according to Regulation (EC) No. 1907/2006 (REACH), amended by 2020/878/EU



#### Ammonium sulphate ROTI®METIC 99,999 % (5N)

article number: **5606** Version: **4.0 en** Replaces version of: 2022-05-06 Version: (3)

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

(5N) 5606

231-984-1

7783-20-2

1.1 Product identifier

Identification of the substance

Article number

Registration number (REACH)

EC number

CAS number

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

Relevant identified uses:

Laboratory chemical Laboratory and analytical use

according to REACH (< 1 t/a).

Uses advised against:

Do not use for private purposes (household). Food, drink and animal feedingstuffs.

Ammonium sulphate ROTI®METIC 99,999 %

It is not required to list the identified uses be-

cause the substance is not subject to registration

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

Carl Roth GmbH + Co. KG Schoemperlenstr. 3-5 D-76185 Karlsruhe Germany

**Telephone:**+49 (0) 721 - 56 06 0 **Telefax:** +49 (0) 721 - 56 06 149 **e-mail:** sicherheit@carlroth.de **Website:** www.carlroth.de

Competent person responsible for the safety data Department Health, Safety and Environment sheet:

#### e-mail (competent person):

#### sicherheit@carlroth.de

#### 1.4 Emergency telephone number

| Name  | Street        | Postal<br>code/city | Telephone       | Website                     |
|---|---------------|---------------------|-----------------|-----------------------------|
| National Poisons Information<br>Centre<br>Beaumont Hospital | Beaumont Road | Dublin 9            | +353 1 809 2166 | https://<br>www.poisons.ie/ |

# **SECTION 2: Hazards identification**

#### 2.1 Classification of the substance or mixture

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

This substance does not meet the criteria for classification in accordance with Regulation No 1272/ 2008/EC.

date of compilation: 2016-09-27 Revision: 2024-03-03

according to Regulation (EC) No. 1907/2006 (REACH), amended by 2020/878/EU



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#### 2.2 Label elements

# Labelling according to Regulation (EC) No 1272/2008 (CLP) not required

#### 2.3 Other hazards

#### Results of PBT and vPvB assessment

According to the results of its assessment, this substance is not a PBT or a vPvB.

#### Endocrine disrupting properties

Does not contain an endocrine disruptor (ED) at a concentration of  $\ge 0,1\%$ .

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

#### 3.1 Substances

| Name of substance | Ammonium sulphate                               |
|-------------------|---|
| Molecular formula | (NH <sub>4</sub> ) <sub>2</sub> SO <sub>4</sub> |
| Molar mass        | 132,1 <sup>g</sup> / <sub>mol</sub>             |
| CAS No            | 7783-20-2                                       |
| EC No             | 231-984-1                                       |

## **SECTION 4: First aid measures**

#### 4.1 Description of first aid measures



General notes

Take off contaminated clothing.

#### Following inhalation

Provide fresh air.

#### Following skin contact

Rinse skin with water/shower.

#### Following eye contact

Rinse cautiously with water for several minutes.

#### **Following ingestion**

Rinse mouth. Call a doctor if you feel unwell.

# **4.2 Most important symptoms and effects, both acute and delayed** Acidosis, Gastrointestinal complaints, Irritant effects

# **4.3 Indication of any immediate medical attention and special treatment needed** none

according to Regulation (EC) No. 1907/2006 (REACH), amended by 2020/878/EU

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# SECTION 5: Firefighting measures

#### 5.1 Extinguishing media



#### Suitable extinguishing media

co-ordinate firefighting measures to the fire surroundings! water, foam, alcohol resistant foam, dry extinguishing powder, ABC-powder

#### Unsuitable extinguishing media

water jet

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

Non-combustible.

#### Hazardous combustion products

In case of fire may be liberated: Nitrogen oxides (NOx), Sulphur oxides (SOx)

#### 5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Fight fire with normal precautions from a reasonable distance. Wear self-contained breathing apparatus.

# **SECTION 6: Accidental release measures**

6.1 Personal precautions, protective equipment and emergency procedures



#### For non-emergency personnel

Control of dust.

#### 6.2 Environmental precautions

Keep away from drains, surface and ground water. Retain contaminated washing water and dispose of it.

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

#### Advice on how to contain a spill

Covering of drains. Take up mechanically.

#### Advice on how to clean up a spill

Take up mechanically.

