MATERIAL SAFETY DATA SHEET

Chloropicrin 100 Fumigant

1. CHEMICAL PRODUCT AND COMPANY INFORMATION

PRODUCT NAME: Chloropicrin 100 Fumigant
SYNONYMS: Chloropicrin
CHEMICAL NAME: Trichloronitromethane, Chloropicrin
CHEMICAL FAMILY: Halonitroalkanes
PRINCIPAL USE: Pesticide (Fumigant)

Date Prepared: July 2, 2012
Date Revised: N/A

REGISTRANT/DISTRIBUTOR:
Soil Chemicals Corporation D/B/A
Cardinal Professional Products
57 Matmor Road
Woodland, CA 95776-6008

EMERGENCY TELEPHONE NUMBER:
Emergency Phone: (800) 548-2223
Monday – Friday, 8:00 am - 5:00 pm EST

24-HOUR EMERGENCY TELEPHONE NUMBER:
INFOTRAC: (800) 535-5053

2. COMPOSITION / INFORMATION ON INGREDIENTS

CAS #	Chemical Name	% by Weight	EINECS #	Hazard Symbol*	Risk Phrases*	NFPA 704 Rating
76-06-2	Chloropicrin	100.0	200-930-9	T+, Xn, Xi	R22, R26 R36/37/38	4 – 0 – 3 H – F - R

*European Hazard and Risk Phrases defined in Section 15

OSHA HAZARDOUS INGREDIENTS

Chemical Name	PEL	TLV - ACGIH	IDLH Immediately Dangerous to Life or Health	Mfg Recommendation
Chloropicrin	0.1 ppm TWA 0.7 mg/m3 TWA	0.1 ppm TWA 0.7 mg/m3 TWA	2 ppm	--

3. HAZARDS IDENTIFICATION

Emergency Overview

Appearance: Colorless liquid with an intensely irritating odor.
DANGER! May be fatal if inhaled or swallowed. Severe burn follows liquid contact with eyes or skin. May cause severe respiratory tract irritation. Causes eye and skin irritation. Lachrimator.
POISON! May cause lung damage.
Target Organs: Eyes, skin, respiratory system, stomach

This Chloropicrin fumigant has the capacity to cause marked irritation to the upper respiratory tract, and is a strong lachrimator (tear-producing eye irritant). Chloropicrin's odor threshold is about 1 ppm and the eyes can

begin tearing or stinging at about 0.3 ppm. Being able to sense the presence of Chloropicrin at these levels constitutes a good warning of exposure. Low concentrations, below those necessary to cause serious systemic intoxication, are capable of causing painful eye irritation, which will not be voluntarily tolerated and will cause a person to immediately leave the exposure area. However, the effect may be so powerful that a person may become temporarily blinded, thus becoming panic-stricken, which could lead to accidents.

POTENTIAL HEALTH EFFECTS*

Acute Effects	• Exposure to very low concentrations of vapor will cause irritation or tearing of the eyes and may cause irritation of the nose and throat (coughing). • Higher concentrations may cause painful irritation to eyes, temporary blindness due to eyes tearing, marked irritation to the upper respiratory tract (forceful coughing), breathing difficulty, vertigo, nausea, and vomiting. • Pulmonary edema may develop. • Liquid contact may cause burns to eyes and chemical burns or redness to skin.
Chronic Effects	• Increased susceptibility to acute effects (particularly, the respiratory system).
Signs and Symptoms of Exposure	• Eyes tearing and/or stinging at low levels. • Throat irritation (coughing). • Nausea, vomiting. • Chloropicrin is readily identifiable by smell and by irritation to mucous membranes.
Conditions Aggravated by Exposure	Pre-existing disorders involving the skin, eyes, or respiratory tract may increase risk of developing adverse health effects from exposure.
Primary Routes of Exposure	Eyes, Lungs, Skin
Potential Environmental Effects**	This fumigant product is toxic to fish and aquatic organisms.

* See Section 11, Toxicological Information for additional information

** See Section 12, Ecological Information for additional information

4. FIRST AID MEASURES

Eyes	Hold eyelids open and flush with a steady, gentle stream of water for at least 15 minutes. Occasionally, lift the upper and lower eyelids. Get medical attention if discomfort continues.
Skin	Immediately remove contaminated clothing, shoes, and other items covering the skin. Wash contaminated skin area thoroughly with soap and water. Aerate and then launder any contaminated clothing, shoes, gloves, etc. Dispose of heavily contaminated clothing.
Inhalation	Get exposed person to fresh air. Keep warm. Make sure person can breathe freely. Place victim in half upright position. If breathing has stopped, give artificial respiration, preferably with the aid of a pocket mask to avoid contact with the chemical substance. Do not give anything by mouth to an unconscious person. Treat for pulmonary edema. Get medical attention as soon as possible. Administer 100% humidified oxygen, if available.
Ingestion	Do NOT induce vomiting. If conscious and alert, have victim rinse the contaminated mouth cavity several times with a fluid such as water. After rinsing, have victim drink one 4-8 oz. cup of fluid and no more (preferably water, but milk if no water available). Do not permit victim to drink carbonated beverages. Do not permit victim to drink any fluid if more than 60

