1. Identification

Product name: aquaSAVE-53za
Chemical name/Common Product name: -
Recommended use/Restriction of use: Antistatic coating
Manufacturer: Mitsubishi Rayon Co., Ltd.
Address: 1-1, Marunouchi 1-Chome, Chiyoda-ku, Tokyo 100-8253, Japan
Phone number: +81-3-6748-7546～7547 (Specialty Chemicals Department I )
Fax number: +81-3-3286-1386 (Specialty Chemicals Department I )
Emergency phone number: +81-3-6748-7501 (MMA Administration Office)
(Monday – Friday, 9:30 a.m.~6:00 p.m. Japan Time)

2. Hazard Identification

GHS Classification
Physical Hazards
- Flammable liquids – Category 3
Health Hazards
- Reproductive toxicity – Category 2
- Specific target organ toxicity – single exposure – Category 2 (kidney, systemic toxicity, central nervous system)
Environmental Hazards

* GHS classification without description: “not subject to classification” / “classification not possible”

GHS label elements
Symbols:

Signal word: Warning

Hazard Statements
- Flammable liquid and vapour
- Suspected of damaging fertility or the unborn child
- May cause damage to organs (kidney, systemic toxicity, central nervous system)

Precautionary Statements
Prevention:
- Obtain special instructions before use.
- Do not handle until all safety precautions have been read and understood.
- Keep container tightly closed.
- Keep away from heat/sparks/open flames/hot surfaces. – No smoking.
- Wear protective gloves/eye protection/face protection.
- Use personal protective equipment as required.
- Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools.
- Do not breathe mist/vapours/spray.
- Wash hands thoroughly after handling.
- Do not eat, drink or smoke when using this product.

Response:
- In case of fire: Use appropriate extinguishing media for extinction.
- IF ON SKIN (or hair): Remove take/ off immediately all contaminated clothing.
- Rinse skin with water/shower.
- IF exposed or concerned: Get medical advice/attention.

Storage:
- Store in a well-ventilated place. Keep cool. Store locked up.
MITSUBISHI RAYON CO., LTD.

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Disposal:
Dispose of contents/container in accordance with local/regional/national
/international regulations.
Other hazards which do not result in classification
Safety Hazards: May ignite by heat/sparks/open flames.

3. Composition/Information on ingredients
Substance/Mixture: Mixture

<table>
<thead>
<tr>
<th>Components</th>
<th>Wt%</th>
<th>CAS Registry Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poly(aniline sulfonic acid)</td>
<td>1–6</td>
<td>TRADE SECRET</td>
</tr>
<tr>
<td>Isopropyl alcohol</td>
<td>6–11</td>
<td>67–63–0</td>
</tr>
<tr>
<td>Water</td>
<td>88–93</td>
<td>7732–18–5</td>
</tr>
</tbody>
</table>

4. First aid measures
Inhalation: Remove to fresh air and keep at rest. Keep patient warm.
If breathing stops, administer artificial respiration.
If there is breathing difficulty, give oxygen. Get immediate medical attention and provide MSDS.
Skin contact: Immediately wash with plenty of water. Remove clothing under water stream. Then, wash with soap and water. Discard contaminated clothing and shoes. Get immediate medical attention if the appearance of the skin changes or if irritation persists.
Eye contact: If possible, remove contact lenses. Flush with clean water for at least 15 minutes. Wash sufficiently the back of the eyelids, too. Get immediate medical attention and provide MSDS.
Ingestion: Get immediate medical attention and provide MSDS. Do not induce vomiting. Dilute by giving a glass of milk or water. Never give anything by mouth to an unconscious person.
Most important symptoms/effects, acute and delayed: Inhalation may cause dizziness, nausea or choking; and nose and throat irritation. Skin or eye contact may cause irritation. Swallowing may cause nausea or vomiting.
Indication of immediate medical attention and special treatment needed: None

