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# Certificate of Analysis

Item Number	Product Description	Lot Number
CPB-A20510	Ammonium Sulfate	112993
Formula	Molecular Weight	Cas Number
$H_8N_2O_4S$	132.2	7783-20-2

**QC TEST/RELEASE DATE:** 04/01/2020

**SUGGESTED RETEST DATE:** 10/31/2024

S.No	Test	Unit	Specifications	Test Value
1	Appearance		White Powder	passed
2	Assay	%	$\geq 99.0$	99.8
3	Chloride (Cl)	%	$\leq 0.0005$	<0.0005
4	Heavy Metals	%	$\leq 0.0005$	<0.0005
5	Insoluble Matter	%	$\leq 0.005$	0.002
6	Iron (Fe)	%	$\leq 0.0005$	<0.0005
7	Nitrate	%	$\leq 0.001$	<0.001
8	pH, 5% solution in $H_2O$ @25 °C		5.0 - 6.0	5.34
9	Phosphate	%	$\leq 0.0005$	<0.0005
10	Residue on Ignition	%	$\leq 0.005$	<0.002
11	BSE/TSE Free		BSE/TSE Free	BSE/TSE Free
12	Country of Origin		Report	India

This is to certify that samples of the lot number above were tested and found to comply with the stated specifications. Some or all data have been provided by vendors/ third parties. ChemPure Brand Chemicals disclaims all warranties, expressed or implied, including the implied warranties of merchantability and fitness for a particular use or purpose. Certain products (USP/FCC/NF/EP/BP/JP grades) are sold for use in Research and further manufacturing only. **NOT FOR USE IN FOOD, DRUG OR MEDICAL DEVICE MANUFACTURING.** Persons using this information should make their own determination regarding its suitability for their particular use.

**This is an electronically generated document and does not require signatures.**

**Certified By: Imran Memon**

*Q.C.Manager*

PAGE #:1 OF 5	<b>PRODUCT SAFETY DATA SHEET</b> ChemPure Brand Chemicals	ISSUE DATE: 12/15/14	REV.:2 REV Date :03/23/18
DOCUMENT #: F/RPI/QC 7.7.3-02	PRODUCT NAME: Ammonium Sulfate		RPI ITEM NO: A20510

### **SECTION 1 - CHEMICAL IDENTIFICATION**

PRODUCT NAME: Ammonium Sulfate  
 RPI CATALOG #: CPB-A20510  
 SUPPLIER'S NAME: ChemPure Brand Chemicals  
 SUPPLIERS ADDRESS: 39193 Warren Road, Westland, MI 48185  
 EMERGENCY CONTACT: 734-729-1805

### **SECTION 2 - HAZARDS IDENTIFICATION**

#### **2.1 Classification of the substance or mixture** **GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)**

H371	Specific target organ toxicity - single exposure	Category 2
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#### **2.2 GHS Label elements, including Hazard and Precautionary Statement(s)** **Pictogram**



**Signal word: Warning**

#### **Hazard statement(s)**

H371	May Cause damage to organs.
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#### **Prevention, Response, Storage and Disposal Precautionary Statement(s)**

P260	Do not breathe dust/fume/gas/mist/vapors/spray.
P264	Wash skin thoroughly after handling
P270	Do not eat, drink or smoke when using this product.
P308 + P311	IF exposed or concerned: call a POISON CENTER or doctor/ physician
P405	Store locked up.
P501	Dispose of contents/ container to an approved waste disposal plant.

### **SECTION 3- COMPOSITION/INFORMATION ON INGREDIENTS**

Component	CAS#	EINECS #	Formula:	Molecular Weight	% age
Ammonium Sulfate	7783-20-2	231-984-1	H <sub>8</sub> N <sub>2</sub> O <sub>4</sub> S	132.14/mol	99 - 100

### **SECTION 4 - FIRST-AID MEASURES**

#### **4.1 Description of first aid measures**

**General advice:** Consult a doctor and show this safety data sheet.

- i. **If inhaled:** Remove to fresh air and monitor breathing. If breathing becomes difficult, give oxygen. If breathing stops, give artificial respiration. Consult a doctor.

