

**Safety data sheet**  
according to 1907/2006/EC, Article 31

Printing date 05.04.2023


Version number 15

Revision: 02.04.2023

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


- **1.1 Product identifier**
- **Molecular formula:** C H<sub>5</sub> N O<sub>2</sub>
- **Trade name:** ammonium formate
- **SDS number:** CH0705
  
- **EC number:**  
208-753-9
- **Application of the substance / the mixture** Chemicals products for laboratory
  
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
CARLO ERBA REAGENTS  
Chaussée du Vexin  
Parc d'Affaires des Portes - BP616  
27106 VAL DE REUIL Cedex  
Téléphone: +33 (0)2 32 09 20 00  
Télécopie: +33 (0)2 32 09 20 20
- **Further information obtainable from:**  
Q.A / Normative  
email: MSDS\_CER-SDS@cer.dgroup.it
- **1.4 Emergency telephone number:**  
Ireland - Tel : 00 353 1 8092568 - 00 353 1 8379964 (24h/24)  
EU Tel : 112  
National Poisons Information Centre: +353 (1) 809 2166 (8.00 a.m. to 10.00 p.m. 7 days a week)  
Healthcare Professionals: +353 (1) 809 2566 (24 hour service)  
Members of the public seeking specific information on poisons should contact:  
In England and Wales: NHS 111 - dial 111  
In Scotland: NHS 24 - dial 111

**SECTION 2: Hazards identification**

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**
- 

Skin Irrit. 2 H315 Causes skin irritation.  
Eye Irrit. 2 H319 Causes serious eye irritation.  
STOT SE 3 H335 May cause respiratory irritation.

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- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**  
The substance is classified and labelled according to the GB CLP regulation.
- **Hazard pictograms**
- 

GHS07
- **Signal word** Warning
- **Hazard statements**  
H315 Causes skin irritation.  
H319 Causes serious eye irritation.  
H335 May cause respiratory irritation.

(Contd. on page 2)

## Safety data sheet

### according to 1907/2006/EC, Article 31

Printing date 05.04.2023

Version number 15

Revision: 02.04.2023

**Trade name: ammonium formate**

(Contd. of page 1)

· **Precautionary statements**

- P261 Avoid breathing dust/fume/gas/mist/vapours/spray.  
 P271 Use only outdoors or in a well-ventilated area.  
 P280 Wear eye protection / face protection.  
 P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 P403+P233 Store in a well-ventilated place. Keep container tightly closed.

· **2.3 Other hazards**

· **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.  
 · **vPvB:** Not applicable.

### SECTION 3: Composition/information on ingredients

· **3.1 Chemical characterisation: Substances**

· **CAS No. Description**

ammonium formate

· **Identification number(s)**

· **EC number:** 208-753-9

### SECTION 4: First aid measures

· **4.1 Description of first aid measures**

- **After inhalation:** In case of unconsciousness place patient stably in side position for transportation.  
 · **After skin contact:**  
 Immediately wash with water and soap and rinse thoroughly. Wash contaminated clothing before reuse. If skin irritation continues, consult a doctor.  
 · **After eye contact:**  
 Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor. Seek immediate medical advice.  
 · **After swallowing:**  
 Rinse out mouth and then drink plenty of water. If some symptoms persist seek for medical advice.  
 · **Information for doctor:** Show the doctor this Material Safety Data Sheet.  
 · **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.  
 · **4.3 Indication of any immediate medical attention and special treatment needed**  
 No further relevant information available.

### SECTION 5: Firefighting measures

· **5.1 Extinguishing media**

· **Suitable extinguishing agents:**

CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam. Use fire extinguishing methods suitable to surrounding conditions.

· **5.2 Special hazards arising from the substance or mixture**

In case of fire, the following can be released:

Nitrogen oxides (NO<sub>x</sub>)

Carbon monoxide and carbon dioxide

In the absence of oxygen: Ammonia (NH<sub>3</sub>).

(Contd. on page 3)

**Safety data sheet**  
according to 1907/2006/EC, Article 31

Printing date 05.04.2023

Version number 15

Revision: 02.04.2023

**Trade name: ammonium formate**

(Contd. of page 2)

- **5.3 Advice for firefighters**
- **Protective equipment:** Do not inhale gases in case of fire or combustion.
- **Additional information** Keep receptacles cool with water spray.

### SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**  
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.  
Ensure adequate ventilation
- **6.2 Environmental precautions:**  
Do not allow to penetrate the ground/soil.  
Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**  
Pick up mechanically.  
Ensure adequate ventilation.  
Provide suction extractors if dust is formed.
- **6.4 Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

### SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**  
Ensure good ventilation/exhaustion at the workplace.  
Prevent formation of dust.  
Provide suction extractors if dust is formed.
- **Information about fire - and explosion protection:** The product is not flammable.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** None.
- **7.3 Specific end use(s)** No further relevant information available.

### SECTION 8: Exposure controls/personal protection

- **8.1 Control parameters**
- **Additional information about design of technical facilities:** No further data; see section 7.
- **Ingredients with limit values that require monitoring at the workplace:** TLV not established.
- **Additional information:** The lists valid during the making were used as basis.
- **8.2 Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**  
The usual precautionary measures are to be adhered to when handling chemicals.  
Keep away from foodstuffs, beverages and feed.  
Immediately remove all soiled and contaminated clothing  
Avoid contact with the eyes and skin.

(Contd. on page 4)

## Safety data sheet

### according to 1907/2006/EC, Article 31

Printing date 05.04.2023

Version number 15

Revision: 02.04.2023

**Trade name: ammonium formate**

(Contd. of page 3)

· **Respiratory protection:**

Use suitable respiratory protective device only when aerosol or mist is formed.



In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

Use suitable respiratory protective device in case of insufficient ventilation.

· **Protection of hands:**

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation



Protective gloves

Rubber gloves

· **Material of gloves**

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

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

Thin, disposable gloves in PVC or PE

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:**



Tightly sealed goggles

· **Limitation and supervision of exposure into the environment**

In case of unintended release of the product: See section 6 of the Safety Data Sheet.

· **Risk management measures** Keep good industrial hygiene.

### SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**

· <b>Molecular weight</b>	63.06 g
· <b>Appearance:</b>	
<b>Form:</b>	Crystalline
<b>Colour:</b>	White
· <b>Odour:</b>	Characteristic
· <b>Odour threshold:</b>	Not determined.

· **pH-value:** Not applicable.

· **Change in condition**

<b>Melting point/freezing point:</b>	116 °C
<b>Initial boiling point and boiling range:</b>	Undetermined.
· <b>Flash point:</b>	Not applicable.
· <b>Flammability (solid, gas):</b>	Product is not flammable.
· <b>Decomposition temperature:</b>	Not determined.

(Contd. on page 5)

## Safety data sheet

### according to 1907/2006/EC, Article 31

Printing date 05.04.2023

Version number 15

Revision: 02.04.2023

**Trade name: ammonium formate**

(Contd. of page 4)

- |  |   |
|--|---|
| · <b>Ignition temperature:</b>                   | Not determined.                               |
| · <b>Explosive properties:</b>                   | Product does not present an explosion hazard. |
| · <b>Explosion limits:</b>                       |   |
| <b>Lower:</b>                                    | Not determined.                               |
| <b>Upper:</b>                                    | Not determined.                               |
| · <b>Vapour pressure:</b>                        | Not applicable.                               |
| · <b>Density at 20 °C:</b>                       | 1.28 g/cm <sup>3</sup>                        |
| · <b>Relative density</b>                        | Not determined.                               |
| · <b>Vapour density</b>                          | Not applicable.                               |
| · <b>Evaporation rate</b>                        | Not applicable.                               |
| · <b>Solubility in / Miscibility with</b>        |   |
| <b>water at 0 °C:</b>                            | 1020 g/l                                      |
| · <b>organic solvents:</b>                       | Soluble in many organic solvents.             |
| · <b>Partition coefficient: n-octanol/water:</b> | -3.33724                                      |
| · <b>Viscosity:</b>                              |   |
| <b>Dynamic:</b>                                  | Not applicable.                               |
| <b>Kinematic:</b>                                | Not applicable.                               |
| · <b>9.2 Other information</b>                   | No further relevant information available.    |

### SECTION 10: Stability and reactivity

- **10.1 Reactivity** See 10.3
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:**  
Carbon monoxide, Carbon dioxide.  
Nitrogen oxides (NO<sub>x</sub>)

### SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity** Based on available data, the classification criteria are not met.

