

Material Safety Data Sheet (MSDS)

Product Name: Tween 80 Food Grade

MSDS Generate Date: 20-05-2017

Revision Date: 30-12-2024

Supplier:

Rawpharma Biz Pvt Ltd
1101- City Centre 2,
Science City Road,
Sola Ahmedabad Gujarat,
India - 380060.

Contact No.: +91 97272 88479

Email: info@rawpharmabiz.com

Website: www.rawpharmabiz.com

1. Identification of the Substance/Preparation and Company

- Product identifier: Tween 80 (Polysorbate 80) — Food Grade
- Uses: Emulsifier, surfactant in food and related formulations, stabilizer in pharmaceutical/food applications.

2. Hazard identification

- **GHS classification:** Not classified as a severe physical hazard. May be classified as **Eye Irritation — Category 2** (H319: Causes serious eye irritation) in some jurisdictions.
- **Signal word:** Warning (if eye irritation classification is applied).
- **Hazard statements:** H319 — Causes serious eye irritation (if applicable). Otherwise generally considered of low acute toxicity.
- **Precautionary statements (examples):** P264, P280, P305+P351+P338, P337+P313 — Wash hands after handling; wear eye/face protection; if in eyes rinse cautiously with water for several minutes; get medical advice if eye irritation persists.
- **Other hazards:** Not classified as a respiratory sensitizer or skin sensitizer in normal use. Not a flammable solid; combustible at elevated temperatures.

3. Composition / information on ingredients

- **Substance / Mixture:** Substance (technical mixture).
- **Main constituent:** Polysorbate 80 (Polyoxyethylene (20) sorbitan monooleate) — **CAS 9005-65-6**.
- **Concentration:** Food grade product — typically predominately polysorbate 80 (consult certificate of analysis for exact assay).
- **Impurities / additives:** May contain minor amounts of sorbitan esters, free sorbitol, and water. See product COA for specifications.

4. First aid measures

- **Inhalation:** Not expected to be an inhalation hazard under normal conditions. If mist/vapour inhaled, move person to fresh air. Seek medical attention if symptoms persist.
- **Skin contact:** Wash affected area with soap and water. If irritation develops or persists, get medical attention.
- **Eye contact:** Immediately flush eyes with water for at least 15 minutes, lifting eyelids occasionally. Remove contact lenses if present and easy to do. Seek medical attention if irritation continues.
- **Ingestion:** Rinse mouth. Do NOT induce vomiting unless directed by medical personnel. Seek medical advice if large amounts ingested or if symptomatic.
- **Notes to physician:** Treat symptomatically. No specific antidote.

5. Firefighting measures

- **Suitable extinguishing media:** Water spray, foam, dry chemical, CO₂.
- **Unsuitable extinguishing media:** Do not use water jet if product is burning and oil film creation would spread fire — use foam or dry chemical.
- **Specific hazards from the chemical:** On burning, may produce carbon oxides, smoke and irritating vapours. Aerosolization may occur if heated.
- **Protective equipment for firefighters:** Self-contained breathing apparatus (SCBA) and full protective clothing. Cool fire-exposed containers with water spray.

6. Accidental release measures

- **Personal precautions:** Use appropriate PPE (gloves, safety goggles). Avoid contact with eyes. Prevent slip hazards from spilled material.
- **Environmental precautions:** Prevent entry into drains, surface water, groundwater and soil. If product enters waterways notify appropriate authorities as required.
- **Methods for containment and cleanup:** Contain spill; absorb with inert material (e.g., sand, vermiculite). Collect into labeled containers for recovery or disposal. Wash area with water if appropriate; avoid creating runoff to drains. For large spills notify emergency services.

7. Handling and storage

- **Handling:** Good industrial hygiene: avoid contact with eyes. Use in well-ventilated areas. Avoid creating aerosols or mists. Wash hands after handling.
- **Storage:** Store in tightly closed containers in a cool, dry, well-ventilated place away from direct sunlight and extreme heat. Keep away from strong oxidizers. Recommended storage temperature: ambient to moderate (follow supplier guidance).
- **Materials to avoid:** Strong oxidizing agents. Avoid contamination with water if storage requires dryness (food grade form may be viscous liquid).