	minutes have passed since ingestion. Never give anything by mouth to an unconscious person. Get medical attention immediately.
Other Instructions	Obtain medical assistance at once in case of illness or burn after exposure, or if irritation to eyes and respiratory tract persist. Do not allow conditions that could accidentally cause further exposure until recovery is complete.
Note to Physician	Chloropicrin is a volatile liquid that is the active ingredient in tear gas. As a gas, it is a powerful lachrimator. Early symptoms of overexposure are lachrimation, respiratory distress, and vomiting. Pulmonary edema may develop later. Treatment is symptomatic.

5. FIRE FIGHTING MEASURES

Flash Point (°F.)	None (non-combustible)
Flammable Limits	Not applicable
Autoignition Temperature	Not applicable
Extinguishing Media	All conventional fire extinguishing media are suitable: water spray, dry chemical, carbon dioxide, alcohol-resistant chemical foam.
Special Fire Fighting Procedures	• Evacuate area at least 300 feet. • Wear self-contained breathing apparatus and full turnout gear for fire situations. See Section 8, which addresses protective clothing for spill situations. • Cool with flooding water from a distance upwind using unattended hose holders. • Stay away from the ends of cylinders.
Unusual Fire & Explosion Hazards	• Not explosive but during a fire, irritating and highly toxic gas (phosgene) may be generated by thermal decomposition or combustion. • Vapors may be heavier than air. They can spread along the ground and collect in low or confined areas. • Closed cylinders may rupture if heated by fire. Explosive decomposition may occur under fire conditions. • NOTE: Cylinders containing Chloropicrin are not equipped with relief valves or fusible overpressure devices.

6. ACCIDENTAL RELEASE MEASURES

Spill Mitigation	• Use proper personal protective equipment (PPE) as indicated in Section 8. • Eliminate all sources of ignition in immediate area. • Do not touch damaged containers or spilled material unless wearing appropriate PPE. • Avoid low places, ventilate closed spaces before entering, work upwind if possible.

Small Spills < 53 gallons (726 pounds)	• Isolate immediate area at least 200 feet. • Wear recommended PPE. • Chloropicrin readily vaporizes so provide ventilation. • Allow spilled fumigant to evaporate or cover spill with water, soil, or plastic tarp to

	reduce vapors. • Absorb onto inert material such as vermiculite, dry sand, or dirt, and deposit spill in a sealable polyethylene or steel container.
Large Spills > 53 gallons (727 pounds)	• Isolate at least 600 feet in all directions. • Wear SCBA and recommended PPE. • Contain with dikes and cover diked area with water to reduce vapors. • Move leaking or damaged cylinders outdoors to an isolated location.
Containment	• Prevent entry into waterways, sewers, basements, or confined areas. • Do not permit entry into the spill or leak area by any person not wearing proper PPE until the concentration of Chloropicrin is measured to be 0.1 ppm or less.
Disposal	• See Section 13.

7. HANDLING AND STORAGE

HANDLING

- This fumigant product is a highly hazardous material and must be handled with care only by those individuals experienced with its proper use. READ AND OBSERVE ALL PRECAUTIONS ON PRODUCT LABEL.
- Persons moving, handling, or opening containers must wear the personal protective equipment as specified in the Hazards to Humans section of the product label.
- Ropes, slings, hooks, tongs, and similar handling devices should not be used for unloading cylinders. A suitable hand truck, fork truck, or similar device to which the cylinders can be firmly secured should be used for transporting the heavier cylinders.
- When cylinder not in use, keep valves closed and secure.
- Ventilation: Whenever possible, open cylinder only in a well-ventilated area with the operator "upwind" from the container or provide ventilation to control airborne levels below the permissible exposure limit.
- NOTE: Passing vapors through activated carbon effectively removes Chloropicrin.
- Keep away from open flame or heat.
- Do not allow to spill.
- Always have adequate clean water available to wash the skin.
- If product splashes or spills on shoes or clothing, remove them at once. Vapors from contaminated area will be an intolerable source of irritation. If liquid contacts skin where rings or bandages are worn, remove them and wash exposed skin with soap and water. Air expose shoes or clothing outside and do not wear until free of all traces of fumigant. Keep and wash PPE and work clothing separately from other laundry. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product.
- Use only dry nitrogen gas (180 psig maximum) to pressurize cylinders. Polyethylene or Teflon® tubing may be used to transfer Chloropicrin at low pressures. Regulator must be operated with a secondary pressure relief valve. **DO NOT** use high pressure hose connection (such as stainless steel braided hose) between nitrogen cylinder and Chloropicrin cylinder.
- Do not use containers or application equipment made of magnesium, aluminum, or their alloys, as under certain conditions this fumigant may be severely corrosive to such metals.
- Containers should never be refilled by the consumer or used for any other product or purpose.

