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| DOCUMENT #:<br>F/RPI/QC 7.7.3-02 | Product Name: TS-2 Tissue and Gel Solubilizer                              |                         | RPI ITEM NO: 112001          |

### **SECTION 1 - CHEMICAL IDENTIFICATION**

PRODUCT NAME: TS-2 Tissue and Gel Solubilizer  
 RPI CATALOG #: 112001  
 SUPPLIER'S NAME: Research Products International Corp.  
 SUPPLIERS ADDRESS: 410 N Business Center Drive Mount Prospect, IL 60056  
 EMERGENCY CONTACT: 1-800-424-9300  
 OTHER INFORMATION: 847-635-7330

### **SECTION 2 - HAZARDS IDENTIFICATION**

#### **2.1 Classification of the substance or mixture** **GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)**

|      |  |             |
|------|--|-------------|
| H224 | Flammable liquids                      | Category 1  |
| H302 | Acute toxicity, Oral                   | Category 4  |
| H314 | Skin corrosion                         | Category 1B |
| H336 | Specific target organ toxicity, single | Category 3B |

#### **2.2 GHS Label elements, including Hazard and Precautionary Statement(s)** **Pictogram**



**Signal word: Danger**  
**Hazard statement(s)**

|      |  |
|------|--|
| H224 | Extremely Flammable liquid and vapour    |
| H302 | Harmful if swallowed                     |
| H314 | Causes severe skin burns and eye damage. |
| H336 | May cause drowsiness or dizziness        |

#### **Prevention, Response, Storage and Disposal Precautionary Statement(s)**

|      |  |
|------|--|
| P210 | Keep away from heat/sparks/open flames/hot surfaces. No smoking. |
| P233 | Keep container tightly closed.                                   |
| P240 | Ground/bond container and receiving equipment.                   |
| P241 | Use explosion-proof electrical/ventilating/lighting/equipment    |
| P242 | Use only non-sparking tools.                                     |
| P243 | Take precautionary measures against static discharge             |
| P261 | Avoid breathing dust/fume/gas/mist/vapors/spray.                 |
| P264 | Wash skin thoroughly after handling                              |
| P270 | Do not eat, drink or smoke when using this product.              |
| P271 | Use only outdoors or in a well-ventilated area.                  |

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|                  |  |
|------------------|--|
| P280             | Wear protective gloves/protective clothing/eye protection/face protection.   |
| P301 + P312      | IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.   |
| P301+ P330+ P331 | IF SWALLOWED: rinse mouth. Do NOT induce vomiting.   |
| P303+ P61+ P353  | IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.                     |
| P304 + P340      | IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.                                 |
| P305+ P351+ P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P310             | Immediately call a POISON CENTER or doctor/ physician.   |
| P321             | Specific treatment (see. on this label).   |
| P330             | Rinse mouth.   |
| P363             | Wash contaminated clothing before reuse  |
| P370 + P378      | In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction   |
| P403 + P233      | Store in a well-ventilated place. Keep container tightly closed.   |
| P403 + P235      | Store in a well-ventilated place. Keep cool.   |
| P405             | Store locked up.   |
| P501             | Dispose of contents/ container to an approved waste disposal plant.  |

### **SECTION 3- COMPOSITION/INFORMATION ON INGREDIENTS**

| <b>Component</b>                           | <b>CAS Number</b> | <b>Composition %age</b> |
|--|-------------------|-------------------------|
| Propan-2-ol                                | 67-63-0           | 70.0 – 80.0             |
| N,N-dialkyl-N,N-dimethylammonium hydroxide | N/A (mixture)     | 15.0 – 30.0             |
| Water                                      | 7732-18-5         | 15.0 – 25.0             |

### **SECTION 4 - FIRST-AID MEASURES**

#### **4.1 Description of first aid measures**

**General advice:** Consult a doctor and show this safety data sheet.

- i. **If inhaled:** Remove to fresh air and monitor breathing. If breathing becomes difficult, give oxygen. If breathing stops, give artificial respiration. Consult a doctor.
- ii. **In case of skin contact:** Immediately wash skin with copious amounts of soap and water for at least 15 minutes. Remove contaminated clothing and shoes and wash before reuse. Consult a doctor.
- iii. **In case of eye contact:** Flush with copious amounts of water for at least 15 minutes. Consult a doctor.
- iv. **If swallowed:** Rinse mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Consult a doctor.

