SAFETY DATA SHEET

1. Identification

Product identifier **OMNIPRO TITAN-Q DISINFECTANT**

Other means of identification

Product Code 2658-6723

Product registration number 10324-80-92595

Recommended use FIFRA Regulated End Use Product (EUP)

Recommended restrictions For Reference Only

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company name Bioesque Solutions

Address 2091 NE 36th Street #50548
Lighthouse Point, FL 33074
United States

Telephone 1-800-921-4634

E-mail info@bioesquesolutions.com

Emergency phone number CHEMTREC International: 1-703-527-3887

CHEMTREC USA: 1-800-424-9300

2. Hazard(s) identification

Physical hazards	Not classified.	
Health hazards	Skin corrosion/irritation	Category 1B
	Serious eye damage/eye irritation	Category 1
Environmental hazards	Hazardous to the aquatic environment, acute hazard	Category 1
	Hazardous to the aquatic environment, long-term hazard	Category 2
OSHA defined hazards	Not classified.	

Label elements

Signal word Danger

Hazard statement Causes severe skin burns and eye damage. Causes serious eye damage. Very toxic to aquatic life. Toxic to aquatic life with long lasting effects.

Precautionary statement

Prevention Do not breathe mist/vapors. Wash thoroughly after handling. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection.

Response If swallowed: Rinse mouth. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center/doctor. Wash contaminated clothing before reuse. Collect spillage.

Storage Store locked up.

Disposal Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard(s) not otherwise classified (HNOC)

None known.

Supplemental information None.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
1-decanaminium, n,n-dimethyl-n-octyl-, Chloride		32426-11-2	1 - < 3
Ethanol		64-17-5	1 - < 3
Quaternary Ammonium Compounds, Benzyl-C12-C16-alkyldimethyl, Chlorides		68424-85-1	1 - < 3
Surfactant		-	1 - < 3
Tetrasodium Ethylenediaminetetraacetate		64-02-8	1 - < 3
1-octanaminium, N,n-dimethyl-n-octyl-, Chloride		5538-94-3	< 1
Didecyldimethylammonium Chloride		7173-51-5	< 1
Other components below reportable levels			80 - < 90

Composition comments Occupational Exposure Limits for residuals are listed in Section 8.

4. First-aid measures

Inhalation Move to fresh air. Call a physician if symptoms develop or persist.

Skin contact Take off immediately all contaminated clothing. Rinse skin with water/shower. Call a physician or poison control center immediately. Chemical burns must be treated by a physician. Wash contaminated clothing before reuse.

Eye contact Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician or poison control center immediately.

Ingestion Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.

Most important symptoms/effects, acute and delayed Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.

Indication of immediate medical attention and special treatment needed Provide general supportive measures and treat symptomatically. Chemical burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim under observation. Symptoms may be delayed.

General information Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire fighting equipment/instructions Move containers from fire area if you can do so without risk.

Specific methods Use standard firefighting procedures and consider the hazards of other involved materials.

General fire hazards No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist/vapors. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up

This product is miscible in water. Prevent entry into waterways, sewer, basements or confined areas.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

Environmental precautions

Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling

Do not breathe mist/vapors. Do not get in eyes, on skin, or on clothing. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. Avoid release to the environment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Store locked up. Store in tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
Ethanol (CAS 64-17-5)	PEL	1900 mg/m3
		1000 ppm

US. ACGIH Threshold Limit Values

Components	Type	Value
Ethanol (CAS 64-17-5)	STEL	1000 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Ethanol (CAS 64-17-5)	TWA	1900 mg/m3
		1000 ppm

Biological limit values

No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls

Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

Individual protection measures, such as personal protective equipment

Eye/face protection

Wear safety glasses with side shields (or goggles) and a face shield.

Skin protection

Hand protection

Wear appropriate chemical resistant gloves.

Other

Wear appropriate chemical resistant clothing.

Respiratory protection

In case of insufficient ventilation, wear suitable respiratory equipment.

Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance

Physical state	Liquid.

Form	Liquid.
Color	Clear. Colorless.
Odor	Not available.
Odor threshold	Not available.
pH	10 - 12 (1% soln.)
Melting point/freezing point	Not available.
Initial boiling point and boiling range	> 204.8 °F (> 96 °C)
Flash point	None to boiling.
Evaporation rate	Not available.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Miscible.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	< 5 cSt @25°C
Other information	
Explosive properties	Not explosive.
Oxidizing properties	Not oxidizing.
Specific gravity	1.013

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	Avoid temperatures exceeding the decomposition temperature. Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation	May cause irritation to the respiratory system. Prolonged inhalation may be harmful.
Skin contact	Causes severe skin burns.

Eye contact	Causes serious eye damage.
Ingestion	Causes digestive tract burns.
Symptoms related to the physical, chemical and toxicological characteristics	Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.

