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Zaclon LLC
Material Safety Data Sheet

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-Quilon(R) M - Chromium Complex
6454CR Revised 11-OCT-2008

-CHEMICAL PRODUCT/COMPANY IDENTIFICATION

-Material Identification

"QUILON" is a registered trademark of DuPont.

CAS Name "Quilon" Chrome Complex
Grade : M

Tradenames and Synonyms

CHROMIUM COMPLEX

Company Identification

MANUFACTURER/DISTRIBUTOR
Zaclon LLC
2981 Independence Road
Cleveland, Ohio 44115

PHONE NUMBERS

Product Information : 1-800-441-7515
Transport Emergency : CHEMTREC: 1-800-424-9300
Medical Emergency : 1-800-441-3637

-COMPOSITION/INFORMATION ON INGREDIENTS

Components

Material	CAS Number	9
Isopropyl Alcohol (Isopropanol)	67-63-0	55-60
*	15659-56-0	
*Chromium Chloride Hydroxide Tetradecanoate (2:4:		25-30
* 1:1)		
Acetone	67-64-1	5-15

* Disclosure as a toxic chemical is required under Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR part 372.

HAZARDS IDENTIFICATION

Potential Health Effects

Inhalation may cause irritation of the upper respiratory passages, with coughing and discomfort; and temporary central nervous system depression with dizziness, headache, confusion, incoordination, drowsiness, and loss of consciousness.

Skin contact may cause irritation with itching, redness or rash. Significant skin permeation, and systemic toxicity, after contact appears unlikely.

Eye contact may cause irritation or injury with tearing, pain or blurred vision; eye corrosion with corneal or conjunctival ulceration.

Ingestion may cause irritation of the digestive tract with stomach pain, heartburn, nausea, vomiting or diarrhea; however there may be no symptoms at all. A major ingestion hazard is aspiration (liquid entering the lungs during ingestion or vomiting) which may result in "chemical pneumonia".

Inhalation, ingestion or skin contact with Isopropyl Alcohol may include non-specific effects such as headache, nausea and weakness; flushing of the face; and low blood pressure.

Increased susceptibility to this product may be observed in persons with pre-existing disease of the skin and lungs.

Carcinogenicity Information

None of the components present in this material at concentrations equal to or greater than 0.19 are listed by IARC, NTP, OSHA or ACGIH as a carcinogen.

FIRST AID MEASURES

First Aid

INHALATION

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

SKIN CONTACT

Flush skin with water after contact. Wash contaminated clothing before reuse.

EYE CONTACT

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Call a physician.

(FIRST AID MEASURES - Continued)

INGESTION

If swallowed, do not induce vomiting. Give two glasses of water or activated charcoal slurry. Call a physician. Never give anything by mouth to an unconscious person.

NOTE:

To prepare activated charcoal slurry, suspend 50 gm of activated charcoal in 400 mL of water in a bottle and shake well. Give 5 mL/kg of body weight, or 350 mL for an average adult.

FIRE FIGHTING MEASURES

Flammable Properties

Flash Point	. -3 to 4 C (27-39 F)
Method	TOC
Flammable limits in Air, %by Volume	
LEL	: 2
UEL Autoignition	12
Autodecomposition	>399 C (>750 F)
	Not available

Actual Autoignition Temperatures (AIT's) can be affected by the concentration of vapors and oxygen, vapor/air contact time, pressure, volume, catalytic impurities, etc. Process conditions should be analyzed to determine if the AIT may be higher or lower.

Fire and Explosion Hazards:

OSHA Class 1B Flammable Liquid. Follow appropriate National Fire Protection Association (NFPA) codes for handling and storage facilities.

Extinguishing Media

Water, Dry Chemical, Foam, CO2.

"Alcohol" Foam. Carbon Dioxide (CO2).

Fire Fighting Instructions

Evacuate personnel to a safe area. Cool tank/container with water spray.

ACCIDENTAL RELEASE MEASURES

Safeguards (Personnel)

NOTE: Review FIRE FIGHTING MEASURES and HANDLING (PERSONNEL) sections before proceeding with clean-up. Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean-up.

Evacuate personnel, thoroughly ventilate area, use self-contained breathing apparatus.

Initial Containment

Remove source of heat, sparks, flame, impact, friction or electricity.

Spill Clean Up

Discarded material is a RCRA Hazardous Waste.

