IMPORTANT: Read this MSDS before handling and disposing of this product and pass this information on to employees, customers and users of this product.

INFOTRAC 24 HOUR EMERGENCY RESPONSE NUMBER: 1-800-535-5053

SECTION 1. GENERAL INFORMATION
TRADE NAME: AAW 0241
GENERIC NAME: Orange Water-Based Ink

CHEMICAL CHARACTERIZATION: Mixture of water, polar organic solvents, dye, and auxiliaries.

SECTION 2. INGREDIENTS

<table>
<thead>
<tr>
<th>COMPONENTS</th>
<th>CAS Number</th>
<th>Content %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ammonia solution (25%)</td>
<td>1336-21-6</td>
<td>1-2</td>
</tr>
</tbody>
</table>

SECTION 3. HAZARDOUS IDENTIFICATION

Possible noticeable symptoms on humans:
Ammonia solution (25%): Has a caustic effect for the skin and the mucous membranes of the eyes and of the respiratory system. Causes burns. Swallowing can lead to stomach trouble, stomach-ache, collapse, shock and loss of consciousness.

SECTION 4. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form</td>
<td>Liquid</td>
</tr>
<tr>
<td>Color</td>
<td>Orange</td>
</tr>
<tr>
<td>Odor</td>
<td>characteristic</td>
</tr>
<tr>
<td>Boiling point</td>
<td>79°C - 110°C</td>
</tr>
<tr>
<td>Melting point</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash point</td>
<td>&gt; 55°C</td>
</tr>
<tr>
<td>Autoignition point</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive limits</td>
<td>lower: No data available, upper: No data available</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor density</td>
<td>&gt; 1 (air=1)</td>
</tr>
<tr>
<td>pH value</td>
<td>9-10</td>
</tr>
<tr>
<td>Density</td>
<td>~1.042g/ml</td>
</tr>
<tr>
<td>Bulk density</td>
<td>Not applicable due to physical condition</td>
</tr>
<tr>
<td>Viscosity</td>
<td>~2.75 mPas</td>
</tr>
<tr>
<td>Solubility in water</td>
<td>Miscible</td>
</tr>
<tr>
<td>Miscible in</td>
<td>No data available</td>
</tr>
<tr>
<td>Solvent content</td>
<td>&lt;5%</td>
</tr>
</tbody>
</table>

SECTION 5. FIRST AID MEASURES

General advice:
Take off immediately all contaminated clothing. If there is a risk that person is losing consciousness, lay person down and move person safely on their side.
Inhalation:
Move person to fresh air. If there is respiratory distress, give artificial respiration and seek medical attention.

Skin contact:
Wash affected area with soap and copious amounts of water.

Eye contact:
Remove contact lenses if applicable. Rinse immediately with copious amounts of water (at least 15 minutes long), holding eyelids apart. Seek medical attention.

Ingestion:
Have the person rest. Seek immediately medical attention. Have the person drink water (200 ml). DO NOT INDUCE VOMITING. NO MILK. NO CASTOR OIL.

SECTION 6. FIRE FIGHTING MEASURES
The vapors of the solvents are heavier than air and collect on the ground. The product is flammable. Contact with air may lead to explosive mixtures. The product is miscible in water.

Extinguishing media:
To be used: Alcohol resistant foam, carbon dioxide, dry powder, water fog and water spray
Do not use: Water jet

Hazard due to gas formation and/or decomposition products:
A fire can generate the following gases: Carbon oxide, nitrogen oxide and other by part irritating combustion vapors.

Special protective equipment during fire fighting:
Wear self-contained breathing apparatus with pressure equipment as well as complete protective clothing. Prevent water used for fire fighting from entering sewers or ground water.

SECTION 7. ACCIDENTAL RELEASE MEASURES

Personal Protection:
Avoid sources of ignition. Do not smoke. Do not breath in vapors/aerosol. Avoid contact with eyes and skin. Wear appropriate protective gloves (latex, vinyl, nitril are only resistant to a limited extent; butyl rubber is resistant.) Wear safety glasses/goggles. If no exhauster available, wear breathing filter (Class A brown).