Information on toxicological effects

Acute toxicity Not known.

Product	Species	Test Results
MAQUAT® 5.5-FD		
Acute		
Dermal		
Liquid		
LD50	Rabbit	> 2 g/kg
Oral		
Liquid		
LD50	Rat	2.72 g/kg

Components	Species	Test Results
1-decanaminium, n,n-dimethyl-n-octyl-, Chloride (CAS 32426-11-2)		
Acute		
Dermal		
Liquid		
LD50	Rabbit	2930 mg/kg
LD50	Rat	3342 mg/kg
Oral		
Liquid		
LD50	Rat	262 mg/kg
		238 mg/kg
1-octanaminium, N,n-dimethyl-n-octyl-, Chloride (CAS 5538-94-3)		
Acute		
Dermal		
LD50	Rabbit	2930 mg/kg
Inhalation		
Mist		
LC50	Rat	> 10 mg/l, 1 h
Oral		
Liquid		
LD50	Rat	262 mg/kg
		238 mg/kg
Didecyldimethylammonium Chloride (CAS 7173-51-5)		
Acute		
Dermal		
Liquid		
LD50	Rabbit	2930 mg/kg
LD50	Rat	3342 mg/kg
Oral		
Liquid		
LD50	Rat	262 mg/kg
		238 mg/kg
Ethanol (CAS 64-17-5)		
Acute		
Dermal		
Liquid		
LD50	Rabbit	> 15800 mg/kg

Inhalation

Vapor

LC50	Rat	51.3 mg/l, 6 Hours

Components	Species	Test Results
Oral		
LD50	Rat	6.2 g/kg

Quaternary Ammonium Compounds, Benzyl-C12-C16-alkyldimethyl, Chlorides (CAS 68424-85-1)

Acute		
Dermal		
Liquid		
LD50	Rabbit	3413 mg/kg
LD50	Rat	930 mg/kg
Oral		
Liquid		
LD50	Rat	795 mg/kg
LD50	Rat	304.5 mg/kg

Surfactant

Acute		
Dermal		
LD50	Rabbit	> 2000 mg/kg, 24 Hours
Inhalation		
Vapor		
LC50	Rat	> 100 mg/m3, 6 Hours
Oral		
LD50	Rat	3488 mg/kg

Tetrasodium Ethylenediaminetetraacetate (CAS 64-02-8)

Acute		
Inhalation		
LOEC	Rat	30 mg/m3
Oral		
LD50	Rat	1780 - 2000 mg/kg
		1210 - 1780 mg/kg

Skin corrosion/irritation Causes severe skin burns and eye damage.

Serious eye damage/eye irritation Causes serious eye damage.

Respiratory or skin sensitization

Respiratory sensitization Not a respiratory sensitizer.

Skin sensitization This product is not expected to cause skin sensitization.

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity No data available to indicate product or any components present at greater than 0.1% are carcinogenic.

IARC Monographs. Overall Evaluation of Carcinogenicity

Not listed.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

US. National Toxicology Program (NTP) Report on Carcinogens

Not listed.

Reproductive toxicity Possible reproductive hazard.

Specific target organ toxicity - single exposure Not available.

Specific target organ toxicity - repeated exposure Not classified.

Aspiration hazard	Not an aspiration hazard.
Chronic effects	Prolonged inhalation may be harmful.

12. Ecological information

Ecotoxicity Very toxic to aquatic life. Toxic to aquatic life with long lasting effects.

Components		Species	Test Results
1-decanaminium, n,n-dimethyl-n-octyl-, Chloride (CAS 32426-11-2)			
Aquatic			
Acute			
Fish	LC50	Bluegill (Lepomis macrochirus)	0.032 mg/l, 96 h
Chronic			
Crustacea	NOEC	Daphnia	0.01 mg/l
1-octanaminium, N,n-dimethyl-n-octyl-, Chloride (CAS 5538-94-3)			
Aquatic			
Acute			
Crustacea	LC50	Daphnia magna	0.1 mg/l, 48 h
Fish	LC50	Bluegill (Lepomis macrochirus)	0.032 mg/l, 96 h
		Oncorhynchus mykiss	0.35 mg/l, 96 h
Chronic			
Crustacea	NOEC	Daphnia	0.01 mg/l
Didecyldimethylammonium Chloride (CAS 7173-51-5)			
Aquatic			
Acute			
Algae	EC50	Algae	0.062 mg/l, 72 h
Crustacea	LC50	Daphnia	0.057 mg/l, 48 h
Fish	LC50	Bluegill (Lepomis macrochirus)	0.032 mg/l, 96 h
		Danio rerio	0.97 mg/l, 96 h
Chronic			
Crustacea	NOEC	Daphnia	0.021 mg/l, 21 d
			0.01 mg/l, 21 d
Ethanol (CAS 64-17-5)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	> 10000 mg/l, 48 hours
Fish	LC50	Fathead minnow (Pimephales promelas)	> 100 mg/l, 96 hours
Quaternary Ammonium Compounds, Benzyl-C12-C16-alkyldimethyl, Chlorides (CAS 68424-85-1)			
Aquatic			
Acute			
Fish	LC50	Bluegill (Lepomis macrochirus)	0.515 mg/l
Chronic			
Crustacea	NOEL	Daphnia	0.0042 mg/l
Surfactant			
Aquatic			
Acute			
Algae	EC50	Algae	1.4 mg/l, 96 h
Crustacea	EC50	Daphnia	2.5 mg/l, 48 h
Fish	LC50	Oncorhynchus mykiss	5 - 7 mg/l, 96 h