8. Exposure controls / personal protection

- **Occupational exposure limits:** No specific occupational exposure limit established in many jurisdictions. Follow general good practice and local regulations.
- **Engineering controls:** Provide adequate ventilation to maintain exposure below occupational limits (if present). Use local exhaust for dust/mist generation.
- **Personal protective equipment (PPE):**
 - **Eye protection:** Safety glasses with side shields or goggles.
 - **Skin protection:** Protective gloves (nitrile or neoprene) for repeated contact. Protective clothing as needed.
 - **Respiratory protection:** Normally not required; if aerosol/mist generated use suitable respirator (e.g., particulate/organic vapor as required).
 - **Hygiene:** Do not eat, drink or smoke during handling. Wash hands before breaks and at end of workday.

9. Physical and chemical properties

- **Appearance:** Viscous, pale yellow to amber liquid (food grade).
- **Odour:** Mild characteristic odour.
- **pH:** ~ 6–8 (aqueous 1% solution — value dependent on batch).
- **Boiling point / range:** Not applicable (decomposes before typical boiling behavior as industrial material).
- **Melting point / freezing point:** Viscous liquid at ambient.
- **Flash point:** Not readily flammable at room temperature; flash point typically > 200 °C (consult supplier data).
- **Evaporation rate:** Low.
- **Relative density / specific gravity:** Approx. 1.06–1.12 (batch dependent).
- **Solubility:** Miscible/soluble in water and many organic solvents.
- **Viscosity:** Viscous liquid (refer to product specification).
- **Other:** Non-volatile surfactant.

10. Stability and reactivity

- **Chemical stability:** Stable under recommended storage and handling conditions.
- **Conditions to avoid:** Excessive heat, contamination with strong oxidizers.
- **Incompatible materials:** Strong oxidizing agents, strong acids (may hydrolyse), strong bases in concentrated form.
- **Hazardous decomposition products:** Carbon oxides, smoke, and possibly small amounts of acrolein or aldehydes if thermally decomposed — typical combustion products.

11. Toxicological information

- **Acute toxicity:** Low acute toxicity by oral, dermal and inhalation routes in normal handling amounts. (Food grade use implies oral exposure in regulated small amounts).
- **Skin corrosion/irritation:** Not expected to be a primary skin irritant for most people; prolonged/repeated exposure may cause irritation in sensitive individuals.
- **Serious eye damage/irritation:** Can cause eye irritation — rinse thoroughly if exposed.

- **Respiratory or skin sensitisation:** Not generally considered a sensitizer; rare allergic responses possible.
- **Chronic toxicity / other:** No reliable evidence of carcinogenicity, mutagenicity, or reproductive toxicity from typical use levels. Refer to regulatory dossiers and product COA for details.
- **Toxicological data (examples):** See supplier technical dossier for specific LD50/TOX values (varies with test species and formulation).

12. Ecological information

- **Ecotoxicity:** Not classified as highly toxic to aquatic organisms at typical expected concentrations; biodegradable in the environment. However, high concentrations may cause adverse effects to aquatic life due to surfactant properties.
- **Persistence and degradability:** Readily biodegradable under aerobic conditions (consult specific biodegradability tests).
- **Bioaccumulation potential:** Low potential for bioaccumulation.
- **Mobility:** Soluble in water; may disperse. Prevent release to waterways.

13. Disposal considerations

- **Waste treatment methods:** Dispose of in accordance with local, regional and national regulations. Do not discharge into drains or waterways. Incineration or landfill via licensed contractor is typical. Empty containers may retain residues — handle as hazardous waste if contaminated. Obtain waste disposal advice from authorized waste disposal services.

14. Transport information

General statement: Tween 80 (Polysorbate 80) — food grade is **generally not regulated** as a dangerous good for transport under ADR (Europe), IMDG (sea), IATA/ICAO (air), and most national road transport regulations when shipped at ambient temperature in non-hazardous form. However, transport classification can vary by jurisdiction, product concentration, packaging and mode of transport. Below are detailed guidance and recommended precautions.