#### Other information relating to spills and releases

Place in appropriate containers for disposal.

#### 6.4 Reference to other sections

Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

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# **SECTION 7: Handling and storage**

#### 7.1 Precautions for safe handling

No special measures are necessary.

#### Advice on general occupational hygiene

Keep away from food, drink and animal feedingstuffs.

# 7.2 Conditions for safe storage, including any incompatibilities

Store in a dry place.

#### Incompatible substances or mixtures

Observe hints for combined storage.

#### Consideration of other advice:

#### **Ventilation requirements**

Use local and general ventilation.

#### Specific designs for storage rooms or vessels

Recommended storage temperature: 15 – 25 °C

#### 7.3 Specific end use(s)

No information available.

## **SECTION 8: Exposure controls/personal protection**

#### 8.1 Control parameters

#### National limit values

#### **Occupational exposure limit values (Workplace Exposure Limits)**

| Coun<br>try | Name of agent       | CAS No | Identifi-<br>er | TWA<br>[mg/<br>m³] | STEL<br>[mg/<br>m³] | Ceil-<br>ing-C<br>[mg/<br>m³] | Nota-<br>tion | Source                  |
|-------------|---------------------|--------|-----------------|--------------------|---------------------|-------------------------------|---------------|-------------------------|
| IE          | dusts, non-specific |        | OELV            | 10                 |                     |                               | i             | S.I. No. 619<br>of 2001 |
| IE          | dusts, non-specific |        | OELV            | 4                  |                     |                               | r             | S.I. No. 619<br>of 2001 |

Notation

 Ceiling-C Ceiling value is a limit value above which exposure should not occur
 Inhalable fraction
 r Respirable fraction
 STEL Short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15minute period (unless otherwise specified)
 TWA Time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average (unless otherwise specified)

#### Human health values

| Relevant DNELs and other threshold levels |                         |                                    |                   |                            |  |  |
|---|-------------------------|------------------------------------|-------------------|----------------------------|--|--|
| Endpoint                                  | Threshold<br>level      | Protection goal, route of exposure | Used in           | Exposure time              |  |  |
| DNEL                                      | 11,17 mg/m <sup>3</sup> | human, inhalatory                  | worker (industry) | chronic - systemic effects |  |  |
| DNEL                                      | 42,67 mg/kg<br>bw/day   | human, dermal                      | worker (industry) | chronic - systemic effects |  |  |

according to Regulation (EC) No. 1907/2006 (REACH), amended by 2020/878/EU



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| Relevant PNECs and other threshold levels |                                     |                       |                                 |                             |  |  |  |
|---|-------------------------------------|-----------------------|---------------------------------|-----------------------------|--|--|--|
| End-<br>point                             | Threshold<br>level                  | Organism              | Environmental com-<br>partment  | Exposure time               |  |  |  |
| PNEC                                      | 0,53 <sup>mg</sup> / <sub>l</sub>   | aquatic organisms     | water                           | intermittent release        |  |  |  |
| PNEC                                      | 0,312 <sup>mg</sup> / <sub>l</sub>  | aquatic organisms     | freshwater                      | short-term (single instance |  |  |  |
| PNEC                                      | 0,031 <sup>mg</sup> / <sub>l</sub>  | aquatic organisms     | marine water                    | short-term (single instance |  |  |  |
| PNEC                                      | 16,18 <sup>mg</sup> / <sub>l</sub>  | aquatic organisms     | sewage treatment plant<br>(STP) | short-term (single instance |  |  |  |
| PNEC                                      | 0,063 <sup>mg</sup> / <sub>kg</sub> | aquatic organisms     | freshwater sediment             | short-term (single instance |  |  |  |
| PNEC                                      | 62,6 <sup>mg</sup> / <sub>kg</sub>  | terrestrial organisms | soil                            | short-term (single instance |  |  |  |

#### 8.2 Exposure controls

#### Individual protection measures (personal protective equipment)

#### Eye/face protection



Use safety goggle with side protection.

#### **Skin protection**



#### hand protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374.

#### • type of material

NBR (Nitrile rubber)

#### material thickness

>0,11 mm

#### • breakthrough times of the glove material

>480 minutes (permeation: level 6)

#### • other protection measures

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended.

#### **Respiratory protection**



Respiratory protection necessary at: Dust formation. Particulate filter device (EN 143). P1 (filters at least 80 % of airborne particles, colour code: White).

