

**QED Bioscience Inc.**  
**Surf's Up® Surfactant Kit**  
**Surfactant No. 24 Tween® 80**

**NOTE: Chemicals in the Surf's Up® Surfactant Kit are provided as 10% solutions. The following information pertains to the chemicals in an undissolved/undiluted state.**

**1. PRODUCT**

Trade Name	<b>Tween® 80</b>
Product Name	Polyoxyethylenesorbitan monoleate

**2. COMPOSITION**

Ingredient Name	CAS Number
Polyoxyethylenesorbitan monoleate	9005-65-6

**3. HAZARDS IDENTIFICATION**

Emergency Overview: No known OSHA hazards

HAZARD RATINGS	HMIS	NFPA
Health	0	0
Flammability	1	1
Reactivity	0	0

**Potential Health Effects**

**Inhalation** May be harmful if inhaled. May cause respiratory tract irritation.  
**Skin** May be harmful if absorbed through skin. May cause skin irritation.  
**Eyes** May cause eye irritation.  
**Ingestion** May be harmful if swallowed.

**4. FIRST AID MEASURES**

**Eyes** Immediately flush eyes with water for at least 15 minutes while holding eyelids open. If irritation persists, seek medical attention.  
**Skin** Immediately flush skin with large amounts of soap and water. If irritation persists, seek medical attention.  
**Inhalation** Move victim to fresh air. If symptoms persist, seek medical attention.  
**Ingestion** Never give anything by mouth to an unconscious person. Rinse mouth with water. If symptoms persist, seek immediate medical attention.

**5. FIRE FIGHTING MEASURES**

**Extinguishing Media** Water spray, dry extinguishing media, carbon dioxide or alcohol-resistant foam.  
**Fire Fighting Equipment/Instructions** Wear self-contained breathing apparatus if necessary and protective clothing to prevent contact with skin and eyes.

**6. ACCIDENTAL RELEASE MEASURES**

**Personal precautions**

Use personal protective equipment. Avoid breathing vapors, mist, or gas. Ensure adequate ventilation.

**Environmental precautions**

Do not let product enter drains.

**Containment and clean-up**

Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable closed containers for disposal. Dispose of contaminated packaging as hazardous waste.

**7. HANDLING AND STORAGE**

**Handling Procedures** Avoid inhalation. Avoid contact with skin and eyes. Wash thoroughly after handling. Avoid prolonged or repeated exposure. As with all chemicals, good industrial hygiene practices should be followed when handling this material.

**Storage Procedures** Store in tightly sealed containers in well-ventilated area.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Engineering Controls** Use local exhaust ventilation.

**Personal Protective Equipment** Wear chemical goggles and face shield if splashing is possible. Wear suitable protective clothing. Use impervious gloves. If vapors are present or irritation is experienced, NIOSH-approved respiratory protection for vapors should be worn. Eye wash fountain and emergency showers are recommended. Wash contaminated clothing before reuse. Discard contaminated shoes.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

Flash Point	113°C (235°F) Method: closed cup
Freezing Point	No data available
Boiling Point	100°C (212°F)
Ignition temperature	No data available
Lower explosion limit	No data available
Upper explosion limit	No data available
Density	1.064 g/cm <sup>3</sup>
Water solubility	Soluble
Evaporation Rate	No data available
pH	No data available

**10. STABILITY AND REACTIVITY**

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

**Incompatibility** Avoid bases, heavy metal salts, strong oxidizing agents.

**Hazardous Decomposition** No data available

**11. TOXICOLOGICAL INFORMATION****Acute toxicity**

LD50 Oral – mouse – 25,000mg/kg

LC50 Inhalation – no data available

LD50 Dermal – no data available

**Skin corrosion/irritation**

Skin – rabbit – Mild skin irritation – 24h

**Serious eye damage/eye irritation**

Eyes – rabbit – Mild eye irritation

**Respiratory or skin sensitization**

No data available

**Germ cell mutagenicity**

No data available

**Carcinogenicity**

This product is or contains a component that is not classifiable as to its carcinogenicity.

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible, or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

**Reproductive toxicity**

No data available

**Teratogenicity**

No data available

**Specific target organ toxicity – single exposure**

No data available

**Specific target organ toxicity – repeated exposure**

No data available

**Potential health effects**

**Inhalation** May be harmful if inhaled. May cause respiratory tract irritation.

**Ingestion** May be harmful if swallowed.

**Skin** May be harmful if absorbed through skin. May cause skin irritation.

**Eyes** May cause eye irritation.

**Signs and symptoms of exposure**

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

**12. ECOLOGICAL INFORMATION**

**Ecotoxicity** No data available

**Persistence and degradability** No data available

**Bioaccumulative potential** No data available

**13. DISPOSAL CONSIDERATIONS**

Treatment, storage, transportation and disposal must be in accordance with applicable Federal, State/Provincial, and Local regulations. Compliance with applicable laws is the responsibility of the user.

**14. TRANSPORT INFORMATION****DOT (US)**

Not dangerous goods.

**IMDG**

Not dangerous goods.

**IATA**

Not dangerous goods.

## 15. REGULATORY INFORMATION

### OSHA Hazards

No known OSHA hazards.

### DSL Status

All components of this product are on the Canadian DSL list.

### SARA 302 Components

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

### SARA 313 Components

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

### SARA 311/312 Hazards

No SARA hazards

### Massachusetts Right to Know Components

No components are subject to the Massachusetts Right to Know Act.

### Pennsylvania Right to Know Components

Tween® 80

CAS No. 9005-65-6

### New Jersey Right to Know Components

Tween® 80

CAS No. 9005-65-6

### California Prop. 65 Components

This product does not contain chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

## 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. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. QED Bioscience Inc. shall not be held liable for any damage resulting from handling or from contact with the above product.