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

- **1.1 Product identifier**
  - Trade name: AGITAN® 28-N
  - UFI: MRM1-90PQ-600D-SM79

- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
  - No further relevant information available.
  - **Application of the substance / the mixture** Defoamers, Anti-foaming agent

- **1.3 Details of the supplier of the safety data sheet**
  - Manufacturer/Supplier:
    - MÜNZING CHEMIE GmbH
    - Münzingstrasse 2
    - 74232 Abstatt, Germany
    - E-Mail: info@munzing.com
    - Tel.: +49 7131 987-100

  - **Further information obtainable from:**
    - Product Safety Department
    - E-mail (MSDS): msds@munzing.com

- **1.4 Emergency telephone number:** For Chemical Emergencies: CHEMTREC: +1 703 741 5970

**SECTION 2: Hazards identification**

- **2.1 Classification of the substance or mixture**
  - **Classification according to Regulation (EC) No 1272/2008**
    - Skin Sens. 1 H317 May cause an allergic skin reaction.

- **2.2 Label elements**
  - **Labelling according to Regulation (EC) No 1272/2008**
    - The product is classified and labelled according to the CLP regulation.

- **Hazard pictograms**
  - GHS07

- **Signal word** Warning

- **Hazard-determining components of labelling:**
  - 2-Methyl-2H-isothiazol-3-one
  - Reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)
  - 1,2-benzisothiazol-3(2H)-one

- **Hazard statements**
  - H317 May cause an allergic skin reaction.

- **Precautionary statements**
  - P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
  - P272 Contaminated work clothing should not be allowed out of the workplace.
  - P280 Wear protective gloves.
  - P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
  - P321 Specific treatment (see on this label).
  - P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

- **2.3 Other hazards**
  - **Results of PBT and vPvB assessment**
    - PBT: None.

(Contd. on page 2)
SECTION 3: Composition/information on ingredients

3.2 Chemical characterisation: Mixtures

Description: Dispersion of nonionic fatty derivatives

<table>
<thead>
<tr>
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<th>Description</th>
<th>vPvB</th>
<th>Concentration</th>
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<td>2-Methyl-2H-isothiazol-3-one</td>
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<td>Reaction mass of 5-chloro-2- methyl-2H-isothiazol-3-one and 2- methyl-2H-isothiazol-3- one (3:1)</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

SECTION 4: First aid measures

4.1 Description of first aid measures

- General information: No special measures required.
- After inhalation: Supply fresh air; consult doctor in case of complaints.
- After skin contact: Generally the product does not irritate the skin.
- After eye contact: Rinse opened eye for several minutes under running water.
- After swallowing: If symptoms persist consult doctor.

4.2 Most important symptoms and effects, both acute and delayed: No further relevant information available.

4.3 Indication of any immediate medical attention and special treatment needed: No further relevant information available.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing agents: Use fire extinguishing methods suitable to surrounding conditions.

5.2 Special hazards arising from the substance or mixture: No further relevant information available.

5.3 Advice for firefighters

Protective equipment: Do not inhale explosion gases or combustion gases.

Additional information: Product contains water and is non-combustible.

Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Wear protective clothing. Particular danger of slipping on leaked/spilled product.
· **6.2 Environmental precautions:**
  Dilute with plenty of water.
  Do not allow to enter sewers/surface or ground water.

· **6.3 Methods and material for containment and cleaning up:**
  Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

· **6.4 Reference to other sections**
  See Section 7 for information on safe handling.
  See Section 8 for information on personal protection equipment.
  See Section 13 for disposal information.

### SECTION 7: Handling and storage

· **7.1 Precautions for safe handling**
  Keep away from heat and direct sunlight.
  No special measures required.

· **Information about fire - and explosion protection:** The product is not flammable.

· **7.2 Conditions for safe storage, including any incompatibilities**
  **Storage:**
  No special requirements.

· **Further information about storage conditions:**
  Protect from frost.

· **7.3 Specific end use(s)**
  No further relevant information available.

### SECTION 8: Exposure controls/personal protection

· **8.1 Control parameters**
  **Additional information about design of technical facilities:** No further data; see item 7.
  **Ingredients with limit values that require monitoring at the workplace:**
  The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

· **Additional information:** The lists valid during the making were used as basis.