· <b>LD/LC50 values relevant for classification:</b>		
Oral	LD50	2,250 mg/kg (mouse)

- **Primary irritant effect:**

- **Skin corrosion/irritation**

Causes skin irritation.

- **Serious eye damage/irritation**

Strong irritant with the danger of severe eye injury.

Irritating effect.

Causes serious eye irritation.

- **Ingestion:** It can be harmful if swallowed.

- **Inhalation:**

Harmful if inhaled. May cause respiratory tract irritation.

May cause respiratory irritation.

- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.

- **Other information (about experimental toxicology):** No further relevant information available.

(Contd. on page 6)

**Safety data sheet**  
according to 1907/2006/EC, Article 31

Printing date 05.04.2023

Version number 15

Revision: 02.04.2023

**Trade name: ammonium formate**

(Contd. of page 5)

- **Target organ information**
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure**  
May cause respiratory irritation.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

## SECTION 12: Ecological information

- **12.1 Toxicity**
  - **Aquatic toxicity:**  
Foreseeable as non relevant.
- |          |                    |
|----------|--------------------|
| EC50/48h | 365 mg/l (Daphnia) |
| LC50/72h | 1,240 mg/l (algae) |

- **12.2 Persistence and degradability** No further relevant information available.
- **Method**
- **Ecological information** Not available
- **Other information:** The product is biodegradable.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**  
Water hazard class 1 (German Regulation) (Assessment by list): slightly hazardous for water  
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

## SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**  
Must not be disposed together with household garbage. Do not allow product to reach sewage system.  
Reutilise if possible or contact a waste processors for recycling or safe disposal.
- **Uncleaned packaging:**
- **Recommendation:**  
Disposal must be made according to official regulations.  
Wash with solvents to be incinerated.  
Packagings that may not be cleansed are to be disposed of in the same manner as the product.
- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

## SECTION 14: Transport information

- **14.1 UN-Number**
- **ADR/RID, ADN, IMDG, IATA** Void

(Contd. on page 7)



## Safety data sheet

### according to 1907/2006/EC, Article 31

Printing date 05.04.2023

Version number 15

Revision: 02.04.2023

**Trade name: ammonium formate**

(Contd. of page 6)

· 14.2 UN proper shipping name · ADR/RID, ADN, IMDG, IATA	Void
· 14.3 Transport hazard class(es) · ADR/RID, ADN, IMDG, IATA · Class	Void
· 14.4 Packing group · ADR/RID, IMDG, IATA	Void
· 14.5 Environmental hazards: · Marine pollutant:	No
· 14.6 Special precautions for user	Not applicable.
· 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
· UN "Model Regulation":	Void

### SECTION 15: Regulatory information

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
- SARA Section 355 (extremely hazardous substances) Substance is not listed.
- SARA Section 313 (specific toxic chemical listings) Substance is not listed.
- Prop 65 - Chemicals known to cause cancer Substance is not listed.
- Chemical safety assessment
- Named dangerous substances - ANNEX I Substance is not listed.
- National regulations:
- Waterhazard class: Water hazard class 1 (Assessment by list): slightly hazardous for water.
- 15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

### SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Department issuing SDS: Q.A./Normative

· Abbreviations and acronyms:

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

ICAO: International Civil Aviation Organisation

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

IMO: International Maritime Organization

Skin Irrit. 2: Skin corrosion/irritation – Category 2

Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

(Contd. on page 8)

**Safety data sheet**  
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Version number 15

Revision: 02.04.2023

**Trade name: ammonium formate**

(Contd. of page 7)

**· Sources**

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006, UK REACH, in the latest valid version.

Regulation (EC) N° 1272/2008 of the European Parliament and of the Council of 16 December 2008, GB CLP, in the latest valid version.

Globally Harmonized System, GHS

ADR/RID, IMDG, IATA

PubChem : an open chemistry database at the National Institutes of Health (NIH)

ECHA : European CHEMicals Agency

GESTIS : Information system on hazardous substances of the German Social Accident Insurance

· **\* Data compared to the previous version altered. .**

GB