Ammonium nitrate

31114-1KG

Version 1.5 Revision Date 24.01.2021

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name	:	Ammonium nitrate
SDS-number	:	000000020719
Type of product	:	Substance
Remarks	:	SDS according to Art. 31 of Regulation (EC) 1907/2006. In accordance to the Article 14 (1) of the REACh Regulation (EC) No 1907/2006, exposure estimation and risk characterisation is not required.
Chemical name	:	Ammonium nitrate
CAS-No.	:	6484-52-2
REACH Registration Number	:	no data available

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

Use of the Substance/Mixture	:	Laboratory chemicals
Uses advised against	:	none

1.3. Details of the supplier of the safety data sheet

Company	:	Honeywell International Inc. 115 Tabor Road 07950-2546 Morris Plains USA	Honeywell International, Inc. 115 Tabor Road Morris Plains, NJ 07950-2546 USA
Telephone	:		
For further information, please contact:	:	SafetyDataSheet@Honeywell.com	

1.4. Emergency telephone number

Emergency telephone number	:	+1-703-527-3887 (ChemTrec-Transport) +1-303-389-1414 (Medical)

Country based Poison Control Center	:	see chapter 15.1

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

REGULATION (EC) No 1272/2008

Oxidizing solids Category 3
H272 May intensify fire; oxidizer.
Eye irritation Category 2
H319 Causes serious eye irritation.

2.2. Label elements

REGULATION (EC) No 1272/2008

Hazard pictograms :

Signal word	:	Warning	
Hazard statements	:	H272	May intensify fire; oxidizer.
		H319	Causes serious eye irritation.
Precautionary statements	:	P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
		P280	Wear protective gloves/ eye protection/ face protection.
		P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
		P308 + P313	IF exposed or concerned: Get medical advice/ attention.
Special labelling of certain products:	:	The national and European Regulations for handling, delivery and storage have to be observed.	

2.3. Other hazards

Protect from contamination. Results of PBT and vPvB assessment, see chapter 12.5.

SECTION 3: Composition/information on ingredients

3.1. Substance

Chemical name	CAS-No. Index-No. REACH Registration Number EC-No.	Classification 1272/2008	Concentration	Remarks
Ammonium nitrate	6484-52-2 229-347-8	Ox. Sol. 3; H272 Eye Irrit. 2; H319	100 %	

3.2. Mixture

Not applicable

Occupational Exposure Limit(s), if available, are listed in Section 8.
For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice:
Take off all contaminated clothing immediately. First aider needs to protect himself. Move out of dangerous area.

Inhalation:
If inhaled, remove to fresh air. Call a physician if irritation develops or persists.

Skin contact:
After contact with skin, wash immediately with plenty of water.

Eye contact:
Protect unharmed eye. Rinse thoroughly with plenty of water, also under the eyelids. Consult a physician.

Ingestion:

A person suspected to have swallowed the substance who is conscious should be given water to drink.
Take to a doctor immediately together with this card

4.2. Most important symptoms and effects, both acute and delayed

No data available

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

No data available

See Section 11 for more detailed information on health effects and symptoms. :

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:
Water spray
Dry powder
Alcohol-resistant foam
Carbon dioxide (CO2)

Extinguishing media which shall not be used for safety reasons:
High volume water jet

5.2. Special hazards arising from the substance or mixture

Fire may cause evolution of:
Nitrogen oxides (NOx)
Cool closed containers exposed to fire with water spray.
Do not use a solid water stream as it may scatter and spread fire.
Fire or intense heat may cause violent rupture of packages.

5.3. Advice for firefighters

Wear self-contained breathing apparatus and protective suit.
No unprotected exposed skin areas.
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Avoid dust formation. Provide adequate ventilation. Wear personal protective equipment. Unprotected persons must be kept away.

6.2. Environmental precautions

Do not let product enter drains.

6.3. Methods and materials for containment and cleaning up

Use mechanical handling equipment.
Pick for disposal in tightly closed containers
Do not pick up with the help of saw-dust or other combustible substances.
Dispose of absorbed material in accordance with the regulations.
Protect against water.