PAGE #:2 OF 5	<b>PRODUCT SAFETY DATA SHEET</b> <b>ChemPure Brand Chemicals</b>	ISSUE DATE: 12/15/14	REV.:2 REV Date :03/23/18
DOCUMENT #: F/RPI/QC 7.7.3-02	PRODUCT NAME: Ammonium Sulfate		RPI ITEM NO: A20510

- ii. **In case of skin contact:** Immediately wash skin with copious amounts of soap and water for at least 15 minutes. Remove contaminated clothing and shoes and wash before reuse. Consult a doctor.
- iii. **In case of eye contact:** Flush with copious amounts of water for at least 15 minutes. Consult a doctor.
- iv. **If swallowed:** Rinse mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Consult a doctor.

**4.2 Most important symptoms and effects, both acute and delayed:** To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated.

**4.3 Indication of immediate medical attention and special treatment needed:** Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.

## **SECTION 5 - FIRE FIGHTING MEASURES**

### **5.1 Extinguishing media**

**Suitable extinguishing media:** Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide

**5.2 Special hazards arising from the substance or mixture:** Sulfur oxides. Ammonia. Nitrogen oxides (NOx)..

**5.3 Precautions for fire-fighters:** Wear suitable protective clothing to prevent contact with skin and eyes and self-contained breathing apparatus.

**5.4 Further information:** No data available

## **SECTION 6 - ACCIDENTAL RELEASE MEASURES**

**6.1 Personal precautions, protective equipment and emergency procedures:** Do not take action without suitable protective clothing - see section 8 of SDS. Evacuate personnel to safe areas. Ensure adequate ventilation. Avoid breathing vapors, mist, dust or gas.

**6.2 Environmental precautions:** Do not let product enter drains.

**6.3 Methods and materials for containment and cleaning up:** Cover spillage with suitable absorbent material. Using non-spark tools, sweep up material and place in an appropriate container. Decontaminate spill site with 10% caustic solution and ventilate area until after disposal is complete. Hold all material for appropriate disposal as described under section 13 of SDS.

**6.4 Reference to other sections:** For required PPE see section 8. For disposal see section 13.

## **SECTION 7 - HANDLING AND STORAGE**

**7.1 Precautions for safe handling:** Avoid conditions which create dust. Avoid inhalation of dust. Avoid contact with eyes, skin, and clothing. Do not taste or swallow. Do not eat, drink or smoke when using the product. Use only with adequate ventilation. Wash thoroughly after handling. See Section 8 of the SDS for Personal Protective Equipment

**7.2 Conditions for safe storage, including any incompatibilities:** Store in cool, well-ventilated area. Keep away from direct sunlight. Keep container tightly sealed until ready for use. Keep in a dry place. Store at room temperature.

**7.3 Specific end use(s):** Use in a laboratory fume hood where possible. Refer to employer's COSHH risk assessment.

## **SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION**

### **8.1 Control parameters**

PAGE #:3 OF 5	<b>PRODUCT SAFETY DATA SHEET</b> ChemPure Brand Chemicals	ISSUE DATE: 12/15/14	REV.:2 REV Date :03/23/18
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**Components with workplace control parameters:** Contains no substances with occupational exposure limit values.

### 8.2 Exposure Controls

- i. **Appropriate engineering controls:** General industrial hygiene practice. Ensure all engineering measures described under section 7 of SDS are in place. Ensure laboratory is equipped with a safety shower and eye wash station.

### 8.3 Personal protective equipment

- i. **Eye/face protection:** Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).
- ii. **Skin protection:** Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166
- iii. **Body Protection:** Wear appropriate protective clothing. Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
- iv. **Respiratory Protection:** Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.
- v. **Control of environmental exposure:** Do not let product enter drains

## SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

<b>Appearance</b>	White crystals solid	<b>Vapor Pressure @25 °C</b>	2.57 kPa
<b>Odor</b>	Odorless	<b>Vapor Pressure @35 °C</b>	4.47 kPa
<b>Odor Threshold</b>	No Data Available	<b>Relative Density @20 °C</b>	1.77
<b>pH(0.1 molar Aqua solution)</b>	5.5	<b>Water Solubility @0 °C</b>	70.6 g/l
<b>Melting / Freezing Point</b>	235 °C	<b>Water Solubility @25 °C</b>	76.7 g/l
<b>Initial Boiling Point Range</b>	No Data Available	<b>Water Solubility @100 °C</b>	103.8 g/l
<b>Flash Point</b>	No Data Available	<b>Solubility(alcohol and acetone)</b>	Practically Insoluble
<b>Evaporation Rate</b>	No Data Available	<b>Viscosity</b>	No Data Available
<b>Flammability (Solid, Gas)</b>	No Data Available	<b>Explosive Properties</b>	No Data Available
<b>Upper / Lower Flammability Or Explosive Limits</b>	No Data Available	<b>Oxidizing Properties</b>	No Data Available