5. Fire Fighting Measures
Suitable extinguish media: Foam, CO₂, Dry Chemical, Dry Sand
Unsuitable extinguish media: Do not use water jet as this may spread the fire.
Special Hazards: Flammable liquid and vapour. Sealed containers can explode in the heat of fire. Vapours may travel to ignition source because they are heavier than air. Run off may create an explosion, fire, and environment hazard.
Fire-fighting procedures: Keep persons not directly involved in fire-fighting out of the area. Use dry chemicals, CO₂ extinguisher, dry sand etc. to extinguish small fires. In case of large fires, deprive the fire of a source of oxygen using a foam extinguisher or by other appropriate means. In case of a fire near storage locations, move containers if safe to do so. If possible, use water spray to cool containers of the material and surrounding buildings.
Special protective actions for fire-fighters: Wear full protective equipment and self-contained breathing apparatus.
6. Accidental Release Measures
Personnel precautions, protective equipment and emergency procedures:
Wear protective equipment and operate upwind during clean up operations.
Isolate hazard area and deny entry to unnecessary and unprotected personnel.
Ventilate area of leak or spill. Remove all ignition sources and any flammable materials from
the surrounding area. Prepare extinguishing media in the case of accidental fire.
Environment protection measures: Prevent runoff to drains, ditches or sewage systems
leading to rivers, lakes, or other surface water. Prevent soil contamination.
If product is spilled into the river or public sewer, immediately notify the relevant authorities.
Methods and materials for containment and cleaning up:
Small Spills : Absorb spill with waste cloth or other materials (e.g., vermiculite
or dry sand), then collect into a container using spark-proof tools.
Clean the spilled area with 60–70% ethanol and absorb residues with waste cloth.
Then, flush the area with soap and water.
Large Spills : Block the flow of liquid with earth or sand, then collect as much of
the material into empty containers as possible using spark-proof tools.
Dispose spilled product and contaminated material as waste according to Section 13.

7. Handling and Storage
Precautions for safe handling:
Handle containers of the material carefully. Do not overturn, drop, strike or drag containers.
Keep away from heat, fire, open flames, and all ignition sources.
Handle only in well ventilated areas.
Wear adequate protective equipment. See ~ Section 8.
Avoid contact with eyes, skin, and clothing. Avoid breathing vapours.
Close the container tightly after use.
Ground equipment (fluid transfer, pumping and stirring devices) to prevent electrostatic hazards.
Use only explosion-proof electric appliances and devices. Use only non-sparking tools.
Wear anti-static clothing and footwear.
Contaminated personal protective equipment (e.g., protective gloves) should not be removed from
the work area. Wash hands thoroughly after handling and before eating, drinking or smoking.
Conditions for safe storage, including any incompatibilities:
Keep the product in the original containers. Store in cool, dry, well-ventilated,
low fire risk area away from direct sunlight. Keep containers closed.
Keep away from strong oxidizing agents, acid and bases.
Keep out of reach of children. Keep away from feed, food and drinking water.
Avoid pressure build-up in containers. Storage area should not be subject to rapid
temperature changes as such changes may cause increased internal pressure.
Avoid long storage periods.

8. Exposure controls/personal protection
Control parameters (Occupational exposure limits):

<table>
<thead>
<tr>
<th>Components</th>
<th>ACGIH TLV-TWA</th>
<th>ACGIH TLV-STEL</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isopropl alcohol</td>
<td>200ppm</td>
<td>400ppm</td>
<td>2009</td>
</tr>
</tbody>
</table>

*Blanks means that exposure limits have not been set.

Appropriate engineering controls: If the product is used indoors, use automatic
application equipment, local exhaust ventilation and/or other means to prevent
worker exposure.
Use explosion-proof equipment. Install proper exhaust systems to prevent
high vapour concentrations.
If an area, where the product is used, has poor ventilation (tank bottom, etc.), install ventilation
systems before beginning work.
Install a safety shower, wash basin and eye bath near the handling and work areas.
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Indicate the locations of these facilities clearly and prominently.

Personal protective equipment
Eye/face protection:
Wear chemical safety goggles. Wear face shield in addition to chemical safety goggles where splashing is possible.
Spectacle-type safety glasses do not provide sufficient protection.

Skin protection:
Wear appropriate chemical resistant gloves and footwear.
Wear additional appropriate protection including use of apron, face shield or full body protection to prevent skin contact where splashing is possible.

Respiratory protection:
In case of brief exposures or prolonged exposure to low vapour concentrations, use respirators with organic vapour cartridges.
In case of intensive exposure or for emergencies, use a self-contained breathing apparatus (SCBA). Use a NIOSH approved respirator or equivalent.

Other requirements for protection: All protective equipment should be inspected periodically.

