SORBITOL
MSDS

1. Chemical Product and Company Identification

- **Product Name:** Sorbitol Solution (typically 70% w/v in water)
- **Synonyms:** D-Sorbitol, Glucitol
- **Chemical Formula:** $C_6H_{14}O_6$ (active ingredient)
- **CAS Number:** 50-70-4

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2. Composition / Information on Ingredients

Component	CAS No.	% by Weight
Sorbitol (D-glucitol)	50-70-4	~70%
Water	7732-18-5	~30%

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3. Hazards Identification

- **Hazard Classification:** Not classified as hazardous under GHS
- **Health Hazards:**
  - May cause slight eye irritation
  - Ingestion in large quantities may cause gastrointestinal discomfort
- **Environmental Hazards:** None known
- **Symbols:** None required
- **Routes of Exposure:** Skin, eyes, ingestion, inhalation (mists)

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4. First Aid Measures

- **Inhalation:** Move to fresh air. Get medical attention if symptoms persist.
- **Skin Contact:** Wash with soap and water.
- **Eye Contact:** Rinse immediately with plenty of water for at least 15 minutes.
- **Ingestion:** Rinse mouth. Seek medical attention if large quantities are swallowed.

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5. Fire-Fighting Measures

- **Suitable Extinguishing Media:** Water spray, foam, dry chemical, CO_2
- **Fire Hazards:** Non-flammable; may burn at high temperatures
- **Hazardous Combustion Products:** CO, CO_2

- **Protective Equipment:** Wear self-contained breathing apparatus and protective gear

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6. Accidental Release Measures

- **Personal Precautions:** Avoid contact with eyes and skin. Use PPE.
- **Spill Response:** Contain and absorb with inert material (e.g., sand), collect in suitable containers. Wash area with water.
- **Environmental Precautions:** Prevent entry into drains or watercourses

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7. Handling and Storage

- **Handling:** Avoid contact with eyes and prolonged skin exposure.
- **Storage:** Store in tightly sealed containers in a cool, dry, and well-ventilated place. Protect from heat.
- **Incompatible Materials:** Strong oxidizers

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8. Exposure Controls / Personal Protection

- **Exposure Limits:** Not established
- **Engineering Controls:** Adequate ventilation
- **Personal Protective Equipment (PPE):**
  - **Eyes:** Safety goggles
  - **Skin:** Gloves and lab coat
  - **Respiratory:** Use a dust/mist respirator if needed

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9. Physical and Chemical Properties

- **Appearance:** Clear, viscous, colorless liquid
- **Odor:** Odorless
- **pH:** ~6.0–7.5 (aqueous solution)
- **Boiling Point:** >100°C
- **Melting Point:** Not applicable (solution)
- **Solubility in Water:** Completely miscible
- **Density:** ~1.29 g/cm³ @ 20°C
- **Viscosity:** High (varies with concentration)

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10. Stability and Reactivity

- **Chemical Stability:** Stable under normal conditions
- **Incompatible Materials:** Strong oxidizers, acids
- **Conditions to Avoid:** Excessive heat
- **Hazardous Decomposition Products:** CO, CO_2 on combustion

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11. Toxicological Information

- **Oral LD_{50} (rat):** ~15,900 mg/kg (low toxicity)
- **Skin/Eye Irritation:** Mild irritant
- **Carcinogenicity:** Not listed by IARC, NTP, OSHA
- **Chronic Effects:** None known for typical use

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12. Ecological Information

- **Ecotoxicity:** Not expected to be harmful to aquatic or terrestrial life
- **Biodegradability:** Readily biodegradable
- **Bioaccumulation:** Not expected
- **Mobility in Soil:** High, due to water solubility

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13. Disposal Considerations

- **Disposal Methods:** Dispose of in accordance with local, regional, and national regulations
- **Waste Classification:** Non-hazardous
- **Container Disposal:** Triple rinse and recycle or dispose per local laws

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