

## SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Revision Date 07.02.2019

Version 2.4

**SECTION 1. Identification of the substance/mixture and of the company/undertaking****1.1 Product identifier**

Catalogue No.	101125
Product name	Ammonium bromide for analysis EMSURE® ACS
REACH Registration Number	01-2119931350-50-xxxx
CAS-No.	12124-97-9

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

Identified uses	Reagent for analysis For additional information on uses please refer to the Merck Chemicals portal ( <a href="http://www.merckgroup.com">www.merckgroup.com</a> ).
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**1.3 Details of the supplier of the safety data sheet**

Company	Merck KGaA * 64271 Darmstadt * Germany * Phone: +49 6151 72-0
Responsible Department	LS-QHC * e-mail: <a href="mailto:prodsafe@merckgroup.com">prodsafe@merckgroup.com</a>

**1.4 Emergency telephone number** **Please contact the regional company representation in your country.****SECTION 2. Hazards identification****2.1 Classification of the substance or mixture****Classification (REGULATION (EC) No 1272/2008)**

Eye irritation, Category 2, H319

For the full text of the H-Statements mentioned in this Section, see Section 16.

**2.2 Label elements****Labelling (REGULATION (EC) No 1272/2008)***Hazard pictograms**Signal word*

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Warning

## *Hazard statements*

H319 Causes serious eye irritation.

## *Precautionary statements*

Response

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes.

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

## **Reduced labelling (≤125 ml)**

*Hazard pictograms*



*Signal word*  
Warning

CAS-No. 12124-97-9

## **2.3 Other hazards**

None known.

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## **SECTION 3. Composition/information on ingredients**

### **3.1 Substance**

Formula	NH <sub>4</sub> Br	H <sub>4</sub> BrN (Hill)
EC-No.	235-183-8	
Molar mass	97,94 g/mol	

### **Hazardous components (REGULATION (EC) No 1272/2008)**

*Chemical name (Concentration)*

CAS-No.	Registration number	Classification
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ammonium bromide (≤ 100 % )

12124-97-9	01-2119931350-50-xxxx	Eye irritation, Category 2, H319
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For the full text of the H-Statements mentioned in this Section, see Section 16.

### **3.2 Mixture**

Not applicable

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## **SECTION 4. First aid measures**

### **4.1 Description of first aid measures**

After inhalation: fresh air.

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In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower.

After eye contact: rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses.

After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.

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

Vomiting, Stomach/intestinal disorders, Convulsions, Tiredness, CNS disorders, confusion

The following applies to inorganic bromides in general: the uptake of large quantities as a result of misuse or improper handling leads to tiredness, agitation, spasms., The following applies to ammonium salts in general: after swallowing: local irritation symptoms, nausea, vomiting, diarrhoea. Systemic effect: after the uptake of very large quantities: drop in blood pressure, collapse, CNS disorders, spasms, narcotic conditions, respiratory paralysis, haemolysis. irritant effects

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

No information available.

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## SECTION 5. Firefighting measures

### 5.1 Extinguishing media

*Suitable extinguishing media*

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

*Unsuitable extinguishing media*

For this substance/mixture no limitations of extinguishing agents are given.

### 5.2 Special hazards arising from the substance or mixture

Not combustible.

Ambient fire may liberate hazardous vapours.

Fire may cause evolution of:

nitrogen oxides, hydrogen bromide

### 5.3 Advice for firefighters

*Special protective equipment for firefighters*

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

*Further information*

Suppress (knock down) gases/vapours/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

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## SECTION 6. Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Avoid inhalation of dusts. Avoid inhalation of vapours/aerosols or dusts. Avoid substance contact. Ensure adequate ventilation.

Evacuate the danger area, observe emergency procedures, consult an expert.

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Advice for emergency responders:

Protective equipment see section 8.

## 6.2 Environmental precautions

Do not let product enter drains.

## 6.3 Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up with suitable equipment. Dispose of properly. Clean up affected area. Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

## 6.4 Reference to other sections

Indications about waste treatment see section 13.

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## SECTION 7. Handling and storage

### 7.1 Precautions for safe handling

*Advice on safe handling*

Observe label precautions.

