

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

#### 1.1. Product identifier

Product form	: Substance
Name	: 5-Amino-3H-1,2,4-dithiazole-3-thione (ADTT)
EC-No.	: 229-933-3
CAS-No.	: 6846-35-1
Product code	: NC-0305
Type of product	: Synthesis Reagent
Formula	: C <sub>2</sub> H <sub>2</sub> N <sub>2</sub> S <sub>3</sub>
Synonyms	: Xanthane Hydride; 5-Imino-(1,2,4)dithiazolidine-3-thione
Product group	: End product

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

##### 1.2.1. Relevant identified uses

Main use category	: Industrial use, Laboratory chemical
Industrial/Professional use spec	: Industrial For professional use only
Use of the substance/mixture	: Laboratory chemicals Substance manufacture
Function or use category	: Laboratory chemicals

##### 1.2.2. Uses advised against

No additional information available

#### 1.3. Details of the supplier of the safety data sheet

emp Biotech GmbH GmbH  
Robert-Rössle-Str. 10  
DE- 13125 Berlin  
Deutschland  
T +49 (0)30 94 89 22 01 (Monday-Friday, 9:00 am-5:00 pm) - F +49 (0)30 94 89 32 01  
[info@empbiotech.com](mailto:info@empbiotech.com) - [www.empbiotech.com](http://www.empbiotech.com)

#### 1.4. Emergency telephone number

Emergency number	: Giftnotruf Berlin +49 30 30686700 (Beratung in Deutsch), 24 Stunden, 7 Tage/Woche; International: INFOTRAC +1-352-323-3500 (Phone) or in the US 800-535-5053 (toll-free), 24 hours/day, 7 days/week
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### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### Classification according to Regulation (EC) No. 1272/2008 [CLP]

Skin Irrit. 2	H315
Eye Irrit. 2	H319
STOT SE 3	H335

Full text of hazard classes, H- and EUH-statements: see section 16

##### Adverse physicochemical, human health and environmental effects

No additional information available

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## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

### 2.2. Label elements

#### Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS07

Signal word (CLP) :

Warning

Hazard statements (CLP) :

H315 - Causes skin irritation.

H319 - Causes serious eye irritation.

H335 - May cause respiratory irritation.

Precautionary statements (CLP) :

P261 - Avoid breathing dust, fume, gas, mist, vapours, spray.

P280 - Wear protective clothing, protective gloves, eye protection, face protection.

P302+P352 - IF ON SKIN: Wash with plenty of water.

P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

### 2.3. Other hazards

Other hazards which do not result in classification :

This substance / mixture does not contain any components of 0.1% or higher that are either classified as persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB).

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Substance type :

Mono-constituent

Name	Product identifier	%
5-Amino-3H-1,2,4-dithiazole-3-thione (ADTT)	CAS-No.: 6846-35-1 EC-No.: 229-933-3	≤ 100

### 3.2. Mixtures

Not applicable

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

First-aid measures general :

Consult a doctor. Show this safety data sheet to the doctor in attendance.

First-aid measures after inhalation :

Remove person to fresh air and keep comfortable for breathing. In case of respiratory arrest, ventilate artificially. Ask for medical advice.

First-aid measures after skin contact :

After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water. Ask for medical advice.

First-aid measures after eye contact :

Rinse thoroughly with plenty of water for at least 15 minutes. Ask for medical advice.

First-aid measures after ingestion :

Do not give an unconscious person anything to drink. Rinse mouth out with water. Ask for medical advice.

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

Symptoms/effects :

The most important known symptoms and effects are described on the label (see 2.2) and / or in section 11.

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

No additional information available

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### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

Suitable extinguishing media : Water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

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

Hazardous decomposition products in case of fire : Products of decomposition can be formed in case of fire:  
Carbon oxides  
Nitrogen oxides (NOx)  
Sulfur oxides.

#### 5.3. Advice for firefighters

Protection during firefighting : Wear self-contained breathing apparatus for firefighting if necessary.