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#### Environmental exposure controls

Keep away from drains, surface and ground water.

# **SECTION 9: Physical and chemical properties**

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

| Physical state   | solid  |
|--|--|
| Form   | crystals   |
| Colour   | colourless - whitish   |
| Odour  | odourless  |
| Melting point/freezing point                             | 230 °C   |
| Boiling point or initial boiling point and boiling range | not determined   |
| Flammability   | non-combustible  |
| Lower and upper explosion limit                          | not determined   |
| Flash point  | not applicable   |
| Auto-ignition temperature                                | not determined   |
| Decomposition temperature                                | >280 °C (ECHA)   |
| pH (value)   | 5 – 6 (in aqueous solution: 130 <sup>g</sup> / <sub>l</sub> , 25 °C) |
| Kinematic viscosity                                      | not relevant   |
| Solubility(ies)  |  |
| Water solubility   | ~ 767 <sup>g</sup> / <sub>l</sub> at 25 °C (ECHA)                    |
| Partition coefficient                                    |  |
| Partition coefficient n-octanol/water (log value):       | not relevant (inorganic)   |
| Vapour pressure  | 0 hPa at 25 °C   |
| Density and/or relative density                          |  |
| Density  | 1,77 <sup>g</sup> / <sub>cm³</sub> at 20 °C                          |
| Relative vapour density                                  | Information on this property is not available                        |
| Bulk density   | 800 – 900 <sup>kg</sup> / <sub>m³</sub>                              |
| Particle characteristics                                 | No data available.   |
| Other safety parameters                                  |  |
| Oxidising properties                                     | none   |

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#### 9.2 Other information

Information with regard to physical hazard classes:

Other safety characteristics:

# haracteristics: There is no additional information.

# SECTION 10: Stability and reactivity

#### 10.1 Reactivity

This material is not reactive under normal ambient conditions.

#### 10.2 Chemical stability

The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

hazard classes acc. to GHS (physical hazards): not relevant

#### 10.3 Possibility of hazardous reactions

Violent reaction with: strong oxidiser, Chlorates, Nitrites, Potassium nitrate, Alkalis, Hypochlorite

#### 10.4 Conditions to avoid

Keep away from heat. Decompostion takes place from temperatures above: >280 °C.

#### **10.5** Incompatible materials

There is no additional information.

#### 10.6 Hazardous decomposition products

Hazardous combustion products: see section 5.

# **SECTION 11: Toxicological information**

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

#### Classification according to GHS (1272/2008/EC, CLP)

This substance does not meet the criteria for classification in accordance with Regulation No 1272/ 2008/EC.

#### Acute toxicity

Shall not be classified as acutely toxic.

| Acute toxicity |          |                                      |         |        |        |  |  |
|----------------|----------|--------------------------------------|---------|--------|--------|--|--|
| Exposure route | Endpoint | Value                                | Species | Method | Source |  |  |
| oral           | LD50     | 4.250 <sup>mg</sup> / <sub>kg</sub>  | rat     |        | ECHA   |  |  |
| dermal         | LD50     | >2.000 <sup>mg</sup> / <sub>kg</sub> | rat     |        | ECHA   |  |  |

#### Skin corrosion/irritation

Shall not be classified as corrosive/irritant to skin.

#### Serious eye damage/eye irritation

Shall not be classified as seriously damaging to the eye or eye irritant.

#### Respiratory or skin sensitisation

Shall not be classified as a respiratory or skin sensitiser.

#### Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

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#### Carcinogenicity

Shall not be classified as carcinogenic.

#### **Reproductive toxicity**

Shall not be classified as a reproductive toxicant.

#### Specific target organ toxicity - single exposure

Shall not be classified as a specific target organ toxicant (single exposure).

#### Specific target organ toxicity - repeated exposure

Shall not be classified as a specific target organ toxicant (repeated exposure).

#### **Aspiration hazard**

Shall not be classified as presenting an aspiration hazard.

#### Symptoms related to the physical, chemical and toxicological characteristics

#### • If swallowed

diarrhoea, vomiting

#### • If in eyes

essentially non-irritating

#### • If inhaled

Inhalation of dust may cause irritation of the respiratory system

#### • If on skin

Frequently or prolonged contact with skin may cause dermal irritation

#### • Other information

none

#### **11.2** Endocrine disrupting properties

Does not contain an endocrine disruptor (ED) at a concentration of  $\ge 0,1\%$ .

