

**QED Bioscience Inc.**  
**Surf's Up® Surfactant Kit**  
**Surfactant No. 19 Triton® X-45**

**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>Triton® X-45</b>
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**

**OSHA Hazards:** Harmful by ingestion, 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** 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 immediate medical attention.

**5. FIRE FIGHTING MEASURES**

**Extinguishing Media:** Water spray, alcohol-resistant foam, dry chemical, or carbon dioxide.

**Fire Fighting Equipment/Instructions:** Wear self-contained breathing apparatus if necessary and protective clothing to prevent contact with skin and eyes.

**Hazardous combustion products:** Carbon oxides

**6. ACCIDENTAL RELEASE MEASURES**

**Personal Precautions:** Use personal protective equipment. Avoid breathing vapors, mist, or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

**Environmental Precautions:** Do not let product enter drains. Avoid discharge into the environment.

**Clean-up Methods:** Soak up with inert absorbent material and dispose of as hazardous waste. Keep in closed containers for disposal. Dispose of contaminated packaging as unused product.

## 7. HANDLING AND STORAGE

**Handling Procedures:** Do not breathe vapor. 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 and well-ventilated area. Containers that are opened must be resealed and kept upright to prevent leakage.

## 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	251°C (485°F) Method: closed cup
Freezing Point	6°C (43°F)
Boiling Point	>200°C (392°F)
Ignition Temperature	No data available
Lower Explosion Limit	No data available
Upper Explosion Limit	No data available
Density	1.07g/cm <sup>3</sup>
Vapor Pressure	<1.33 hPA (<1.00 mmHg) at 20°C (68°F)
pH	9.7
Evaporation Rate	No data available

## 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 monoxide, carbon dioxide.

## 11. TOXICOLOGICAL INFORMATION

### Acute toxicity

LD50 Oral – rat – 500mg/kg

LC50 Inhalation – No data available

LD50 Dermal – rabbit – 8,000mg/kg

### Serious eye damage/eye irritation

Rabbit – severe eye irritation

### 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.

**Germ cell mutagenicity, Reproductive toxicity, Teratogenicity, Specific target organ toxicity, 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:** Toxic to aquatic life

EC50 Daphnia: 26 mg/L – 48h

LC50 Fish: 8.9 mg/L – 96h

**Degradability:** 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

Proper shipping name: Environmentally hazardous substances, 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 substances, 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 product are subject to the reporting requirements of SARA Title III, Section 302.

**SARA 313 Components**

This product 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 are subject to the Massachusetts Right to Know Act.

**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.