6.4. Reference to other sections

For personal protection see section 8.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling:
Exhaust ventilation at the object is necessary. Keep limited supplies at workplace. Keep away from open flames, hot surfaces and sources of ignition. Do not grind the product. Wear personal protective equipment. Protect from atmospheric moisture and water.

Advice on protection against fire and explosion:
In case of fire, emergency cooling with water spray should be available. Keep away from easily oxidizable materials. Keep away from heat and sources of ignition. Keep away from fire, sparks and heated surfaces.

Hygiene measures:
Keep working clothes separately. Regular cleaning of equipment, work area and clothing. Take off all contaminated clothing immediately. Wash hands before breaks and at the end of workday. When using do not eat or drink.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers:
Keep only in the original container, tightly closed, in a well ventilated place. Protect from extreme heat and cold.

Further information on storage conditions:

Keep away from heat. Do not leave vessels/containers open Containers should be protected against falling down. Avoid product residues in/on containers. Keep locked up or in an area accessible only to qualified or authorised persons. Product is hygroscopic.

Advice on common storage:
Keep away from reducing agents.

7.3. Specific end use(s)

no additional data available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Components with workplace control parameters

Contains no substances with occupational exposure limit values.

DNEL/ PNEC-Values

Component	End-use/impact	Exposure duration	Value	Exposure routes	Remarks
Ammonium nitrate	Workers / Long-term systemic effects		36 mg/m3	Inhalation	
Ammonium nitrate	Workers / Long-term systemic effects		5,12mg/kg bw/d	Skin contact	
Ammonium nitrate	Consumers / Long-term systemic effects		8,9 mg/m3	Inhalation	
Ammonium nitrate	Consumers / Long-term systemic effects		2,56mg/kg bw/d	Skin contact	
Ammonium nitrate	Consumers / Long-term systemic effects		2,56mg/kg bw/d	Ingestion	

Component	Environmental compartment / Value	Remarks
Ammonium nitrate	Sewage treatment plant: 18 mg/l	Assessment factor: 10

8.2. Exposure controls

Occupational exposure controls

The Personal Protective Equipment must be in accordance with EN standards:respirator EN 136, 140, 149; safety glasses EN 166; protective suit: EN 340, 463, 468, 943-1, 943-2; gloves EN 374, 511; safety shoes EN-ISO 20345.
Do not breathe dust.

Engineering measures
Jointless smooth floor
Local exhaust

Personal protective equipment
Respiratory protection:
In the case of dust or aerosol formation use respirator with an approved filter.

Hand protection:
Glove material: Natural Latex
Break through time: > 480 min
Glove thickness: 0,6 mm
Lapren®706
Gloves must be inspected prior to use.
Replace when worn.
Remarks:Supplementary note: The specifications are based on information and tests from similar substances by analogy.
Due to varying conditions (e.g.temperature or other strains) it must be considered that the usage of a chemical protective glove in practice may be much shorter than the permeation time determined in accordance with EN 374.
Since actual conditions of practical use often deviate from standardised conditions according EN 374 the glove manufacturer reccomends to use the chemical protective glove in practice not longer than 50% of the recomended permeation time.
Manufacturer´s directions for use should be observed because of great diversity of types .
Suitable gloves tested according EN 374 are supplied e.g. from KCL GmbH, D-36124 Eichenzell, Vertrieb@kcl.de

Eye protection:
Safety goggles

Skin and body protection:
Protective suit

Environmental exposure controls

Handle in accordance with local environmental regulations and good industrial practices.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	solid
Colour	:	colourless
Odour	:	odourless
Melting point/range	:	ca. 169 °C at 1.013 hPa
Decomposition temperature	:	>= 170 °C
Boiling point/boiling range	:	Not applicable Decomposition
Flammability	:	The product is not flammable.
Upper explosion limit	:	Not applicable
Lower explosion limit	:	Not applicable
Flash point	:	Not applicable
Ignition temperature	:	Not applicable
Decomposition temperature	:	170 °C
pH	:	4,5 - 6,0 Concentration: 50 g/l at 20 °C
Auto-ignition temperature	:	not auto-flammable
Viscosity, kinematic	:	Not applicable

