SAFETY DATA SHEET (SDS)

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product Name/ Commercial Name:	QT Quat: Quaternary Ammonium
Product Code:	QT55XX
Product Configuration:	Screw Cap Bottles
Manufacturer Name:	QUANTUMTEC (A Life Science Solutions Division of PMA Manufacturing Sdn. Bhd.)
Product Use:	Industrial, Manufacturing and/or Laboratory Use
Address:	11, Lintang Beringin 3, Diamond Valley, 11960 Bayan Lepas, Penang, Malaysia.
General Phone No.:	+604-626 5518
Emergency Contact No.:	+604-626 5518
Email Address:	pmasales@pma-asia.com

SECTION 2: HAZARD(S) IDENTIFICATION

OSHA Hazards:	Flammable Liquid, Target Organ Effect, Irritant, Toxic
GHS Pictograms:	
Signal Word:	DANGER!
GHS Classifications:	Flammable Liquid – Category 3
	Skin corrosion / Irritation – Category 1B
	Eye Irritation – Category 1
	Acute Toxicity, oral – Category 3
GHS Label Elements, Including Precautionary Elements (The code refers to GHS Standard)	
Hazard Statement:	H225 – Highly flammable liquid and vapour
	H314 – Causes severe skin burns and eye damage
	H318 – Cause serious eye damage
	H301 – Toxic if swallowed

Precautionary Statements:	P210 - Keep away from heat/hot surfaces, sparks/ open flames and other ignition sources. — No smoking.
	P243 – Take precautionary measures against static discharge.
	P370 - In case of fire: Use dry chemical, carbon dioxide to extinguish small fires. Use water for large fires.
	P280 - Wear protective gloves, protective clothing, eye protection and face protection.
	P261 - Avoid breathing vapours / spray.
	P403+233 - Store in a well-ventilated place. Keep container tightly closed.
	P305+351+338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing. If eye irritation persists: Get medical advice/attention.
	P304+312+340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
	P303+361+353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
	P501 - Dispose of contents / container in accordance with Local, State, Federal and Provincial regulations
Emergency Overview:	DANGER! Flammable. Irritant. May cause drowsiness or dizziness.
Route of Exposure:	Eyes, Skin and Inhalation.
Potential Health Effects:	**Eye**: Eye contact with product or vapors may result in irritation, redness, and blurred vision. May cause pain disproportionate to the level of irritation to eye tissues. Vapor may cause eye irritation experienced as mild discomfort and redness. May cause moderate corneal injury.
	Skin: May cause irritation. Repeated exposure may cause a burning sensation and dryness or cracking. Prolonged skin contact is unlikely to result in absorption of harmful amounts.
	Inhalation: Inhalation of vapors, fumes or mists of the product may be irritating to the respiratory system. Excessive exposure (400 ppm) may cause eye, nose and throat irritation. Higher levels may cause incoordination, confusion, hypotension, hypothermia, circulatory collapse, respiratory arrest, and death may follow a longer duration and higher levels. In confined or poorly ventilated areas, vapors can readily accumulate and can cause unconsciousness and death.
	Ingestion: May cause irritation. Ingesting large amounts may cause injury. May cause central nervous system depression, nausea and vomiting. Aspiration of material into the lungs can cause chemical pneumonitis which can be fatal.
Chronic Health Effects:	Prolonged or repeated contact may cause skin irritation. Repeated or prolonged inhalation may cause toxic effects.
Target Organs:	Eyes. Skin. Respiratory system. Digestive system.
Aggravation of Pre-Existing Conditions:	None generally recognized.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	CAS Number	w/v (Weight by Volume)	Formula
Didecyldimethylammonium Chloride	7173-51-5	10.14%	$C_{22}H_{48}ClN$
Quaternary Ammonium Compounds, Benzyl-C12-C16-alkyldimethyl, Chlorides	68424-85-1	6.76%	$C_9H_{13}NClR$
Ethanol	64-17-5	<5%	C_2H_5OH

SECTION 4: FIRST-AID MEASURES

Eye Contact:	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
Skin Contact:	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation occurs: Get medical advice/attention. Wash contaminated cloth before reuse.
Inhalation:	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call POISON CONTROL CENTER or doctor/physician if you feel unwell.
Ingestion:	If swallowed, do NOT induce vomiting. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person. Do not use mouth to mouth method.