Accidental Release Measures

Wear protective clothing. Dike spill; soak up with sand, earth, or other non-combustible absorbent material and dispose of in covered metal containers. Prevent liquid from entering sewers, waterways, or low area. After bulk removal, flush spill area with plenty of water.

If "QUILON" M is spilled and not recovered, or is recovered as a waste for treatment or disposal, the CERCLA Reportable Quantity is 100 lbs. for the product and 10 lbs. for Chromium Compounds (release of an unlisted Hazardous Waste characteristic of ignitibility and unlisted Hazardous Waste characteristic of toxicity). The CERCLA Reportable Quantity for acetone is 5,000 lbs.

HANDLING AND STORAGE

Handling (Personnel)

Do not get in eyes. Avoid breathing vapors or mist. Wash thoroughly after handling.

Avoid contact with skin and clothing.

Storage

Keep away from heat, sparks, and flame. Keep containers tightly closed and in an upright position. Do not store or mix with oxidizing agents.

Best temperature for stability is below 32 deg C (90 deg F) and above freezing point.

EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls

Good general ventilation should be provided to keep component concentrations below the recommended exposure limits and avoid flammable mixtures with air. Use explosion-proof motors, electrical fittings, and nonsparking tools and equipment. Containers should be grounded.

Personal Protective Equipment

EYE/FACE PROTECTION

Wear coverall chemical splash goggles. Additionally, wear a face shield where the possibility exists for face contact due to splashing or spraying of material.

RESPIRATORS Wear NIOSH approved respiratory protection as appropriate.

PROTECTIVE CLOTHING

Where there is potential for skin contact have available and wear as appropriate impervious gloves, apron, pants, jacket, hood and boots.

Exposure Guidelines

Exposure Limits

Quilon(R) M - Chromium Complex

PEL (OSHA) : 0.5 mg/m³, as Cr, 8 Hr. TWA
TLV (ACGIH) : 0.5 mg/m³, as Cr, 8 Hr. TWA
AEL * (DuPont) : 0.5 mg/m³, as Cr, 8 Hr. TWA

Other Applicable Exposure Limits

Isopropyl Alcohol (Isopropanol)

PEL (OSHA) : 400 ppm, 980 mg/m³, 8 Hr. TWA
TLV (ACGIH) : 200 ppm, 8 Hr. TWA, A4
STEL 400 ppm
AEL * (DuPont) 200 ppm, 8 & 12 Hr. TWA

Acetone

PEL (OSHA) 1000 ppm, 2400 mg/m³, 8 Hr. TWA
TLV (ACGIH) 500 ppm, 1188 mg/m³, 8 Hr. TWA, A4
STEL 750 ppm, 1782 mg/m³, A4
AEL * (DuPont) 500 ppm, 8 & 12 Hr. TWA

* AEL is DuPont's Acceptable Exposure Limit. Where governmentally imposed occupational exposure limits which are lower than the AEL are in effect, such limits shall take precedence.

PHYSICAL AND CHEMICAL PROPERTIES

Physical Data

Boiling Point	82 C (180 F) @ 760 mm Hg
Vapor Density	2.25 C (77 F)
Evaporation Rate	(Butyl Acetate = 1) Greater than 1
Solubility in Water	100 g
pH	2.6-2.7 (1% water solution)
Odor	Alcoholic
Form	Liquid
Color	blue green
Specific Gravity	0.93-0.97

STABILITY AND REACTIVITY

Chemical Stability

Stable.

Incompatibility with Other Materials

Incompatible or can react with oxidizing agents.

Decomposition

Decomposes with heat; solvent vapors and gaseous hydrogen chloride will be emitted.

Other Hazards

Polymerization : Polymerization will occur with water.

TOXICOLOGICAL INFORMATION

Animal Data

QUILON CHROME COMPLEX:

Oral ALD: 7500 mg/kg in rats
Inhalation
4 hour ALC: 18 mg/L in rats

These products are corrosive to the eye and are mild to moderate skin irritants. Toxic effects in animals from ingestion exposures include severe stomach irritation. Although some Chromium Compounds (VI) have demonstrated carcinogenic activity in animals, Chromium (III) Compounds have not.

