

1. Identification of the substance/preparation and of the company/undertaking**1.1 Identification of the product****Product number:** A5116**Name of material:** Ammonium Sulfate**CAS No.:** 7783-20-2**1.2 Recommended use and restriction on use**

General use : for experimental, research and industrial use

Restriction on use : Never drink, Not used except for experimental, research and industrial applications.

1.3 Manufacturer / Supplier / Distributor information**Importer/distributors identification**

Company : ASIA CHEMIE (THAILAND) CO., LTD.

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2. Hazards identification**2.1 GHS Classification**

Acute Toxicity (Inhalation: dust / mist): Category3

2.2 GHS label elements**Hazard symbols**

QRëC

Signal words : Danger**Hazard statements**

H331 Toxic if inhaled

Precautionary statements

P261 Avoid breathing dust/fume.

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

P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P311 Call a POISON CENTER or doctor/physician.

P321 Specific treatment

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulation.

2.3 Other hazards which do not result in classification: (NFPA Classification)

Not available

3. Composition/information on ingredients

Chemical Name	Synonyms	CAS No.	Concentration (%)
Ammonium sulfate	Ammonium sulfate (2:1) ; Diammonium sulfate ; Sulfuric acid, diammonium salt ; Mascagnite ; Diazanium sulfate ; Sulphuric acid, ammonium salt (1:2) ;	7783-20-2	100

4. First aid measures**4.1 Eye contact**

- Do not rub your eyes.

- Immediately flush eyes with plenty of water for at least 15 minutes and call a doctor/physician.

4.2 Skin contact

- Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.

- Wash contaminated clothing thoroughly before re-using.

4.3 Inhalation contact

- When exposed to large amounts of steam and mist, move to fresh air.
- Take specific treatment if needed.
- If breathing is stopped or irregular, give artificial respiration and supply oxygen.
- Take the doctor's examination.

4.4 Ingestion contact

- Please be advised by doctor whether induction of vomit is demanded or not.
- Rinse your mouth with water immediately.

4.5 Delayed and immediate effects and also chronic effects from short and long term exposure

- Not available

4.6 Notes to physician

- Notify medical personnel of contaminated situations and have them take appropriate protective measures.

5. Fire-fighting measures**5.1 Suitable (Unsuitable) extinguishing media**

- Dry chemical, carbon dioxide, regular foam extinguishing agent, spray
- Avoid use of water jet for extinguishing

5.2 Specific hazards arising from the chemical

- Not available

5.3 Special protective actions for firefighters

- Move containers from fire area, if you can do without the risk.
- Cool containers with water until well after fire is out.
- Do not approach the tank surrounded by fire until it is extinguished.
- Wear appropriate protective equipment.
- Keep containers cool with water spray.

6. Accidental release measures**6.1 Personal precautions, protective equipment and emergency procedures**

- Ventilate closed spaces before entering.
- Must work against the wind, let the upwind people to evacuate.
- Move container to safe area from the leak area.
- Handle the damaged containers or spilled material after wearing appropriate protective equipment.

6.2 Environmental precautions

- Prevent runoff and contact with waterways, drains or sewers.
- If large amounts have been spilled, inform the relevant authorities.

6.3 Methods and materials for containment and cleaning up

- Large spill : Stay upwind and keep out of low areas. Dike for later disposal.
- Notify the central and local government if the emission reach the standard threshold.
- Disposal of waste shall be in compliance with the Wastes Control Act.
- Appropriate container for disposal of spilled material collected.
- Small liquid state spills: Appropriate container for disposal of spilled material collected.
- Put the spilled material in an appropriate containers and clean the contaminated area

7. Handling and storage**7.1 Precautions for safe handling**

- Avoid contact with incompatible materials.
- Get the manual before use.
- Do not handle until all safety precautions have been read and understood.
- Operators should wear antistatic footwear and clothing.

7.2 Conditions for safe storage, including any incompatibilities

- Check regularly for leaks.
- Avoid direct sunlight.
- Keep in the original container.
- No open fire.
- Prevent static electricity and keep away from combustible materials or heat sources.

8. Exposure controls/personal protection**8.1 Exposure limits****ACGIH TLV**

- Not available

OSHA PEL

- Not available

8.2 Engineering controls

Business owner is recommended to maintain below recommended exposure limits for the working place with general exhaust of gas/vapour/mist/fume.

8.3 Individual protection measures, such as personal protective equipment**Respiratory protection**

- Respiratory protection is ranked in order from minimum to maximum.
- Consider warning properties before use.
- Under conditions of frequent use or heavy exposure, Respiratory protection may be needed.
- Dust, mist, fume-purifying respiratory protection
- Air-purifying respirator with high-efficiency particulate filtering - Any respiratory protection with a electromotion fan (for dust, mist, fume-purifying) - Self-contained breathing apparatus with a corpuscle filter of high efficiency
- For Unknown Concentration or Immediately Dangerous to Life or Health : Any supplied-air respirator with full facepiece and operated in a pressure-demand or other positive-pressure mode in combination with a separate escape supply. Any self-contained breathing apparatus with a full facepiece.

Eye protection

- Wear primary eye protection such as splash resistant safety goggles with a secondary protection face shield.
- Provide an emergency eye wash station and quick drench shower in the immediate work area.

Hand protection

- Wear appropriate glove.

Skin protection

- Wear appropriate clothing.