SECTION 5: FIRE FIGHTING MEASURES

Extinguishing Media:	Alcohol resistant foam, Water fog, Dry chemical powder. CO2.
Unsuitable Media:	Do not use water jet as an extinguisher, as this will spread fire.
Protective Equipment:	In the event of a fire, wear Self-Contained Breathing Apparatus (SCBA), approved or in accordance to NFPA, NIOSH, and/or European Standard EN 137 guidelines or equivalent and full protective gear.
Unusual Fire Hazards:	Material burns with an invisible flame.
Hazardous Combustion By-products:	Oxides of carbon, oxides of nitrogen and other organic substances may be formed.
Universal Fire and Explosion Hazards:	Vapors are heavier than air and may travel along the ground or may be moved by ventilation to locations distant from the point of material handling or release.
NFPA Ratings:	NFPA Health: 3 NFPA Flammability: 3 NFPA Instability: 0

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Protection:	Evacuate area and keep unnecessary and unprotected personnel from entering the spill area. Avoid breathing vapor, aerosol or mist. Avoid contact with skin, eyes and clothing.
Environmental Precautions:	Avoid runoff into storm sewers, ditches, and waterways. Comply with all government regulations on reporting releases.
Methods for Containment:	Spills are very unlikely, because the wiper fabric has absorbed the liquid solvent solution. In the event of a spill, contain with an inert absorbent.
Methods for Cleanup:	Remove all sources of ignition. Collect the wipes with a non-sparking tool and absorb or wipe any residual liquids. Place in a suitable container for proper disposal. Use appropriate protective apparel as described in Section 8. Avoid contact with skin and eyes.

SECTION 7: HANDLING AND STORAGE

Handling:	Use with adequate ventilation. Avoid breathing vapor and fumes. Use only in accordance with directions.
Storage:	Store in a cool, dry, well ventilated area away from sources of heat, combustible materials, direct sunlight, and incompatible substances. Keep container tightly closed when not in use. Keep away from aldehydes, halogenated organics, halogens, strong acids, and strong oxidizers.
Special Handling Procedures:	WARNING! Used wipes may catch fire if improperly discarded or stored near ignition sources.
Hygiene Practices:	Wash thoroughly after handling. Avoid inhaling vapors, mists, or fumes.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls:	Use appropriate engineering control such as process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Where such systems are not effective wear suitable personal protective equipment, which performs satisfactorily and meets OSHA or other recognized standards. Consult with local procedures for selection, training, inspection and maintenance of the personal protective equipment.
Eye/Face Protection:	Safety glasses with side shields must be worn at all times. If splash hazard exists, wear chemical splash goggles and/or face shield.
Hand Protection Description:	Wear appropriate protective gloves. Consult glove manufacturer's data for permeability data.
Respiratory Protection:	Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced. Comply with the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 49. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection.

Other Protective:	Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.
EXPOSURE GUIDELINES:	**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 PEL: Permissible exposure limit STEL: Short Term Exposure Limit TWA: Time-Weighted Average

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical State Appearance:	Clear, colorless to beige liquid
Odor:	Slight odor
Odor Threshold:	Not Available
Boiling Point:	Not Available
Melting Point:	Not Available
Specific Gravity:	0.919
Solubility:	Soluble in water.
Vapor Density:	Not Available
Vapor Pressure:	Not Available
pH:	6 – 8
Viscosity:	278 cSt
Flash Point:	Not Available
Auto Ignition Temperature:	Not Available

SECTION 10: STABILITY AND REACTIVITY

Chemical Stability:	Stable under normal temperatures and pressures.
Hazardous Polymerization:	Not reported.
Conditions to Avoid:	Keep away from heat, ignition sources and incompatible materials.
Incompatible Materials:	Strong oxidizers

SECTION 11: TOXICOLOGICAL INFORMATION

Acute toxicity Toxic if swallowed.