· **8.2 Exposure controls**
  **Personal protective equipment:**
  **General protective and hygienic measures:**
  The usual precautionary measures are to be adhered to when handling chemicals.
  **Respiratory protection:** Use suitable respiratory protective device only when aerosol or mist is formed.
  **Protection of hands:**
  Only use chemical-protective gloves with CE-labelling of category III.
  The glove material has to be impermeable and resistant to the product/the substance/the preparation.
  Due to missing tests no recommendation to the glove material can be given for the product/the preparation/the chemical mixture.
  Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**
  Nitrile rubber, NBR
  Recommended thickness of the material: > 0.4 mm
  The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.


· Penetration time of glove material
  For the mixture of chemicals mentioned below the penetration time has to be at least 480 minutes (Permeation according to EN 16523-1:2015: Level 6).
  The determined penetration times according to EN 16523-1:2015 are not performed under practical conditions. Therefore a maximum wearing time, which corresponds to 50% of the penetration time, is recommended.
  The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· Eye protection: Goggles recommended during refilling

· Body protection: Protective work clothing

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**SECTION 9: Physical and chemical properties**

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

**General Information**

- **Appearance:** Fluid
- **Colour:** White
- **Odour:** Characteristic
- **Odour threshold:** Not determined.

- **pH-value at 20 °C:** ≈ 8 (DIN ISO 976)

- **Change in condition**
  - **Melting point/freezing point:** Undetermined.
  - **Initial boiling point and boiling range:** ≈ 100 °C

- **Flash point:** > 100 °C (DIN EN ISO 2719)
- **Flammability (solid, gas):** Not applicable.
- **Ignition temperature:** Not determined.
- **Decomposition temperature:** Not determined.
- **Auto-ignition temperature:** Product is not selfigniting.
- **Explosive properties:** Product does not present an explosion hazard.

- **Explosion limits:**
  - **Lower:** Not determined.
  - **Upper:** Not determined.
- **Oxidising properties:** None.

- **Vapour pressure:** Not determined.
- **Density at 20 °C:** ≈ 0,98 g/cm³ (DIN EN ISO 2811-1)
- **Relative density**
  - **Vapour density:** Not determined.
  - **Evaporation rate:** Not determined.

- **Solubility in / Miscibility with water:** Emulsifiable.
- **Partition coefficient: n-octanol/water:** Not determined.
- **Viscosity:**
  - **Dynamic at 20 °C:** ≈ 350 mPas (DIN EN ISO 3219)
  - **Kinematic:** Not determined.
Safety data sheet
according to 1907/2006/EC, Article 31

Trade name: AGITAN® 28-N

(Contd. of page 4)

Solvent separation test: ≤3%
Solvent content:
Water: ≈ 70 %

9.2 Other information
No further relevant information available.

SECTION 10: Stability and reactivity

10.1 Reactivity
No further relevant information available.

10.2 Chemical stability
Thermal decomposition / conditions to be avoided:
No decomposition if used and stored according to specifications.

10.3 Possibility of hazardous reactions
No dangerous reactions known.

10.4 Conditions to avoid
No further relevant information available.

10.5 Incompatible materials
No further relevant information available.

10.6 Hazardous decomposition products
No dangerous decomposition products known.

SECTION 11: Toxicological information

11.1 Information on toxicological effects
Acute toxicity
Based on available data, the classification criteria are not met.

LD/LC50 values relevant for classification:

| CAS: 52-51-7 2-bromo-2-nitropropane-1,3-diol |
| Oral LD50 | 307 mg/kg (rat) |
| Dermal LD50 | >2000 mg/kg (rat) |

| CAS: 55965-84-9 Reaction mass of 5-chloro-2- methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1) |
| Oral LD50 | 49.6-75 mg/kg (rat) |
| Dermal LD50 | 141 mg/kg (rabbit) |
| Inhalative LC50/4h | 0.33 mg/l (rat) (Aerosol) |

Primary irritant effect:
Skin corrosion/irritation
Based on available data, the classification criteria are not met.

Serious eye damage/irritation
Based on available data, the classification criteria are not met.

Respiratory or skin sensitisation
May cause an allergic skin reaction.

Additional toxicological information:
CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)
Based on available data, the classification criteria are not met.

Germ cell mutagenicity
Based on available data, the classification criteria are not met.

Carcinogenicity
Based on available data, the classification criteria are not met.

Reproductive toxicity
Based on available data, the classification criteria are not met.

STOT-single exposure
Based on available data, the classification criteria are not met.

