

Ammonium Sulfate 40% By-Product

Version number: 1.0

SECTION 1: Identification

1.1 Product identifier

Trade name Ammonium Sulfate 40% By-Product

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

Relevant identified uses Industrial use
Chemicals for various applications

Uses advised against Do not use for private purposes (household)

1.3 Details of the supplier of the safety data sheet

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179 Calle Magdalena Suite 100 e-mail: info@valudor.com
Encinitas, California CA 92024 Website: www.valudor.com
United States

1.4 Emergency telephone number

Emergency information 800-535-5053 (Infotrac)
As above or nearest toxicological information centre.

SECTION 2: Hazard(s) identification

2.1 Classification of the substance or mixture

Classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)
This mixture does not meet the criteria for classification.

2.2 Label elements

Labelling acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)
Not required.

2.3 Other hazards

Results of PBT and vPvB assessment
Does not contain a PBT-/vPvB-substance in a concentration of $\geq 0.1\%$.

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SECTION 3: Composition/information on ingredients

3.1 Substances

Not relevant (mixture).

3.2 Mixtures

Description of the mixture

Name of substance	Identifier	Wt%
water	CAS No 7732-18-5	40 – 70
ammonium sulfate	CAS No 7783-20-2	30 – 60

For full text of H-phrases: see SECTION 16

The specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

SECTION 4: First-aid measures

4.1 Description of first-aid measures

General notes

Take off contaminated clothing.

In all cases of doubt, or when symptoms persist, seek medical advice.

Following inhalation

Provide fresh air.

Following skin contact

Rinse skin with water/shower.

Following eye contact

Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing.

If eye irritation persists: Get medical advice/attention.

Following ingestion

Rinse mouth. Do not induce vomiting.

Get medical advice/attention if you feel unwell.

Notes for the doctor

None.

4.2 Most important symptoms and effects, both acute and delayed

This information is not available.

4.3 Indication of any immediate medical attention and special treatment needed

None.

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SECTION 5: Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media

non-combustible
coordinate firefighting measures to the fire surroundings

5.2 Special hazards arising from the substance or mixture

Hazardous decomposition products: Section 10.

Hazardous combustion products

ammonia (NH₃), nitrogen oxides (NO_x), sulfur oxides (SO_x)

5.3 Advice for firefighters

Non-combustible.
Keep containers cool with water spray.
In case of fire and/or explosion do not breathe fumes.
Coordinate firefighting measures to the fire surroundings.
Do not allow firefighting water to enter drains or water courses.
Collect contaminated firefighting water separately.
Fight fire with normal precautions from a reasonable distance.

Special protective equipment for firefighters

chemical protective clothing, Self-contained breathing apparatus (SCBA)

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Ventilate affected area.
Do not breathe mist/vapors/spray.
Do not get in eyes, on skin, or on clothing.
Wearing of suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing.

For emergency responders

Wear breathing apparatus if exposed to vapors/dust/aerosols/gases.

6.2 Environmental precautions

Keep away from drains, surface and ground water.
Retain contaminated washing water and dispose of it.

6.3 Methods and material for containment and cleaning up

Advice on how to clean up a spill

Collect spillage.
Absorbent material (e.g. sand, diatomaceous earth, acid binder, universal binder, sawdust, etc.).

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Appropriate containment techniques

Use of adsorbent materials.

Other information relating to spills and releases

Place in appropriate containers for disposal.
Ventilate affected area.

6.4 Reference to other sections

Hazardous combustion products: see section 5.
Personal protective equipment: see section 8.
Incompatible materials: see section 10.
Disposal considerations: see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Measures to prevent fire as well as aerosol and dust generation

Use local and general ventilation.

Specific notes/details

None.

Measures to protect the environment

Avoid release to the environment.

Advice on general occupational hygiene

Do not eat, drink and smoke in work areas.
Remove contaminated clothing and protective equipment before entering eating areas.
Do not breathe mist/vapors/spray.
Do not get in eyes, on skin, or on clothing.
Wash hands after use.
Preventive skin protection (barrier creams/ointments) is recommended.

7.2 Conditions for safe storage, including any incompatibilities

Flammability hazards

None.

Incompatible substances or mixtures

Incompatible materials: see section 10.

Protect against external exposure, such as

heat, high temperatures

Consideration of other advice

Keep away from food, drink and animal feedingstuffs.
Store in a well-ventilated place. Keep container tightly closed.

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Ventilation requirements

Provision of sufficient ventilation.

Specific designs for storage rooms or vessels

Keep container tightly closed and in a well-ventilated place.

Packaging compatibilities

Keep only in original container.

7.3 Specific end use(s)

No information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limit values (Workplace Exposure Limits)

No constituent of the product currently has a known exposure limit.

8.2 Exposure controls

Appropriate engineering controls

Use local and general ventilation.

Individual protection measures (personal protective equipment)

Eye/face protection

Use safety goggle with side protection.