**4.2 Most important symptoms and effects, both acute and delayed:** To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated.

|                                  |  |                         |                              |
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**4.3 Indication of immediate medical attention and special treatment needed:** Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.

#### **SECTION 5 - FIRE FIGHTING MEASURES**

##### **5.1 Extinguishing media**

**Suitable extinguishing media:** Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide

**5.2 Special hazards arising from the substance or mixture:** No data available.

**5.3 Precautions for fire-fighters:** Wear suitable protective clothing to prevent contact with skin and eyes and self-contained breathing apparatus.

**5.4 Further information:** No data available

#### **SECTION 6 - ACCIDENTAL RELEASE MEASURES**

**6.1 Personal precautions, protective equipment and emergency procedures:** Do not take action without suitable protective clothing - see section 8 of SDS. Evacuate personnel to safe areas. Ensure adequate ventilation. Avoid breathing vapors, mist, dust or gas.

**6.2 Environmental precautions:** Do not let product enter drains.

**6.3 Methods and materials for containment and cleaning up:** Cover spillage with suitable absorbent material. Using non-spark tools, sweep up material and place in an appropriate container. Decontaminate spill site with 10% caustic solution and ventilate area until after disposal is complete. Hold all material for appropriate disposal as described under section 13 of SDS.

**6.4 Reference to other sections:** For required PPE see section 8. For disposal see section 13.

#### **SECTION 7 - HANDLING AND STORAGE**

**7.1 Precautions for safe handling:** Use in a chemical fume hood, with air supplied by an independent system. Avoid inhalation, contact with eyes, skin and clothing. Avoid the formation of dust and aerosols. Use in a well-ventilated area. Keep away from sources of ignition. Avoid prolonged or repeated exposure.

**7.2 Conditions for safe storage, including any incompatibilities:** Store in cool, well-ventilated area. Keep away from direct sunlight. Keep container tightly sealed until ready for use. Keep in a dry place. Keep away from direct sunlight. Keep away from sources of ignition. Flammable liquids.

**7.3 Specific end use(s):** Use in a laboratory fume hood where possible. Refer to employer's COSHH risk assessment.

#### **SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION**

##### **8.1 Control parameters: Components with workplace control parameters**

| Component         | ACGIH TLV                     | OSHA PEL  | NIOSH IDLH  |
|-------------------|-------------------------------|---|---|
| Isopropyl Alcohol | TWA: 200 ppm<br>STEL: 400 ppm | (Vacated) TWA: 400 ppm<br>(Vacated) TWA: 980 mg/m <sup>3</sup><br>(Vacated) STEL: mg/m <sup>3</sup><br>(Vacated) STEL: 1225 mg/m <sup>3</sup><br>TWA: 400 ppm | IDLH: 2000 ppm<br>TWA: 400 ppm<br>TWA: 980 mg/m <sup>3</sup><br>STEL: 500 ppm<br>STEL: 1225 mg/m <sup>3</sup> |

|                                  |  |                         |                              |
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| Component         | Quebec  | Mexico OEL (TWA)   | Ontario TWAEV                 |
|-------------------|---|--|-------------------------------|
| Isopropyl Alcohol | TWA: 400 ppm<br>TWA: 985 mg/m <sup>3</sup><br>STEL: 500 ppm<br>STEL: 1230 mg/m <sup>3</sup> | TWA: 980 mg/m <sup>3</sup><br>TWA:400 ppm<br>TWA: 980 mg/m <sup>3</sup><br>STEL: 500 ppm<br>STEL: 1225 mg/m <sup>3</sup> | TWA: 200 ppm<br>STEL: 400 ppm |

