

## MATERIAL SAFETY DATA SHEET

### I - IDENTIFICATION AND USE

**PRODUCT NAME:** FLO-CLENE  
**PRODUCT USE:** LIQUID DRAIN OPENER

**SUPPLIER:** STARK INDUSTRIAL SOLUTIONS  
527 DUNDONALD STREET  
#133  
HALIFAX, NS B3J 3L7  
**Tel:** (888) 709-8881

**24 HOUR EMERGENCY NUMBER: ECO-CHOICE INDUSTRIES (905) 532-9100**

### II - HAZARDOUS INGREDIENTS OF PRODUCT

CHEMICAL IDENTITY	CAS#	%	LD50	LC50
PHOSPHORIC ACID	7664-93-9	85%	Oral(LD50) mg/kg Acute: 2140(Rat)	LC50 Acute 255ppm 4hrs

PERMISSIBLE EXPOSURE LIMITS IN AIR: ACGIH TWA = 1MG/M3

### III - PHYSICAL DATA FOR PRODUCT

PHYSICAL STATE:	LIQUID
ODOUR & APPEARANCE:	CHERRY SCENT, CLEAR LIQUID
SOLUBILITY IN WATER:	SOLUBLE
PH:	<1.00
SPECIFIC GRAVITY	1.84 GM/CM3
VAPOUR PRESSURE	1 mm/Hg AT 146 C
VAPOUR DENSITY	N/A
EVAPORATION RATE	N/A
BOILING POINT	100 C AT 1 ATM
FREEZING POINT	NOT PERTINENT
% VOLATILE	4%
FLASH POINT OF CONC.	NOT FLAMMABLE

### IV - FIRE AND EXPLOSION HAZARD

**FLAMMABILITY:** NO  
**MEANS OF EXTINCTION:** N/A  
**SPECIAL PROCEDURES:** SULPHURIC ACID MIST, SO3 OR SO2 GASSES CAN BE RELEASED AT HIGH TEMPERATURES; FIREFIGHTERS SHOULD WEAR ACID RESISTANT SUITS AND PRESSURE DEMAND SELF-CONTAINED BREATHING APPARATUS FOR RESPIRATORY AND EYE  
**PROTECTION SENSITIVITY TO IMPACT:** N/A  
**OTHER FIRE AND EXPLOSION DATA:** AUTOIGNITION TEMPERATURE: N/A  
**UPPER EXPLOSION LIMIT:** N/A  
**LOWER EXPLOSION LIMIT:** N/A  
**HAZARDOUS COMBUSTION PROD:** N/A

### V - REACTIVITY DATA

**CHEMICAL STABILITY:** YES  
**INCOMPATIBILITY MATERIALS:** COMBUSTIBLE MATERIALS, WOOD, OIL, CAUSTIC AMMONIA, ALCOHOLS, AROMATIC AMINES, AMIDES, ALIPHATIC AMINES, ORGANIC ANHYDRIDES. NOT DANGEROUSLY REACTIVE, CHLORINE(BLEACH) BASED CLEANERS.  
**CONDITIONS TO AVOID:** DILUTED PHOSPHORIC ACID MAY REACT WITH METAL AND PRODUCE FLAMMABLE HYDROGEN GAS: WHEN

REACTS WITH SULPHIDES, PRODUCES TOXIC  
HYDROGEN SULPHIDE.

HAZARDOUS DECOMPOSITION PRODUCTS: PHOSPHORIC ACID WHEN IN CONTACT WITH  
METALS MAY LIBERATE FLAMMABLE HYDROGEN  
GAS.

## VI - TOXICOLOGICAL PROPERTIES

ROUTE OF ENTRY: SKIN CONTACT: YES  
EYE CONTACT: YES  
INGESTION: YES  
INHALATION: YES

EFFECTS OF ACUTE EXPOSURE TO PRODUCT:

EYE: MAY CAUSE CONJUNCTIVITIS OR SEVERE  
BURN; PERMANENT DAMAGE MAY OCCUR.  
SKIN: IS HIGHLY CORROSIVE; WILL CAUSE BURNING AND SCARRING.  
INGESTION: WILL CAUSE CORROSIVE BURNS TO MOUTH, THROAT, STOMACH;  
MAY BE FATAL IF SWALLOWED.  
INHALATION: INHALATION OF ACID MIST MAY CAUSE IRRITATION OR CORROSIVE  
BURNS TO NOSE, MOUTH, THROAT AND MUCOUS MEMBRANES;  
DENTAL EROSION MAY OCCUR; PULMONARY EDEMA IS POSSIBLE