Water solubility	:	1.877,0 g/l at 20 °C
Water solubility	:	2.830 g/l at 40 °C
Partition coefficient: n-octanol/water	:	No data available
Vapour pressure	:	negligible
Density	:	ca. 1,72 g/cm3 at 20 °C
Bulk density	:	ca. 850 kg/m3

9.2 Other Information

Oxidizing properties	:	The substance or mixture is classified as oxidizing with the category 3.
Viscosity, dynamic	:	Not applicable

SECTION 10: Stability and reactivity

10.1. Reactivity

No decomposition if stored and applied as directed.

10.2. Chemical stability

>=170 °C
Decomposition temperature
No decomposition if used as directed.

10.3. Possibility of hazardous reactions

Hazardous decomposition products formed under fire conditions.
Potential for exothermic hazard
Decomposes on heating.
Possible emission of gaseous decomposition products may lead to a dangerous pressure build-up.

Mixtures of inflammable substances are easily combustible and burn vigorously even under exclusion of air.

10.4. Conditions to avoid

Protect from contamination.
Keep away from reducing agents.
Avoid contact with combustible material (paper, wool, oil).
Avoid dust formation.
Do not keep at temperatures above 30 °C.
Protect from frost, heat and sunlight.
Protect from atmospheric moisture and water.

10.5. Incompatible materials

Combustible material
As oxidising agent, attacks organic substances such as wood, paper, fats.
Contact with strong bases liberates ammonia.
Powdered metals
Reactions with strong alkalies.
Reducing agents
Dirt
Polyhalogenated compounds
Halogens
Nitrites

10.6. Hazardous decomposition products

Nitrous gases
Ammonia
Oxygen

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute oral toxicity:
LD50
Species: Rat
Sex: male and female
Value: 2.950 mg/kg
Method: OECD Test Guideline 401

Acute dermal toxicity:
LD50
Species: Rat

Value: > 5.000 mg/kg
Method: OECD Test Guideline 402
No deaths

Acute inhalation toxicity:
Not classified due to data which are conclusive although insufficient for classification.

Skin irritation:
Species: Rabbit
Result: No skin irritation
Classification: non-irritant
Method: OECD Test Guideline 404

Eye irritation:
Species: Rabbit
Result: irritating
Classification: irritating
Method: OECD Test Guideline 405

Respiratory or skin sensitisation:
Not classified due to data which are conclusive although insufficient for classification.

Germ cell mutagenicity:
Test Method: Chromosome aberration test in vitro
Cell type: Chinese hamster ovary cells
Metabolic activation: with and without metabolic activation
Result: negative
Method: OECD Test Guideline 473

Aspiration hazard:
Not applicable

11.2. Information on other hazards

Endocrine disrupting properties
No data available

Other information:
No data available

SECTION 12: Ecological information

12.1. Toxicity

Toxicity to fish:
LC50

semi-static test
Species: Cyprinus carpio (Carp)
Value: 447 mg/l
Exposure time: 48 h

Toxicity to aquatic plants:
EC50
Growth rate
Species: Diatoms
Value: > 1.700 mg/l
Exposure time: 10 d

Toxicity to aquatic invertebrates:
EC50
Species: Daphnia magna (Water flea)
Value: 490 mg/l
Exposure time: 24 h
EC50
Species: Daphnia magna (Water flea)
Value: 226 mg/l
Exposure time: 72 h

12.2. Persistence and degradability

Biodegradability:
The methods for determining biodegradability are not applicable to inorganic substances.

12.3. Bioaccumulative potential

No data available

12.4. Mobility in soil

No data available

12.5. Results of PBT and vPvB assessment

No data available

12.6. Endocrine disrupting properties

No data available

12.7. Other adverse effects

Do not flush into surface water.
An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product:
Dispose according to legal requirements.

Packaging:
Legal requirements are to be considered in regard of reuse or disposal of used packaging materials

Further information:
Provisions relating to waste:
EC Directive 2006/12/EC; 2008/98/EEC
Regulation No. 1013/2006

For personal protection see section 8.

