

Murexide

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IDENTIFICATION

Murexide

Ammonium purpurate

5,5'-Nitrilodibarbituric acid ammonium salt

Ammonium 5-(2,4,6-trioxoperhydropyrimidin-5-ylideneamino)barbiturate

ZVG No: 114040

CAS No: 3051-09-0

EC No: 221-266-6

CHARACTERISATION

SUBSTANCE GROUP CODE

128120 Ammonium salts

144228 Nitrogen oxygen heterocycles with keto group

STATE OF AGGREGATION

The substance is solid.

PROPERTIES

powder

dark red to dark brown

odourless

CHEMICAL CHARACTERISATION

Combustible substance, poorly flammable.

Very slightly soluble in water.

Sensitive to light.

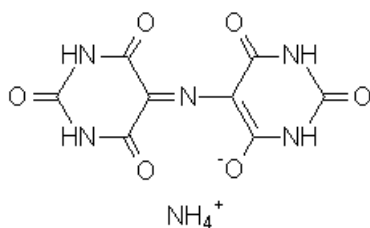
[Substance information in Wikipedia](#)

DUST EXPLOSIVENESS

Hints on the possibility of a dust explosion are not given for this substance. Nevertheless, finely dispersed combustible solids in a whirled up state always have to be considered as a subject of dust explosion.

Quelle: 01211

FORMULA



Molar mass: 284,19 g/mol

PHYSICAL AND CHEMICAL PROPERTIES

[Melting point](#) | [Solubility](#) | [pH-value](#) | [Hazardous reactions](#)

MELTING POINT

The substance decomposes when heated (see decomposition temperature).

Reference: [99999](#)

SOLUBILITY IN WATER

Concentration: ca. 1 g/l

Temperature: 20 °C

Reference: [01211](#)

pH-VALUE

pH-value: ca. 5

Temperature: 20 °C

Concentration: 1 g/l

Reference: [01211](#)

HAZARDOUS REACTIONS

Decomposition temperature: > 250 °C

SAFE HANDLING

[Handling](#) | [Storage](#) | [Fire and explosion protection](#) | [Personal protection](#) | [Disposal considerations](#) | [Accidental release measures](#) | [Fire fighting measures](#)

TECHNICAL MEASURES - HANDLING

Workplace

Select ventilation measures according to the other used substances.

If there is a chance that dusts may be released, then the work room must provide adequate ventilation.

Washing facility at the workplace required.

Equipment

Use closed apparatus if possible.

Suction off dust at the point of exit.

Consider emission limit values, a purification of waste gases if necessary.
Containers are to be marked clearly.

Advice on safer handling

Do not leave container open.
Sufficient ventilation must be guaranteed for refilling, transfer, or open use.
Fill only into clearly marked containers.
Avoid rising dust.

Cleaning and maintenance

Avoid dust formation. Dust formation that cannot be avoided must be collected regularly.
Use a tested industrial vacuum cleaner or suction device.
Do not raise dust while cleaning.
Use of a blower for cleaning is not permitted.

TECHNICAL MEASURES - STORAGE**Storage**

Do not use any food containers - risk of mistake.
Containers have to be marked clearly and permanently.
Keep container tightly closed.
Storage temperature: Without any limitation.
Store in a dry place.
Substance is sensitive to light, protect from exposure to light.

Conditions of collocated storage

Storage class 10 - 13 (Other liquids and solids)
Only substances of the same storage class should be stored together.
Collocated storage with the following substances is prohibited:
- Pharmaceuticals, foods, and animal feeds including additives.
- Infectious, radioactive und explosive substances.
- Strongly oxidizing substances of storage class 5.1A.

Under certain conditions the collocated storage with the following sub-stances is permitted (For more details see [TRGS 510](#)):

- Gases.
 - Flammable liquids of storage class 3.
 - Other explosive substances of storage class 4.1A.
 - Pyrophoric substances.
 - Substances liberating flammable gases in contact with water.
 - Oxidizing substances of storage class 5.1B.
 - Ammonium nitrate and preparations containing ammonium nitrate.
 - Organic peroxides and self reactive substances.
 - Combustible and non combustible acutely toxic substances of storage classes 6.1A and 6.1B.
- The substance should not be stored with substances with which hazardous chemical reactions are possible.