EFFECTS OF CHRONIC EXPOSURE: SULPHURIC ACID DOES NOT HAVE CHRONIC  
HEALTH EFFECTS

EXPOSURE LIMITS: SHORT TERM INHALATION LIMITS: 10MG/M3 FOR 5  
MINUTES. 5MG/M3 FOR 10 MINUTES  
IRRITANCY OF MATERIAL: CAUSES SEVERE SECOND AND THIRD DEGREE BURNS OF  
SKIN.  
SYNERGISTIC MATERIALS: NONE KNOWN  
CARCINOGENICITY: OCCUPATIONAL EXPOSURE TO STRONG-INORGANIC ACID  
MISTS CONTAINING PHOSPHORIC ACID IS CARCINOGENIC  
TO HUMANS (Group 1)

TLV: TLV-STEL 15MIN 3MG/M3

## VII - PREVENTIVE MEASURES

PERSONAL PROTECTIVE EQUIPMENT:

- GLOVES: WEAR RUBBER OR ACID RESISTANT GLOVES
- EYE: GOGGLES, GLASSES, OR FULL FACE SHIELD
- RESPIRATORY: WEAR APPROPRIATE NIOSH-MSHA APPROVED RESPIRATORS FOR  
INORGANIC ACID MIST OR FUMES WHENEVER WORKPLACE CONTAMINATION EXCEEDS  
APPLICABLE LIMITS
- OTHER: ACID RESISTANT CLOTHING SUCH AS RUBBER APRONS, COATS, PANTS,  
BOOTS AND HELMETS

ENGINEERING CONTROLS: GENERAL VENTILATION OR LOCAL FOR HOT SOLUTION

LEAK AND SPILL PROCEDURE: CONSIDER EVACUATION OF ALL BUT EMERGENCY PERSONNEL;

DO NOT TOUCH MATERIAL: VENTILATE AREA; CONTAIN SPILL WITH SAND OR EARTH; CLEAN  
UP, NEUTRALIZE WITH A BASE.

ENVIRONMENTAL EFFECTS: WILL BURN VEGETATION ON THE SPILL AREA: LARGE QUANTITIES  
IN A WATER STREAM WILL INTERFERE WITH AQUATIC LIFE.

WASTE DISPOSAL: RECYCLE IF POSSIBLE OR DISPOSE ACCORDING TO APPLICABLE  
REGULATIONS. TO PROTECT FRESHWATER AQUATIC LIFE NEUTRALIZE TO PH 6.5 - 9.0; TO  
PROTECT SALTWATER AQUATIC LIFE PH 6.5 - 8.5. TO NEUTRALIZE ADD SLOWLY SOLUTION OF  
SODA ASH OR CAUSTIC WITH STIRRING; FLUSH TO DRAIN WITH LARGE QUANTITIES OF WATER  
HANDLING PROCEDURES AND EQUIPMENT: HANDLE WITH CARE. AVOID CONTACT WITH SKIN,  
CLOTHING AND EYES.

SPECIAL SHIPPING INFORMATION: MARK AS: PHOSPHORIC ACID, MORE THAN 51%, PIN# 1805,

CLASS 8.

STORAGE REQUIREMENTS: THIS PRODUCT SHOULD BE STORED IN AREAS WITH NO ACID RESISTANT FLOORS. STORE IN CLOSED CONTAINERS AND AWAY FROM CHILDREN AND COMBUSTIBLE CHEMICALS.

SPECIAL PRECAUTIONARY STATEMENTS: PLEASE READ AND FOLLOW THE DIRECTIONS ON THE PRODUCT LABEL. THEY ARE YOUR BEST GUIDE TO USING THIS PRODUCT IN THE MOST EFFECTIVE WAY, AND THEY ALSO GIVE THE NECESSARY SAFETY PRECAUTIONS TO PROTECT YOUR HEALTH.

#### **VIII - FIRST AID MEASURES**

EYES: IMMEDIATELY FLUSH WITH LARGE AMOUNTS OF WATER FOR 15 MINUTES, LIFTING UPPER AND LOWER LIDS OCCASIONALLY. SEEK MEDICAL ATTENTION.

SKIN: WASH AND FLUSH GENEROUSLY WITH A LOT OF WATER. REMOVE CONTAMINATED CLOTHING AND SHOES. WASH BEFORE REUSE. GET MEDICAL ATTENTION IF REQUIRED.

INGESTION: DO NOT INDUCE VOMITING. GET MEDICAL ATTENTION IMMEDIATELY. DRINK LOTS OF WATER, IF PATIENT VOMITS GIVE THEM MORE WATER

INHALATION: IF AFFECTED, REMOVE INDIVIDUAL TO FRESH AIR. IF BREATHING IS DIFFICULT, ADMINISTER OXYGEN. IF BREATHING HAS STOPPED, GIVE ARTIFICIAL RESPIRATION. GET MEDICAL HELP. KEEP WARM AND QUIET.

PREPARED BY: ECO-CHOICE INDUSTRIES LAB GROUP

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