14.1 Regulatory transport classification (typical)

- **UN Number:** Not applicable / Not regulated (no UN number assigned) for standard commercial shipments of food-grade Polysorbate 80.
- **UN Proper Shipping Name:** Not regulated — “Not Classified as Dangerous Goods” for road/rail/sea/air (confirm with local regulations). If a transport rule requires a description,

use: *Polysorbate 80, not regulated.*

- **Transport hazard class(es):** Not classified as hazardous for transport under normal conditions.
- **Packing group:** Not applicable.

14.2 Road (ADR/RID) guidance

- **ADR/RID classification:** Not classified as dangerous for carriage by road/rail in most jurisdictions.
- **Packaging & labeling:** Use secure, intact UN-approved or food-grade containers appropriate for viscous liquids. Ensure containers are tightly sealed and labelled with product name, supplier and handling instructions. Even when not regulated, transport documentation should include Emergency Contact and a basic product description.
- **Special provisions/notes:** Avoid transporting mixed with strong oxidizers. If transported as part of a larger waste or reactive mixture, re-evaluate classification.

14.3 Sea transport (IMDG)

- **IMDG code:** Not regulated as a dangerous good under IMDG for standard commercial product.
- **Marine pollutant: Not a marine pollutant** (per typical definitions); if contaminated with hazardous substances, re-assess.
- **Stowage & segregation:** Stow away from strong oxidizers and incompatible materials. Prevent container damage that could lead to spills.

14.4 Air transport (IATA/ICAO)

- **IATA/ICAO:** Not classified as Dangerous Goods by air for standard formulations.
- **Packing instructions:** Use strong, leak-proof packaging suitable for air carriage if shipped by air. Follow airline/forwarder instructions for non-dangerous liquids.

14.5 Bulk transport and tanker guidance

- For bulk shipments (tankers or ISO tanks), ensure tank clean and compatible, properly ventilated per local requirements. Use materials of construction compatible with polysorbate (stainless steel recommended). Secure manways and valves. Avoid contamination with water if product specification requires dryness.

14.6 Emergency response guidance during transport

- **Spill during transport:** Contain spill (prevent runoff). For liquid spills, use absorbent material (sand, sawdust) and collect into labelled containers. Avoid discharge to drains

and waterways. Notify local emergency services if large spill threatens the environment.

- **Fire during transport:** Use appropriate extinguishers (foam or dry chemical). Cool containers with water from a safe distance. Firefighters should wear SCBA.
- **First aid for exposure during transport incidents:** Follow first aid measures in Section 4.

14.7 Documentation recommended to accompany shipment

- **Commercial invoice / packing list** with product name and net weight/volume.
- **Material Safety Data Sheet (this document)** or a concise transport safety data sheet.

14.8 Important caveats & local compliance

- **Always confirm the local, national and carrier-specific rules** before shipment. Although generally not regulated, certain carriers or countries may require specific documentation or packaging for surfactants or food-grade chemicals. If the product is mixed with other hazardous substances or if unusual packaging (e.g., aerosol) is used, transport classification may change.
- **For export/import shipments** check customs and regulatory requirements (e.g., ISPM, phytosanitary if relevant).
- **For hazardous waste consignment or contaminated product** re-evaluate transport classification and apply appropriate dangerous goods regulations.

15. Regulatory information

- **Regulatory status:** Food grade Polysorbate 80 is permitted for many food/pharmaceutical uses subject to local food regulation (e.g., maximum use levels). Comply with applicable food safety standards (e.g., local FSSAI, FDA, EU food additive rules) and label claims.
- **Label requirements:** Follow local labeling regulations for allergens, ingredients and food additive registration where applicable. Also comply with general workplace chemical labeling (GHS) if local authority requires.
- **Other regulations:** Observe national occupational safety and environmental regulations.

16. Other information

- **Disclaimer:** The information in this MSDS was compiled from sources believed to be reliable and is accurate to the best of RawPharmaBiz's knowledge as of the revision date. It is provided without warranty, express or implied, regarding its accuracy or completeness. Users must determine suitability for their own use. This MSDS does not

constitute a specification or guarantee of product properties. Follow local laws and regulations.

- **MSDS Generate Date:** 20-05-2017
- **Revision Date:** 30-12-2024
- **Website:** www.rawpharmabiz.com
- MSDS are based on the manufacturer's provided information.