



## SAFETY DATA SHEET

### 3-AMINOPROPYLDIETHYLAMINE

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

##### 1.1. Product identifier

|                           |                           |
|---------------------------|---------------------------|
| Product name              | 3-AMINOPROPYLDIETHYLAMINE |
| Product number            | 921                       |
| Synonyms; trade names     | DIETHYLAMINOPROPYLAMINE   |
| REACH registration number | 01-2119965402-39-XXXX     |
| CAS number                | 104-78-9                  |
| EU index number           | 612-062-00-1              |
| EC number                 | 203-236-4                 |

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

|                 |                                                                             |
|-----------------|-----------------------------------------------------------------------------|
| Identified uses | Chemicals used in the synthesis and / or formulation of industrial products |
|-----------------|-----------------------------------------------------------------------------|

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

|          |                                                                                                                                      |
|----------|--------------------------------------------------------------------------------------------------------------------------------------|
| Supplier | Univar<br>Aquarius House<br>6 Mid Point Business Park<br>Bradford<br>BD3 7AY<br>+44 1274 267300<br>sds@univar.com<br>+44 1274 267306 |
|----------|--------------------------------------------------------------------------------------------------------------------------------------|

##### 1.4. Emergency telephone number

|                     |                                |
|---------------------|--------------------------------|
| Emergency telephone | SGS - +32 (0)3 575 55 55 (24h) |
| Sds No.             | 921                            |

#### SECTION 2: Hazards identification

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

###### Classification (EC/1272/2008)

|                       |                                                                                                    |
|-----------------------|----------------------------------------------------------------------------------------------------|
| Physical hazards      | Flam. Liq. 3 - H226                                                                                |
| Health hazards        | Acute Tox. 4 - H302 Acute Tox. 3 - H311 Skin Corr. 1B - H314 Eye Dam. 1 - H318 Skin Sens. 1 - H317 |
| Environmental hazards | Not Classified                                                                                     |

Classification (67/548/EEC or 1999/45/EC) T; R24. Xn; R22. C; R34. R10, R43

##### 2.2. Label elements

|           |           |
|-----------|-----------|
| EC number | 203-236-4 |
|-----------|-----------|

## 3-AMINOPROPYLDIETHYLAMINE

### Pictogram



### Signal word

Danger

### Hazard statements

H226 Flammable liquid and vapour.  
 H302 Harmful if swallowed.  
 H311 Toxic in contact with skin.  
 H314 Causes severe skin burns and eye damage.  
 H317 May cause an allergic skin reaction.

### Precautionary statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
 P243 Take precautionary measures against static discharge.  
 P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.  
 P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.  
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 P310 Immediately call a POISON CENTER/ doctor.  
 P403+P235 Store in a well-ventilated place. Keep cool.

### 2.3. Other hazards

No information available.

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

|                           |                                                                 |
|---------------------------|-----------------------------------------------------------------|
| Product name              | 3-AMINOPROPYLDIETHYLAMINE                                       |
| REACH registration number | 01-2119965402-39-XXXX                                           |
| EU index number           | 612-062-00-1                                                    |
| CAS number                | 104-78-9                                                        |
| EC number                 | 203-236-4                                                       |
| Composition comments      | The data shown are in accordance with the latest EC Directives. |

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

|              |                                                                                                                                                                                                                                                                                                   |
|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Inhalation   | Move affected person to fresh air at once. Rinse nose and mouth with water. Inhale Corticosteroid dose aerosol Get medical attention.                                                                                                                                                             |
| Ingestion    | Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Rinse mouth thoroughly with water. Do not induce vomiting. If vomiting occurs, the head should be kept low so that stomach vomit doesn't enter the lungs. Get medical attention immediately. |
| Skin contact | Promptly wash contaminated skin with water. Promptly remove clothing if soaked through and wash the skin with water. Get medical attention immediately.                                                                                                                                           |
| Eye contact  | Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Get medical attention immediately. Continue to rinse.                                                                                                   |

