

Safety Data Sheet

Material Name: Quilon C - Chromium Complex

*** Section 1 - Identification of the Substance/Preparation and the Company/Undertaking ***

Manufacturer Information

Zaclon LLC
2981 Independence Road
Cleveland, OH 44115

Phone: 216-271-1569 or 800-356-7327
Fax: 216-271-1792
Emergency # 800-424-9300

*** Section 2 - Composition / Information on Ingredients ***

EC #	Component	Percent	Symbols	Risks
200-661-7	Isopropyl alcohol 67-63-0	34-45	Xi	R:11-36-67
265-647-5	Chromium, pentahydroxy(tetradecanoato)di- 65229-24-5	20-25		
200-662-2	Acetone 67-64-1	8-12	Xi	R:11-36-66-67
231-595-7	Hydrogen chloride 7647-01-0	0.7-0.9	C Xi	R:34-37

*** Section 3 - Hazards Identification ***

Human and Environmental Hazards

May cause eye, skin and respiratory tract irritation. Ingestion of this material may cause gastrointestinal tract irritation.

*** Section 4 - First Aid Measures ***

First Aid: Eyes

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

First Aid: Skin

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

First Aid: 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.

First Aid: Inhalation

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

First Aid: Notes to Physician

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.

*** Section 5 - Fire Fighting Measures ***

General Fire Hazards

Product is a flammable liquid.

Hazardous Combustion Products

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

Extinguishing Media

Water, Dry Chemical, Alcohol Foam, CO₂.

Fire Fighting Equipment/Instructions

Firefighters should wear full protective gear. Evacuate personnel to a safe area. Cool tank/container with water spray.

*** Section 6 - Accidental Release Measures ***

Containment Procedures

Remove source of heat, sparks, flame, impact, friction or electricity. Stop the flow of material, if this is without risk.

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Clean-Up Procedures

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.

Evacuation Procedures

Isolate area. Keep unnecessary personnel away.

Special Procedures

None

*** Section 7 - Handling and Storage ***

Handling Procedures

Do not get in eyes. Avoid breathing vapors or mist. Wash thoroughly after handling. Avoid contact with skin and clothing.

Storage Procedures

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 -47 deg C solidification point.

Specific Use

Paper treatment

*** Section 8 - Exposure Controls / Personal Protection ***

Substance Exposure Limits

Isopropyl alcohol (200-661-7)

ACGIH:	400 ppm STEL 200 ppm TWA
Austria:	800 ppm STEL (4 X 15 min); 2000 mg/m3 STEL (4 X 15 min); 800 ppm STEL (STEL for large casting, 4 X 30 min); 2000 mg/m3 STEL (STEL for large casting, 4 X 30 min) 200 ppm MAK; 500 mg/m3 MAK (short time value for large casting)
Belgium:	400 ppm STEL; 1000 mg/m3 STEL 200 ppm TWA; 500 mg/m3 TWA
Denmark:	200 ppm TWA; 490 mg/m3 TWA
Finland:	250 ppm STEL; 620 mg/m3 STEL 200 ppm TWA; 500 mg/m3 TWA
France:	400 ppm VLCT; 980 mg/m3 VLCT
Germany:	200 ppm TWA (exposure factor 2); 500 mg/m3 TWA (exposure factor 2) 50 mg/L Medium: whole blood Time: end of shift Parameter: Acetone; 50 mg/L Medium: urine Time: end of shift Parameter: Acetone 200 ppm MAK; 500 mg/m3 MAK 400 ppm Peak; 1000 mg/m3 Peak
Greece:	500 ppm STEL; 1225 mg/m3 STEL 400 ppm TWA; 980 mg/m3 TWA
Ireland:	400 ppm STEL 200 ppm TWA Potential for cutaneous absorption
Portugal:	200 ppm TWA
Spain:	500 ppm VLA-EC; 1250 mg/m3 VLA-EC 400 ppm VLA-ED; 998 mg/m3 VLA-ED
Sweden:	150 ppm LLV; 350 mg/m3 LLV 250 ppm STV; 600 mg/m3 STV

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Acetone (200-662-2)