TECHNICAL MEASURES - FIRE AND EXPLOSION PROTECTION**Technical, constructive measures**

Substance is combustible.
Fire fighting equipment must be available.

PERSONAL PROTECTION**Body protection**

Wear an apron or a lab coat.

Respiratory protection

In an emergency (e.g.: unintentional release of the substance) respiratory protection must be worn. Consider the maximum period for wear.

Respiratory protection: Particle filter P1, colour code white.

Eye protection

Wear glasses with side protection.

Hand protection

Select hand protection according to the other used substances.

Occupational hygiene

Take heed of usual occupational hygiene measures when handling chemical substances, especially wash the skin with soap and water before breaks and at the end of work and apply fatty skin-care products after washing.

DISPOSAL CONSIDERATIONS

Non-hazardous waste according to Waste Catalogue Ordinance (AVV).

If there is no way of recycling it must be disposed of in compliance with the respective national and local regulations.

Collection of small amounts of substance:

Collect in container for solid organic residues.

ACCIDENTAL RELEASE MEASURES

Wear a dust mask.

Pick up without creating dust.

Afterwards ventilate area and wash spill site.

Endangerment of watert:

The effects on water sources have not yet been classified. Yet escape into ground, lakes, or streams should be avoided under all circumstances. Inform responsible authorities in case of escape.

FIRE FIGHTING MEASURES

Suitable extinguishing media

Water (spray - not splash)

Alcohol resistant foam

Dry extinguishing powder

Carbon dioxide

Instructions

If possible, take container out of dangerous zone.

Shut off sources of ignition.

Special protective equipment

In the case of a fire hazardous substances can be released.

Nitrous gases (nitric oxides)

Carbon monoxide and carbon dioxide

Wear self-contained breathing apparatus and special tightly sealed suit.

REGULATIONS

GHS Classification/Labelling | Air quality control | Transport Regulations | Technical rules | Regulations of accident insurers

EUROPEAN GHS CLASSIFICATION AND LABELLING

Not a dangerous substance according to GHS.
Manufacturer's specification by Sigma-Aldrich

Reference: [01221](#)

State: 2019

Checked: 2019

TECHNICAL INSTRUCTIONS ON AIR QUALITY CONTROL ([TA LUFT](#))

Chapter 5.2.5 Organic Substances, dust

To be treated as overall dust. The emissions of dust in the exhaust gas are not allowed to exceed the following values:

Mass flow: 0,20 kg/hr

or

Mass conc.: 20 mg/m³

The mass per unit volume of 0,15 g/m³ in exhaust gas is not allowed to be exceeded also on observance or lower deviation of a mass flow of 0,20 kg/h.

TRANSPORT REGULATIONS

Not subject to transport regulations.

Reference: [01221](#)

TECHNICAL RULES FOR HAZARDOUS SUBSTANCES

[TRGS 500](#)

Schutzmaßnahmen; Ausgabe September 2019

[TRGS 509](#)

Lagern von flüssigen und festen Gefahrstoffen in ortsfesten Behältern sowie Füll- und Entleerstellen für ortsbewegliche Behälter; Ausgabe Juni 2022

[TRGS 510](#)

Lagerung von Gefahrstoffen in ortsbeweglichen Behältern; Ausgabe Januar Dezember 2020

[TRGS 800](#)

Brandschutzmaßnahmen; Ausgabe Dezember 2010

REGULATIONS OF GERMAN ACCIDENT INSURERS

[DGUV Regel 112-190](#)

Benutzung von Atemschutzgeräten, Ausgabe November 2021
(in German only)

LINKS

[DGUV Information 213-098: List of substances - lesson in schools \(in German only\)](#)

REFERENCES

Quelle: 00001

IFA: Erfassungs- und Pflegehandbuch der GESTIS-Stoffdatenbank (nicht öffentlich)

Data acquisition and maintenance manual of the GESTIS substance database (non-public)

Quelle: 01211

GHS-Sicherheitsdatenblatt, Merck

GHS Material Safety Data Sheet, Merck

Quelle: 01221

GHS-Sicherheitsdatenblatt, Sigma-Aldrich

GHS Material Safety Data Sheet, Sigma-Aldrich

Quelle: 05300

[TRGS 510](#) "Lagerung von Gefahrstoffen in ortsbeweglichen Behältern" Ausgabe Dezember 2020

Quelle: 99999

Angabe des Bearbeiters

Indication of the editor

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