- ❖ **ACGIH:** American Conference of Governmental Industrial Hygienists
- ❖ **OSHA:** Occupational Safety and Health Administration
- ❖ **NIOSH IDLH:** The National Institute for Occupational Safety and Health Immediately Dangerous to Life or Health

## 8.2 Exposure Controls

- i. **Appropriate engineering controls:** Use in a fume hood where applicable. Ensure all engineering measures described under section 7 of SDS are in place. Ensure laboratory is equipped with a safety shower and eye wash station.

## 8.3 Personal protective equipment

- i. **Eye/face protection:** Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).
- ii. **Skin protection:** Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166
- iii. **Body Protection:** Wear appropriate protective clothing. Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
- iv. **Respiratory Protection:** Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.
- v. **Control of environmental exposure:** Do not let product enter drains

## SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

|                                    |                   |                                  |                   |
|------------------------------------|-------------------|----------------------------------|-------------------|
| <b>Appearance</b>                  | Colorless Liquid  | <b>Vapor Pressure @ 20.0 °C</b>  | 35mm Hg           |
| <b>Odor</b>                        | No Data Available | <b>Vapor Density</b>             | No Data Available |
| <b>Odor Threshold</b>              | No Data Available | <b>Relative Density</b>          | 0.83              |
| <b>pH</b>                          | No Data Available | <b>Water Solubility</b>          | No Data Available |
| <b>Melting / Freezing Point</b>    | No Data Available | <b>Partition Coefficient</b>     | No Data Available |
| <b>Initial Boiling Point Range</b> | 82 °C             | <b>Auto-Ignition Temperature</b> | 399.0 °C          |
| <b>Flash Point</b>                 | 12 °C             | <b>Decomposition Temperature</b> | No Data Available |
| <b>Evaporation Rate</b>            | No Data Available | <b>Viscosity</b>                 | No Data Available |
| <b>Flammability (Solid, Gas)</b>   | No Data Available | <b>Explosive Properties</b>      | No Data Available |

|                                  |  |   |                              |
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|  |                   |                      |                   |
|--|-------------------|----------------------|-------------------|
| Upper / Lower Flammability Or Explosive Limits | No Data Available | Oxidizing Properties | No Data Available |
|--|-------------------|----------------------|-------------------|

### **SECTION 10 - STABILITY AND REACTIVITY**

**Stability:** Stable under recommended storage conditions.

**Conditions to Avoid:** Moist, Air, Heat, Sources of Ignition, Light.

**Incompatibilities Materials:** Acids, Bases, Ammonia, Ethylene oxide, Isocyanates, Acetaldehyde, Chloride, Phosgene.

### **SECTION 11 - TOXICOLOGICAL INFORMATION**

#### **Acute Toxicity**

| LD50 Oral          | LD50Dermal           | LD50 Vapour toxicity |
|--------------------|----------------------|----------------------|
| > 2000 mg/kg (Rat) | >2000 mg/kg (Rabbit) | >20mg/l( Rat )       |

