

Safety Data Sheet

According to regulation (EC) No. 1907/2006 (REACH)



64020 Ammonium bicarbonate

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Revised edition: 14.04.2014

Version: 5.0

Printed: 06.05.2019

1. Identification of the Substance/Mixture and of the Company/Undertaking

1.1. Product Identifier

Product Name: Ammonium bicarbonate

Article No.: 64020

1.2. Relevant identified Uses of the Substance or Mixture and Uses advised against

Identified uses:
Industrial application

Uses advised against:

1.3. Details of the Supplier of the Safety Data Sheet (Producer/Importer)

Company: Kremer Pigmente GmbH & Co. KG

Address: Hauptstr. 41-47, 88317 Aichstetten, Germany

Tel./Fax.: Tel +49 7565 914480, Fax +49 7565 1606

Internet: www.kremer-pigmente.de

E-Mail: info@kremer-pigmente.de

Importer: --

1.4. Emergency No.

Emergency No.: +49 7565 914480 (Mon-Fri 8:00 - 17:00)

1.4.2 Poison Center:

2. Hazards Identification

2.1. Classification of the Substance or Mixture

Classification according to Regulation (EC) No. 1272/2008 (CLP/GHS)

H302

Cat.: 4

Acute toxicity (oral), hazard category 4
Harmful if swallowed.

Possible Environmental Effects:

See Section 12.

2.2. Label Elements

Classification according to Regulation (EC) No. 1272/2008 (CLP/GHS)

Hazard designation:



GHS07-1

Signal word:

Warning

Hazard designation:

H302

Harmful if swallowed.

Safety designation:

Wash thoroughly after handling.

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P264	
P270	Do not eat, drink or smoke when using this product.
P301+P312	If swallowed: Call a poison center or physician if you feel unwell.
P330	Rinse mouth.
P501	Dispose of contents/ container according to regional, national and international regulations.

Hazardous components for labelling:

Ammonium hydrogen carbonate

2.3. Other Hazards

3. Composition/Information on Ingredients

3.1. Substance

3.2. Mixture

Chemical Characterization: Ammonium hydrogen carbonate

Information on Components / Hazardous Ingredients:

Ammonium bicarbonate (Acute Tox. 4, H302); REACH 01-2119486970-26	100 %	CAS-Nr: 1066-33-7 EINECS-Nr: 213-911-5 EC-Nr:
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Additional information:

4. First Aid Measures

4.1. Description of the First Aid Measures

General information:

Remove contaminated clothes immediately.

After inhalation:

*Supply fresh air and keep patient calm.
If breathing is difficult call a physician.*

After skin contact:

*Wash with soap and rinse with plenty of water.
Remove contaminated clothing immediately.
If symptoms persist, consult a physician.*

After eye contact:

*Rinse open eyes with plenty of water for at least 15 minutes.
Seek medical attention if irritation persists.*

After ingestion:

*Rinse mouth with water and drink plenty of water.
Do not induce vomiting.
Consult a doctor.*

4.2. Most important Symptoms and Effects, both Acute and Delayed

Symptoms:

Irritating to mucous membrane, can cause vomiting.

Effects:

Harmful if swallowed.

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4.3. Indication of any Immediate Medical Attention and special Treatment needed

Treatment:

Treat symptomatically.

5. Fire-Fighting Measures

5.1. Extinguishing Media

Suitable extinguishing media:

Product itself does not burn.

Use extinguishing media for surrounding fire.

Unsuitable extinguishing media:

5.2. Special Hazards arising from the Substance or Mixture

Special hazards:

In case of fire: formation of carbon oxides and ammonia.

Release of other toxic fumes by surrounding fire is possible.

5.3. Advice for Firefighters

Protective equipment:

Wear self-contained respiratory protective device and full protective gear.

Further information:

6. Accidental Release Measures

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

Personal precautions:

Wear appropriate protective equipment. Keep spectators away.

Do not inhale dust. Avoid formation of dust.

Avoid contact with eyes and skin.

6.2. Environmental Precautions

Environmental precautions:

Prevent contamination of soils, drains and surface water.

Contact local authorities if product pollutes soil or vegetation.

6.3. Methods and Material for Containment and Cleaning Up

Methods and material:

Take up mechanically and collect in suitable containers for disposal.

6.4. Reference to other Sections

Dispose of contaminated material according to Section 13.

7. Handling and Storage

7.1. Precautions for Safe Handling

Instructions on safe handling:

Avoid formation and deposition of dust. Provide adequate ventilation.

Provide adequate ventilation.

Hygienic measures:

Do not inhale dust. Wash hands before breaks and at the end of next page: 4

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work.

