is discharged.

SECTION 3: Composition/information on ingredients

3.1 Substances

The material does not meet the criteria of a substance in accordance with regulation (EC) No 1272/2008

Chemical Name	CAS Number	EC Number	Composition (%)	LD50/LC50	Classification OSHA HCS 2012
Lead	7439-92-1	231-100-4	55,9 – 63,4 %	NO DATA AVAILABLE	Repr. 1A; STOT RE 1 (Liver, Kidney, Blood, Nervous system); Carc. 2
Sulfuric acid	7664-93-9	231-639-5	15,8 – 20,5 %	Inhalation-Rat LC50 • 510 mg/m³ 2 Hour(s) Ingestion/Oral-Rat LD50 • 2140 mg/kg	Eye Dam. 1; Skin Corr. 1A
1-Propene, homopolymer	9003-07-0	--	4,8 – 12,3 %	Ingestion/Oral-Rat LD50 • >8 g/kg	Not Classified
Amorphous/fused silica	60676-86-0	--	3,7 – 5,6 %	NO DATA AVAILABLE	Not Classified
Polyvinyl Chloride	9002-86-2	--	2,6 %	NO DATA AVAILABLE	Not Classified
Copper	7440-50-8	231-159-6	2,6 %	NO DATA AVAILABLE	Repr. 2, STOT SE 3: Resp. Irrit.; Eye Irrit. 2;
Steel	--	--	0,4 %	NO DATA AVAILABLE	Not Classified

Tin	7440-31-5	231-141-8	0,3 %	NO DATA AVAILABLE	STOT SE 3: Resp. Irrit.; STOT RE 2 (Lungs, Inhalation); STOT RE 1 (CNS, Liver, Kidney)
Polycarbonate	27440-31-5	--	0,1 %	NO DATA AVAILABLE	Not Classified

See Section 11 for Toxicological Information. See Section 16 for full text of H-statements and R-phrases.

SECTION 4: First aid measures

4.1 Description of first aid measures

Inhalation	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Administer oxygen if breathing is difficult. Give artificial respiration if victim is not breathing. Do not use mouth-to-mouth method if victim inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.
Skin	IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash before reuse. If signs/symptoms develop, get medical attention.
Eye	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If signs/symptoms develop, get medical attention.
Ingestion	Do NOT induce vomiting. If conscious, drink large quantities of milk or water. Follow with milk of magnesia, beaten egg, egg whites or vegetable oil. Get medical attention immediately.

4.2 Most important symptoms and effects, both acute and delayed

Refer to Section 11 - Toxicological Information

4.3 Indication of any immediate medical attention and special treatment needed

Notes to Physician: All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.

SECTION 5: Fire-fighting measures

5.1 Extinguishing media

Suitable Extinguishing Media	Dry chemical or CO2.
Unsuitable Extinguishing Media	Water should not be used unless from a safe distance due to vigorous and exothermic reaction which will result.

5.2 Special hazards arising from the substance or mixture

Unusual Fire and Explosion Hazards	Hydrogen and oxygen gases are produced during normal battery operation and charging. These gases escape through the battery vents and may form an explosive atmosphere around the battery if ventilation is poor. Avoid open flame, sparks and other ignition sources in areas where batteries are used or stored.
Hazardous Combustion Products	Acid mists and vapors, toxic fumes from burning plastic.

5.3 Advice for firefighters

Fire fighters should wear complete protective clothing including self-contained breathing apparatus. Wear chemical protective clothing that is specifically recommended by the manufacturer. It may provide little or no thermal protection. Fire fighters to wear acid-resistant full protective clothing, including rubber footwear and self-contained breathing apparatus.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal Precautions	Do not walk through spilled material. Wear appropriate personal protective equipment, avoid direct contact. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate enclosed areas. Do not get in eyes, on skin, or on clothing. Do not breathe dusts or mists.
Emergency Procedures	As an immediate precautionary measure, isolate spill or leak area for at least 50 meters (150 feet) in all directions. Keep unauthorized personnel away. Do not get water inside container.

6.2 Environmental precautions

Avoid run off to waterways and sewers.