ACGIH:	750 ppm STEL 500 ppm TWA
Austria:	2000 ppm STEL (4 X 15 min); 4800 mg/m3 STEL (4 X 15 min) 500 ppm MAK; 1200 mg/m3 MAK
Belgium:	1000 ppm STEL; 2420 mg/m3 STEL 500 ppm TWA; 1210 mg/m3 TWA
Denmark:	250 ppm TWA; 600 mg/m3 TWA
Finland:	630 ppm STEL; 1500 mg/m3 STEL 500 ppm TWA; 1200 mg/m3 TWA
France:	1000 ppm VLCT (restrictive limit); 2420 mg/m3 VLCT (restrictive limit) 500 ppm VME (restrictive limit); 1210 mg/m3 VME (restrictive limit)
Germany:	500 ppm TWA (exposure factor 2); 1200 mg/m3 TWA (exposure factor 2) 80 mg/L Medium: urine Time: end of shift Parameter: Acetone 500 ppm MAK; 1200 mg/m3 MAK 1000 ppm Peak; 2400 mg/m3 Peak
Greece:	3560 mg/m3 STEL 1780 mg/m3 TWA
Ireland:	500 ppm TWA; 1210 mg/m3 TWA
Italy:	500 ppm TWA; 1210 mg/m3 TWA
Netherlands:	2420 mg/m3 STEL 1210 mg/m3 TWA
Portugal:	500 ppm TWA
Spain:	500 ppm VLA-ED (indicative limit value); 1210 mg/m3 VLA-ED (indicative limit value)
Sweden:	250 ppm LLV; 600 mg/m3 LLV 500 ppm STV; 1200 mg/m3 STV

Hydrogen chloride (231-595-7)

ACGIH:	2 ppm Ceiling
Austria:	10 ppm STEL (8 X 5 min); 15 mg/m3 STEL (8 X 5 min) 5 ppm MAK; 8 mg/m3 MAK
Belgium:	10 ppm STEL; 15 mg/m3 STEL 5 ppm TWA; 8 mg/m3 TWA
Denmark:	5 ppm Ceiling; 7 mg/m3 Ceiling
Finland:	5 ppm STEL; 7.6 mg/m3 STEL (including solution)
France:	5 ppm VLCT (restrictive limit); 7.6 mg/m3 VLCT (restrictive limit)
Germany:	2 ppm TWA (exposure factor 2); 3 mg/m3 TWA (exposure factor 2) 2 ppm MAK; 3.0 mg/m3 MAK 4 ppm Peak; 6 mg/m3 Peak
Greece:	5 ppm STEL; 7 mg/m3 STEL 5 ppm TWA; 7 mg/m3 TWA
Ireland:	10 ppm STEL; 15 mg/m3 STEL 5 ppm TWA; 8 mg/m3 TWA
Italy:	5 ppm TWA; 8 mg/m3 TWA
Netherlands:	15 mg/m3 STEL 8 mg/m3 TWA
Spain:	10 ppm VLA-EC; 15 mg/m3 VLA-EC 5 ppm VLA-ED (indicative limit value); 7.6 mg/m3 VLA-ED (indicative limit value)
Sweden:	5 ppm CLV; 8 mg/m3 CLV

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

Personal Protective Equipment: Eyes/Face

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

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Personal Protective Equipment: Skin

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

Personal Protective Equipment: Respiratory

Wear NIOSH approved respiratory protection as appropriate.

Personal Protective Equipment: General

Eye wash fountain and emergency showers are recommended.

*** Section 9 - Physical & Chemical Properties ***

Appearance:	Blue green	Odor:	Alcohol
Physical State:	Liquid	pH:	2.6-2.7
Vapor Pressure:	ND	Vapor Density:	2.25 C (77 F)
Boiling Point:	82 C (180 F) @ 760 mm Hg	Melting Point:	ND
Solubility (H2O):	Soluble	Specific Gravity:	0.93-0.97
Evaporation Rate:	>1	VOC:	ND
Octanol/H2O Coeff.:	ND	Flash Point:	0 to 4 C (32-39 F)
Flash Point Method:	TOC	Upper Flammability Limit (UFL):	12
Lower Flammability Limit (LFL):	2	Burning Rate:	ND
Auto Ignition:	>399 C (>750 F)		

*** Section 10 - Chemical Stability & Reactivity Information ***

Chemical Stability

This is a stable material.

Chemical Stability: Conditions to Avoid

Keep away from sparks, heat, and other ignition sources.

Incompatibility

Oxidizing agents.

Hazardous Decomposition

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

Hazardous Polymerisation

Will occur with water.

*** Section 11 - Toxicological Information ***

Potential Health Effects

A: General Product Information

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.

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

B: Substance Analysis - LD50/LC50

Isopropyl alcohol (200-661-7)

Inhalation LC50 Rat 72.6 mg/L 4 h; Oral LD50 Rat 4396 mg/kg; Dermal LD50 Rat 12800 mg/kg; Dermal LD50 Rabbit 12870 mg/kg

Acetone (200-662-2)

Oral LD50 Rat 5800 mg/kg

Hydrogen chloride (231-595-7)

Inhalation LC50 Rat 3124 ppm 1 h; Oral LD50 Rat 700 mg/kg; Dermal LD50 Rabbit >5010 mg/kg

Carcinogenicity

A: General Product 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.

