

1. Identification of the Preparation and the Company

Trade Name of the Preparation:

AgPURE-W

Use of the Preparation:

Antimicrobial finishing of surfaces.

Company:

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+49 (0) 941 607 17-42 (manufacturer)

2. Hazards Identification

Unknown. Dried up product may be spontaneously flammable, especially in contact with combustible material.
Spilling product harms waters by high consumption of oxygen and general pollution impact.

3. Composition / Information on Ingredients

Aqueous nano-silver dispersion

Hazardous Ingredients:

| <u>EINECS-No.</u> | <u>CAS-No.</u> | <u>Name According to EC Directives</u> | <u>Content</u> | <u>Unit</u> | <u>Classification</u> | <u>R-Phrases</u> |
|-------------------|----------------|--|----------------|-------------|-------------------------|------------------|
| 231-131-3 | 7440-22-4 | Silver, metallic | 5 - 30 | % | EC OELV (see section 8) | |
| 229-347-8 | 6484-52-2 | Ammonium nitrate | 3 - 15 | % | O | 8-9 |

The text of the R-phrases is in section 16.

4. First Aid Measures

Inhalation:

Remove the person to fresh air, in case of indisposition obtain medical advice.

Skin Contact:

Remove contaminated clothing, wash off affected skin with plenty of water, in case of indisposition obtain medical advice.

Eye Contact:

Rinse the eyes thoroughly with plenty of water, see an eye specialist.

Ingestion:

Let drink large quantities of water, do not induce vomiting, danger of suffocation by inhalation of foam.
Obtain medical advice immediately.

5. Fire-fighting Measures

Suitable Extinguishing Media:

Product does not burn, if evaporated water will be substituted, but dry residue has an oxidizing effect, and so keep away from combustible material.

Unsuitable Extinguishing Media:

Not applicable.

Decomposition Products:

Thermal decomposition to carbon monoxide, nitrogen oxides, and organic cracked products.

Special Protective Equipment:

Tightly closing fireproof clothing and oxygen apparatus.

6. Accidental Release Measures

Person-related Precautionary Measures:

See section 8 "Exposures Controls / Personal Protection".

Environmental Precautions and Methods for Cleaning up:

Do not empty into drains or waters, absorb with inert not combustible material.

Further Information:

Not available.

7. Handling and Storage

Handling:

General handling precautions:

Keep container tightly closed.

Protection from fire and explosion:

Dried up product may be spontaneously flammable, treat endangered areas with sprinkling water.

Storage:

Regulations of storage:

Store container between 10 and 30 °C.

Incompatible materials:

Keep container away from combustible material, concentrated sulphuric acid, and alkali hydroxide solutions.

Storage class according to VCI (Association of the German Chemical Industry):

LGK 12

8. Exposure Control / Personal Protection

Additional Information for the Formation of Technical Facilities:

No further information available, see section 7 "Handling and Storage".

Occupational Exposure Limit Values (Directive 2000/39/EC):

| EINECS-No. | CAS-No. | Ingredient | Limit Values | | Remarks |
|------------|-----------|------------------|-----------------------|-----------|---------|
| | | | (8 h) | (15 min.) | |
| 231-131-3 | 7440-22-4 | Silver, metallic | 0.1 mg/m ³ | - | - |

Personal Protective Equipment:General measures for protection and hygiene:

Avoid contact with skin and eyes. When using do not eat, drink, or smoke; preventive skin protection.

Breathing protection: Take care of exhausting the atomised spray.

Hand Protection: Protective gloves according to EN 374-1 of nitrile rubber are recommended.

Eye Protection: Protective goggles are recommended.

Personal protection: Flame-retardant protective clothing is recommended.

9. Physical and Chemical Properties**Appearance:**

State: liquid

Colour: orange-brown

Odour: practically odourless

Data of Safety:

| | | |
|--------------------------------|-------------|------------------|
| Melting Point / Melting Range: | | Not available. |
| Boiling Point / Boiling Range: | (102 ± 2) | °C |
| Flash Point: | | Not applicable. |
| pH-Value (concentrate): | (T = 20 °C) | 7.2 ± 0.3 |
| Flammability: | | Not applicable. |
| Ignition Temperature: | | Not applicable. |
| Auto-flammability: | | Not applicable. |
| Oxidising Properties: | | For dry residue. |
| Explosive Properties: | | Not applicable. |
| Explosion Limits: | lower: | Not applicable. |
| | upper: | Not applicable. |

Further Information:

| | | | |
|--|-------------|-------------|---|
| Density: | (T = 20 °C) | (1.2 ± 0.1) | g/ml |
| Water Solubility: | (T = 20 °C) | | Miscible in each ratio with purified water. |
| Vapour Pressure: | (T = 20 °C) | | Not available. |
| Vapour Density (air = 1): | | | Not available. |
| Partition Coefficient (n-octanol / water): | | | Not available. |
| Viscosity: | (T = 20 °C) | | Not available. |
| Separation of Solvents: | | | Not applicable. |
| Content of Solvents: | | | Not applicable. |
| Evaporation Number: | | | Not available. |

10. Stability and Reactivity**Conditions to Avoid:**

See section 7 "Handling and Storage".

Materials to Avoid:

Combustible material, alkali hydroxide solutions, and concentrated sulphuric acid.

Hazardous Decomposition Products:

In case of fire, see section 5.

Further Information:

Alkali hydroxides release ammonia, nitrous fumes develop with concentrated sulphuric acid.

11. Toxicological Information

Not data available.

EC SAFETY DATA SHEET

Manufacturer/supplier:
Date of issue: 01/28/2010

AgPURE-W
ras materials GmbH, D-93059 Regensburg
Updated: First edition

Page 4 of 4

12. Ecological Information

Persistence in the Environment:

Inorganic ingredients are not biodegradable.

13. Disposable Considerations

Residues and contaminated packaging are special waste. For disposing ask your local authority.

Waste Classification according to EC Regulations (2000/532/EC):

16 10 04 Aqueous concentrates.

14. Transport Information

No dangerous good.

15. Regulatory Information

Labelling according to EC Directives:

Special label: "Safety data sheet available for professional user on request."

German Regulations:

| | |
|---|--------------------------------------|
| Water Hazardous Class: | WHC 3 (strongly hazardous to water). |
| Classification According to TA Luft (2002) (Technical Instructions about Clean Air): | Not applicable. |

16. Other Information

Denomination in Annex I of the Directive 96/82/EC
(Control over dangers of disasters with hazardous substances): Not applicable.

| | |
|--|---------|
| Registration numbers according to 98/8/EC: | N-29916 |
| | N-29917 |
| | N-29918 |
| | N-29919 |
| | N-29921 |

The text of the R-phrases of section 3:

| | |
|---|--|
| 8 | Contact with combustible material may cause fire |
| 9 | Explosive when mixed with combustible material |

The information in this MSDS is correct to the best of our knowledge, information and belief at the date of its publication and is, in our opinion consistent with the state of general scientific and technical knowledge at that date, but we cannot except liability for a loss, injury or damage which may result from its use. In compiling this MSDS we have taken into account all proper application of the material of which we are aware and any user of the material should consult us before applying it to any novel or unusual use. We must section out that it is the responsibility of any intermediate supplier to ensure that the information contained in this MSDS is passed to the ultimate user.