Isopropyl Alcohol:

Oral LD50: 4700 mg/kg in rats

(TOXICOLOGICAL INFORMATION - Continued)

Dermal LD50: 12,900 mg/kg in rabbits
Inhalation 4 hour LC50: 16,000 ppm in rats

Animal testing indicates Isopropyl Alcohol is a moderate eye irritant and a mild skin irritant. Repeated skin contact with Isopropyl Alcohol caused dry skin, decreased body weight and increased lung weight. Single exposure by ingestion to near lethal doses of Isopropyl Alcohol caused histopathological changes of the stomach, lungs, and kidneys; gastrointestinal tract irritation; incoordination; lethargy; and inactivity or anaesthesia. Repeated exposure caused increased weight of the liver, kidney, and adrenals. Long-term exposure caused incoordination, lethargy and reduced weight gain. Single exposure by inhalation to Isopropyl Alcohol caused inactivity or anaesthesia, and histopathological changes of the nasal cavity, respiratory tract, and auditory canal. Repeated exposure caused narcosis, decreased motor activity, incoordination, increased liver weight, and lung, kidney, blood and spleen effects. Long-term inhalation exposure caused impaired kidney function and increased testes, liver and kidney weights in rats; increased liver weights, seminal vesicle enlargement, and histopathological changes of the kidneys and testes in mice. In animal testing Isopropyl Alcohol has not caused carcinogenicity. Inhalation of Isopropyl Alcohol vapor has caused developmental effects (resorptions and skeletal malformations) only at maternally toxic doses and reduced fetal weight at non-maternally toxic levels. Isopropyl Alcohol has caused reproductive toxicity in laboratory animals following oral exposure to high doses that caused liver and kidney effects in parental animals. Tests have shown that Isopropyl Alcohol does not cause genetic damage in bacterial or mammalian cell cultures, or in animals. Isopropyl Alcohol has not been tested for its ability to cause permanent genetic damage in reproductive cells of mammals (not tested for heritable genetic damage).

Acetone:

Oral LD50, rat: 9750 mg/kg
Inhalation 4 hour, LC50, rat: 31,983 ppm
Dermal LD50, rabbit: 20,000 mg/kg

Animal testing indicates that Acetone is an eye irritant, but is not a skin irritant. Acetone has not been tested for skin sensitization in animals. Repeated dermal exposure of animals caused dry skin and cataracts. Long-term dermal exposure caused no significant toxicological effects. Repeated ingestion exposure to high doses of acetone caused kidney injury, reduced weight gain, and liver, hematological and testicular effects. Single and repeated exposure by inhalation to high doses caused central nervous system depression, and decreased motor activity. Repeated exposures to higher concentrations caused incoordination and reduced

(TOXICOLOGICAL INFORMATION - Continued)

weight gain. In animal testing Acetone has not caused carcinogenicity. Limited data on the exposure of pregnant rats to Acetone show developmental toxicity only at exposure levels producing other toxic effects in the adult animal. Limited data on the exposure of pregnant mice to Acetone show a reduction of fetal body weight and an increase in the incidence of late resorptions. The NOEL (No-Observed-Effect-Level) for developmental toxicity in the rat and mouse study was 2200 ppm. Limited data on the exposure of rats and mice to Acetone show reproductive toxicity only at exposure levels producing other toxic effects in the adult animal. Acetone does not cause genetic damage in bacterial cells. Test in mammalian cell cultures have been both positive and negative. Testing in yeast has also produced positive results.

ECOLOGICAL INFORMATION

Ecotoxicological Information

Aquatic Toxicity:

"QUILON":

96 hour LC50, fathead minnows: 460 mg/L

The toxicity of "QUILON" is pH dependent and may not indicate the true toxicity of the chromium complex.

Acetone:

96 hour LC50 - Bluegill sunfish: 8300 ppm
96 hour LC50 - Fathead minnows: 7280-8120 mg/L
48 hour LC50 - Daphnia magna: 39,000 ppm

Isopropyl Alcohol:

96 hour LC50 - fathead minnows: 3,200 mg/L

DISPOSAL CONSIDERATIONS

Waste Disposal

Treatment, storage, transportation, and disposal must be in accordance with applicable Federal, State/Provincial, and Local regulations.

OTHER INFORMATION

NFPA, NPCA-HMIS

NPCA-HMIS Rating	
Health	3
Flammability	3
Reactivity	1

Personal Protection rating to be supplied by user depending on use conditions.

Additional Information

For further information, see "QUILON" Properties, Uses, Storage and Handling Bulletin.

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The data in this Material Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process.

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Indicates updated section.

This information is based upon technical information believed to be reliable. It is subject to revision as additional knowledge and experience is gained.

End of MSDS