STORAGE

- Cylinders should be tightly closed and stored in a cool, dry, well-ventilated area under lock and key (secured).
- Keep flammable/combustible liquids, oxidizers, and combustible solid materials away from Chloropicrin cylinders.

- Post as a pesticide storage area.
- Do not contaminate water, food, or feed by storage or disposal.

8. EXPOSURE CONTROL AND PPE

ENGINEERING CONTROLS

Work / Hygienic Practices	Wash hands and face before eating, drinking, or smoking after handling material.
Equipment	Emergency eyewash and shower facilities should be readily accessible.
Ventilation	Use in well ventilated places and work upwind from cylinders whenever possible. In the laboratory, use only under a chemical fume hood.

PERSONAL PROTECTION FOR ROUTINE USE OF PRODUCT

Clothing	Loose-fitting or well ventilated long-sleeved shirt, long pants or coveralls, socks with shoes.
Eyes	Full-face shield or safety glasses with brow and side shields must be worn if full-facepiece respiratory protection is not required. Wearing goggles is not recommended.
Skin	Gloves – Use chemical resistant gloves when contact with liquid product is likely. Butyl, Nitrile, and Neoprene are acceptable for incidental contact. See EPA Chemical Resistance Category H Selection Chart at end of this Section for further guidance.
Respiratory NOTE: Only NIOSH-approved respirators may be used for Respiratory Protection	Air concentrations less than 8-hour exposure limit of 0.1 ppm or less: • No respiratory protection required. Air concentrations greater than 0.1 ppm to 2 ppm: • Full facepiece respirator or powered air-purifying respirator with an organic vapor cartridge or canister. For pesticide applicators or if mists are generated during the handling of the product, then an R, P, or HE prefilter must be used in conjunction with the organic vapor cartridge or canister. • Any self-contained breathing apparatus or supplied air respirator with a full facepiece. Air concentrations greater than 2 ppm (IDLH): • Positive pressure self-contained breathing apparatus (SCBA). • Continuous-flow supplied air respirator equipped with escape cylinder & full facepiece. Emergency or planned entry into unknown concentrations: • Any full facepiece self-contained breathing apparatus in pressure-demand mode. • Any supplied-air respirator that has a full facepiece and is operated in a pressure-demand mode in combination with an auxiliary self-contained positive-pressure breathing apparatus (5 to 10 minute escape cylinder). Escape: • Any air-purifying, full-facepiece respirator (gas mask) with a chin-style, front- or back-mounted organic vapor canister. • Any appropriate escape-type, self-contained breathing apparatus.
Measurement	Air concentration can be measured with a direct reading detection device, such as a Sensidyne pump, using its Carbon Tetrachloride detector tube #134 or #134L to measure Chloropicrin.

PERSONAL PROTECTION FOR SPILLS/EMERGENCY

Fire	In case of fire only, use normal fire fighting equipment. If chemical release and fire involved, wear recommended chemical protective clothing in conjunction with normal fire fighting gear.
Spills	Minimum PPE: Full facepiece air-purifying respirator with organic vapor cartridge,

	chemical resistant gloves, rubber boots. Upgrade respiratory protection in accordance with the "Routine Use" table above in this Section.
Chemical Protective Clothing	• For small cleanup where liquid splash is unlikely, loose-fitting or well ventilated long-sleeved shirt, long pants or coveralls, socks with shoes may be worn. If contact occurs, remove contaminated clothing immediately to prevent skin irritation or burn. • For cleanup where liquid splash is likely, a liquid impervious chemical coverall with booties and head cover may be worn such as Tyvek QC or Saranex SL. • In confined areas or areas where substantial vapor levels exist, wear a vapor-tight suit such as Tychem TK or Kappler CPF 3. • Use Responder for use against permeation by Chloropicrin for periods greater than 8 hours. Teflon withstands permeation from 4 to 8 hours.