## SECTION 10 - STABILITY AND REACTIVITY

**Stability:** Stable under recommended storage conditions.

**Condition to avoid:** Excessive heat. Contact with incompatible materials

**Hazardous Decomposition Products:** ammonia Nitrogen Oxides, Oxides of sulfur

**Hazardous Polymerization:** No Data Available.

**Incompatibilities:** Strong oxidizing agents, Potassium, Nitrates.

PAGE #:4 OF 5	<b>PRODUCT SAFETY DATA SHEET</b> ChemPure Brand Chemicals	ISSUE DATE: 12/15/14	REV.:2 REV Date :03/23/18
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### **SECTION 11 - TOXICOLOGICAL INFORMATION**

#### **Acute Toxicity**

LD50 Oral	LD50 Dermal	LC50 Inhalation
3000 mg/kg ( Rat )	2000 mg/kg ( Rat )	0.900 mg/l (Guinea Pig, 8 h)

### **SECTION 12 - ECOLOGICAL INFORMATION**

**Ecotoxicity:** The product contains following substances which are hazardous for the environment. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Component	Freshwater Fish	Water Flea
Ammonium sulfate	Cyprinus carpio: LC50: >460mg/L/96h Brachydanio rerio: LC50:420 mg/L/96h	EC50: 423 mg/L/24h LC50: 14 mg/L/48h

**Persistence and degradability:** No data available

**Bioaccumulative potential:** No data available

**Results of PBT and vPvB assessment:** No data available

**Other adverse effects:** No data available

**Chronic Toxicity:** There are no known carcinogenic chemicals in this product

**Mobility:** Will likely be mobile in the environment due to its water solubility.

Component	log Pow
Ammonium sulfate	-5.1

### **SECTION 13 - DISPOSAL CONSIDERATIONS**

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

### **SECTION 14 - TRANSPORT INFORMATION**

DOT	TDG	IATA	IMDG/IMO
Not regulated	Not regulated	Not regulated	Not regulated

### **SECTION 15 - REGULATORY INFORMATION**

#### **INTERNATIONAL INVENTORIES**

TSCA	DSL	NDSL	ELINCS	NLP	PICCS	ENCS	AICS	CHINA	KECL
Listed	Listed	-	-		Listed	Listed	Listed	Listed	Listed

PAGE #:5 OF 5	<b>PRODUCT SAFETY DATA SHEET</b> ChemPure Brand Chemicals	ISSUE DATE: 12/15/14	REV.:2 REV Date :03/23/18
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**USA FEDERAL REGULATION**

**SARA 313**

INGREDIENT	CAS Number	Weight %	SARA 313-threshold Values %
Ammonium sulfate	7783-20-2	>95.0%	1.0

**SARA 311/312 HAZARDOUS CATEGORIZATION:** Not Applicable

**TSCA 12(b):** Not Applicable

**Clean Water Act/Clean Air Act:** Not Applicable

**OSHA:** Not Applicable

**California Proposition 65:** This product does not contain any Proposition 65 chemicals.

**STATE RIGHT TO KNOW**

Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Listed	Listed	Listed	-	-

**HMIS Rating**

Health hazard	Chronic Health Hazard	Flammability	Physical Hazard
<b>1</b>		<b>0</b>	<b>0</b>

**NFPA Rating**

Health Hazard	Fire Hazard	Reactivity Hazard
<b>0</b>	<b>0</b>	<b>0</b>

**US DEPARTMENT OF TRANSPORTATION**

REPORTABLE QUANTITY (RQ)	DOT MARINE POLLUTANT	DOT SEVER MARINE POLLUTANT
<b>No</b>	<b>No</b>	<b>No</b>

**U.S. DEPARTMENT OF HOMELAND SECURITY:** This product does not contain any DHS chemicals.

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

**This SDS complies with the requirements of Regulation (EC).**

**SECTION 16 - OTHER INFORMATION**

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. ChemPure Brand Chemicals shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. This product is sold for laboratory research and development purposes use only.