### 3-AMINOPROPYLDIETHYLAMINE

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

|                     |                                                                                            |
|---------------------|--------------------------------------------------------------------------------------------|
| <b>Ingestion</b>    | May cause burns in mucous membranes, throat, oesophagus and stomach.                       |
| <b>Skin contact</b> | Toxic in contact with skin. Causes severe burns. May cause an allergic skin reaction.      |
| <b>Eye contact</b>  | Causes serious eye damage. May cause permanent damage if eye is not immediately irrigated. |

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

|                             |                                                                                                                                                                                                                                                                        |
|-----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Notes for the doctor</b> | Treat symptomatically. Inhale Corticosteroid dose aerosol There is no known specific antidote for symptomatic treatment (decontamination, vital functions reached) or in case of prophylaxis of pulmonary edema. Medical supervision for at least 24 hours is required |
|-----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

#### SECTION 5: Firefighting measures

##### 5.1. Extinguishing media

|                                       |                                                                        |
|---------------------------------------|------------------------------------------------------------------------|
| <b>Suitable extinguishing media</b>   | Use: Powder. Foam. Carbon dioxide (CO <sub>2</sub> ).                  |
| <b>Unsuitable extinguishing media</b> | Do not use water jet as an extinguisher, as this will spread the fire. |

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

|                                      |                                                                                                                      |
|--------------------------------------|----------------------------------------------------------------------------------------------------------------------|
| <b>Specific hazards</b>              | The product is flammable, and heating may generate vapours which may form explosive vapour/air mixtures.             |
| <b>Hazardous combustion products</b> | Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours. Oxides of nitrogen. |

##### 5.3. Advice for firefighters

|                                                      |                                                                                                       |
|------------------------------------------------------|-------------------------------------------------------------------------------------------------------|
| <b>Protective actions during firefighting</b>        | Contain and collect extinguishing water.                                                              |
| <b>Special protective equipment for firefighters</b> | Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. |

#### SECTION 6: Accidental release measures

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

|                             |                                                                                                                                                                                                                                                                              |
|-----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Personal precautions</b> | Follow precautions for safe handling described in this safety data sheet. Avoid inhalation of vapours and contact with skin and eyes. Avoid heat, flames and other sources of ignition. Take precautionary measures against static discharges. Provide adequate ventilation. |
|-----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

##### 6.2. Environmental precautions

|                                  |                                                                                                                                                                                                              |
|----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Environmental precautions</b> | Avoid discharge into water courses or onto the ground. Spillages or uncontrolled discharges into watercourses must be reported immediately to the Environmental Agency or other appropriate regulatory body. |
|----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

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

|                                |                                                                                                                                                                            |
|--------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Methods for cleaning up</b> | Absorb spillage with inert, damp, non-combustible material. Collect and place in suitable waste disposal containers and seal securely. For waste disposal, see Section 13. |
|--------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

##### 6.4. Reference to other sections

|                                    |                                                                             |
|------------------------------------|-----------------------------------------------------------------------------|
| <b>Reference to other sections</b> | For personal protection, see Section 8. For waste disposal, see Section 13. |
|------------------------------------|-----------------------------------------------------------------------------|

#### SECTION 7: Handling and storage

##### 7.1. Precautions for safe handling

## 3-AMINOPROPYLDIETHYLAMINE

### Usage precautions

Avoid inhalation of vapours and contact with skin and eyes. Avoid heat, flames and other sources of ignition. Take precautionary measures against static discharges. Do not eat, drink or smoke when using the product. Provide adequate ventilation.

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

#### Storage precautions

Store in tightly-closed, original container in a dry, cool and well-ventilated place. Avoid contact with acids.

### 7.3. Specific end use(s)

#### Specific end use(s)

The identified uses for this product are detailed in Section 1.2.

## SECTION 8: Exposure Controls/personal protection

### 8.1. Control parameters

#### Ingredient comments

No exposure limits known for ingredient(s).