#### 11.3 Information on other hazards

There is no additional information.

# **SECTION 12: Ecological information**

#### 12.1 Toxicity

Shall not be classified as hazardous to the aquatic environment.

| Aquatic toxicity (act | ute)                               |                       |        |                  |
|-----------------------|------------------------------------|-----------------------|--------|------------------|
| Endpoint              | Value                              | Species               | Source | Exposure<br>time |
| LC50                  | 53 <sup>mg</sup> / <sub>l</sub>    | fish                  | ECHA   | 96 h             |
| EC50                  | 121,7 <sup>mg</sup> / <sub>l</sub> | aquatic invertebrates | ECHA   | 48 h             |

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# **ROTH**

#### Ammonium sulphate ROTI®METIC 99,999 % (5N)

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| Aquatic toxicity (chronic) |                                    |         |        |                  |  |  |
|----------------------------|------------------------------------|---------|--------|------------------|--|--|
| Endpoint                   | Value                              | Species | Source | Exposure<br>time |  |  |
| EC50                       | 2.700 <sup>mg</sup> / <sub>l</sub> | algae   | ECHA   | 18 d             |  |  |
| ErC50                      | 1.605 <sup>mg</sup> / <sub>l</sub> | algae   | ECHA   | 5 d              |  |  |

- **12.2 Persistence and degradability** Data are not available.
- **12.3 Bioaccumulative potential** Data are not available.
- 12.4 Mobility in soil

Data are not available.

**12.5 Results of PBT and vPvB assessment** Data are not available.

# 12.6 Endocrine disrupting properties

Does not contain an endocrine disruptor (ED) at a concentration of  $\ge 0,1\%$ .

#### 12.7 Other adverse effects

Data are not available.

# **SECTION 13: Disposal considerations**

#### 13.1 Waste treatment methods



Consult the appropriate local waste disposal expert about waste disposal.

#### Sewage disposal-relevant information

Do not empty into drains.

#### Waste treatment of containers/packagings

Handle contaminated packages in the same way as the substance itself. Completely emptied packages can be recycled.

#### 13.2 Relevant provisions relating to waste

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

#### 13.3 Remarks

Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities. Please consider the relevant national or regional provisions. Non-contaminated packages may be recycled.

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## **SECTION 14: Transport information**

- UN number or ID number 14.1
- UN proper shipping name 14.2
- Transport hazard class(es) 14.3
- 14.4 Packing group
- 14.5 **Environmental hazards**

not subject to transport regulations

not assigned

none

not assigned

non-environmentally hazardous acc. to the dangerous goods regulations

- 14.6 Special precautions for user There is no additional information.
- 14.7 Maritime transport in bulk according to IMO instruments The cargo is not intended to be carried in bulk.
- Information for each of the UN Model Regulations 14.8

International Maritime Dangerous Goods Code (IMDG) - Additional information Not subject to IMDG.

International Civil Aviation Organization (ICAO-IATA/DGR) - Additional information Not subject to ICAO-IATA.

# SECTION 15: Regulatory information

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

Relevant provisions of the European Union (EU)

**Restrictions according to REACH, Annex XVII** 

| Dangerous substances with restrictions (REACH, Annex XVII) |                          |        |             |    |  |
|--|--------------------------|--------|-------------|----|--|
| Name of substance  | Name acc. to inventory   | CAS No | Restriction | No |  |
| Ammonium sulphate  | inorganic ammonium salts |        | R65         | 65 |  |

Leaend R65

. Shall not be placed on the market, or used, in cellulose insulation mixtures or cellulose insulation articles after 14 July 2018 unless the emission of ammonia from those mixtures or articles results in a concentration of less than 3 ppm by volume (2,12 mg/m3) under the test conditions specified in paragraph 4.

A supplier of a cellulose insulation mixture containing inorganic ammonium salts shall inform the recipient or con-sumer of the maximum permissible loading rate of the cellulose insulation mixture, expressed in thickness and density.

A downstream user of a cellulose insulation mixture containing inorganic ammonium salts shall ensure that the maximum permissible loading rate communicated by the supplier is not exceeded.

