

MATERIAL SAFETY DATA SHEET
SECTION I – MATERIAL IDENTIFICATION AND USE

MATERIAL NAME: Q 99

MANUFACTURERS NAME:

CP INDUSTRIES LTD.
 225 BLACK STREET
 FERGUS, ONTARIO N1M 1A5

SUPPLIERS NAME:

QUALITY CHEMICALS
 215 DOLOMITE DRIVE
 DOWNSVIEW, ONTARIO M3J 2N1

EMERGENCY TELEPHONE NUMBER: (613) 996-6666
 Non-Office Hours, Weekends, or Holidays – (CANUTEC) Call Collect

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CHEMICAL NAME

Sulfuric Acid

CHEMICAL FAMILY

Mineral Acid

CHEMICAL FORMULA

H₂SO₄

WHMIS CLASS

D1A E

MOLECULAR WEIGHT

98.1

TRADE NAME AND SYNONYMS

None

MATERIAL USE

Drain Opener

SECTION II – HAZARDOUS INGREDIENTS OF MATERIAL

HAZARDOUS INGREDIENTS	APPROXIMATE CONCENTRATION %	C.A.S.N.A.	“EXPOSURE LIMITS”	LD50/LC50 SPECIFY SPECIES & ROUTE
Sulphuric acid	90-100	7664-93-9	TLV-TWA (ACGIH) (1987-1988) 1 mg/m ³ PEL (OSHA) 1 mg/m ³	LD50 2140 mg/kg (oral/rat) LC50 510 mg/m ³ /2 hrs

SECTION III – PHYSICAL DATA FOR MATERIAL

PHYSICAL STATE

GAS LIQUID X SOLID

VAPOUR PRESSURE (mm)

0.0016mm Hg @ 40°C

FREEZING POINT (°C)

-29.5°C

COEFFICIENT OF WATER/OIL DISTRIBUTION: Not Available

ODOUR AND APPEARANCE

Clear red liquid, pungent odor

VAPOUR DENSITY (Air=1)

3.4

SOLUBILITY IN WATER

Soluble

ODOUR THRESHOLD

Not Available

EVAPORATION RATE

Not Available

% VOLATILE (by volume)

5% (Approx.)

SPECIFIC GRAVITY

1.83

BOILING POINT (°C)

276°C

pH (1%)

<1

SECTION IV – FIRE AND EXPLOSION DATA

FLAMMABILITY IF YES, UNDER WHAT CONDITIONS

YES NO X

MEANS OF EXTINCTION: As for surrounding fire. Use water carefully.

SPECIAL PROCEDURES: Not flammable but highly reactive; capable of igniting finely divided combustible materials on contact. Use water on combustibles burning in vicinity of this material but use care; water applied directly will cause evolution of heat and spattering. Full protective acid resistant equipment including a self-contained breathing apparatus should be worn.

FLASHPOINT (°C) AND METHOD: Not Applicable **AUTO IGNITION TEMPERATURE (°C):** Not Applicable

UPPER EXPLOSION LIMIT (% BY VOLUME): Not Applicable

LOWER EXPLOSION LIMIT (% BY VOLUME): Not Applicable

HAZARDOUS COMBUSTION PRODUCTS: Toxic gases and vapors (SO₂, SO₃, Sulfuric Acid mist).

EXPLOSION DATA SENSITIVITY TO MECHANICAL IMPACT: Not Applicable

RATE OF BURNING

Not Applicable

EXPLOSIVE POWER

Not Available

SENSITIVITY TO STATIC DISCHARGE

None

SECTION V – REACTIVITY DATA

CHEMICAL STABILITY

YES X NO

IF NO, UNDER WHAT CONDITIONS?

INCOMPATIBILITY TO OTHER SUBSTANCES

YES X NO

IF SO, WHICH ONES?

Combustible materials; carbides, chlorate, fulminates, nitrates, picrates, powdered metals, acids, bleach.

REACTIVITY AND UNDER WHAT CONDITIONS:

Contact with water or bases will generate heat, and vapors. Contact with organic materials (such as chlorates, carbides, fulminates, picrates) may cause fire and explosion. Contact with soft metals may produce flammable hydrogen gas. Contact with bleach generates toxic gas (chlorine).

HAZARDOUS DECOMPOSITION PRODUCTS:

See above

MATERIAL NAME: Q 99

SECTION VI – TOXICOLOGICAL PROPERTIES OF PRODUCT

ROUTE OF ENTRY

SKIN CONTACT:	X	SKIN ABSORPTION:		EYE CONTACT:	X
INHALATION ACUTE:	X	INHALATION CHRONIC:	X	INGESTION:	X

EFFECTS OF ACUTE EXPOSURE TO PRODUCT

EYE: CORROSIVE. Immediate pain, severe burns and permanent corneal damage which may result in blindness.

