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

- 1.1 Product identifier
  - Trade name: ABTS® BioChemica
  - Article number: A1088
  - CAS Number: 30931-67-0
  - EC number: 250-396-6
- 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
    Biochemistry
    Laboratory chemical
- 1.3 Details of the supplier of the safety data sheet
  - Manufacturer/Supplier: AppliChem GmbH
    Ottoweg 4
    D-64291 Darmstadt
    Tel.: +49 (0)6151 93570
    msds@applichem.com
  - Further information obtainable from: Abteilung Qualitätssicherung / Dep. Quality Control
  - 1.4 Emergency telephone number:
    +49(0)6151 93570 (während der normalen Geschäftszeiten / Inside normal business hours)

SECTION 2: Hazards identification

- 2.1 Classification of the substance or mixture
  - Classification according to Regulation (EC) No 1272/2008
    Skin Irrit. 2 H315 Causes skin irritation.
    Eye Irrit. 2 H319 Causes serious eye irritation.
    STOT SE 3 H335 May cause respiratory irritation.
  - Classification according to Directive 67/548/EEC or Directive 1999/45/EC
    Xi: Irritant
    R36/37/38: Irritating to eyes, respiratory system and skin.
- 2.2 Label elements
  - Labelling according to Regulation (EC) No 1272/2008
    The substance is classified and labelled according to the CLP regulation.
  - Hazard pictograms

GHS07

- Signal word Warning
- Hazard-determining components of labelling:
  Diammonium-2,2'-azinobis(3-ethyl-2,3-dihydrobenzothiazol-6-sulfonat)
Hazard statements
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.

Precautionary statements
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
Results of PBT and vPvB assessment
· PBT: Not applicable.
· vPvB: Not applicable.

SECTION 3: Composition/information on ingredients
· 3.1 Chemical characterisation: Substances
   CAS No. Description
   30931-67-0 Diammonium-2,2’-azinobis(3-ethyl-2,3-dihydrobenzothiazol-6-sulfonat)
   Identification number(s)
   EC number: 250-396-6

SECTION 4: First aid measures
· 4.1 Description of first aid measures
  After inhalation:
  Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.
  After skin contact:
  Wash off with plenty of water.
  If skin irritation continues, consult a doctor.
  After eye contact:
  Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
  After swallowing:
  Rinse out mouth.
  Seek medical treatment.
· 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:
  CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
· 5.2 Special hazards arising from the substance or mixture
  Formation of toxic gases is possible during heating or in case of fire.
  In case of fire, the following can be released:
  Nitrogen oxides (NOx)
  carbon oxides (CO, CO2).
  sulfur oxides (SO2, SO3…)
· 5.3 Advice for firefighters
  Protective equipment: Wear self-contained respiratory protective device.
· Additional information
  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
  Avoid formation of dust.
  Do not inhale dust.
  Avoid substance contact.
  Ensure adequate ventilation

- 6.2 Environmental precautions: Do not allow to enter sewers/surface or ground water.

- 6.3 Methods and material for containment and cleaning up:
  Pick up mechanically.
  Avoid generation of dusts.
  Ensure adequate ventilation.
  Clean up affected area.
  Dispose of the material collected according to regulations.

- 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 Any unavoidable deposit of dust must be regularly removed.

- 7.2 Conditions for safe storage, including any incompatibilities
  Storage:
  Requirements to be met by storerooms and receptacles: No special requirements.
  Information about storage in one common storage facility: Not required.
  Further information about storage conditions:
  Keep container tightly sealed.
  Open receptacle only under localised extractor facilities.
  Recommended storage temperature: +2 - +8 °C
  Storage class: 10-13

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

SECTION 8: Exposure controls/personal protection

- Additional information about design of technical facilities: No further data; see item 7.

- 8.1 Control parameters
  Ingredients with limit values that require monitoring at the workplace: Not required.
  Additional information: The lists valid during the making were used as basis.

