

OFI TESTING EQUIPMENT, INC.  
**MATERIAL SAFETY DATA SHEET**

<b>SECTION I - PRODUCT AND COMPANY IDENTIFICATION</b>	
<b>Chemical Name:</b>	QUATERNARY AMMONIUM SALT SOLUTION
<b>Trade Name:</b>	QAS SOLUTION
<b>OFI Part No.</b>	285-32
<b>Chemical Family:</b>	Cetrimonium Bromide; Cetyltrimethylammonium bromide in aqueous form
<b>Formula:</b>	CH <sub>3</sub> (CH <sub>2</sub> ) <sub>15</sub> N(CH <sub>3</sub> ) <sub>3</sub> Br :H <sub>2</sub> O
<b>Manufacturer:</b>	OFI Testing Equipment, Inc. 11302 Steeplecrest Drive Houston, TX 77065 USA Phone: (713) 880-9885
<b>In Case of Emergency Spills, Leaks, Fire, Exposure or Accident:</b>	In the USA, call INFOTRAC at 1-800-535-5053 day or night Outside the USA, call collect, (352) 323-3500
<b>SECTION II - COMPOSITION / INFORMATION ON INGREDIENTS</b>	
<b>CAS #:</b>	<b>CHEMICAL NAME</b>
57-09-0	Hexadecyltrimethylammonium Bromide 0.1 to 0.5%
<b>SECTION III - HAZARD IDENTIFICATION</b>	
<b>Emergency Overview:</b>	Warning! May Be Harmful If Swallowed, Inhaled Or Absorbed Through Skin. Causes Severe Irritation To Eyes, Skin And Respiratory Tract.
<b>Inhalation:</b>	Irritates the Respiratory Tract. May Produce Sore Throat, Coughing and Labored Breathing. Other Symptoms may Parallel Ingestion.
<b>Ingestion:</b>	Large Doses may Produce Abdominal Pain, Nausea, and Vomiting. The Toxicological Properties are Not Well Known, but Material is Probably Toxic.
<b>Skin:</b>	May Cause Irritation with Redness and Pain.
<b>Eye Contact</b>	May Cause Irritation, Redness, Pain, or Blurred Vision.
<b>Chronic Exposure:</b>	No Information Found.
<b>Aggravated by Exposure:</b>	Persons with Pre-Existing Skin Disorders or Impaired Respiratory Function may be More Susceptible to the Effects of the Substance.
<b>SECTION IV - FIRST AID MEASURES</b>	
<b>Inhalation:</b>	Remove to Fresh Air. If Not Breathing, Give Artificial Respiration. If Breathing is Difficult, Give Oxygen. Get Medical Attention Immediately.
<b>Ingestion:</b>	Induce Vomiting Immediately as Directed by Medical Personnel. Never Give Anything by Mouth to an Unconscious Person. Get Medical Attention Immediately.
<b>Skin:</b>	In Case of Contact, Immediately Flush Skin with Plenty of Water for at Least 15 Minutes while Removing Contaminated Clothing and Shoes. Wash Clothing and Shoes before Reuse.
<b>Eyes:</b>	Immediately Flush Eyes with Plenty of Water for at Least 15 Minutes, Lifting Upper and Lower Eyelids Occasionally. Get Medical Attention Immediately.
<b>SECTION V - FIRE FIGHTING MEASURES</b>	
<b>Fire:</b>	This Solution is Not Considered to be a Fire Hazard.
<b>Explosion:</b>	This Solution is Not Considered to be an Explosion Hazard.
<b>Fire Extinguishing Media:</b>	Water Spray, Dry Chemical, Alcohol Foam, or Carbon Dioxide.
<b>Special Information:</b>	In the Event of Fire, Wear full Protective Clothing and NIOSH-Approved Self-Contained Breathing Apparatus with Full Facepiece Operated in the Pressure Demand or Other Positive Pressure Mode.