2. By way of derogation, paragraph 1 shall not apply to placing on the market of cellulose insulation mixtures intended to be used solely for the production of cellulose insulation articles, or to the use of those mixtures in the production of cellulose insulation articles

3. In the case of a Member State that, on 14 July 2016, has national provisional measures in place that have been au-thorised by the Commission pursuant to Article 129(2)(a), the provisions of paragraphs 1 and 2 shall apply from that date.

4. Compliance with the emission limit specified in the first subparagraph of paragraph 1 shall be demonstrated in accordance with Technical Specification CEN/TS 16516, adapted as follows:
(a) the duration of the test shall be at least 14 days instead of 28 days;
(b) the ammonia gas emission shall be measured at least once per day throughout the test;

- (c) the emission limit shall not be reached or exceeded in any measurement taken during the test;
   (d) the relative humidity shall be 90 % instead of 50 %;

an appropriate method to measure the ammonia gas emission shall be used;

(f) the loading rate, expressed in thickness and density, shall be recorded during the sampling of the cellulose insulation mixtures or articles to be tested.



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#### **List of substances subject to authorisation (REACH, Annex XIV)/SVHC - candidate list** Not listed.

#### **Seveso Directive**

| 2012/ | 2012/18/EU (Seveso III)               |   |       |  |  |  |  |
|-------|---------------------------------------|---|-------|--|--|--|--|
| Νο    | Dangerous substance/hazard categories | Qualifying quantity (tonnes) for the ap-<br>plication of lower and upper-tier re-<br>quirements | Notes |  |  |  |  |
|       | not assigned                          |   |       |  |  |  |  |

#### **Deco-Paint Directive**

| VOC content | 0 %                           |
|-------------|-------------------------------|
| VOC content | 0 <sup>g</sup> / <sub>l</sub> |

#### **Industrial Emissions Directive (IED)**

| VOC content | 0 %   |
|-------------|-------|
| VOC content | 0 g/l |

# Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS)

not listed

# Regulation concerning the establishment of a European Pollutant Release and Transfer Register (PRTR)

not listed

#### Water Framework Directive (WFD)

| List of pollutants (WFD) |  |        |           |         |
|--------------------------|--|--------|-----------|---------|
| Name of substance        | Name acc. to inventory   | CAS No | Listed in | Remarks |
| Ammonium sulphate        | Substances which contribute to<br>eutrophication (in particular, ni-<br>trates and phosphates) |        | a)        |         |

Legend

a) Indicative list of the main pollutants

#### Regulation on the marketing and use of explosives precursors

not listed

#### **Regulation on drug precursors**

not listed

#### Regulation on substances that deplete the ozone layer (ODS)

not listed

#### Regulation concerning the export and import of hazardous chemicals (PIC)

not listed

#### Regulation on persistent organic pollutants (POP)

not listed

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#### **Other information**

Directive 94/33/EC on the protection of young people at work. Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

#### **National inventories**

| Country | Inventory  | Status                       |
|---------|------------|------------------------------|
| AU      | AIIC       | substance is listed          |
| CA      | DSL        | substance is listed          |
| CN      | IECSC      | substance is listed          |
| EU      | ECSI       | substance is listed          |
| EU      | REACH Reg. | substance is listed          |
| JP      | CSCL-ENCS  | substance is listed          |
| JP      | ISHA-ENCS  | substance is listed          |
| KR      | KECI       | substance is listed          |
| MX      | INSQ       | substance is listed          |
| NZ      | NZIoC      | substance is listed          |
| PH      | PICCS      | substance is listed          |
| TR      | CICR       | substance is listed          |
| TW      | TCSI       | substance is listed          |
| US      | TSCA       | substance is listed (ACTIVE) |
| VN      | NCI        | substance is listed          |

#### Legend

| Legenu     |   |
|------------|---|
| AIIC       | Australian Inventory of Industrial Chemicals                            |
| CICR       | Chemical Inventory and Control Regulation                               |
| CSCL-ENCS  | List of Existing and New Chemical Substances (CSCL-ENCS)                |
| DSL        | Domestic Substances List (DSL)  |
| ECSI       | EC Substance Inventory (EINECS, ELINCS, NLP)                            |
| IECSC      | Inventory of Existing Chemical Substances Produced or Imported in China |
| INSQ       | National Inventory of Chemical Substances                               |
| ISHA-ENCS  | Inventory of Existing and New Chemical Substances (ISHA-ENCS)           |
| KECI       | Korea Existing Chemicals Inventory                                      |
| NCI        | National Chemical Inventory   |
| NZIoC      | New Zealand Inventory of Chemicals                                      |
| PICCS      | Philippine Inventory of Chemicals and Chemical Substances (PICCS)       |
| REACH Reg. | REACH registered substances   |
| TCSI       | Taiwan Chemical Substance Inventory                                     |
| TSCA       | Toxic Substance Control Act   |