9. Physical and chemical properties
Appearance: Brown liquid
Odor: Alcohol odor
Odor threshold: Not available.
PH: 1-5
Melting point/freezing point: Not available.
Initial boiling point and boiling range: (83°C:isopropyl alcohol)
Flash point: 39.4°C (closed cup)

Upper/lower flammability limits:

<table>
<thead>
<tr>
<th>Components</th>
<th>Lower (vol%)</th>
<th>Upper (vol%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isopropyl alcohol</td>
<td>2</td>
<td>12</td>
</tr>
</tbody>
</table>

Vapour pressure: Not available. (4.4kPa(20°C):isopropyl alcohol)
Vapour density: Not available.
Specific gravity: Not available.
Solubility in Water: Soluble
Partition coefficient: n-octanol/water: Not available.
Auto-ignition temperature: Not available.
Decomposition temperature: Not available.
Viscosity: 1-5 mPa·s (25°C)
% Volatile: 94-99wt%

10. Stability and reactivity
Chemical stability: Stable under normal conditions.
Possibility of hazardous reactions: May react vigorously with strong oxidizing agents and may ignite.
Conditions to avoid: Avoid heat, high temperatures, open flames, all ignition sources, and exposure to direct sunlight.
Incompatible materials: Oxidizing agents
Hazardous decomposition products: At elevated temperatures, decomposition may occur resulting in the release of smoke, carbon monoxide, carbon dioxide, and other toxic gases.
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## 11. Toxicological information

| Information on the routes of exposure: | Oral, inhalation. |
| Acute oral toxicity:                  | Not available.    |
| Acute dermal toxicity:               | Not available.    |
| Acute inhalation toxicity:           | Not available.    |
| Skin corrosion/irritation:           | Not classified as a skin irritant. |
| Serious eye damage/irritation:       | Not classified as an eye irritant. |
| Respiratory or skin sensitization:   | Not available.    |
| Germ cell mutagenic:                 | Not available.    |
| Reproductive toxicity:               | Not available.    |
| STOT—single exposure:                | Not available.    |
| STOT—repeated exposure:              | Not available.    |
| Aspiration hazard:                   | Not available.    |

* Please refer to the classifications in Section 2 “Hazard Identification” regarding health hazards.

### Symptoms related to the physical, chemical and toxicological characteristics:

- May cause respiratory irritation, drowsiness, dizziness, nausea, headache or choking.
- May cause eye irritation.

## 12. Ecological information

| Ecotoxicity:                          | Not available.    |
| Persistence and degradability:       | Not available.    |
| Bioaccumulative potential:           | Not available.    |
| Mobility in soil:                    | Not available.    |
| Other adverse effects:               | May harmful to aquatic life |

Do not allow product or effluent containing it to reach sewage systems, rivers, lakes, ocean, ground or surface water.

## 13. Disposal consideration

| Disposal methods:                    | Dispose of unused contents, container and other wastes in accordance with all applicable regulations. Follow precautions given in section 7. Exercise caution during disposal operations as this product is flammable. See flash point (section 9) When disposing unused contents, container, effluent containing the product, spilled products or contaminated materials, use only qualified waste management companies. When incinerating small amounts of this product, absorb product using sawdust or other materials, and burn slowly. Burning/incineration will produce toxic gases. Use incinerators with exhaust gas treatment devices. Use incinerators approved by local/national regulations. |

## 14. Transport Information

| UN Number:                           | 1139 |
| UN Proper Shipping Name:             | COATING SOLUTION |
| Transport hazard class:              | Class 3 |
| Packing group:                       | III |
| Environmental hazards:               | No |
| Marine pollutant(Yes/No):            | No |

### Special precautions for transportation:

- Transport with appropriate personal protective equipment and fire extinguishers.
- Avoid leaks of the product. Handle containers carefully; do not overturn, drop, strike or drag containers.
- Keep away from strong oxidizers, acid and bases.
- Avoid direct sunlight and transportation under high temperatures.
15. Regulatory information
   Follow all regulations in your country.

16. Other information
   Literature:
   (1) MSDS, Material Data Base (paint); Japan Paint Manufacturers Association
   (2) Database, Japan Chemical Database Ltd.
   (3) Information from MSDS of raw materials.
   (4) Globally Harmonized System of Classification and Labelling of chemicals (GHS)
       (second revised edition); United Nations

Disclaimer: Information in this MSDS is based on our present knowledge.
However, this MSDS shall not constitute a warranty for any specific product features
and shall not establish a legally valid contractual relationship.
The precautions given herein apply to normal handling.
For handling under specific condition, users are responsible for implementing
adequate safety measures.