Others

- Not available

9. Physical and chemical properties

A. Appearance	
- Appearance	Solid (Other)
- Color	colorless or gray
B. Odor	odorless
C. Odor threshold	Not available
D. pH	5.5 (0.1 M solution)
E. Melting point/Freezing point	Not available
F. Initial Boiling Point/Boiling Ranges	Not available
G. Flash point	Not available
H. Evaporation rate	Not available
I. Flammability (solid, gas)	Not available
J. Upper/Lower Flammability or explosive limits	Not available
K. Vapour pressure	Not available
L. Solubility	71% (0 °C)
M. Vapour density	>1 (air=1)
N. Specific gravity (Relative density)	1.769 (50 °C) (water=1)
O. Partition coefficient of n-octanol/water	Not available
P. Autoignition temperature	Not available
Q. Decomposition temperature	>235 °C

R. Viscosity	Not available
S. Molecular weight	132.14

10. Stability and reactivity**10.1 Chemical Stability**

- This material is stable under recommended storage and handling conditions.

10.2 Possibility of hazardous reactions

- Hazardous Polymerization will not occur.

10.3 Conditions to avoid

- Avoid contact with incompatible materials and condition.
- Avoid: Accumulation of electrostatic charges, Heating, Flames and hot surfaces.

10.4 Incompatible materials

- Not available

10.5 Hazardous decomposition products

- May emit flammable vapour if involved in fire.

11. Toxicological information**11.1 Information on the likely routes of exposure****Respiratory tracts**

- Not available

Oral

- Not available

Eye · Skin

- Not available

11.2 Delayed and immediate effects and also chronic effects from short and long term exposure**Acute toxicity***** Oral**

- [Ammonium sulfate] : LD50 >2000 mg/kg Rat (OECD Guideline 423)

*** Dermal**

- [Ammonium sulfate] : LD50 >2000 mg/kg Rat (OECD Guideline 434)

*** Inhalation**

- [Ammonium sulfate] : Dust LC50 0.64 mg/l 4 hr Guinea pig

Skin corrosion/irritation

- Not available

Serious eye damage/irritation

- Not available

Respiratory sensitization

- Not available

Skin sensitization

- Not available

Carcinogenicity*** IARC**

- Not available

*** OSHA**

- Not available

*** ACGIH**

- Not available

*** NTP**

- Not available

*** EU CLP**

- Not available

Germ cell mutagenicity

- Not available

Reproductive toxicity

- Not available

STOT-single exposure

- Not available

STOT-repeated exposure

- Not available

Aspiration hazard

- Not available

12. Ecological information**12.1 Ecotoxicity****Fish**

- [Ammonium sulfate] : LC50 53 mg/l 96 hr *Oncorhynchus mykiss* (ECHA)

Crustaceans

- [Ammonium sulfate] : EC50 121.7 mg/l 48 hr (*Ceriodaphnia acanthina*) (ECHA)

Algae

- Not available

12.2 Persistence and degradability**Persistence**

- [Ammonium sulfate] : log Kow 0.48 (ECHA)

Degradability

- Not available

12.3 Bioaccumulative potential**Bioaccumulative potential**

- Not available

Biodegradation

- Not available

12.4 Mobility in soil

Not available

12.5 Other adverse effects

Not available

QRëC

13. Disposal considerations**13.1 Disposal methods**

- Stabilization and minimization treatment by incineration or similar method can be applied, if more than two kinds of designated wastes are in mixture state and it is impractical to separate them

- Oil water separation technology shall be applied as pre-waste treatment if it is applicable

- It shall be treated by incineration

13.2 Special precautions for disposal

- Anyone with business license number who generates industrial wastes shall treat the waste by him/herself or by entrusting to the legal entities who treat the wastes, recycle the wastes of others or install and operate the waste treatment facilities according to the Wastes Control Act - Dispose of waste in accordance with all applicable laws and regulations.

14. Transport information**14.1 UN No. (IMDG CODE/IATA DGR)**

- Not applicable

14.2 Proper shipping name

- Not applicable

14.3 Hazard Class

- Not applicable

14.4 IMDG CODE/IATA DGR Packing group

- Not applicable

14.5 Marine pollutant

- Not applicable

14.6 Special precautions for user related to transport or transportation measures

- Local transport follows in accordance with Dangerous goods Safety Management Law.

- Package and transport follow in accordance with Department of Transportation (DOT) and other regulatory agency requirements. - EmS FIRE SCHEDULE : Not available

- EmS SPILLAGE SCHEDULE : Not available

- Air transport(IATA): Not subject to IATA regulations.

15. Regulatory information

15.1 National and/or international regulatory information

POPs Management Law

- [Ammonium sulfate] : Not applicable

Information of EU Classification

* Classification

- Not applicable

U.S. Federal regulations

* OSHA PROCESS SAFETY (29CFR1910.119)

- Not applicable

* CERCLA Section 103 (40CFR302.4)

- Not applicable

* EPCRA Section 302 (40CFR355.30)

- Not applicable

* EPCRA Section 304 (40CFR355.40)

- Not applicable

* EPCRA Section 313 (40CFR372.65)

- Not applicable

Rotterdam Convention listed ingredients

- Not applicable

Stockholm Convention listed ingredients

- Not applicable

Montreal Protocol listed ingredients

- Not applicable

16. Other information

Reason for the revision: General update.

Date: 07/09/2014

Revision #3

Date: 13/07/2020

No warranty, expressed or implied for a particular purpose or otherwise is made, except the products herein discussed comply to the chemical description on the labels. Buyer assumes risks of the use, storage and handling. Producer or distributors shall not be liable for any incidental or consequential damages arising directly or indirectly in connection with the purchase, use, storage or handling of this product. The information contained herein is, to the best of our knowledge, true and accurate. However, all recommendations or suggestions are made without guarantee, since the conditions of use are beyond our control. We disclaim any liability incurred in connection with the use of these data or suggestions.