1. **Product Identification**

   **Commercial product name**: AAW 0214 Ink

   **Emergency telephone**: INFOTRAC 24-hour telephone # 1-800-535-5053

2. **Hazards Identification**

   **Routes of Entry**: None

   **Signs and Symptoms of Exposure**

   - Carcinogenicity (NTP): None
   - Carcinogenicity (IARC): None
   - Carcinogenicity (OSHA): None

   **2.2 Special hazards for human health and environment**

   Water risk class: 1 Mild water pollutant.

3. **Composition/Information on Ingredients**

   **3.2 Hazardous components**

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS No.</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ammonia ...%</td>
<td>1336-21-6</td>
<td>1-5%</td>
</tr>
<tr>
<td>Isopropanol, isopropyl alcohol, propan-2-ol</td>
<td>67-63-0</td>
<td>1-5%</td>
</tr>
</tbody>
</table>

4. **First Aid Measures**

   **General Information**: In case of accident or if you feel unwell, seek medical advice immediately (show safety data sheet if possible). Take off immediately all contaminated clothing if victim is at risk of losing consciousness, position and transport on their side. The decision about the measures, which have to be initiated, has to be taken by the doctor.

   **4.1 After inhalation**: In case of accident by inhalation: remove casualty to fresh air and keep at rest. Consult physician

   **4.2 After contact with skin**: After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water and soap.

   **4.3 After contact with eyes**: Take off lenses. Immediately flush eyes with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Consult physician.

   **4.4 After ingestion**: Calm the victim. Rinse mouth thoroughly with water. Immediately get medical attention. Let water be swallowed in little sips (dilution effect). Do not induce vomiting. Milk or fat oils and are strongly contraindicated. Do not allow a neutralization agent to be drunk.

5. **Fire Fighting Measures**

   **Suitable extinguishing media**: alcohol resistant foam. Carbon dioxide (CO2). Dry extinguishing powder. Water spray. Atomized water.

   **Unsuitable extinguishing media**: High power water jet

   **Special hazards arising from the chemical**: In case of fire may form: Carbon monoxide. Nitrogen oxides (NOx). Vapors may form explosive mixtures with air.

   **Protective equipment and precautions for firefighters**: Wear a self-contained breathing apparatus and chemical resistant suit.

   **Additional information**: Temperature class T 1 (Ignition temperature: >450 °C)

6. **Accidental Release Measures**

   **Personal precautions**: Provide fresh air. Avoid contact with skin and eyes. Wear suitable gloves. NR (Natural rubber (Caoutchouc), Natural latex). NBR (Nitrile rubber) limited resistance, Butyl rubber. In the cases of special applications, it is recommended to check the chemical resistance with the manufacturer of the gloves. Wear eye/face protection. If technical suction or ventilation measures are not possible or are insufficient, protective breathing apparatus must be worn. The filter class must be suitable for the maximum contaminant concentration (gas/vapor/aerosol/particulates) that may arise when handling the product. If the concentration is exceeded, self-contained breathing apparatus must be used. See protective measures under point 7 and 8.

   **Environmental precautions**: Do not empty into drains or the aquatic environment.
6.3 Methods for cleaning up/taking up: Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Clean contaminated objects and areas thoroughly observing environmental regulations. Treat the assimilated material according to the section on waste disposal. (13)

7. Handling and Storage

7.1 Advice on safe handling: When handling with chemicals, please consider usual precautionary measures Wear suitable protective clothing, gloves and eye/face protection. See protective measures under point 7 and 8. Do not leave the container open. Handle open container with care. Keep container tightly closed. If technical suction or ventilation measures are not possible or are insufficient, protective breathing apparatus must be worn. When using do not eat, drink or smoke. Protect skin by using skin protective cream. "Wash hands when done working with material; at breaks, lunch, shift changes, etc." Keep away from food, drink and animal feeding stuffs. Never clean the skin or the clothes with the preparation!

7.2 Advice on protection against fire and explosion: The vapors are heavier than air and can accumulate in high concentrations on the ground, in cavities, channels and cellars. Vapors may form explosive mixtures with air. Take precautionary measures against static discharges. Keep away from sources of ignition. No smoking.