SKIN: CORROSIVE. May cause pain and severe burns to the skin and brownish or yellow stains.

INHALATION: Mists and vapours may cause severe irritation of the eyes, nose and respiratory tract.

INGESTION: CORROSIVE. May cause severe burning and pain in the mouth, throat and abdomen. Vomiting, diarrhea and perforation of the esophagus and stomach lining may occur.

EFFECTS OF CHRONIC EXPOSURE TO PRODUCT: Prolonged or repeated exposure to dilute solutions may cause irritation, redness, pain, and drying and cracking of skin. Prolonged or repeated exposure to mists and vapours may result in impaired lung function and possible discoloration and erosion of teeth.

LD50 OF PRODUCT (SPECIFY SPECIES & ROUTE)	IRRITANCY OF PRODUCT	EXPOSURE LIMITS OF PRODUCT
2140 mg/kg (oral/rat)	Highly irritating	TLV-TWA (ACGIH) (1987-1988) 1mg/m ³ PEL (OSHA) 1 mg/m ³

LC50 OF PRODUCT (SPECIFY SPECIES)	SENSITIZATION TO PRODUCT	SYNERGISTIC MATERIALS
510 mg/m ³ 2 hrs (inhalation/rat)	None Known	None Known

CARCINOGENICITY: Although there are reports linking exposure to sulphuric acid to cancer, this product is not classified by NTP(National Toxicology Program), not regulated as carcinogenic by OSHA(Occupational Safety and Health Administration), and has not been evaluated by IARC(International Agency for Research on Cancer) or ACGIH(American Conference of Governmental Industrial Hygienists).

OTHER TOXIC EFFECTS: IARC has classified "occupational exposure to strong inorganic acid mists containing sulphuric acid" as being carcinogenic to humans. The route of entry is inhalation of these mists resulting in respiratory cancers. There is no evidence that the liquid is in any way a carcinogen.

REPRODUCTIVE EFFECTS	TERATOGENICITY	MUTAGENICITY
Not available	Not available	Not available

SECTION VII – PREVENTATIVE MEASURES

PERSONAL PROTECTIVE EQUIPMENT

GLOVES	RESPIRATORY (SPECIFY)	EYE (SPECIFY)
PVC or Neoprene	NIOSH/MSHA approved respirator	Chemical Goggles
FOOTWEAR (SPECIFY)	CLOTHING (SPECIFY)	OTHER (SPECIFY)
Rubber	Acid resistant	Acid resistant aprons and face shield

ENGINEERING CONTROLS (E.G. VENTILATION, ENCLOSED PROCESS, (SPECIFY): Local exhaust to maintain vapour concentration below exposure limits.

LEAK AND SPILL PROCEDURE: Remove all ignition sources. Ventilate area. Do not allow the spilled product to go to drain. Dike with inert material (sand, earth). Collect into containers for disposal.

WASTE DISPOSAL: Dispose of according to local, provincial, and federal regulations.

HANDLING PROCEDURES & EQUIPMENT: Always add acid to water cautiously. Always wear protective equipment.

STORAGE REQUIREMENTS: Store in a cool, dry well ventilated area away from combustibles, oxidizers, bases, metallic powders, acids and bleach.

SPECIAL SHIPPING INFORMATION: Not Applicable.

SECTION VIII – FIRST AID PROCEDURES

SKIN: Flush with water for at least 30 minutes; if irritation persists, repeat flushing. Seek medical attention immediately.

EYE: Immediately flush eyes and under eyelids with running water for at least 30 minutes. If irritation persists, repeat flushing. Seek medical attention immediately.

INHALATION: Remove patient to fresh air. If not breathing give artificial respiration. Keep warm and quiet. Seek medical attention immediately.

INGESTION: Seek medical attention immediately. Drink lots of water or milk. Do not induce vomiting, but if patient vomits give him/her more water. Do not give anything by mouth to an unconscious patient. Immediately transport victim to emergency facility.

GENERAL ADVICE: Safety shower and eyewash must be readily available.

SECTION IX – PREPARATION DATE OF MSDS

ADDITIONAL INFORMATION/COMMENTS: None

SOURCES USED: Supplier MSDS

PREPARED BY: CP INDUSTRIES LTD.

PHONE NUMBER: (519) 843-6300

DATE: 3/24/04