Hand protection

Protective gloves		
Material	Material thickness	Breakthrough times of the glove material
NR: natural rubber, latex	≥ 0,4 mm	these information are not available
CR: chloroprene (chlorobutadiene) rubber	≥ 0,5 mm	these information are not available
PVC: polyvinyl chloride	≥ 0,7 mm	these information are not available

Wear suitable gloves.

Chemical protection gloves are suitable, which are tested according to EN 374.

Check leak-tightness/impermeability prior to use.

For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Body protection

Protective clothing against liquid chemicals.

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Respiratory protection

In case of inadequate ventilation wear respiratory protection.

Environmental exposure controls

Use appropriate container to avoid environmental contamination.
Keep away from drains, surface and ground water.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state	liquid
Color	clear - colorless - yellowish
Odor	odorless
Odor threshold	not determined
Other safety parameters	
pH (value)	3 – 7 (20 °C)
Melting point/freezing point	not determined
Boiling point or initial boiling point and boiling range	not determined
Flash point	not determined
Evaporation rate	not determined
Flammability (solid, gas)	not relevant (fluid)
Explosive limits	not determined
Vapor pressure	not determined
Density	not determined
Relative density	1.23 (water = 1)
Relative vapour density	this information is not available
Solubility(ies)	
Water solubility	miscible in any proportion
Partition coefficient	
n-octanol/water (log KOW)	not determined

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Auto-ignition temperature	not determined
Decomposition temperature	not relevant
Viscosity	
Kinematic viscosity	not determined
Dynamic viscosity	not determined
Explosive properties	none
Oxidizing properties	none
Information for relevant hazard classes according to GHS	hazard classes acc. to GHS (physical hazards): not relevant
9.2 Other information	there is no additional information

SECTION 10: Stability and reactivity

10.1 Reactivity

This material is not reactive under normal ambient conditions.

10.2 Chemical stability

The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

See below "Conditions to avoid".

10.3 Possibility of hazardous reactions

No known hazardous reactions.

10.4 Conditions to avoid

There are no specific conditions known which have to be avoided.

10.5 Incompatible materials

bases, oxidizers, nitrites and their mixtures

10.6 Hazardous decomposition products

Ammonia (NH₃).

Sulfur oxides (SO_x).

Nitrogen oxides (NO_x).

Hazardous combustion products: see section 5.

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SECTION 11: Toxicological information

11.1 Information on toxicological effects

Classification procedure

If not otherwise specified the classification is based on:
Ingredients of the mixture (additivity formula).

Classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

This mixture does not meet the criteria for classification.

Acute toxicity

Test data are not available for the complete mixture.

Acute toxicity of components of the mixture

Name of substance	CAS No	Exposure route	Endpoint	Value	Species	Method
ammonium sulfate	7783-20-2	oral	LD50	>2,000 mg/kg	rat	OECD Guideline 423
ammonium sulfate	7783-20-2	dermal	LD50	>2,000 mg/kg	rat	OECD Guideline 434

Skin corrosion/irritation

Shall not be classified as corrosive/irritant to skin.

Serious eye damage/eye irritation

Shall not be classified as seriously damaging to the eye or eye irritant.

Respiratory or skin sensitization

Skin sensitization

Classification could not be established because:
Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Respiratory sensitization

Classification could not be established because:
Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Germ cell mutagenicity

Classification could not be established because:
Data are lacking, inconclusive, or conclusive but not sufficient for classification.

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Carcinogenicity

IARC Monographs

None of the ingredients are listed.

National Toxicology Program (United States)

None of the ingredients are listed.

OSHA Carcinogens

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity

Classification could not be established because:
Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Specific target organ toxicity - single exposure

Classification could not be established because:
Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Specific target organ toxicity - repeated exposure

Classification could not be established because:
Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

11.2 Other information

There is no additional information.

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity (acute)

Test data are not available for the complete mixture.

Aquatic toxicity (acute) of components of the mixture

Name of substance	CAS No	Endpoint	Exposure time	Value	Species	Method
ammonium sulfate	7783-20-2	LC50	96 h	53 mg/l	rainbow trout (Oncorhynchus mykiss)	-
ammonium sulfate	7783-20-2	EC50	48 h	121.7 mg/l	Ceriodaphnia acanthina	-

Aquatic toxicity (chronic)

Test data are not available for the complete mixture.

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Aquatic toxicity (chronic) of components of the mixture

Name of substance	CAS No	Endpoint	Exposure time	Value	Species	Method
ammonium sulfate	7783-20-2	EC50	18 d	2,700 mg/l	algae (Chlorella vulgaris)	-
ammonium sulfate	7783-20-2	EC50	30 min	1,618 mg/l	Activated sludge, municipal	OECD Guideline 209
ammonium sulfate	7783-20-2	growth (EbCx) 10%	30 d	5.29 mg/l	bluegill (Lepomis macrochirus)	-
ammonium sulfate	7783-20-2	growth (EbCx) 20%	30 min	1,050 mg/l	Activated sludge, municipal	OECD Guideline 209
ammonium sulfate	7783-20-2	reproductive output 10%	70 d	3.12 mg/l	Hyalella azteca	-

12.2 Persistence and degradability

Biodegradation

The relevant substances of the mixture are readily biodegradable.