7.3 Further information on handling: Vapors / aerosols should be extracted by suction directly at point of origin. See information supplied by the manufacturer. For limiting the emission through volatile organic compounds (VOC), the solvent vapors should be forwarded to an emission control facility. Please note the manufacturer indications for storage conditions and shelf life (see section 7.3) When storing outside the recommended storing temperatures, the shell life can be shortened. Inappropriate storage may conduct to endangerment of persons and environment.

7.4 Requirements for storage rooms and vessels: Keep only in the original container in a cool, well ventilated place. Keep container tightly closed. Rooms, in which inks are stocked, have to be equipped with sufficient air ventilation. Remove all sources of ignition. Protect against high warming or solar radiation. Recommended storage temperature: +15 °C - 25 °C. Maximum period of storage (time): 6 months

8. Exposure Controls/Personal Protection:

8.1 Exposure limit values:

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS No.</th>
<th>ml/m³</th>
<th>mg/m³</th>
<th>Category</th>
<th>Origin</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isopropyl alcohol</td>
<td>67-63-0</td>
<td>400</td>
<td>980</td>
<td>TWA (8hr)</td>
<td>PEL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>400</td>
<td>980</td>
<td>TWA (8hr)</td>
<td>REL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>500</td>
<td>1225</td>
<td>STEL (15 min)</td>
<td>REL</td>
</tr>
</tbody>
</table>

Exposure controls: None

Occupational exposure controls: Technical measures and the application of appropriate methods of operation, as indicated in section 7, have precedence over to the application of personal protection equipment.

8.2 Protective and hygiene measures: Protect skin by using skin protective cream. "Wash hands when done working with material; at breaks, lunch, shift changes, etc."

8.3 Respiratory protection: If technical suction or ventilation measures are not possible or are insufficient, protective breathing apparatus must be worn.

8.4 Hand protection: Type of chemical protective gloves to choose depends on the concentration and quantity of dangerous substances as well as on work place specifications. In the cases of special applications, it is recommended to check the chemical resistance with the manufacturer of the gloves.

8.5 Eye protection: Tightly sealed safety glasses.

8.6 Skin protection: Carry long-sleeved, flame impeding and anti-static labor safety clothing

8.7 Environmental exposure controls: Please see chapter 6 and 7

8.8 Additional advice on control parameters: None

9. Physical and Chemical Properties

9.1 Appearance

Form: liquid
Color: blue
Odor: like ammoniac

9.2 Important health, safety and environmental information

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>pH-Value (at 20 °C):</td>
<td>9.9</td>
<td>DIN 19268</td>
</tr>
<tr>
<td>Melting point:</td>
<td>not determined</td>
<td>DIN 53181</td>
</tr>
<tr>
<td>Boiling point:</td>
<td>79 – 110°C</td>
<td>DIN 51751</td>
</tr>
<tr>
<td>Flash point:</td>
<td>&gt;55°C</td>
<td>DIN 51765</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>not explosive</td>
<td></td>
</tr>
<tr>
<td>Lower explosion limits:</td>
<td>not determined</td>
<td>DIN 51649</td>
</tr>
<tr>
<td>Upper explosion limits:</td>
<td>not determined</td>
<td>DIN 51649</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>not determined</td>
<td></td>
</tr>
</tbody>
</table>
Vapor pressure (at 20°C) not determined DIN 51754
Density (at 20°C) 1.04 g/cm³ DIN 53217
Water solubility (at 20°C) 250 g/L
Partition coefficient not determined
Viscosity/dynamic (at 20°C) 2.8 mPas DIN 53018
Viscosity/Kinematic (at 20°C) not determined
Vapor density: (at 20°C) >1
Evaporation rate (at 20°C) not determined
Solvent separation test not determined

9.3 Other information
Ignition temperature: >450°C DIN 51794
VOC 1.375% (14.3 g/l)
Maximum period of storage (time): 6 months

