

QED Bioscience Inc.
Surf's Up® Surfactant Kit
Surfactant No. 20 Triton® X-100

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	Triton® X-100
Product Name	p-Tertiary-octylphenoxy-polyethyl alcohol

2. COMPOSITION

Ingredient Name	CAS Number
p-Tertiary-octylphenoxy-polyethyl alcohol	9002-93-1

3. HAZARDS IDENTIFICATION

Emergency Overview: Harmful if swallowed. Irritant.

HAZARD RATINGS	HMIS	NFPA
Health	2	2
Flammability	1	1
Reactivity	0	0

Potential Health Effects

Inhalation May be harmful if inhaled. Causes respiratory tract irritation.
Skin May be harmful if absorbed through skin. Causes skin irritation.
Eyes Causes eye irritation.
Ingestion 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 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. Discharge into the environment must be avoided.

Containment and Clean-up

Soak up spills with inert absorbent material and dispose of as hazardous waste. Store in suitable closed containers for disposal.

7. HANDLING AND STORAGE

Handling Procedures Do not breathe vapor or mist. 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 a dry, well-ventilated area. Reseal opened containers and store upright to prevent leakage.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Contains no substances with occupational exposure limit values.

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	251°C (485°F) Method: closed cup
Boiling Point	>200°C (>392°F)
Melting Point	6°C (43°C)
Ignition temperature	No data available
Lower explosion limit	No data available
Upper explosion limit	No data available
Density	1.07 g/cm ³
Water solubility	Soluble
pH	9.7

10. STABILITY AND REACTIVITY

Chemical Stability Stable under recommended storage conditions.

Incompatibility Avoid contact with strong acids, strong bases, strong oxidizing agents.

Hazardous Decomposition Carbon oxides.

11. TOXICOLOGICAL INFORMATION

Acute toxicity

LD50 Oral – rat – 500mg/kg

LD50 Dermal – rabbit – 8,000mg/kg

Skin corrosion/irritation

Skin – rabbit – Mild skin irritation – 24h

Eye damage/eye irritation

Eyes – rabbit – Severe eye irritation

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

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

EC50 Daphnia = 26 mg/L

LC50 Fish = 8.9 mg/L – 96h

Persistence and degradability

Biodegradability

90% - readily biodegradable

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)

UN Number: 3082 Class: 9 Packing group: III

Proper shipping name: Environmentally hazardous substances, liquid, n.o.s. (p-tertiary-Octylphenoxy polyethyl alcohol).

Marine pollutant: Marine pollutant

Poison inhalation hazard: No

IMDG

UN Number: 3082 Class: 9 Packing group: III EMS No. F-A, S-F

Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (p-tertiary-Octylphenoxy polyethyl alcohol).

Marine pollutant: Marine pollutant

IATA

UN Number: 3082 Class: 9 Packing group: III

Proper shipping name: Environmentally hazardous substance, liquid, n.o.s. (p-tertiary-Octylphenoxy polyethyl alcohol).

15. REGULATORY INFORMATION

OSHA Hazards

Harmful by ingestion, irritant

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

Acute health hazard

Massachusetts Right to Know Components

No components listed

Pennsylvania Right to Know Components

p-tertiary-Octylphenoxy polyethyl alcohol CAS No. 9002-93-1

New Jersey Right to Know Components

p-tertiary-Octylphenoxy polyethyl alcohol CAS No.. 9002-93-1

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.