7.2. Conditions for Safe Storage, including any Incompatibilities

Storage conditions:

Store in tightly sealed containers in a cool and well ventilated location.

Storage temperature: < 30°C

Requirements for storage areas and containers:

Store the product in the original container.

Information on fire and explosion protection:

Follow the usual measures for preventive fire protection.

Do not store together with: nitrites, nitrates and alkalis.

Do not store together with: strong acids and alkalis.

Storage class:

13; Non combustible solids

Further Information:

Shelf-life: 24 months

7.3. Specific End Use(s)

Further information:

8. Exposure Controls/Personal Protection

8.1. Parameters to be Controlled

Parameters to be controlled (DE):

Does not contain any components with workplace limit values.

Parameters to be controlled:

Derived No-Effect Level (DNEL):

Ammonium bicarbonate (1066-33-7):

62.5 mg/m³ (consumer, inhalation, long-term exposition - systemic effects)

57 mg/kg (worker, skin contact, long-term exposition - systemic)

160.7 mg/m³ (worker, inhalation, short-term exposition - systemic)

13.33 mg/m³ (consumer, inhalation, long-term exposition - systemic effects)

143.91 mg/m³ (consumer, inhalation, short-term exposition - systemic)

34.2 mg/m³ (consumer, skin contact, long-term exposition - systemic)

Predicted No-Effect Concentration (PNEC):

Fresh water: 0.37 mg/l

Sea water: 0.037 mg/l

Fresh water sediment: 0.1332 mg/l

Seawater sediment: 0.01332 mg/l

Soil: 74.9 mg/kg

Sewage treatment system (STP): 1347 mg/l

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Sporadic release: 0.63 mg/l

Additional Information:

8.2. Exposure Controls

Technical protective measures:

Use local exhaust ventilation in case of dust and/or fume formation.

Personal Protection

General protective measures:

Keep away from foodstuffs and drinks. Do not eat, drink or smoke during work. Wash hands before breaks and at the end of work.

Respiratory protection:

Respiratory equipment required in case of insufficient ventilation, filter combination type A-P2.

Hand protection:

Protective gloves. The glove material has to be impermeable and resistant to the product / substance / preparation.

Protective glove material:

*Butyl rubber (480 min, 0.7 mm).
Chloroprene rubber (> 480 min, > 0.5 mm).
Nitrile rubber (480 min, 0.4 mm)*

Eye protection:

Tightly fitting safety goggles (EN 166).

Body protection:

Protective clothing.

Environmental precautions:

*Prevent contamination of open water ways and sewage system.
Avoid contamination of ground water.
Contact local authorities if large spillages cannot be contained.*

9. Physical and Chemical Properties

9.1. Information on Basic Physical and Chemical Properties

Form: powder

Color: white

Odor: ammonium-like

Odor threshold:
No information available.

pH-Value: 7.7 (100 g/l; 20°C)

Melting temperature:
not available

Boiling temperature:
not available

Flash point:

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not applicable

Evaporation rate:

not applicable

Flammability (solid, gas):

not flammable

Upper explosion limit:

not determined

Lower explosion limit:

not determined

Vapor pressure:

79 hPa (25.4°C); 526 hPa(50°C)
1086 hPa (59.25°C)

Vapor density:

No information available.

Density:

1.58 g/cm³ (20°C)

Solubility in water:

220 g/l (20°C)

*Coefficient of variation (n-
Octanol/Water):*

-2.4 logKOW (25°C)

Auto-ignition temperature:

not applicable

Decomposition temperature:

> 34°C

Viscosity, dynamic:

not applicable

Explosive properties:

Product does not present an explosion hazard.

Oxidizing properties:

No information available.

Bulk density:

850 kg/m³

9.2. Further Information

Solubility in solvents:

Viscosity, kinematic

Burning class:

Solvent content:

Solid content:

Particle size:

Other information:

No further information.

10. Stability and Reactivity

10.1. Reactivity

No decomposition if used according to specifications.

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10.2. Chemical Stability

No decomposition if used according to specifications.

10.3. Possibility of Hazardous Reactions

Reacts with acids, bases und nitrites.

10.4. Conditions to Avoid

Conditions to avoid:

Avoid heat.

Thermal decomposition:

Decomposes when heated.

10.5. Incompatible Materials

Strong acids, strong bases, nitrites and nitrates.

10.6. Hazardous Decomposition Products

*Carbon oxides
Ammonia.*

10.7. Further Information

11. Toxicological Information

11.1. Information on Toxicological Effects

Acute Toxicity

LD50, oral: 1576 mg/kg (rat)

LD50, dermal: > 2000 mg/kg

LC50, inhalation: > 4.75 mg/l (4.5h, rat)

Primary effects

Irritant effect on skin:

Non irritating (rabbit)

Irritant effect on eyes:

Non-irritating to eyes (rabbit)

Inhalation:

No information available.

