

QED Bioscience Inc.
Surf's Up® Surfactant Kit
Surfactant No. 22 Tween® 20

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	Tween® 20
Product Name	Polyoxyethylenesorbitan monolaurate

2. COMPOSITION

Ingredient Name	CAS Number
Polyoxyethylenesorbitan monolaurate	9005-64-5

3. HAZARDS IDENTIFICATION

Emergency Overview: No known OSHA hazards

HAZARD RATINGS	HMIS	NFPA
Health	0	0
Flammability	0	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.

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

Contains no substances with occupational exposure limit values.

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	>110°C (>230°F)
Melting 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
Vapor pressure	<1.33 hPa (<1.00 mmHg)
Density	1.095g/ml at 25°C (77°F)
Water solubility	Soluble
pH	7.0

10. STABILITY AND REACTIVITY

Chemical Stability	Stable under recommended storage conditions.
Incompatibility	Avoid strong oxidizing agents.
Hazardous Decomposition	Carbon oxides

11. TOXICOLOGICAL INFORMATION

Acute toxicity

LD50 – rat – 40,500mg/kg

Skin corrosion/irritation

Human – mild skin irritation – 3d

Serious eye damage/eye irritation

No data available

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

No data available

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

Specific target organ toxicity – single exposure

No data available

Specific target organ toxicity – repeated exposure

No data available

Aspiration hazard

No data available

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

Fish – LC50 350mg/l – 24h

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. Dispose of contaminated packaging as unused product.

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® 20

CAS No. 9005-64-5

New Jersey Right to Know Components

Tween® 20

CAS No. 9005-64-5

California Prop. 65 Components

This product does not contain any 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.