SECTION 14: Transport information

14.1 UN number
ADR/RID:1942 IMDG:1942 IATA:1942

14.2 UN proper shipping name
ADR/RID:AMMONIUM NITRATE
IMDG:AMMONIUM NITRATE
IATA:Ammonium nitrate

14.3 Transport hazard class(es)
ADR/RID: 5.1 IMDG: 5.1 IATA: 5.1

14.4 Packaging group
ADR/RID: III IMDG: III IATA: III

14.5 Environmental hazards
ADR/RID:no Marine pollutant: no

14.6 Special precautions for user
IMDG Code segregation group 2 - Ammonium compounds,

14.7 Maritime transport in bulk according to IMO instruments

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No data available

SECTION 15: Regulatory information

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

Basis	Value	Remarks
Regulation (EC) No. 1907/2006, Annex XVII		This product contains an ingredient according to Annex XVII of the REACH Regulation1907/2006/EC.
Directive 2012/18/EC Listed in Regulation : Ammonium nitrate: technical grade	**Quantity**: 350.000 kg **Quantity**: 2.500.000 kg	
Regulation (EU) 2019/1148 on the marketing and use of explosives precursors		Contains components listed in

Poison Control Center

Country	Phone Number
Austria	+4314064343
Belgium	070 245245
Bulgaria	(+)35929154233
Croatia	(+3851)23-48-342
Cyprus	+357 2240 5611
Czech Republic	+420224919293; +420224915402
Denmark	82121212
Estonia	16662; (+372)6269390
Finland	9471977
France	+33(0)145425959
Greece	+30 210 779 3777
Hungary	(+36-80)201-199
Iceland	5432222
Ireland	+353(1)8092166

Country	Phone Number
Liechtenstein	+41 442515151
Lithuania	+370532362052
Luxembourg	070245245; (+352)80002-5500
Malta	+356 2395 2000
Netherlands	030-2748888
Norway	22591300
Poland	+48 42 25 38 400
Portugal	808250143
Romania	+40 21 318 3606
Slovakia (NTIC)	+421 2 54 774 166
Slovenia	+386 1 400 6051
Spain	+34915620420
Sweden	112 (begär Giftinformation);+46104566786
Switzerland	145

Italy	0382 24444
Germany	Berlin : 030/19240
	Bonn : 0228/19240
	Erfurt : 0361/730730
	Freiburg : 0761/19240
	Göttingen : 0551/19240
	Homburg : 06841/19240
	Mainz : 06131/19240
	Munich : 089/19240
Latvia	+37167042473

United Kingdom	(+44) 844 892 0111

Other inventory information

US. Toxic Substances Control Act
On TSCA Inventory

Australia. Industrial Chemical (Notification and Assessment) Act
On the inventory, or in compliance with the inventory

Canada. Canadian Environmental Protection Act (CEPA). Domestic Substances List (DSL)
All components of this product are on the Canadian DSL

Japan. Kashin-Hou Law List
On the inventory, or in compliance with the inventory

Korea. Existing Chemicals Inventory (KECI)
On the inventory, or in compliance with the inventory

Philippines. Inventory of Chemicals and Chemical Substances (PICCS)
On the inventory, or in compliance with the inventory

China. Inventory of Existing Chemical Substances (IECSC)
On the inventory, or in compliance with the inventory

New Zealand. Inventory of Chemicals (NZIoC), as published by ERMA New Zealand
On the inventory, or in compliance with the inventory

15.2 Chemical safety assessment

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A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

Text of H-statements referred to under heading 3

Ammonium nitrate	:	H272	May intensify fire; oxidizer.
		H319	Causes serious eye irritation.

Further information

All directives and regulations refer to amended versions.
Vertical lines in the left hand margin indicate a relevant amendment from the previous version.

Abbreviations:
EC European Community
CAS Chemical Abstracts Service
DNEL Derived no effect level
PNEC Predicted no effect level
vPvB Very persistent and very biaccumulative substance
PBT Persistent, bioaccmulative und toxic substance

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