6.3 Methods and material for containment and cleaning up

Containment/Clean-up Measures	Stop leak if you can do it without risk. If battery is leaking, place battery in a heavy duty plastic bag. Contain spill by diking with soda ash, etc. Neutralize spill area with (soda ash or lime, dilute with acetic acid) Make certain mixture is neutral then collect residue and place in a drum or other suitable container.

6.4 Reference to other sections

Refer to Section 8 - Exposure Controls/Personal Protection and Section 13 – Disposal Considerations

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Handling: Use only in well ventilated areas. Use caution when combining with water; DO NOT add water to corrosive liquid, ALWAYS add corrosive liquid to water while stirring to prevent release of heat, steam and fumes. Wear appropriate personal protective equipment, avoid direct contact. Do not get in eyes, on skin, or on clothing. Do not breathe mist, vapors, spray. Avoid direct conductive connection across positive and negative terminals to prevent short circuit. Wash thoroughly with soap and water after handling and before eating, drinking, or using tobacco.

7.2 Conditions for safe storage, including any incompatibilities

Batteries should be kept in an upright position away from ignition sources. Stack batteries so as to prevent accidental contact between terminal and/or other damage to terminals or containers. Whenever feasible, store on shipping pallet or rack. Do not stack loaded pallets or racks on top of other batteries. Store in a cool/low temperature, well-ventilated place. Avoid storage in areas exposed to heat or solar buildup

7.3 Specific end use(s)

Refer to Section 1.2 - Relevant identified uses.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Exposure Limits/Guidelines				
	Result	ACGIH	NIOSH	OSHA
Tin (7440-31-5)	TWAs	2 mg/m3 TWA	2 mg/m3 TWA	Not established
Copper (7440-50-8)	TWAs	0.2 mg/m3 TWA (fume)	1 mg/m3 TWA (dust and mist); 0.1 mg/m3 TWA (fume)	0.1 mg/m3 TWA (fume); 1 mg/m3 TWA (dust and mist)
Polyvinyl Chloride (9002-86-2)	TWAs	1 mg/m3 TWA (respirable fraction)	Not established	Not established
Sulfuric acid (7664-93-9)	TWAs	0.2 mg/m3 TWA (thoracic fraction)	1 mg/m3 TWA	1 mg/m3 TWA
Lead as Lead, Inorganic compounds	TWAs	0.05 mg/m3 TWA	0.050 mg/m3 TWA	50 µg/m3 TWA

8.2 Exposure controls

Engineering Measures/Controls: Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Personal Protective Equipment

Respiratory	Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or symptoms are experienced.
Eye/Face	Wear eye/face protection - Chemical splash goggles, or - Full-face shield with safety glasses.
Skin/Body	Acid resistant clothing with rubber/neoprene boots for major spill clean-up. Acid resistant gloves such as rubber, neoprene, vinyl coated, PVC.
Environmental Exposure Controls	Controls should be engineered to prevent release to the environment, including procedures to prevent spills, atmospheric release and release to waterways. Follow best practice for site management and disposal of waste.

Key to abbreviations

ACGIH = American Conference of Governmental Industrial Hygiene
NIOSH = National Institute of Occupational Safety and Health
OSHA = Occupational Safety and Health Administration
TWA = Time-Weighted Averages are based on 8h/day, 40h/week exposures

SECTION 9: Physical and chemical properties

9.1 Information on Physical and Chemical Properties

Material Description			
Physical Form	Solid	Appearance/Description	Shaped article.
Color	Data lacking	Odor	Data lacking
Odor Threshold	Data lacking		
General Properties			
Boiling Point	Data lacking	Melting Point	Data lacking
Decomposition Temperature	Data lacking	pH	Data lacking
Specific Gravity/Relative Density	Data lacking	Water solubility	Data lacking
Viscosity	Data lacking	Explosive Properties	Not Explosive
Oxidizing Properties :	Not an oxidizer		
Volatility			
Vapor Pressure		Vapor Density	
Evaporation Rate			
Flammability			
Flash Point	Data lacking	UEL	Data lacking
LEL	Data lacking	Auto ignition	Data lacking
Flammability (solid, gas)	Not flammable.		
Environmental			
Octanol/Water Partition coefficient	Data lacking		

9.2 Other Information

No additional physical and chemical parameters noted.