#### 15.2 Chemical safety assessment

No Chemical Safety Assessment has been carried out for this substance.

according to Regulation (EC) No. 1907/2006 (REACH), amended by 2020/878/EU



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# **SECTION 16: Other information**

#### Indication of changes (revised safety data sheet)

| Section | Former entry (text/value)  | Actual entry (text/value)   | Safety-<br>relev-<br>ant |
|---------|--|---|--------------------------|
| 2.3     |  | Endocrine disrupting properties:<br>Does not contain an endocrine disruptor (ED) at<br>a concentration of ≥ 0,1%. | yes                      |
| 14.8    | Transport of dangerous goods by road, rail and<br>inland waterway (ADR/RID/ADN) - Additional in-<br>formation:<br>Not subject to ADR, RID and ADN. |   | yes                      |
| 15.1    | VOC content:<br>0 %<br>0 <sup>g</sup> / <sub>l</sub>   | VOC content:<br>0 %   | yes                      |
| 15.1    |  | VOC content:<br>0 <sup>g</sup> / <sub>l</sub>   | yes                      |
| 15.1    |  | National inventories:<br>change in the listing (table)  | yes                      |

#### Abbreviations and acronyms

| Abbr.     | Descriptions of used abbreviations  |
|-----------|---|
| ADR       | Accord relatif au transport international des marchandises dangereuses par route (Agreement concern-<br>ing the International Carriage of Dangerous Goods by Road)                |
| CAS       | Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)  |
| Ceiling-C | Ceiling value   |
| CLP       | Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures  |
| DGR       | Dangerous Goods Regulations (see IATA/DGR)  |
| DNEL      | Derived No-Effect Level   |
| EC50      | Effective Concentration 50 %. The EC50 corresponds to the concentration of a tested substance causing 50 % changes in response (e.g. on growth) during a specified time interval  |
| EC No     | The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an ident fier of substances commercially available within the EU (European Union) |
| ED        | Endocrine disruptor   |
| EINECS    | European Inventory of Existing Commercial Chemical Substances   |
| ELINCS    | European List of Notified Chemical Substances   |
| ErC50     | = EC50: in this method, that concentration of test substance which results in a 50 % reduction in either growth (EbC50) or growth rate (ErC50) relative to the control            |
| GHS       | "Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Na-<br>tions  |
| IATA      | International Air Transport Association   |
| IATA/DGR  | Dangerous Goods Regulations (DGR) for the air transport (IATA)  |
| ICAO      | International Civil Aviation Organization   |
| IMDG      | International Maritime Dangerous Goods Code   |

according to Regulation (EC) No. 1907/2006 (REACH), amended by 2020/878/EU

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| Abbr.                   | Descriptions of used abbreviations   |
|-------------------------|--|
| LC50                    | Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 %<br>lethality during a specified time interval                         |
| LD50                    | Lethal Dose 50 %: the LD50 corresponds to the dose of a tested substance causing 50 % lethality during a specified time interval   |
| NLP                     | No-Longer Polymer  |
| PBT                     | Persistent, Bioaccumulative and Toxic  |
| PNEC                    | Predicted No-Effect Concentration  |
| REACH                   | Registration, Evaluation, Authorisation and Restriction of Chemicals   |
| RID                     | Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regula-<br>tions concerning the International carriage of Dangerous goods by Rail) |
| S.I. No. 619 of<br>2001 | Safety, Health and Welfare at Work (Chemical Agents) Regulations 2001  |
| STEL                    | Short-term exposure limit  |
| SVHC                    | Substance of Very High Concern   |
| TWA                     | Time-weighted average  |
| VOC                     | Volatile Organic Compounds   |
| vPvB                    | Very Persistent and very Bioaccumulative   |

#### Key literature references and sources for data

Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures. Regulation (EC) No. 1907/2006 (REACH), amended by 2020/878/EU.

Agreement concerning the International Carriage of Dangerous Goods by Road (ADR). Regulations concerning the International Carriage of Dangerous Goods by Rail (RID). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

#### Disclaimer

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.