Persistence

No data available.

12.3 Bioaccumulative potential

Test data are not available for the complete mixture.

Bioaccumulative potential of components of the mixture

Name of substance	CAS No	BCF	Log KOW
ammonium sulfate	7783-20-2	-	-5.1 (25 °C)

12.4 Mobility in soil

No data available.

12.5 Results of PBT and vPvB assessment

Does not contain a PBT-/vPvB-substance in a concentration of $\geq 0.1\%$.

12.6 Other adverse effects

Data are not available.

Remarks

None.

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SECTION 13: Disposal considerations

13.1 Waste treatment methods

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

Sewage disposal-relevant information

Do not empty into drains.

Waste treatment of containers/packages

Completely emptied packages can be recycled.
Handle contaminated packages in the same way as the substance itself.

Remarks

Please consider the relevant national or regional provisions.

SECTION 14: Transport information

14.1 UN number not assigned

14.2 UN proper shipping name -

14.3 Transport hazard class(es) -

14.4 Packing group -

14.5 Environmental hazards -

14.6 Special precautions for user -

14.7 Transport in bulk according to IMO instruments -

14.8 Information for each of the UN Model Regulations

Transport of dangerous goods by road or rail (49 CFR US DOT) Additional information

Not subject to transport regulations.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations specific for the product in question

National regulations (United States)

Toxic Substance Control Act (TSCA) All ingredients are listed (ACTIVE) or exempt from listing

Superfund Amendment and Reauthorization Act (SARA TITLE III)

The List of Extremely Hazardous Substances and Their Threshold Planning Quantities (EPCRA Section 302, 304)

None of the ingredients are listed

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Specific Toxic Chemical Listings (EPCRA Section 313)

None of the ingredients are listed

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)

List of Hazardous Substances and Reportable Quantities (CERCLA section 102a) (40 CFR 302.4)

None of the ingredients are listed

Clean Air Act

None of the ingredients are listed

Right to Know Hazardous Substance List

Toxic or Hazardous Substance List (MA-TURA)

Toxic or Hazardous Substance List (MA-TURA)						
Name of substance	Name acc. to inventory	CAS No	DEP CODE	PBT / HHS / LHS	PBT / HHS Thres hold	De Minimis Concentration Threshold
ammonium sulfate	Ammonia	7664-41-7	-	-	-	1.0 %

Hazardous Substances List (MN-ERTK)

None of the ingredients are listed

Hazardous Substance List (NJ-RTK)

None of the ingredients are listed

Hazardous Substance List (Chapter 323) (PA-RTK)

Name acc. to inventory	CAS No	Classification
SULFURIC ACID DIAMMONIUM SALT	7783-20-2	E

Legend

E Environmental hazard

Hazardous Substance List (RI-RTK)

Name of substance	Name acc. to inventory	CAS No	References
ammonium sulfate	Ammonium sulfate	7783-20-2	F

Legend

F Flammability (NFPA®)

California Environmental Protection Agency (Cal/EPA): Proposition 65 - Safe Drinking Water and Toxic Enforcement Act of 1987

None of the ingredients are listed

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Drug precursors, Chemicals designated within the Controlled Substances Act, 21 U.S.C. § 802, paragraphs 34 (list I) and 35 (list II)

None of the ingredients are listed

SECTION 16: Other information, including date of preparation or last revision

Date of preparation: 2023-09-28

Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
49 CFR US DOT	49 CFR U.S. Department of Transportation
BCF	Bioconcentration factor
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
DEP CODE	Department of Environmental Protection Code
DGR	Dangerous Goods Regulations (see IATA/DGR)
EC50	Effective Concentration 50 %. The EC50 corresponds to the concentration of a tested substance causing 50 % changes in response (e.g. on growth) during a specified time interval
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
HHS	Higher hazard substance
IARC	International Agency for Research on Cancer
IARC Monographs	IARC Monographs on the Evaluation of Carcinogenic Risks to Humans
IATA	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)
IMDG	International Maritime Dangerous Goods Code
LC50	Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval
LD50	Lethal Dose 50 %: the LD50 corresponds to the dose of a tested substance causing 50 % lethality during a specified time interval
LHS	Lower hazard substance
log KOW	n-Octanol/water
NFPA®	National Fire Protection Association (United States)
OSHA	Occupational Safety and Health Administration (United States)
PBT	Persistent, Bioaccumulative and Toxic
vPvB	Very Persistent and very Bioaccumulative

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Key literature references and sources for data

OSHA Hazard Communication Standard (HCS), 29 CFR 1910.1200.

Transport of dangerous goods by road or rail (49 CFR US DOT).

International Maritime Dangerous Goods Code (IMDG).

Dangerous Goods Regulations (DGR) for the air transport (IATA).

Classification procedure

Physical and chemical properties.

Health hazards.

Environmental hazards.

The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

Responsible for the safety data sheet

Chemical Regulatory Compliance Com- Telephone: +1 (630) 410-1660

pany

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Jasper, GA

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Disclaimer

This information is based upon the present state of our knowledge.

This SDS has been compiled and is solely intended for this product.