***** MATERIAL SAFETY DATA SHEET *****

MERCURY

DATE OF PREP: 5/1/00

SECTION I

DISTRIBUTOR:	UV PROCESS SUPPLY.
ADDRESS:	1229 W. CORTLAND
	CHICAGO, IL 60614-4805
TELEPHONE #	(773)-248-0099
EMERGENCY#	(800) 424-9300

TRADE NAME : Mercury; Metallic Mercury; Quicksilver

SECTION II **HAZARDOUS INGREDIENTS/IDENTITY**

COMPONENT	OSHA/PEL	ACGIH/TLV	OTHER EXPOSURE LIMITS	%	CAS
Mercury (Metallic Mercury) (Quicksilver)	0.05 MG (HG)/M^3	0.05 MG (HG)/M^3	TWA	100	7439-97-6

SECTION III **PHYSICAL & CHEMICAL CHARACTERISTICS**

Boiling Point:	675 degree F (357 degree C)
Specific Gravity (water =1):	13.6
Vapor Pressure (mm Hg):	0.0012 MMGH @ 20 degree C
Vapor Density (air = 1):	7.0
Solubility in Water:	Insoluble
Reactivity in Water:	N/A
Appearance and Odor:	Silver-white; heavy mobile; liquid metal
Melting Point:	-38 degree F (-39 degree C)

SECTION IV **FIRE AND EXPLOSION DATA**

Flash Point:	N/A
Flammable Limits in Air % by Volume:	LEL (lower): N/A UEL (upper): N/A
Auto-ignition Temperature:	N/A
Extinguisher Media:	Dry chemical, carbon dioxide, water spray or foam (1984 Emergency Response Guidebook, DOT P 5800.3)
Special Firefighting Procedures:	For larger fires, use water spray, fog or alcohol foam (1984 Emergency Response Guidebook, DOT P 5800.3) Firefighting: Move materials from area if possible. Cool materials exposed to flames with water from side until well after fire is out (1984 Emergency Response Guidebook, DOT P 5800.3). Use agents suitable for type of fire
Unusual Fire and Explosion Hazards:	Use water in flooding amounts as a fog. Avoid breathing corrosive and poisonous vapors. Keep upwind.

SECTION V **PHYSICAL HAZARDS (REACTIVITY DATA)**

Conditions to Avoid:	Does not ignite readily. Flammable, poisonous gases may accumulate in tanks and hopper cars. May ignite combustibles (wood, paper, oil).
Incompatibility: (Materials to Avoid)	Violent Reaction: Acetylinic compounds; Amonia; Boron; Dilodophosphide; Ethylene Oxide; Metals (aluminum; potassium; lithium; sodium; rubidium); methyl azide; methylsilane; oxygen; oxidants (bromine; peroxyformic acid; chlorine dioxide; nitric acid; tetracabonlnickel; nitromethane; silver perchlorate).
Hazardous Decomposition Products:	Thermal decomposition products include toxic mercury vapors and oxygen

Hazardous Polymerization: Will not occur

Conditions to Avoid: None known

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SECTION VI **HEALTH HAZARDOUS**

Elemental Hg, liquid and vapor, is toxic due to its liquid solubility, lack of charge, and membrane permeability. Inhaled vapos (80%) diffuse rapidly through alvcolar membranes into the blood and are systemically transported to body tissues, including the brain. Exposer to high cone, (1.2 mg/m^3) of vapors for brief periods can cause pnuemonitis, chest pains, dyspea, coughin,; later stomatitis, gingivitis, and salivation occurs. Hg can be absorbed slowly through the skin. Chronic symptoms involved the CNS with tremors and various neuropsychiatric disturbances. The TLV would be exceeded if the contents of a small Hg clinical thermometer were dispersed in a closed 100' x 15' room. GI uptake of HG is low (5%).

FIRST AID:

Eye contact: Flush with running water for 15 minutes, including under the eyelids.

Skin contact: Remove contaminated clothing. Wash affected area with soap and water.

Inhalation: Gastric lavage with 5% solution of sodium formaldehyde suffoxylate, followed by 2% $NaHCO_3$ and finally leave 250 cd of the sodium formaldehyde sulfoxylate in the stomach. Seek medical assistance for further treatment, observation and support.