#### DNEL

Workers - Dermal; Long term systemic effects: 0.16 mg/kg  
 Workers - Inhalation; Long term systemic effects: 1.17 mg/m<sup>3</sup>  
 Consumer - Inhalation; Long term local effects: 0.29 mg/m<sup>3</sup>  
 Workers - Inhalation; Short term local effects: 2.34 mg/m<sup>3</sup>  
 Consumer - Oral; Long term systemic effects: 0.08 mg/kg

#### PNEC

- Fresh water; 0.03 mg/l  
 - Marine water; 0.003 mg/l  
 - Intermittent release; 0.3 mg/l  
 - STP; 10 mg/l  
 - Sediment (Freshwater); 0.1115 mg/kg  
 - Sediment (Marinewater); 0.01145 mg/kg  
 - Soil; 0.0053 mg/kg

### 8.2. Exposure controls

#### Protective equipment



#### Appropriate engineering controls

Provide adequate general and local exhaust ventilation. Provide eyewash station and safety shower.

#### Eye/face protection

Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. Unless the assessment indicates a higher degree of protection is required, the following protection should be worn: Wear chemical splash goggles. EN 166

#### Hand protection

Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. The most suitable glove should be chosen in consultation with the glove supplier/manufacture, who can provide information about the breakthrough time of the glove material. Short term It is recommended that gloves are made of the following material: Nitrile rubber. (0.4mm coating thickness) Viton rubber (fluoro rubber). (0.7mm coating thickness) The selected gloves should have a breakthrough time of at least 0.5 hours. EN 374

#### Other skin and body protection

Wear appropriate clothing to prevent any possibility of skin contact.

#### Hygiene measures

Wash hands at the end of each work shift and before eating, smoking and using the toilet. When using do not eat, drink or smoke. Take off immediately all contaminated clothing and wash it before reuse.

### 3-AMINOPROPYLDIETHYLAMINE

**Respiratory protection** If ventilation is inadequate, suitable respiratory protection must be worn. EN 136/140/145/143/149

#### SECTION 9: Physical and Chemical Properties

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

|                                              |                                                             |
|----------------------------------------------|-------------------------------------------------------------|
| Appearance                                   | Liquid.                                                     |
| Colour                                       | Colourless to pale yellow.                                  |
| Odour                                        | Amine.                                                      |
| pH                                           | pH (diluted solution): 11.70 @ 10g/l                        |
| Melting point                                | <-60°C                                                      |
| Initial boiling point and range              | 170°C @ 760 mm Hg                                           |
| Flash point                                  | 51°C                                                        |
| Upper/lower flammability or explosive limits | Data lacking.                                               |
| Vapour pressure                              | 1996 hPa @ 24.2°C                                           |
| Relative density                             | 0.8237 @ 20°C                                               |
| Solubility(ies)                              | Miscible with water.                                        |
| Partition coefficient                        | log Kow: 0.36                                               |
| Auto-ignition temperature                    | 215°C                                                       |
| Viscosity                                    | 1.7 m <sup>2</sup> /s @ 23°C                                |
| Explosive properties                         | Not considered to be explosive.                             |
| Oxidising properties                         | Does not meet the criteria for classification as oxidising. |

##### 9.2. Other information

Other information Not determined.

#### SECTION 10: Stability and reactivity

##### 10.1. Reactivity

Reactivity Stable at normal ambient temperatures and when used as recommended.

##### 10.2. Chemical stability

Stability Stable under the prescribed storage conditions.

##### 10.3. Possibility of hazardous reactions

Possibility of hazardous reactions The product is flammable. Reactions with the following materials may generate heat: Acids.

##### 10.4. Conditions to avoid

Conditions to avoid Avoid heat, flames and other sources of ignition. Static electricity and formation of sparks must be prevented.

##### 10.5. Incompatible materials

Materials to avoid Acids. Acid Chlorides Anhydrides Isocyanates. Nitrosating agents