SECTION 10: Stability and reactivity

10.1 Reactivity

No dangerous reaction known under conditions of normal use.

10.2 Chemical stability

Stable under normal temperatures and pressures

10.3 Possibility of hazardous reactions

No Data Available

10.4 Conditions to avoid

Use only approved charging methods. Avoid overcharging. Avoid short-circuiting. Avoid sparks and other ignition sources. Do not open, break or melt the casing.

10.5 Incompatible materials

Strong oxidizing or reducing agents.

10.6 Hazardous decomposition products

Can emit highly toxic fumes when heated. Combustion can produce carbon dioxide and carbon monoxide. Will release an explosive hydrogen/oxygen gas mixture. Oxides of lead, lead and/or lead compounds may be released. Sulfuric acid may release sulfur dioxide and/or sulfur trioxide.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Components		
Sulfuric acid (15.8% TO 20.5%)	7664-93-9	**Acute Toxicity:** Ingestion/Oral-Rat LD50 • 2140 mg/kg; Inhalation-Rat LC50 • 510 mg/m 2 Hour(s); **Irritation:** Eye-Rabbit • 250 µg • Severe irritation; **Multi-dose Toxicity:** Inhalation-Rat TCLo • 1.8 mg/m 24 Hour(s) 65 Day(s)-Continuous; *Peripheral Nerve and Sensation*: **Recording from peripheral motor nerve**; *Kidney, Ureter, and Bladder*: **Changes in both tubules and glomeruli**
Polyvinyl Chloride (2.6%)	9002-86-2	**Tumorigen / Carcinogen:** Ingestion/Oral-Rat TDLo • 210 g/kg 30 Week(s)-Continuous; *Tumorigenic*: **Equivocal tumorigenic agent by RTECS criteria**; *Lungs, Thorax, or Respiration*: **Tumors**; *Skin and Appendages: Other*: **Tumors**
Copper (2.6%)	7440-50-8	**Reproductive:** Ingestion/Oral-Rat TDLo • 152 mg/kg (22W pre); *Reproductive Effects: Effects on Embryo or Fetus*: **Fetotoxicity (except death, e.g., stunted fetus)**; *Reproductive Effects: Specific Developmental Abnormalities*: **Central nervous system**

GHS Properties	Classification
Acute toxicity	**EU/CLP** • Acute Toxicity - Oral 4 - ATEmix = 703.47 mg/kg **OSHA HCS 2012** • Classification criteria not met
Aspiration Hazard	**EU/CLP** • Classification criteria not met **OSHA HCS 2012** • Classification criteria not met
Carcinogenicity	**EU/CLP** • Classification criteria not met **OSHA HCS 2012** • Carcinogenicity 2
Germ Cell Mutagenicity	**EU/CLP** • Classification criteria not met **OSHA HCS 2012** • Classification criteria not met
Skin corrosion/Irritation	**EU/CLP** • Skin Corrosion 1A **OSHA HCS 2012** • Skin Corrosion 1A
Skin sensitization	**EU/CLP** • Classification criteria not met **OSHA HCS 2012** • Classification criteria not met
STOT-RE	**EU/CLP** • Specific Target Organ Toxicity Repeated Exposure 2 **OSHA HCS 2012** • Specific Target Organ Toxicity Repeated Exposure 1
STOT-SE	**EU/CLP** • Classification criteria not met **OSHA HCS 2012** • Classification criteria not met
Toxicity for Reproduction	**EU/CLP** • Toxic to Reproduction 1A **OSHA HCS 2012** • Toxic to Reproduction 1A
Respiratory sensitization	**EU/CLP** • Classification criteria not met **OSHA HCS 2012** • Classification criteria not met
Serious eye damage/Irritation	**EU/CLP** • Classification criteria not met **OSHA HCS 2012** • Serious Eye Damage 1

Target Organs : Nervous System, Blood, Liver, Kidney
Route(s) of entry/exposure : Inhalation, Skin, Eye, Ingestion