B: Substance Carcinogenicity

Isopropyl alcohol (200-661-7)

IARC: Monograph 71 [1999]; Supplement 7 [1987]; Monograph 15 [1977] (Group 3 (not classifiable))

Hydrogen chloride (231-595-7)

IARC: Monograph 54 [1992] (Group 3 (not classifiable))

*** Section 12 - Ecological Information ***

Ecotoxicity

Substance Analysis - Ecotoxicity - Aquatic Toxicity

Isopropyl alcohol (200-661-7)

Test & Species	Conditions
96 Hr LC50 Pimephales promelas	9640 mg/L [flow-through]
96 Hr LC50 Pimephales promelas	11130 mg/L [static]
96 Hr LC50 Lepomis macrochirus	>1400000 µg/L >1000 mg/L
96 Hr EC50 Desmodesmus subspicatus	13299 mg/L
72 Hr EC50 Desmodesmus subspicatus	48 Hr EC50 Daphnia magna

Acetone (200-662-2)

Test & Species	Conditions	
96 Hr LC50 Oncorhynchus mykiss	4.74 - 6.33 mL/L	
96 Hr LC50 Pimephales promelas	6210 - 8120 mg/L [static]	
96 Hr LC50 Lepomis macrochirus	8300 mg/L 48 Hr EC50 Daphnia magna	10294 - 17704 mg/L [Static]

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48 Hr EC50 12600 - 12700 mg/L
Daphnia magna

Hydrogen chloride (231-595-7)
Test & Species

96 Hr LC50 282 mg/L [static]
Gambusia affinis

Conditions

282 mg/L [static]

Mobility

No information available for the product.

Persistence & Degradation

No information available for the product.

Bioaccumulation

No information available for the product.

Other Adverse Effects

No information available for the product.

*** Section 13 - Disposal Considerations ***

Waste Disposal Instructions

Avoid disposal, attempt to utilize preparation completely. Prior to disposal of unused preparation, consult an approved waste disposal operative to ensure regulatory compliance. Refer to local statutory requirements and the Toxic Industrial Waste Regulations (TIWR) for proper disposal instructions.

*** Section 14 - Transportation Information ***

IATA Information

Shipping Name: Flammable Liquid, N.O.S. (Isopropanol and Acetone)

UN #: 1993 **Hazard Class:** 3 **Packing Group:** II

ICAO Information

Shipping Name: Flammable Liquid, N.O.S. (Isopropanol and Acetone)

UN #: 1993 **Hazard Class:** 2 **Packing Group:** II

IMDG Information

Shipping Name: Flammable Liquid, N.O.S. (Isopropanol and Acetone)

UN #: 1993 **Hazard Class:** 3 **Packing Group:** II

*** Section 15 - Regulatory Information ***

EU MARKING AND LABELLING:

Symbol(s):

Xi

Risk Phrases:

R36 Irritating to eyes.

R67 Vapours may cause drowsiness and dizziness.

Safety Phrases:

A: General Product Information

S16 Keep away from sources of ignition - No Smoking.

S24/25 Avoid contact with skin and eyes.

S3/9 Keep in a cool, well ventilated place.

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B: Substance Analysis - Inventory

Component/CAS	EC #	EEC	CAN	TSCA
Isopropyl alcohol 67-63-0	200-661-7	EINECS	DSL	Yes
Chromium, pentahydroxy(tetradecanoato)di- 65229-24-5	265-647-5	EINECS	DSL	Yes
Acetone 67-64-1	200-662-2	EINECS	DSL	Yes
Hydrogen chloride 7647-01-0	231-595-7	EINECS	DSL	Yes

*** Section 16 - Other Information ***

Key/Legend

ACGIH = American Conference of Governmental Industrial Hygienists; ADG = Australian Code for the Transport of Dangerous Goods by Road and Rail; ADR/RID = European Agreement of Dangerous Goods by Road/Rail; AS = Standards Australia; DFG = Deutsche Forschungsgemeinschaft; DOT = Department of Transportation; DSL = Domestic Substances List; EEC = European Economic Community; EINECS = European Inventory of Existing Commercial Chemical Substances; ELINCS = European List of Notified Chemical Substances; EU = European Union; HMIS = Hazardous Materials Identification System; IARC = International Agency for Research on Cancer; IMO = International Maritime Organization; IATA = International Air Transport Association; MAK = Maximum Concentration Value in the Workplace; NDSL = Non-Domestic Substances List; NFPA = National Fire Protection Association; NOHSC = National Occupational Health & Safety Commission; NTP = National Toxicology Program; STEL = Short-term Exposure Limit; TDG = Transportation of Dangerous Goods; TLV = Threshold Limit Value; TSCA = Toxic Substances Control Act; TWA = Time Weighted Average

End of Sheet