Components	**Species**	**Test Results**
Didecyldimethylammonium Chloride (CAS 7173-51-5)		
Acute		
Dermal		
LD50		3342 mg/kg
	Rat	> 1000 mg/kg
Oral		
LD50		238 mg/kg
	Rat	329 mg/kg
Ethanol (CAS 64-17-5)		
Acute		
Inhalation		
Vapor		
LC50	Rat	117 - 125 mg/l, 4 h
Oral		
LD50	Rat	10470 mg/kg
Quaternary Ammonium Compounds, Benzyl-C12-C16-alkyldimethyl, Chlorides (CAS 68424-85-1)		
Acute		
Dermal		
LD50		3560
Oral		
LD50		430

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity:	**Components** — **Species** — **Test Results** Didecyldimethylammonium Chloride (CAS 7173-51-5) **Aquatic** Algae — EC50 — Algae — 0.062 mg/l, 72 h Crustacea — LC50 — Daphnia — 0.057 mg/l, 48 h NOEC — Daphnia — 0.021 mg/l, 21 d Fish — LC50 — Danio rerio — 0.97 mg/l, 96 h *Acute* Fish — LC50 — Bluegill (Lepomis macrochirus) — 0.032 mg/l, 96 h *Chronic* Crustacea — NOEC — Daphnia — 0.01 mg/l Ethanol (CAS 64-17-5) **Aquatic** *Acute* Algae — EC50 — Algae — 675 mg/l, 72 h Crustacea — EC50 — Daphnia — 5012 mg/l, 48 h Fish — LC50 — Fathead minnow (Pimephales promelas) — 14200 mg/l, 96 h *Chronic* Crustacea — NOEC — Daphnia — 9.6 mg/l, 9 d 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
Environmental Fate:	No mobility in soil. This product is expected to be readily biodegradable.
Bioaccumulation:	No data available

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal:	Consult with the US EPA Guidelines listed in 40 CFR Part 261.3 or the EU Directive 2008/98/EC on waste for the classifications of hazardous waste prior to disposal. Furthermore, consult with your state, local, or provincial waste requirements or guidelines, if applicable, to ensure compliance. Arrange disposal in accordance to the EPA and/or state and local guidelines. WARNING! Used wipes may catch fire if improperly discarded or stored near ignition sources.
Contaminated:	Do not reuse containers without proper cleaning or reconditioning. The recycling or disposal to be done by approved waste handlers.

SECTION 14: TRANSPORT INFORMATION

DOT UN Number:	UN1903
DOT Shipping Name:	Disinfectats, Liquid, corrosive n.o.s.(Didecyldimethylammonium Chloride;Quaternary Ammonium Compounds, Benzyl-C12-C16-alkyldimethyl, Chlorides
DOT Hazard Class:	8
DOT Packing Group:	II
IATA UN Number:	UN1903
IATA Shipping Name:	Disinfectats, Liquid, corrosive n.o.s.(Didecyldimethylammonium Chloride;Quaternary Ammonium Compounds, Benzyl-C12-C16-alkyldimethyl, Chlorides
IATA Hazard Class:	8
IATA Packing Group:	II
IMDG UN Number:	UN1903
IMDG Shipping Name:	Disinfectats, Liquid, corrosive n.o.s.(Didecyldimethylammonium Chloride;Quaternary Ammonium Compounds, Benzyl-C12-C16-alkyldimethyl, Chlorides
IMDG Hazard Class:	8
IMDG Packing Group:	II
Marine Pollutant:	No

SECTION 15: REGULATORY INFORMATION

Canada WHMIS:	Controlled - Class: B2 Flammable Liquid. Controlled - Class: D2B Toxic
TSCA Inventory Status:	Listed
Canada DSL:	Listed

SECTION 16: ADDITIONAL INFORMATION

HMIS Ratings:	HMIS Health Hazard: 3 HMIS Fire Hazard: 3 HMIS Instability 0 HMIS Personal Protection: X
M/SDS Creation Date:	17 Dec 2019
M/SDS Revision Date:	07 Jun 2023

Disclaimer:

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