Ingestion:

No information available

Sensitization:

Non sensitizing (guinea pig; OECD 406).

Mutagenicity:

Tests with bacteria or mammal cell cultures did not show any mutagenic effects.

Reproductive toxicity:

No relevant data found.

Carcinogenicity:

No cancerogenic effect known.

Teratogenicity:

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Did not show any teratogenic effects in animal studies.

Specific target organ toxicity (STOT):

Single exposure: the substance or mixture is not classified as specific target organ toxicant.

Repeated exposure: the substance or mixture is not classified as specific target organ toxicant.

Additional toxicological information:

12. Ecological Information

12.1. Aquatic Toxicity

Fish toxicity:

LC50: 63.4 mg/l (96h, Oncorhynchus mykiss)

Chronic toxicity: 6,3 mg/l (30d; Lepomis macrochirus)

Daphnia toxicity:

EC50: 145.6 mg/l (48h, Daphnia magna)

Chronic toxicity: EC50: 3.231 mg/l (18d, Daphnia magna); EC10: 3.7 mg/l (70d, Daphnia magna)

Bacteria toxicity:

EC10: 1347 mg/l (16h, Pseudomonas putida)

Algae toxicity:

EC50: 1900 mg/l (120h, Chlorella vulgaris)

12.2. Persistency and Degradability

Inorganic substance. Biological degradability is not affected.

Can be oxidized to nitrite or also reduced to nitrogen by microorganisms.

12.3. Bioaccumulation

Bioaccumulation is not to be expected.

12.4. Mobility

Product floats on water, is not very soluble in water. Adsorbs to soil and has low toxicity.

12.5. Results of PBT- und vPvP Assessment

This substance is not classified as PBT (persistent, bioaccumulative, toxic), nor as vPvB (very persistent, very bioaccumulative).

12.6. Other Adverse Effects

Water hazard class:

1 (German Regulation) (Assessment by list): slightly hazardous.

Behaviour in sewage systems:

Further ecological effects:

Do not let product enter waterways or sewage system.

AOX Value:

13. Disposal Considerations

13.1. Waste Treatment Methods

Product:

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Do not let product enter water systems.

Do not mix with other waste.

European Waste Code (EWC):

Uncleaned packaging:

Uncontaminated packaging may be recycled. Completely empty packaging can be disposed of with the regular waste.

Waste Code No.:

14. Transport Information

14.1. UN Number

ADR, IMDG, IATA

14.2. UN Proper Shipping Name

ADR/RID:

No hazardous goods according to ADR (land transportation).

IMDG/IATA:

No hazardous goods according to IMDG.

14.3. Transport Hazard Classes

ADR Class:

not applicable

Hazard no.:

Classification code:

Tunnel restriction code:

IMDG Class (sea):

Hazard no.:

EmS No.:

IATA Class:

not applicable

Hazard no.:

14.4. Packaging Group

ADR/RID:

not applicable

IMDG:

IATA:

14.5. Environmental Hazards

None

14.6. Special Precautions for User

Not classified as a dangerous good under transport regulations.

14.7. Transportation in Bulk according to Annex II of MARPOL 73/78 and IBC-Code

IMDG: not applicable

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14.8. Further Information

15. Regulatory Information

15.1. Safety, Health and Environmental Regulations/Legislation specific for the Substance or Mixture

Water hazard class:

1, slightly hazardous for water (German Regulation)

Local regulations on chemical accidents:

Does not underlie the Accident Ordinance.

Employment restrictions:

The employment restrictions for expectant and nursing mothers in accordance with the Maternity Protection Guideline (94/85/EEC) are to be observed.

The employment restrictions for young workers in accordance with the Youth Employment Protection Law (94/33/EC) are to be observed.

Restriction and prohibition of application:

Technical instructions on air quality:

15.2. Chemical Safety Assessment

A Chemical Safety Assessment has been carried out for this product.

15.3. Further Information

Listed in the following inventories:

Ammonium hydrogen carbonate: EINECS (213-911-5), TSCA (US), AICS (AUS), DSL (CA), ENCS/ISHL (JP)((1)-141), KECI (KR: KE-01678), PICCS (PH), NZIoC (NZ)(HSR003204)

16. Other Information

This product should be stored, handled and used in accordance with good hygiene practices and in conformity with any legal regulations. This information contained herein is based on the present state of knowledge and is intended to describe our product from the point of view of safety requirements. It should be therefore not be construed as guaranteeing specific properties.