### SECTION 6: Accidental release measures

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

##### 6.1.1. For non-emergency personnel

Protective equipment : For personal protection see section 8.  
Emergency procedures : Avoid creating or spreading dust. Do not breathe dust, vapours, mist, gas. Ensure adequate ventilation, observe emergency procedures, consult an expert. Evacuate area.

##### 6.1.2. For emergency responders

Protective equipment : Wear recommended personal protective equipment.

#### 6.2. Environmental precautions

Do not let product enter drains.

#### 6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

#### 6.4. Reference to other sections

Information on exposure controls/personal protective equipment and on Instructions for disposal can be found in sections 8 and 13.

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

Precautions for safe handling : Avoid contact with skin and eyes. Avoid formation of dust and aerosols.  
. Provide appropriate exhaust ventilation at places of dust forming.  
Hygiene measures : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Take off immediately all contaminated clothing and wash it before reuse.

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

Storage conditions : Keep container tightly closed in a well-ventilated, dry place. Store in cool place.  
Storage temperature : 2 – 8 °C  
Storage area : Storage class (TRGS 510): See section 15.1.2.

#### 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

##### 8.1.1 National occupational exposure and biological limit values

###### 5-Amino-3H-1,2,4-dithiazole-3-thione (ADTT) (6846-35-1)

###### Germany - Occupational Exposure Limits (Generic OEL data)

Contains no substances with occupational exposure limits

##### 8.1.2. Recommended monitoring procedures

No additional information available

##### 8.1.3. Air contaminants formed

No additional information available

##### 8.1.4. DNEL and PNEC

No additional information available

##### 8.1.5. Control banding

No additional information available

#### 8.2. Exposure controls

##### 8.2.1. Appropriate engineering controls

###### Appropriate engineering controls:

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

##### 8.2.2. Personal protection equipment

###### Personal protective equipment symbol(s):



###### 8.2.2.1. Eye and face protection

###### Eye protection:

Wear eye protection. Wear closed safety glasses. EN 166

###### 8.2.2.2. Skin protection

###### Skin and body protection:

Wear protective clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

###### Hand protection:

Wear protective gloves. The selected protective gloves have to satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it.

. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

###### 8.2.2.3. Respiratory protection

###### Respiratory protection:

Wear respiratory protection. For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or EN (EU).

###### 8.2.2.4. Thermal hazards

No additional information available

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### 8.2.3. Environmental exposure controls

#### Environmental exposure controls:

Do not let product enter drains.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state	: Solid
Colour	: Not available
Appearance	: Light yellow to reddish yellow.
Odour	: Not available
Odour threshold	: Not available
Melting point	: Not available
Freezing point	: Not available
Boiling point	: Not available
Flammability	: Not available
Lower explosion limit	: Not applicable
Upper explosion limit	: Not applicable
Flash point	: Not applicable
Auto-ignition temperature	: Not applicable
Decomposition temperature	: Not available
pH	: Not available
pH solution	: Not available
Viscosity, kinematic	: Not applicable
Solubility	: Not available
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: Not available
Vapour pressure at 50 °C	: Not available
Density	: Not available
Relative density	: Not available
Relative vapour density at 20 °C	: Not applicable
Particle size	: Not available

### 9.2. Other information

#### 9.2.1. Information with regard to physical hazard classes

No additional information available

#### 9.2.2. Other safety characteristics

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No additional information available

### 10.2. Chemical stability

Stable under the specified storage conditions.

### 10.3. Possibility of hazardous reactions

No additional information available

### 10.4. Conditions to avoid

No additional information available

### 10.5. Incompatible materials

Strong oxidizing agents.

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### 10.6. Hazardous decomposition products

In the event of fire: see section 5.