Potential Health Effects

Inhalation

Acute (Immediate)	Lead - For industry, inhalation is much more important than is ingestion. Systemic effects include loss of appetite, anemia, malaise, insomnia, headache, irritability, muscle and joint pains, tremors, flaccid paralysis without anesthesia, hallucinations and distorted perceptions, muscle weakness, gastritis and liver changes. Major organ systems affected are the nervous system, blood system and kidneys. Experimental evidence suggests that blood levels of lead below 10 µg/dL can lower the IQ scores of children. Low levels of lead impair neurotransmission and immune system function and may increase systolic blood pressure. Reversible kidney damage can occur from acute exposure. Sulfuric Acid - Experimental poison by inhalation.
Chronic (Delayed)	Lead - Chronic exposure can lead to irreversible vascular sclerosis, tubular cell atrophy, interstitial fibrosis, and glomerular sclerosis. Very heavy intoxication can sometimes be detected by formation of a dark line on the gum margins. Sulfuric acid - Repeated or prolonged inhalation of sulfuric acid mist can cause inflammation of the upper respiratory tract, leading to chronic bronchitis. Severe exposure may cause chemical pneumonitis. Erosion of tooth enamel due to strong acid fume exposure has been observed in industry. Workers exposed to low concentrations of the vapors gradually lose their sensitivity to its irritating action. Occupational exposures to strong-acid mists containing sulfuric acid have been associated with several respiratory tract cancers. However, there is no animal data supporting the carcinogenicity of sulfuric acid. Sulfuric acid has been found to be non-mutagenic, and in two studies of workers employed in lead acid battery manufacture, no association between sulfuric acid mist exposure and respiratory tract cancers was observed.

Skin

Acute (Immediate)	Sulfuric Acid - Extremely irritating, corrosive, and toxic to tissue, resulting in rapid destruction of tissue, causing severe burns. If much skin is involved, exposure is accompanied by shock, collapse and symptoms similar to those seen in severe burns. Repeated contact with dilute solutions can cause dermatitis.
Chronic (Delayed)	No Data Available

Eye

Acute (Immediate)	Causes serious eye damage.
Chronic (Delayed)	No Data Available

Ingestion

Acute (Immediate)	Lead - Poison by ingestion in large dosages and with prolonged exposure leading to the same effects as seen in exposure by inhalation. Adults absorb 5-15% of ingested lead and retain less than 5%. Children absorb about 50% and retain about 30%. Sulfuric Acid - Moderately toxic by ingestion.
Chronic (Delayed)	No Data Available

Reproductive Effects	Lead - Severe toxicity can cause sterility, abortion, and neonatal mortality and morbidity. Experimental teratogen. Experimental reproductive effects. Pathological lesions have been found on male gonads. Sulfuric Acid - Experimental teratogen.
Carcinogenic Effects	Repeated and prolonged exposure may cause cancer.

Carcinogenic Effects			
	CAS	**IARC**	**NTP**
Sulfuric acid	7664-93-9	Group 1-Carcinogenic	Not Listed
Lead	7439-92-1	Group 2A-Probable Carcinogen	Reasonably Anticipated to be Human Carcinogen
Lead as Lead Compounds	NO DATA AVAILABLE	Not Listed	Reasonably Anticipated to be Human Carcinogen
Lead as Lead, inorganic compounds	NO DATA AVAILABLE	Group 2A-Probable Carcinogen	Not Listed

SECTION 12: Ecological information

12.1 Toxicity
Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects

12.2 Persistence and degradability
Material data lacking.

12.3 Bioaccumulative potential
Material data lacking.

12.4 Mobility in Soil
Material data lacking.

12.5 Results of PBT and vPvB assessment
PBT and vPvB assessment has not been conducted for this material.

12.6 Other adverse effects
No studies have been found.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product waste	Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.
Packaging waste	Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

SECTION 14: Transport information

The non-spillable lead acid batteries used in these battery packs are:

- Certified by their manufacturers as capable of withstanding the IATA/ICAO Vibration and Pressure Differential Test and that at a temperature of 55 degrees Centigrade, the electrolyte will not flow from a ruptured or cracked case and there is no free liquid to flow. Schneider Electric only authorizes the use of batteries that meet these criteria. Applicable certifications and test reports are available upon request.
- Packaged in accordance with the requirements of ADR/RID special provision 598, IMDG special provision 238 and IATA -DGR special provision A67 when shipped inside a UPS or packaged in accordance with the requirements of ADR/RID special provision 598, IMDG special provision 238 and IATA -DGR special provision A67 when shipped inside a UPS or shipped in their original battery pack packaging. When they are shipped inside the UPS or in their original packaging, then they are:
    - Secured in such a way that they cannot slip, fall or be damaged;
    - When weighing greater than 2.5 kg, provided with carrying devices, unless they are suitably stacked, e.g. on pallets;

- Free of dangerous traces of alkalis or acids on the outside; and protected against short circuits.
- Outer packaging may be marked “NONSPILLABLE” or “NONSPILLABLE BATTERY.” When not marked, the outer packaging needs to be marked with one of these two phrases.
- Shipment by air requires on Master Air Waybill the following endorsement in the “Nature and Quantity of Good” box: “Not Restricted as per Special Provision A67”

Please note that if the Battery Pack or UPS containing the Battery pack is not shipped in the original packaging or no longer meets any of the referenced requirements above, then the packag e must be shipped as follows:

	14.1 UN number	14.2 UN proper shipping name	14.3 Transport hazard class(es)	14.4 Packing group	14.5 Environmental hazards
DOT	UN280 0	BatteriesW et, Non-spillabe	Hazard Class 8	Packing Group II	
TDG	UN280 0	BatteriesW et, Non-spillabe	Hazard Class 8	Packing Group II	
IMO/IMDG	UN280 0	BatteriesW et, Non-spillabe	Hazard Class 8	Packing Group II	
IATA/ICAO	UN280 0	BatteriesW et, Non-spillabe	Hazard Class 8	Packing Group II	

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

SARA Hazard Classifications: Acute Chronic

Inventory						
Component	**CAS**	**Canada DSL**	**Canada NDSL**	**EU EINECS**	**EU ENICS**	**TSCA**
1-Propene, homopolymer	9003-07-0	Yes	No	No	No	Yes
Amorphous/fused silica	60676-86-0	Yes	No	Yes	Yes	Yes
Calcium	7440-70-2	Yes	No	Yes	No	Yes
Copper	7440-50-8	Yes	No	Yes	No	Yes
Lead	7439-92-1	Yes	No	Yes	No	Yes
Polycarbonate	25037-45-0	Yes	No	No	No	Yes
Polyvinyl Chloride	9002-86-2	Yes	No	No	Yes	Yes
Sulfuric Acid	7664-93-9	Yes	No	Yes	No	Yes
Tin	7440-31-5	Yes	No	Yes	No	Yes

CANADA **WHMIS - Classifications of Substances**		
Copper	7440-50-8	Part 1, Group 1 Substance
Copper as Copper compounds		Part 1, Group 1 Substance
Sulfuric acid	7664-93-9	Part 1, Group 1 Substance Part 1, Group 4 Substance
Lead	7439-92-1	(Does not include lead compounds contained in stainless steel, brass, or bronze alloys)
Lead as Lead compounds		Part 1, Group 4 Substance (Does not include lead compounds contained in stainless steel, brass, or bronze alloys)
Canada - 2005 NPRI (National Pollutant Release Inventory)		
Copper	7440-50-8	Part 1, Group 1 Substance

Copper as copper compounds		Part 1, Group 1 Substance
Sulfuric acid	7664-93-9	Part 1, Group 1 Substance
Lead	7439-92-1	Part 1, Group 4 Substance
Lead as Lead compounds		Part 1, Group 4 Substance
Canada - CEPA - Priority Substances List		
No substance Listed		
Canada - DWQ (Drinking Water Quality) - IMACs		
No substance Listed		
Canada - Accelerated Reduction/Elimination of Toxics (ARET)		
No substance Listed		
Canada - New Brunswick - Ozone Depleting Substances - Schedule A		
No substance Listed		
Canada - New Brunswick - Ozone Depleting Substances - Schedule B		
No substance Listed		