<b>SECTION VI - ACCIDENTAL RELEASE MEASURES</b>	
	Ventilate area or Leak or Spill. Remove all Sources of Ignition. Wear Appropriate Personal Protective Equipment as Specified in Section 8. Isolate Hazard Area. Keep Unnecessary and Unprotected Personnel from Entering. Contain and Recover Liquid when Possible. Absorb with an Inert Material (e.g., Vermiculite, Dry Sand, Earth), and Place in a Chemical Waste Container. Do Not Use Combustible Materials, such as Saw Dust. Do Not Flush to Sewer!
<b>SECTION VII - HANDLING AND STORAGE</b>	
	Store in a Cool, Dry, Ventilated Storage Area. Protect from Physical Damage. Keep out of Direct Sunlight and Away from Heat, Water, and Incompatible Materials. Do Not Wash Out Container and Use it for Other Purposes.
<b>SECTION VIII - EXPOSURE CONTROL / PERSONAL PROTECTION</b>	
<b>Ventilation System:</b>	A System of Local and/or General Exhaust is Recommended to Keep Employee Exposures below the Airborne Exposure Limits. Local Exhaust Ventilation is Generally Preferred because it can Control the Emissions of the Contaminant at its Source, Preventing Dispersion of it into the General Work Area.
<b>Airborne Exposure Limits:</b>	No Information Found.
<b>Personal Respirators: (NIOSH APPROVED)</b>	For Conditions of Use Where Exposure to the Mist is Apparent, a Half-Face Dust/Mist Respirator may be Worn. For Emergencies or Instances Where the Exposure Levels are Not Known, Use a Full-Face Positive-Pressure, Air-Supplied Respirator.
<b>Skin Protection:</b>	Wear Impervious Protective Clothing, Including Boots, Gloves, Lab Coat, Apron or Coveralls, as Appropriate, to Prevent Skin Contact.
<b>Eye Protection:</b>	Use Chemical Safety Goggles and/or a Full Face Shield where Splashing is Possible. Maintain Eye Wash Fountain and Quick-Drench Facilities in Work Area.
<b>SECTION IX - PHYSICAL AND CHEMICAL PROPERTIES</b>	
<b>Appearance / Odor:</b>	Clear, Colorless Liquid / Odorless
<b>Solubility:</b>	Soluble
<b>Specific Gravity:</b>	approx. 1.02 to 1.05
<b>pH:</b>	No Information Found
<b>% Volatiles by Vol.:</b>	0
<b>Melting Point:</b>	459 °F (237 °C)
<b>Boiling Point:</b>	No Information Found
<b>Vapor Density (Air=1):</b>	No Information Found
<b>Vapor Pressure (mmHg):</b>	No Information Found
<b>SECTION X - STABILITY AND REACTIVITY</b>	
<b>General Reactivity:</b>	Stable under Ordinary Conditions of Use and Storage.
<b>Hazardous Decomposition:</b>	Nitrogen Oxides, Oxides of Carbon as well as Ionic or Oxidized Halogen.
<b>Incompatibilities:</b>	Strong Oxidizing Agents.
<b>Hazardous Polymerization:</b>	Will Not Occur.
<b>SECTION XI - TOXICOLOGICAL INFORMATION</b>	
<b>Carcinogenic References:</b>	NTP Carcinogen - Known: No, IARC Category- None
<b>SECTION XII - ECOLOGICAL INFORMATION</b>	
<b>Environmental Fate:</b>	No information found.
<b>Environmental Toxicity:</b>	No information found.
<b>SECTION XIII - DISPOSAL CONSIDERATIONS</b>	
	Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

**SECTION XIV - TRANSPORT INFORMATION**

**Hazard Class:** Not Regulated  
**Identification No.:** Not Regulated

**SECTION XV - REGULATORY INFORMATION**

<b>Chemical Inventory Status – Part 1:</b>	Ingredient Hexadecyltrimethylammonium Bromide (57-09-0)	TSCA EC Yes Yes	Japan Yes	Australia Yes
<b>Chemical Inventory Status – Part 2:</b>	Ingredient Hexadecyltrimethylammonium Bromide (57-09-0)		--Canada-- Korea Yes	DSL NDSL Phil. No Yes
<b>Federal, State &amp; International Regulations – Part 1:</b>	Ingredient Hexadecyltrimethylammonium Bromide (57-09-0)	-SARA 302- RQ TPQ No No	-----SARA 313----- List Chemical Catg. No No	
<b>Federal, State &amp; International Regulations – Part 2:</b>	Ingredient Hexadecyltrimethylammonium Bromide (57-09-0)	CERCLA No	-RCRA- 261.33 No	-TSCA- 8(d) No
<b>Chemical Weapons Convention:</b>	No			
<b>TSCA 12 (b):</b>	No			
<b>CDTA:</b>	No			
<b>SARA 311/312:</b>	Acute: Yes Chronic: No Fire: No Pressure: No Reactivity: No (Mixture / Liquid)			
<b>Australian Hazchem Code:</b>	None allocated.			
<b>Poison Schedule:</b>	None allocated.			
<b>WHMIS</b>	This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.			

**SECTION XVI - OTHER INFORMATION**

**NFPA Rating:** HEALTH-2, FLAMMABILITY-0, REACTIVITY-0

**Disclaimer:** The information contained herein is based upon data believed to be reliable and reflects our best professional judgment. Although reasonable care has been taken in the preparation of this document, we extend no warranties and make no representations as to the accuracy or completeness of the information contained therein and assume no responsibility regarding the suitability of this information for the user's intended purpose or for the consequence of its use. Each individual should make a determination as to the suitability of the information for his/her particular purpose(s).