##### 10.6. Hazardous decomposition products

### 3-AMINOPROPYLDIETHYLAMINE

**Hazardous decomposition products** Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours. Oxides of nitrogen.

#### SECTION 11: Toxicological information

##### 11.1. Information on toxicological effects

###### Acute toxicity - oral

**Notes (oral LD<sub>50</sub>)** LD<sub>50</sub> ~830 mg/kg, Oral, Rat

**ATE oral (mg/kg)** 500.0

###### Acute toxicity - dermal

**Acute toxicity dermal (LD<sub>50</sub> mg/kg)** 525.0

**Species** Rabbit

**ATE dermal (mg/kg)** 525.0

###### Skin corrosion/irritation

**Animal data** Corrosive.

###### Serious eye damage/irritation

**Serious eye damage/irritation** Causes serious eye damage. Rabbit

###### Respiratory sensitisation

**Respiratory sensitisation** Data lacking.

###### Skin sensitisation

**Skin sensitisation** Sensitising.

###### Germ cell mutagenicity

**Genotoxicity - in vitro** Data lacking.

###### Carcinogenicity

**Carcinogenicity** Data lacking.

###### Reproductive toxicity

**Reproductive toxicity - fertility** Data lacking.

###### Specific target organ toxicity - single exposure

**STOT - single exposure** Data lacking.

###### Specific target organ toxicity - repeated exposure

**STOT - repeated exposure** Data lacking.

###### Aspiration hazard

**Aspiration hazard** Data lacking.

**Inhalation** Gas or vapour in high concentrations may irritate the respiratory system.

**Ingestion** Harmful if swallowed. May cause burns in mucous membranes, throat, oesophagus and stomach.

**Skin contact** Toxic in contact with skin. Causes severe burns. May cause an allergic skin reaction.

**Eye contact** Causes serious eye damage.

#### SECTION 12: Ecological Information

### 3-AMINOPROPYLDIETHYLAMINE

**Ecotoxicity** The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment. The product may affect the acidity (pH) of water which may have hazardous effects on aquatic organisms.

#### 12.1. Toxicity

**Acute toxicity - fish** LC<sub>50</sub>, 96 hours: 146.6 mg/l, *Leuciscus idus* (Golden orfe)

**Acute toxicity - aquatic invertebrates** EC<sub>50</sub>, 48 hours: 51.8 mg/l, *Daphnia magna*

**Acute toxicity - aquatic plants** EC<sub>50</sub>, 72 hours: 100-150 mg/l, *Scenedesmus subspicatus*

**Acute toxicity - microorganisms** EC<sub>20</sub>, 30 minutes: >1000 mg/l, Activated sludge  
EC<sub>50</sub>, 180 minutes: ~552 mg/l, Activated sludge  
OECD 209

#### 12.2. Persistence and degradability

**Persistence and degradability** The product is readily biodegradable.

**Biodegradation** - 90-100%: 28 days  
OECD 301A

#### 12.3. Bioaccumulative potential

**Bioaccumulative potential** The product does not contain any substances expected to be bioaccumulating.

**Partition coefficient** log K<sub>ow</sub>: 0.36

#### 12.4. Mobility in soil

**Mobility** No information available.

#### 12.5. Results of PBT and vPvB assessment

**Results of PBT and vPvB assessment** This substance is not classified as PBT or vPvB according to current EU criteria.

#### 12.6. Other adverse effects

**Other adverse effects** No information available.

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

**General information** Waste is classified as hazardous waste. Do not puncture or incinerate, even when empty.

**Disposal methods** Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

### SECTION 14: Transport information

#### 14.1. UN number

UN No. (ADR/RID) 2684

UN No. (IMDG) 2684

UN No. (ICAO) 2684

UN No. (ADN) 2684

#### 14.2. UN proper shipping name

### 3-AMINOPROPYLDIETHYLAMINE

Proper shipping name (ADR/RID) 3-DIETHYLAMINOPROPYLAMINE

Proper shipping name (IMDG) 3-DIETHYLAMINOPROPYLAMINE

Proper shipping name (ICAO) 3-DIETHYLAMINOPROPYLAMINE

Proper shipping name (ADN) 3-DIETHYLAMINOPROPYLAMINE

#### 14.3. Transport hazard class(es)

|                             |    |
|-----------------------------|----|
| ADR/RID class               | 3  |
| ADR/RID subsidiary risk     | 8  |
| ADR/RID classification code | FC |
| ADR/RID label               | 3  |
| IMDG class                  | 3  |
| IMDG subsidiary risk        | 8  |
| ICAO class/division         | 3  |
| ICAO subsidiary risk        | 8  |
| ADN class                   | 3  |
| ADN subsidiary risk         | 8  |