### **SECTION 12 - ECOLOGICAL INFORMATION**

**Eco Toxicity:LC50 –DAPHNIA:** 4600 mg/l - 24H-----**LC50 –FISH:** 9600mg/l- 96H

**Persistence and degradability/ Bioaccumulative potential:** No data available

**Mobility / Results of PBT and vPvB assessment:** No data available

**Other adverse effects:** No data available

**Chronic Toxicity:** There are no known carcinogenic chemicals in this product

### **SECTION 13 - DISPOSAL CONSIDERATIONS**

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

### **SECTION 14 - TRANSPORT INFORMATION**

|                 | UN#  | Proper Shipping Name                           | Transport Hazard Class | Sub Class | Packaging Group |
|-----------------|------|--|------------------------|-----------|-----------------|
| <b>DOT</b>      | 2920 | Corrosive Liquid, Flammable, N.O.S. (Goldisol) | 8                      | 3         | II              |
| <b>TDG</b>      | 2920 | Corrosive Liquid, Flammable, N.O.S. (Goldisol) | 8                      | 3         | II              |
| <b>IATA</b>     | 2920 | Corrosive Liquid, Flammable, N.O.S. (Goldisol) | 8                      | 3         | II              |
| <b>IMDG/IMO</b> | 2920 | Corrosive Liquid, Flammable, N.O.S. (Goldisol) | 8                      | 3         | II              |

### **SECTION 15 - REGULATORY INFORMATION**

#### **INTERNATIONAL INVENTORIES**

| REDIENT: Water |        |      |        | CAS #:7732-18-5 |        |      | EINECS: 231-791-2 |        |        |
|----------------|--------|------|--------|-----------------|--------|------|-------------------|--------|--------|
| TSCA           | DSL    | NDSL | ELINCS | NLP             | PICCS  | ENCS | AICS              | CHINA  | KECL   |
| Listed         | Listed | -    | -      | -               | Listed | -    | Listed            | Listed | Listed |

|                                  |  |   |                              |
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|                               |        |      |        |                |        |        |                   |        |        |
|-------------------------------|--------|------|--------|----------------|--------|--------|-------------------|--------|--------|
| INGREDIENT: Isopropyl alcohol |        |      |        | CAS #: 67-63-0 |        |        | EINECS: 200-661-7 |        |        |
| TSCA                          | DSL    | NDSL | ELINCS | NLP            | PICCS  | ENCS   | AICS              | CHINA  | KECL   |
| Listed                        | Listed | -    | -      | -              | Listed | Listed | Listed            | Listed | Listed |

**USA FEDERAL REGULATION**

**SARA 311/312 HAZARDOUS CATEGORIZATION**

|                     |                       |             |                                   |                 |
|---------------------|-----------------------|-------------|-----------------------------------|-----------------|
| Acute Health Hazard | Chronic Health Hazard | Fire Hazard | Sudden Release Of Pressure Hazard | Reactive Hazard |
| Yes                 | Yes                   | Yes         | No                                | No              |

**SARA 313 HAZARDOUS CATEGORIZATION:** No Hazard Class  
**Clean Water Act/ Clean Air Act/ TSCA 12(b)/ OSHA/ CERCLA:** Not Applicable  
**California Proposition 65:** This product does not contain any Proposition 65 chemicals.

**HMIS Rating**

|               |                       |              |                 |
|---------------|-----------------------|--------------|-----------------|
| Health hazard | Chronic Health Hazard | Flammability | Physical Hazard |
| 2             | *                     | 3            | 0               |

**NFPA Rating**

|               |             |                   |
|---------------|-------------|-------------------|
| Health hazard | Fire Hazard | Reactivity Hazard |
| 2             | 3           | 0                 |

**STATE RIGHT TO KNOW**

|                   |               |            |              |          |              |
|-------------------|---------------|------------|--------------|----------|--------------|
| Component         | Massachusetts | New Jersey | Pennsylvania | Illinois | Rhode Island |
| Isopropyl alcohol | Listed        | Listed     | Listed       | -        | Listed       |

**US DEPARTMENT OF TRANSPORTATION**

|                          |                      |                            |
|--------------------------|----------------------|----------------------------|
| REPORTABLE QUANTITY (RQ) | DOT MARINE POLLUTANT | DOT SEVER MARINE POLLUTANT |
| Yes                      | No                   | No                         |

**U.S. DEPARTMENT OF HOMELAND SECURITY:** This product does not contain any DHS chemicals.

**Canada:** This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all the information required by the CPR.

**This SDS complies with the requirements of Regulation (EC).**

**SECTION 16 - OTHER INFORMATION**

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. Research Products International Corp. shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. This product is sold for laboratory research and development purposes use only.