## SECTION 11: Toxicological information

### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified
Skin corrosion/irritation	: Causes skin irritation.
Serious eye damage/irritation	: Causes serious eye irritation.
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: May cause respiratory irritation.
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified

### 11.2. Information on other hazards

#### 11.2.1. Endocrine disrupting properties

No additional information available

#### 11.2.2. Other information

Other information : To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

## SECTION 12: Ecological information

### 12.1. Toxicity

Hazardous to the aquatic environment, short-term (acute)	: Not classified
Hazardous to the aquatic environment, long-term (chronic)	: Not classified

### 12.2. Persistence and degradability

No additional information available

### 12.3. Bioaccumulative potential

No additional information available

### 12.4. Mobility in soil

No additional information available

### 12.5. Results of PBT and vPvB assessment

#### 5-Amino-3H-1,2,4-dithiazole-3-thione (ADTT) (6846-35-1)

Results of PBT assessment	This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.
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### 12.6. Endocrine disrupting properties

No additional information available

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### 12.7. Other adverse effects

No additional information available

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

- Waste treatment methods : Offer surplus and non-recyclable solutions to a licensed disposal company. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.
- Product/Packaging disposal recommendations : Contaminated packaging to be disposed as unused product.

## SECTION 14: Transport information

In accordance with ADR / IMDG / IATA

ADR	IMDG	IATA
<b>14.1. UN number or ID number</b>		
Not applicable	Not applicable	Not applicable
<b>14.2. UN proper shipping name</b>		
Not applicable	Not applicable	Not applicable
<b>14.3. Transport hazard class(es)</b>		
Not applicable	Not applicable	Not applicable
<b>14.4. Packing group</b>		
Not applicable	Not applicable	Not applicable
<b>14.5. Environmental hazards</b>		
Not applicable	Not applicable	Not applicable
No supplementary information available		

### 14.6. Special precautions for user

#### Overland transport

Not applicable

#### Transport by sea

Not applicable

#### Air transport

Not applicable

### 14.7. Maritime transport in bulk according to IMO instruments

Not applicable

## SECTION 15: Regulatory information

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

#### 15.1.1. EU-Regulations

##### REACH Annex XVII (Restriction List)

No REACH Annex XVII restrictions

##### REACH Annex XIV (Authorisation List)

5-Amino-3H-1,2,4-dithiazole-3-thione (ADTT) is not on the REACH Annex XIV List

# 5-Amino-3H-1,2,4-dithiazole-3-thione (ADTT)

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### REACH Candidate List (SVHC)

5-Amino-3H-1,2,4-dithiazole-3-thione (ADTT) is not on the REACH Candidate List

### PIC Regulation (Prior Informed Consent)

5-Amino-3H-1,2,4-dithiazole-3-thione (ADTT) is not subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals.

### POP Regulation (Persistent Organic Pollutants)

5-Amino-3H-1,2,4-dithiazole-3-thione (ADTT) is not subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

### Ozone Regulation (1005/2009)

5-Amino-3H-1,2,4-dithiazole-3-thione (ADTT) is not subject to REGULATION (EU) No 1005/2009 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 September 2009 on substances that deplete the ozone layer.

### Explosives Precursors Regulation (2019/1148)

Contains no substance subject to Regulation (EU) 2019/1148 of the European Parliament and of the Council of 20 June 2019 on the marketing and use of explosives precursors.

### Drug Precursors Regulation (273/2004)

Contains no substance subject to Regulation (EC) 273/2004 of the European Parliament and of the Council of 11 February 2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances.

### 15.1.2. National regulations

#### Germany

- Employment restrictions : Observe restrictions according Act on the Protection of Working Mothers (MuSchG).  
Observe restrictions according Act on the Protection of Young People in Employment (JArbSchG).
- Water hazard class (WGK) : WGK 3, Highly hazardous to water.
- Storage class (LGK, TRGS 510) : LGK 13 - Non-combustible solids.
- Hazardous Incident Ordinance (12. BImSchV) : Is not subject of the Hazardous Incident Ordinance (12. BImSchV)

### 15.2. Chemical safety assessment

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

## SECTION 16: Other information

Full text of H- and EUH-statements:	
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
Skin Irrit. 2	Skin corrosion/irritation, Category 2
STOT SE 3	Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation

Safety Data Sheet (SDS), EU

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.