UNITES STATES

U.S. - OSHA - Process Safety Management - Highly Hazardous Chemicals		
No substance Listed		
U.S. - OSHA – Specifically regulated Chemicals		
Lead	7439-92-1	30 µg/m3 Action Level (See 29 CFR 1910.1025); 50 µg/m3 TWA (See 29 CFR 1910.1025)
Lead as Lead, inorganic compounds		30 µg/m3 Action Level (See 29CFR 1910.1025, as Pb); 50 µg/m3 TWA (See 29 CFR 1910.1025, as Pb)
U.S. - CAA (Clean Air Act) - 1990 Hazardous Air Pollutants		
No substance Listed		
U.S. - CERCLA/SARA - Hazardous Substances and their Reportable Quantities		
Copper	7440-50-8	5000 lb final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is >100 µm); 2270 kg final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is >100 µm)
Sulfuric acid	7664-93-9	1000 lb final RQ; 454 kg final RQ
Lead	7439-92-1	10 lb final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is >100 µm); 4.54 kg final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is >100 µm)
U.S. - CERCLA/SARA - Radionuclides and Their Reportable Quantities		
No substance Listed		
U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances EPCRA RQs		
Sulfuric acid	7664-93-9	1000 lb EPCRA RQ
U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances TPQs		
Sulfuric acid	7664-93-9	1000 lb TPQ
U.S. - CERCLA/SARA - Section 313 - Emission Reporting		
Copper	7440-50-8	1.0 % de minimis concentration
Copper as copper compounds		1.0 % de minimis concentration (This category does not include CAS numbers 147-14-8, 1328-53-6, or 14302-13-7, or copper phthalocyanine compounds that are substituted with only hydrogen and/or chlorine and/or bromine.)
Sulfuric acid	7664-93-9	1.0 % de minimis concentration (acid aerosols including mists, vapors, gas, fog, and other airborne forms of any particle size)
Lead	7439-92-1	0.1 % Supplier notification limit; 0.1 % de minimis concentration (when

		contained in stainless steel, brass, or bronze)
Lead as Lead, inorganic compounds		0.1 % Supplier notification limit (Chemical Category N420)
U.S. - CERCLA/SARA - Section 313 - PBT Chemical Listing		
Lead	7439-92-1	100 lb RT (this lower threshold does not apply to lead when it is contained in stainless steel, brass or bronze alloy)
Lead as Lead compounds		100 lb RT
U.S. - California - Proposition 65 - Carcinogens List		
Lead	7439-92-1	carcinogen, initial date 10/1/92
Lead as Lead compounds		carcinogen, initial date 10/1/92
U.S. - California - Proposition 65 - Developmental Toxicity		
Lead	7439-92-1	developmental toxicity, initial date 2/27/87
Lead as Lead, inorganic compounds		developmental toxicity, initial date 2/27/87
U.S. - California - Proposition 65 - Maximum Allowable Dose Levels (MADL)		
Lead	7439-92-1	0.5 µg/day MADL
U.S. - California - Proposition 65 - No Significant Risk Levels (NSRL)		
Lead	7439-92-1	15 µg/day NSRL (oral)
U.S. - California - Proposition 65 - Reproductive Toxicity - Female		
Lead	7439-92-1	female reproductive toxicity, initial date 2/27/87
U.S. - California - Proposition 65 - Reproductive Toxicity - Male		
Lead	7439-92-1	male reproductive toxicity,initial date 2/27/87

15.2 Chemical Safety Assessment

No Chemical Safety Assessment has been carried out.

15.3 Other Information

WARNING: This product contains a chemical known to the State of California to cause cancer, birth defects, or other reproductive harm

SECTION 16: Other information

Review date: January, 13th, 2019
Version: 1

Relevant Phrases (code & full text)

H319 - Causes serious eye irritation
H332 - Harmful if inhaled
H335 - May cause respiratory irritation
H361 - Suspected of damaging fertility or the unborn child.
H372 - Causes damage to organs through prolonged or repeated exposure.
R36/37 - Irritating to eyes and respiratory system.
R38 - Irritating to skin.
R48/20 - Harmful: danger of serious damage to health by prolonged exposure through inhalation.
R63 - Possible risk of harm to the unborn child.

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