Environmental protection:
Prevent vapors from developing by covering with damp cloth. Do not allow to enter sewers, basement or ground water. In case of emergency, stem by using appropriate measures. Keep away from sources of ignition.

After spillage/leakage:
Absorb spills with non-combustible, liquid-binding material (such as sand, silica gel, multi-purpose binding agent, Oil-Dry®). Clean with water. Dispose of product and of all cloth and cleaning agents contaminated by the product in accordance with applicable regulations.

Further information:
Product contains Ammonia and is miscible with water.

SECTION 8. HANDLING AND STORAGE

Handling:
Take usual precautionary measures when handling chemicals. Wear appropriate gloves and eye protection. Open and handle container with care. Air thoroughly and if necessary care for exhauster or breathing filter. Do not smoke, eat or drink. Take measures against static discharges. Preventive skin protection is recommended. Wash hands with copious amounts of water at end of work.

Storage:
Store product in a cool, approved area and keep it in its original container, tightly closed. Air thoroughly. Keep away from sources of ignition and from fire-activating materials. Protect against strong heating and sunshine. Recommended storage temperature: +15°C - 25°C

Keep away from frost!
SECTION 9. PERSONAL PROTECTION

Exposure Limits:

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS NO.</th>
<th>ACGIH</th>
<th>OSHA - PEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ammonia solution (25%)</td>
<td>1336-21-6</td>
<td>25 ppm</td>
<td>50 ppm</td>
</tr>
</tbody>
</table>

Personal Protective equipment:

Protective means must be selected according to work-specific conditions and to the concentration of hazardous ingredients. The resistance of the protective means to chemicals should be evaluated with the respective supplier.

Respiratory protection:
If no exhauster available, wear breathing filter (Class A brown).

Protective gloves:
Wear impermeable protective gloves (Butyl rubber). Latex gloves are only resistant to a limited extent. Preventive skin protection.

Eye protection:
Wear safety glasses/goggles with lateral protection.

Protective clothing:
Wear long-sleeved, antistatic, hardly inflammable clothes.

Hygiene measures:
Keep away from food, drink and animal feed. Wash hands at breaks and end of day. Do not eat, drink or smoke around product.

DO NOT USE THIS PRODUCT FOR CLEANING SKIN OR CLOTHES.

SECTION 10. STABILITY AND REACTIVITY

Stability: Product is stable.

Conditions to avoid: Strong heat (≥45°C) and/or sunshine

Substances to avoid: Strong acids and alkaline solutions, oxidizing and reducing substances

Hazardous reactions: With acids, alkaline solutions, oxidizing and reducing substances

Hazardous decomposition: Carbon oxide, nitrogen oxide

SECTION 11. DISPOSAL INFORMATION

In compliance with local, state and federal regulations. The product should not be allowed to enter sewers or water streams.

SECTION 12. TOXICOLOGICAL INFORMATION

Ammonia solution (25%) Unit

<table>
<thead>
<tr>
<th>Acute toxicity</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 : Acute/oral/rat:</td>
<td>350 mg/kg</td>
</tr>
<tr>
<td>LD50 : Acute/dermal/rabbit:</td>
<td>No data available mg/kg</td>
</tr>
<tr>
<td>LD50 : Inhalation/rat:</td>
<td>1.4 mg/Litre/4h</td>
</tr>
</tbody>
</table>

Related or prolonged contact with the skin may cause skin eruptions and dermatitis. Critical amounts can be taken up due to absorption through the skin. Inhalation causes headache, daze, drowsiness and perceptive trouble. Eye contact can cause strong irritation and edema of the cornea. Can cause liver, kidney and central nervous system injuries. If breathed in when swallowed or vomited out, may cause sever lung damage.
SECTION 13. TRANSPORT INFORMATION
Transport in accordance with ADR for road, RID for rail, IMDG for sea, ICAO/IATA for air.
No dangerous goods.

SECTION 14. REGULATORY INFORMATION
SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 (SARA) TITLE III TOXIC CHEMICAL(S) SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF TITLE III AND/OR OF 40 CFR 372.

Ammonia solution (25%) 1336-21-6

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