#### Transport labels



#### 14.4. Packing group

|                       |     |
|-----------------------|-----|
| ADR/RID packing group | III |
| IMDG packing group    | III |
| ADN packing group     | III |
| ICAO packing group    | III |

#### 14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant  
No.

#### 14.6. Special precautions for user

|                                        |          |
|----------------------------------------|----------|
| EmS                                    | F-E, S-C |
| ADR transport category                 | 3        |
| Emergency Action Code                  | •2W      |
| Hazard Identification Number (ADR/RID) | 38       |
| Tunnel restriction code                | (D/E)    |

#### 14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

### 3-AMINOPROPYLDIETHYLAMINE

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

#### SECTION 15: Regulatory information

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

###### EU legislation

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended).

Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended).

COMMISSION REGULATION (EU) 2015/830 of 28 May 2015.

This product may impact SEVESO storage regulations.

##### 15.2. Chemical safety assessment

A chemical safety assessment has been carried out.

#### SECTION 16: Other information

### 3-AMINOPROPYLDIETHYLAMINE

#### Abbreviations and acronyms used in the safety data sheet

ATE: Acute Toxicity Estimate.  
 ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.  
 ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways.  
 CAS: Chemical Abstracts Service.  
 DNEL: Derived No Effect Level.  
 IATA: International Air Transport Association.  
 IMDG: International Maritime Dangerous Goods.  
 Kow: Octanol-water partition coefficient.  
 LC<sub>50</sub>: Lethal Concentration to 50 % of a test population.  
 LD<sub>50</sub>: Lethal Dose to 50% of a test population (Median Lethal Dose).  
 PBT: Persistent, Bioaccumulative and Toxic substance.  
 PNEC: Predicted No Effect Concentration.  
 REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006.  
 RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail.  
 vPvB: Very Persistent and Very Bioaccumulative.  
 IARC: International Agency for Research on Cancer.  
 MARPOL 73/78: International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978.  
 cATpE: Converted Acute Toxicity Point Estimate.  
 BCF: Bioconcentration Factor.  
 BOD: Biochemical Oxygen Demand.  
 EC<sub>50</sub>: 50% of maximal Effective Concentration.  
 LOAEC: Lowest Observed Adverse Effect Concentration.  
 LOAEL: Lowest Observed Adverse Effect Level.  
 NOAEC: No Observed Adverse Effect Concentration.  
 NOAEL: No Observed Adverse Effect Level.  
 NOEC: No Observed Effect Concentration.  
 LOEC: Lowest Observed Effect Concentration.  
 DMEL: Derived Minimal Effect Level.  
 EL50: Exposure Limit 50  
 hPa: Hectopascal  
 LL50: Lethal Loading fifty  
 OECD: Organisation for Economic Co-operation and Development  
 POW: Octanol-water partition coefficient  
 SCBA: self-contained breathing apparatus  
 STP: Sewage Treatment Plant  
 VOC: Volatile Organic Compounds

#### Classification abbreviations and acronyms

Acute Tox. = Acute toxicity  
 Aquatic Acute = Hazardous to the aquatic environment (acute)  
 Aquatic Chronic = Hazardous to the aquatic environment (chronic)

#### Revision comments

NOTE: Lines within the margin indicate significant changes from the previous revision.

#### Revision date

02/12/2016

#### Revision

03

#### Supersedes date

30/07/2015

#### SDS number

921

#### Version number

2.000

### 3-AMINOPROPYLDIETHYLAMINE

|                                  |                                                                                                                                                                                                                                      |
|----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>SDS status</b>                | Approved.                                                                                                                                                                                                                            |
| <b>Signature</b>                 | K Winter                                                                                                                                                                                                                             |
| <b>Risk phrases in full</b>      | R10 Flammable.<br>R22 Harmful if swallowed.<br>R24 Toxic in contact with skin.<br>R34 Causes burns.<br>R43 May cause sensitisation by skin contact.                                                                                  |
| <b>Hazard statements in full</b> | H226 Flammable liquid and vapour.<br>H302 Harmful if swallowed.<br>H311 Toxic in contact with skin.<br>H314 Causes severe skin burns and eye damage.<br>H317 May cause an allergic skin reaction.<br>H318 Causes serious eye damage. |