Chronic

Crustacea	EC20	Daphnia magna	2.11 mg/l, 21 d
Fish	EC20	Pimephales promelas	1.86 mg/l, 30 d

Tetrasodium Ethylenediaminetetraacetate (CAS 64-02-8)

Aquatic

Acute

Algae	EC50	Algae	> 100 mg/l, 72 h

Components		Species	Test Results
Crustacea	EC50	Daphnia	625 mg/l, 24 h
Fish	LC50	Bluegill (Lepomis macrochirus)	121 mg/l, 96 h
Chronic			
Crustacea	NOEC	Daphnia	25 mg/l, 21 d
Fish	NOEC	Fish	>= 25.7 mg/l, 35 d

Persistence and degradability No data is available on the degradability of any ingredients in the mixture.

Bioaccumulative potential

Partition coefficient n-octanol / water (log Kow)	
Ethanol	-0.31
Surfactant	3.75

Mobility in soil No data available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture or rinsate is a violation of federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT

UN number UN1903
UN proper shipping name Disinfectants, liquid, corrosive n.o.s. (Quaternary Ammonium Compounds)
Transport hazard class(es)
Class 8
Subsidiary risk -
Label(s) 8
Packing group III

Special precautions for user Read safety instructions, SDS and emergency procedures before handling.
Special provisions IB3, T4, TP1
Packaging exceptions 154
Packaging non bulk 203
Packaging bulk 241

IATA

UN number UN1903
UN proper shipping name Disinfectant, liquid, corrosive, n.o.s. (Quaternary Ammonium Compounds)
Transport hazard class(es)
Class 8
Subsidiary risk -
Label(s) 8
Packing group III
Environmental hazards Yes
ERG Code 8L

Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

Other information

Passenger and cargo aircraft	Allowed with restrictions.
Cargo aircraft only	Allowed with restrictions.

IMDG

UN number	UN1903
UN proper shipping name	DISINFECTANT, LIQUID, CORROSIVE, N.O.S. (QUATERNARY AMMONIUM COMPOUNDS), MARINE POLLUTANT
Transport hazard class(es)	
Class	8
Subsidiary risk	-
Label(s)	8
Packing group	III
Environmental hazards	
Marine pollutant	Yes
EmS	F-A, S-B

Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not established.

DOT

IATA; IMDG

Marine pollutant

General information IMDG Regulated Marine Pollutant.

15. Regulatory information

CERCLA (Superfund) reportable quantity, lbs

Ethanol: 100

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Classified hazard categories

Skin corrosion or irritation
Serious eye damage or eye irritation

Hazard categories

Immediate Hazard - Yes
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

Section 302 extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical Yes

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Contains component(s) regulated under the Safe Drinking Water Act.

FEMA Priority Substances Respiratory Health and Safety in the Flavor Manufacturing Workplace

Ethanol (CAS 64-17-5) Low priority

FIFRA Information This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Listed below is the hazard information as required on the pesticide label.

Signal word DANGER
KEEP OUT OF REACH OF CHILDREN

Hazard statement Corrosive. Causes irreversible eye damage and skin burns. May be fatal if inhaled. Harmful if swallowed or absorbed through the skin. Do not get in eyes, on skin or on clothing. Wear a minimum of a NIOSH-approved particulate filtering facepiece respirator with any N, R, or P filter, goggles or face shield, chemical-resistant gloves, and protective clothing when handling. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove contaminated clothing and wash before reuse.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	No
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date **Revision date**

HMIS® ratings	Health: 3 Flammability: 1 Physical hazard: 0
NFPA ratings	Health: 3 Flammability: 1 Instability: 0
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Revision information	Product and Company Identification: Physical States Hazard(s) identification: Hazard statement Hazard(s) identification: Supplemental information Composition / Information on Ingredients: Ingredients Physical & Chemical Properties: Multiple Properties Toxicological information: Mutagenicity Toxicological information: Specific target organ toxicity - repeated exposure Disposal considerations: Disposal instructions Disposal considerations: Hazardous waste code Regulatory Information: United States Material Attributes & Uses; Experimental Data: Experimental Data