STOT-repeated exposure
Based on available data, the classification criteria are not met.

Aspiration hazard
Based on available data, the classification criteria are not met.
SECTION 12: Ecological information

12.1 Toxicity

**Aquatic toxicity:**

<table>
<thead>
<tr>
<th>CAS: 52-51-7 2-bromo-2-nitropropane-1,3-diol</th>
</tr>
</thead>
<tbody>
<tr>
<td>EC50 0,4-2,8 mg/l (alga) (green alga / 72 h)</td>
</tr>
<tr>
<td>1,4 mg/l (daphnia) (Daphnia magna / 48 h)</td>
</tr>
<tr>
<td>LC50 41,2 mg/l (fish) (Oncorhynchus mykiss / 96 h)</td>
</tr>
</tbody>
</table>

**CAS: 2682-20-4 2-Methyl-2H-isothiazol-3-one**

| EC50 34,6 mg/l (bacteria) (3 h / (DIN 38412-3 (TTC-Test))) |

**CAS: 55965-84-9 Reaction mass of 5-chloro-2- methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)**

| EC50 0,018 mg/l (alga) (Pseudokirchneriella subcapitata / 72 h) |
| 4,5 mg/l (bacteria) (activated sludge) |
| 0,16 mg/l (daphnia) (Daphnia magna / 48 h) |
| LC50 0,19 mg/l (fish) (Oncorhynchus mykiss / 96 h) |

12.2 Persistence and degradability No further relevant information available.

12.3 Bioaccumulative potential No further relevant information available.

12.4 Mobility in soil No further relevant information available.

Ecotoxicological effects:

12.5 Results of PBT and vPvB assessment

According to Annex XIV of Regulation (EC) No.1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH): The product does not contain a substance fulfilling the PBT (persistent/bioaccumulative/toxic) criteria or the vPvB (very persistent/very bioaccumulative) criteria. Self classification.

12.6 Other adverse effects No further relevant information available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Recommendation Smaller quantities can be disposed of with household waste.

European waste catalogue

16 03 05* organic wastes containing hazardous substances

Uncleaned packaging:

Recommendation: Disposal must be made according to official regulations.

Recommended cleansing agents: Water, if necessary together with cleansing agents.
SECTION 14: Transport information

- 14.1 UN-Number
  - ADR/RID/ADN, ADN, IMDG, IATA Void

- 14.2 UN proper shipping name
  - ADR/RID/ADN, ADN, IMDG, IATA Void

- 14.3 Transport hazard class(es)
  - ADR/RID/ADN, ADN, IMDG, IATA Void

- 14.4 Packing group
  - ADR/RID/ADN, IMGD, IATA Void

- 14.5 Environmental hazards:
  - Marine pollutant: No

- 14.6 Special precautions for user
  - Not applicable.

- 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code
  - Not applicable.

- UN ”Model Regulation”:
  - Void

SECTION 15: Regulatory information

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
  - Directive 2012/18/EU
  - Named dangerous substances - ANNEX I None of the ingredients is listed.
  - REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3

- DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II
  - None of the ingredients is listed.

- National regulations:
  - Waterhazard class: Water hazard class 1 (German AwSV, Self-assessment): slightly hazardous for water.

- 15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- Relevant phrases
  - H301 Toxic if swallowed.
  - H302 Harmful if swallowed.
  - H310 Fatal in contact with skin.
  - H311 Toxic in contact with skin.
  - H312 Harmful in contact with skin.
  - H314 Causes severe skin burns and eye damage.
  - H315 Causes skin irritation.
  - H317 May cause an allergic skin reaction.
  - H318 Causes serious eye damage.
H330 Fatal if inhaled.
H335 May cause respiratory irritation.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.
H411 Toxic to aquatic life with long lasting effects.

Department issuing SDS:
Product Safety Department
E-Mail: msds@munzing.com

Abbreviations and acronyms:
ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Acute Tox. 3: Acute toxicity – Category 3
Acute Tox. 4: Acute toxicity – Category 4
Acute Tox. 2: Acute toxicity – Category 2
Skin Corr. IB: Skin corrosion/irritation – Category 1B
Skin Corr. IC: Skin corrosion/irritation – Category 1C
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Dam. 1: Serious eye damage/eye irritation – Category 1
Skin Sens. 1: Skin sensitisation – Category 1
Skin Sens. 1A: Skin sensitisation – Category 1A
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1
Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2