*Hygiene measures*

Change contaminated clothing. Wash hands after working with substance.

### 7.2 Conditions for safe storage, including any incompatibilities

*Storage conditions*

Tightly closed. Dry.

Protected from light.

Recommended storage temperature see product label.

### 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

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## SECTION 8. Exposure controls/personal protection

### 8.1 Control parameters

### 8.2 Exposure controls

#### Engineering measures

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

See section 7.1.

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## Individual protection measures

Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of the hazardous substances handled. The chemical resistance of the protective equipment should be enquired at the respective supplier.

### *Eye/face protection*

Safety glasses

### *Hand protection*

full contact:

Glove material:	Nitrile rubber
Glove thickness:	0,11 mm
Break through time:	480 min

splash contact:

Glove material:	Nitrile rubber
Glove thickness:	0,11 mm
Break through time:	480 min

The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374, for example KCL 741 Dermatril® L (full contact), KCL 741 Dermatril® L (splash contact).

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: [www.kcl.de](http://www.kcl.de)).

### *Other protective equipment*

protective clothing

### *Respiratory protection*

required when dusts are generated.

Recommended Filter type: Filter P 2 (acc. to DIN 3181) for solid and liquid particles of harmful substances

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer.

These measures have to be properly documented.

## Environmental exposure controls

Do not let product enter drains.

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## SECTION 9. Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Form	deliquescent solid
Colour	white
Odour	odourless

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Odour Threshold	No information available.
pH	ca. 6,6 at 10 g/l
Melting point/range	> 370 °C Method: OECD Test Guideline 102
Boiling point/boiling range	Not applicable
Flash point	Not applicable
Evaporation rate	No information available.
Flammability (solid, gas)	The product is not flammable.
Lower explosion limit	Not applicable
Upper explosion limit	Not applicable
Vapour pressure	< 1 hPa at 25 °C Method: OECD Test Guideline 104
Relative vapour density	No information available.
Density	ca.2,46 g/cm <sup>3</sup> Method: OECD Test Guideline 109
Relative density	No information available.
Water solubility	970 g/l at 25 °C
Partition coefficient: n-octanol/water	Not applicable
Auto-ignition temperature	No information available.
Decomposition temperature	No information available.
Viscosity, dynamic	No information available.
Explosive properties	Not classified as explosive.
Oxidizing properties	none

## 9.2 Other data

Ignition temperature	Not applicable
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Bulk density	ca.1.100 kg/m3
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## SECTION 10. Stability and reactivity

### 10.1 Reactivity

See section 10.3

### 10.2 Chemical stability

sensitive to moisture

Sensitivity to light

sublimable

### 10.3 Possibility of hazardous reactions

Risk of explosion with:

halogen-halogen compounds, Potassium

Violent reactions possible with:

Strong acids, strong alkalis

### 10.4 Conditions to avoid

no information available

### 10.5 Incompatible materials

no information available

### 10.6 Hazardous decomposition products

in the event of fire: See section 5.

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## SECTION 11. Toxicological information

### 11.1 Information on toxicological effects

*Acute oral toxicity*

LD50 Rat: 2.566 mg/kg

OECD Test Guideline 401

*Acute inhalation toxicity*

LC50 Rat: > 0,1 mg/l; 4 h ; dust/mist

OECD Test Guideline 403

(highest concentration to be prepared)

Symptoms: Irritation symptoms in the respiratory tract.

*Acute dermal toxicity*

LD50 Rat: > 2.000 mg/kg

OECD Test Guideline 402

*Skin irritation*

Rabbit

Result: No skin irritation

OECD Test Guideline 404

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## *Eye irritation*

Rabbit

Result: Irritation to eyes, reversing after 7 to 21 days

OECD Test Guideline 405

Causes serious eye irritation.

## *Sensitisation*

Maximisation Test Guinea pig

Result: negative

Method: OECD Test Guideline 406

## *Germ cell mutagenicity*

### *Genotoxicity in vivo*

Micronucleus test

Mouse

male and female

Oral

Bone marrow

Result: negative

Method: OECD Test Guideline 474

### *Genotoxicity in vitro*

Ames test

Escherichia coli/Salmonella typhimurium

Result: negative

Method: OECD Test Guideline 471

In vitro mammalian cell gene mutation test

Mouse lymphoma test

Result: negative

Method: OECD Test Guideline 476

## *Carcinogenicity*

This information is not available.