10 Stability and Reactivity
10.1 Stability: Stable
10.2 Conditions to avoid: High warming > 45°C and / or solar radiation. Heating up forwards the transit of liquid to the vapor phase and the accumulation of potentially explosive atmosphere.
10.3 Materials to avoid: Keep away from strong acids, leachates, heavy metal salts and reducing materials
10.4 Hazardous decomposition products: Keep away from strong acids, leachates, heavy metal salts and reducing materials.
10.6 Additional information: This product is stable

11 Toxicological Information
Acute toxicity: For this product there are currently no toxicological data available.
Specific effects in experiment on an animal: For this product there are currently no toxicological data available.
Corrosive and irritant effects: For this product there are currently no toxicological data available.
Sensitizing effects: For this product there are currently no toxicological data available.
Severe effects after repeated or prolonged exposure: For this product there are currently no toxicological data available.
Carcinogenic/mutagenic/toxic effects for reproduction: For this product there are currently no toxicological data available.
Additional information on tests: For this product there are currently no toxicological data available.
Empirical data on effects on humans: For this product there are currently no toxicological data available.
Further information: Prolonged/repetitive skin contact may cause skin defattening or dermatitis. Highly fat solubilising effect. Danger of cutaneous absorption. Inhalation may cause headache, drowsiness, somnolence and perception disorder. Eye contact may cause heavy irritation and oedema formation of the conjunctiva. May cause damage on liver, kidneys and nervous system. Aspiration after swallowing and vomiting may conduct to heavy lung damages.

12 Ecological Information
12.1 Ecotoxicity: For this product there are currently no ecotoxicological data available.
12.2 Mobility: In grounds: a moderate to high mobility of the solvents used in the preparation can be expected.
12.3 Persistence and degradability: Not determined
12.4 Bioaccumulative potential: No indication of bio-accumulation potential
12.6 Other adverse effects: Water risk class: 1 Mild water pollutant
12.6 Further information: Eco-toxicological data have not been identified especially for this preparation. The indicated information is based on the current state of knowledge of the used materials and of similar products. It should not reach the canalization, the ground or the waters. With an appropriate handling and application any ecological problems are not to be expected.
RoHS-conformity: The preparation is in conformity with the 2002/95/EG RoHS and WEEE-guidelines

13 Disposal Considerations:
13.2 Contaminated packaging: Waste disposal according to official state regulations.

14 Transport Information
14.1 DOT Classification:
Description of the goods: Not a hazardous material with respect to transportation regulations

Land transport (ADR/RID)
UN number 0000
Description of the goods: Not a hazardous material with respect to transportation regulations.

Inland waterways transport
UN number 0000
Material Safety Data Sheet

Description of the goods: Not a hazardous material with respect to transportation regulations

<table>
<thead>
<tr>
<th>Marine transport</th>
<th>Air transport</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN number</td>
<td>0000</td>
</tr>
<tr>
<td>Description of the goods</td>
<td>Not a hazardous material with respect to transportation regulations</td>
</tr>
</tbody>
</table>

15  Regulatory Information

U.S. Regulations:
- SARA Section 313 Toxic Release Chemicals
  - Isopropyl alcohol (mfg-strong acid process)(CAS 67-63-0)

Additional information: DO NOT USE THIS PRODUCT FOR CLEANING SKIN AND CLOTHES!

16  Other Information

Hazardous Materials Information Label (HMIS)
- Health: 1
- Flammability: 0
- Physical Hazard: 0

NFPA Hazard Ratings
- Health: 1
- Flammability: 0
- Reactivity: 0
- Unique Hazard: Not Applicable

Only for industrial application - not for private use

Disclaimer of Liability
THE INFORMATION IN THIS MSDS WAS OBTAINED FROM SOURCES WHICH WE BELIEVE ARE RELIABLE. HOWEVER, THE INFORMATION IS PROVIDED WITHOUT ANY REPRESENTATION OR WARRANTY, EXPRESS OR IMPLIED, REGARDING ITS ACCURACY OR CORRECTNESS. THE CONDITIONS OR METHODS OF HANDLING, STORAGE, USE AND DISPOSAL OF THE PRODUCT ARE BEYOND OUR CONTROL AND MAY BE BEYOND OUR KNOWLEDGE. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THE PRODUCT.