- 8.2 Exposure controls
  Personal protective equipment:
  General protective and hygienic measures:
  Keep away from foodstuffs, beverages and feed.
  Immediately remove all soiled and contaminated clothing
  Wash hands before breaks and at the end of work.
  Avoid contact with the eyes and skin.
  Respiratory protection:
  In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
  Filter P1

(Contd. on page 4)
Protection of hands:

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Material of gloves
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.

Penetration time of glove material
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

For the permanent contact gloves made of the following materials are suitable:
Nitrile rubber, NBR
Recommended thickness of the material: ≥ 0.11 mm
Value for the permeation: Level ≥ 480 min

As protection from splashes gloves made of the following materials are suitable:
Nitrile rubber, NBR
Recommended thickness of the material: ≥ 0.11 mm
Value for the permeation: Level ≥ 480 min

Eye protection:

Tightly sealed goggles

Body protection:
Use protective suit.
Protective clothing should be selected specifically for the working place, depending on concentration and quantity of the hazardous substances handled.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

General Information

Appearance:
Form: Powder
Colour: Light green
Odour: Odourless

pH-value: Not applicable.

Change in condition
Melting point/Melting range: >300 °C
Boiling point/Boiling range: Undetermined.

Flash point: Not applicable.

Flammability (solid, gaseous): Product is not flammable.

Danger of explosion: Product does not present an explosion hazard.

Explosion limits:
Lower: Not determined.
Upper: Not determined.

Vapour pressure: Not applicable.

Density: Not determined.
**Trade name: ABTS® BioChemica**

- **Solubility in / Miscibility with water at 20 °C:** 20 g/l

- **Viscosity:**
  - Dynamic: Not applicable.
  - Kinematic: Not applicable.

- **Solvent content:**
  - Organic solvents: 0.0 %
  - VOC (EC): 0.00 %

- **9.2 Other information**
  No further relevant information available.

**SECTION 10: Stability and reactivity**

- **10.1 Reactivity**
- **10.2 Chemical stability**
  - Thermal decomposition / conditions to be avoided: No decomposition if used 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:
  - strong acids
  - strong oxidants
- **10.6 Hazardous decomposition products:** In the event of fire: See chapter 5

**SECTION 11: Toxicological information**

- **11.1 Information on toxicological effects**
- **Acute toxicity:**
  - Primary irritant effect:
    - on the skin: Irritant to skin and mucous membranes.
    - on the eye: Irritant effect.
  - After inhalation: Irritant to skin and mucous membranes.
  - Sensitisation: No sensitising effects known.

**SECTION 12: Ecological information**

- **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.
- **Additional ecological information:**
  - General notes:
    - Water hazard class 3 (German Regulation) (Self-assessment): extremely hazardous for water
    - Danger to drinking water if even extremely small quantities leak into the ground.
  - **12.5 Results of PBT and vPvB assessment**
    - PBT: Not applicable.
    - vPvB: Not applicable.
- **12.6 Other adverse effects:** No further relevant information available.

**SECTION 13: Disposal considerations**

- **13.1 Waste treatment methods**
- **Recommendation**
  Chemicals must be disposed of in compliance with the respective national regulations.
  Must not be disposed together with household garbage. Do not allow product to reach sewage system.
### SECTION 14: Transport information

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<td>14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</td>
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<td>Not dangerous according to the above specifications.</td>
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<tr>
<td>UN &quot;Model Regulation&quot;:</td>
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### SECTION 15: Regulatory information

| 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture | No further relevant information available. |
| 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.

#### Department issuing MSDS:
Abteilung Qualitätskontrolle / Dept. Quality Control

#### Contact:
Hr. / Mr. Th. Stöckle

#### Abbreviations and acronyms:
- RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
- ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
- GHS: Globally Harmonised System of Classification and Labelling of Chemicals
- EINECS: European Inventory of Existing Commercial Chemical Substances
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- VOC: Volatile Organic Compounds (USA, EU)
- Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
- Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2
- STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3