Skin Contact: Irritant/Sensitizer/Neurotoxin/Nephrotoxin. Acute Exposure – may cause redness and irritation. Sensitization Dermatitis may occur in previously exposed workers. Substance may be absorbed through intact skin causing anuria.

ROUTES OF ENTRY

Eye Contact: Irritant. Acute Exposure – Contact may cause irritation. Solutions are corrosive and may cause corneal injury or burns. Chronic Exposure – Mercury may be deposited in the lens of the yey, causin visual disturbance.

Ingestion: Neurotoxic/Nephrotoxic. Acute Exposure – When ingested, necrosis begins immediately in the mouth, throat, esophagus, and stomach. Within a few minutes, violent pain, profuse vomiting, and sever purging may occur. Patent may die within a few minutes from fluid/electrolyte losses and peripheral vascular collapse, but death (from uremia) is usually delayed 5 to 12 days.

Inhalation: Irritant/Sensitizer/Neurotoxin. 28 MG/M3 immediately dangerous to life or health. Acute Exposure – Inhalation of a higher concentration of mercury vapor can cause almost immediate dyspnea, cough, fever, nausea and vomiting, diarrhea, stomatitis, salivation and metallic taste. Symptoms may resolve or may progress to necrotizing bronchiolitis, pneumonitis, pulmonary edema, and pnuemothorax. This syndrome is often fatal in children. Acidosis and renal damage with renal failure may occur. Inhaling volatile organic mercurials in high concentrations causes metallic taste, dizziness, clumsiness, slurred speech, diarrhea, and sometimes fatal convulsions. Chronic Exposure – Inhalation of mercury vapor, dusts, over a long period causes mercurialism. Findings extremely variable and include tremors, salivation, stomatitis, loosening of teeth, blue lines of gums, pain and numbness in extremities, nephritis, diarrhea, anxiety, headache, weight loss, anorexia, mental depression, insomnia, irritability and instability, hallucinations and evidence of mental deterioration.

SECTION VII **SPECIAL PRECAUTIONS AND SPILL/LEAK PROCEDURES**

Store in closed unbreakable containers (polyethylene) in a cool, dry, well-ventilated area away from sources of heat. Protect containers from physical damage.

Mercury evaporates very slowly. Spilled Hg forms many tiny globules that will evaporate faster than a single pool and can develop a significant concentration of vapors in a unventilated area. Such vapors can be poisonous, especially if breathed over a long period of time. Heated Hg evolves high levels of toxic vapors.

DO NOT TOUCH SPILLED MATERIAL. STOP LEAK IF YOU CAN DO IT WITHOUT RISK. FOR SMALL SPILLS, TAKE UP WITH SAND OR OTHER ABSORBENT MATERIAL AND PLACE INTO CONTAINERS FOR LATER DISPOSAL. A MERCURY SPILL KIT MAY ALSO BE USED FOR SMALL SPILLS IN THE WORKPLACE. FOR LARGER SPILLS, DIKE FAR AHEAD OF SPILL FOR LATER DISPOSAL. KEEP UNNECESSARY PEOPLE AWAY. ISOLATE HAZARD AREA AND DENY ENTRY.

SECTION VIII **SPECIAL PROTECTION INFORMATION/CONTROL MEASURES**

Provide adequate exhaust ventilation to meet TLV requirements in the workplace. Operations requiring a Hg surface should reduce the temperature of Hg to limit vaporization and minimize vapor exposure by using a local exhaust.

Self-contained breathing apparatus can be used up to 5 mg/m^3 with a full-facepiece above 1 mg/m^3. Positive pressure-type air supplied breathing equipment has been recommended above 5 mg/m^3.

Avoid eye contact by use of chemical safety glasses. Wear rubber gloves and protective clothing appropriate for the work situation. Separate work and street clothing. Store work clothing in special lockers. Showers to be taken before changing into street clothes. Provide placement and periodic medical exams for those regularly exposed to Hg with emphasis directed to CNS, skin, lungs, liver, kidneys, and GI tract.

WHMIS – D2B, E	Poison UN 2809
HMIS – 3-0-0	Corrosive 8