## *Reproductive toxicity*

This information is not available.

## *Teratogenicity*

This information is not available.

## *Specific target organ toxicity - single exposure*

This information is not available.

## *Specific target organ toxicity - repeated exposure*

This information is not available.

## *Aspiration hazard*

This information is not available.

## **11.2 Further information**

Systemic effects:

After uptake of large quantities:

Stomach/intestinal disorders, Vomiting, CNS disorders, Convulsions, confusion,

Tiredness, Cardiac irregularities



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The following applies to ammonium salts in general: after swallowing: local irritation symptoms, nausea, vomiting, diarrhoea. Systemic effect: after the uptake of very large quantities: drop in blood pressure, collapse, CNS disorders, spasms, narcotic conditions, respiratory paralysis, haemolysis.

The following applies to inorganic bromides in general: the uptake of large quantities as a result of misuse or improper handling leads to tiredness, agitation, spasms.

Other dangerous properties can not be excluded.

Handle in accordance with good industrial hygiene and safety practice.

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## SECTION 12. Ecological information

### 12.1 Toxicity

*Toxicity to bacteria*

static test EC50 activated sludge: 1.739 mg/l; 3 h

OECD Test Guideline 209

### 12.2 Persistence and degradability

*Biodegradability*

The methods for determining the biological degradability are not applicable to inorganic substances.

### 12.3 Bioaccumulative potential

*Partition coefficient: n-octanol/water*

Not applicable

### 12.4 Mobility in soil

No information available.

### 12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.

### 12.6 Other adverse effects

*Surface tension*

72,9 mN/m

at 20 °C

Method: Surface tension

*Additional ecological information*

Biological effects:

Endangers drinking-water supplies if allowed to enter soil and/or waters in large quantities.

Discharge into the environment must be avoided.

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## SECTION 13. Disposal considerations

### *Waste treatment methods*

See [www.retrologistik.com](http://www.retrologistik.com) for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

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## SECTION 14. Transport information

### Land transport (ADR/RID)

**14.1 - 14.6** Not classified as dangerous in the meaning of transport regulations.

### Inland waterway transport (ADN)

Not relevant

### Air transport (IATA)

**14.1 - 14.6** Not classified as dangerous in the meaning of transport regulations.

### Sea transport (IMDG)

**14.1 - 14.6** Not classified as dangerous in the meaning of transport regulations.

### 14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not relevant

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## SECTION 15. Regulatory information

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

#### *EU regulations*

Major Accident Hazard SEVESO III  
Legislation Not applicable

Occupational restrictions Take note of Dir 94/33/EC on the protection of young people at work.

Regulation (EC) No 1005/2009 on substances that deplete the ozone layer not regulated

Regulation (EC) No 850/2004 of the European Parliament and of the Council of 29 April 2004 on persistent organic pollutants and amending Directive 79/117/EEC not regulated

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Substances of very high concern (SVHC)

This product does not contain substances of very high concern according to Regulation (EC) No 1907/2006 (REACH), Article 57 above the respective regulatory concentration limit of  $\geq 0.1\%$  (w/w).

*National legislation*

Storage class 10 - 13

## 15.2 Chemical safety assessment

For this product a chemical safety assessment was not carried out.

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## SECTION 16. Other information

### Full text of H-Statements referred to under sections 2 and 3.

H319 Causes serious eye irritation.

### Training advice

Provide adequate information, instruction and training for operators.

### Labelling

*Hazard pictograms*



*Signal word*

Warning

*Hazard statements*

H319 Causes serious eye irritation.

*Precautionary statements*

Response

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes.

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

### Key or legend to abbreviations and acronyms used in the safety data sheet

Used abbreviations and acronyms can be looked up at [www.wikipedia.org](http://www.wikipedia.org).

### Regional representation

This information is given on the authorised Safety Data Sheet for your country.

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