EPA Chemical Resistance Category H Selection Chart

Type of Personal Protective Material (Thickness 14 mils or greater)							
Barrier Laminate	Butyl Rubber	Nitrile Rubber	Neoprene Rubber	Natural Rubber	Polyethylene	Polyvinyl chloride (PVC)	Viton
high	*slight*	*slight*	*slight*	*none*	*none*	*none*	*high*

HIGH: Highly chemical-resistant. Clean or replace PPE at end of each day's work period. Rinse off pesticides at rest breaks.
MODERATE: Moderately chemical-resistant. Clean or replace PPE within an hour or two of contact.
SLIGHT: Slightly chemical-resistant. Clean or replace PPE within 10 minutes of contact.
NONE: No chemical-resistance. Do not wear this type of material as PPE when contact is possible.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Clear, colorless liquid
Odor	Strong, sharp, irritating
pH	Not applicable
Vapor Pressure	18.3 mm Hg @ 68° F
Vapor Density	5.7 (air = 1)
Evaporation Rate	Not available
Specific Gravity	1.6558 @ 68° F. (20° C.) H2O = 1; 1.692 g/cm^3
Density	13.7 lbs. / gal. US
Boiling Point	234° F. (112° C.) (757 mm Hg)
Freezing/Melting Point	-83° F. (-64° C.)
Decomposition Temp.	Not available
Solubility	0.16 grams/100 ml (0.2%) in water
Viscosity	Not available
% Volatile	100%
Molecular Formula	CCl_3NO_2
Molecular Weight	164.37 (Chloropicrin)
Other	• Vapors are heavier than air • Liquid is heavier than water and settles to bottom

10. STABILITY AND REACTIVITY

Stability	Product is stable under normal temperatures and pressures.
Conditions to Avoid	Incompatible materials; excess heat.
Materials to Avoid / Incompatibility	Contact of Chloropicrin with strong oxidizers may cause fires or explosions. Chloropicrin also reacts violently with aniline in the presence of heat, alcoholic sodium hydroxide, sodium methoxide, and propargyl bromide. Chloropicrin is also incompatible with organic amines, reducing agents and sulfuric acid. Do not use with PVC, aluminum, magnesium or their alloys. Mixing with water or water solutions causes formation of corrosive products.
Hazardous Decomposition Products	Chloropicrin decomposes to carbon monoxide, chlorine, hydrochloric acid, phosgene, and nitrogen oxides at high temperatures.
Hazardous Polymerization	Will not occur.
Special Precautions	None reported.

11. TOXICOLOGICAL INFORMATION

HUMAN TOXICOLOGY

Routes of Entry	Eyes, skin, lungs
Warning Statements and Warning Properties	DANGER! May be fatal if inhaled or swallowed. Severe burn follows liquid contact with eyes or skin. May cause severe respiratory tract irritation. Causes eye and skin irritation. Lachrimator. POISON! May cause lung damage.
Odor Threshold	1.1 ppm (human)
Irritation Threshold	0.15 to 0.3 ppm (eyes tear immediately) 1.3 ppm (upper respiratory irritation)
Target Organs	Eyes, skin, respiratory tract and tissue associated with portal-of-entry into the body. Stomach is target organ if oral exposure.
FIFRA Toxicity Classification	Category I due to acute lethality and severe irritation.

Inhalation	• Acute overexposure to vapor (4 ppm) may result in respiratory tract irritation. • Very brief exposure to high concentrations of vapor (15 ppm) such as might occur in an enclosed area can result in coughing, nausea or vomiting. • Worker unfit for activity = 4 ppm (few seconds). • Bronchial/pulmonary lesions = 20 ppm (20 minutes). • LC_{Lo} = 297 ppm (10 min) (LC_{Lo} means lowest lethal concentration observed). • Produces more injury to medium and small bronchi then to trachea and large bronchi in fatal concentrations. • Symptoms can exist from hours to days after substantial exposure.
Ingestion	• Ingestion may cause severe gastrointestinal damage and may include nausea, vomiting and abdominal pain, collapse and death. • Probable lethal dose is 5-50 mg/kg (about a teaspoon)
Chronic	• Increased susceptibility to acute effects after frequent exposures

Mutagenicity	• No human data available
Cardiovascular	• Orthostatic hypotension may occur as a mild symptom following acute low dose exposures.
Sensitization	• Produces increased sensitivity after frequent exposures.

SIGNS, SYMPTOMS, AND EFFECTS OF EXPOSURE

EYE

Eyes stinging, severe irritation, tearing (lacrimator). Exposure to vapor in low concentrations (< 0.3 ppm) can cause reversible eye irritation. Direct contact with liquid can cause severe burns or blindness.

INHALATION

Acute	Upper respiratory system irritation with coughing at lower concentrations. At higher levels, severe lung irritation, nausea, vomiting, difficulty breathing, headache, dizziness, cyanosis, pulmonary edema of lower respiratory tract, and death in severe cases due to pulmonary edema.
Chronic	No data found.

SKIN

Acute	Exposure to vapor in low concentrations can cause reversible skin irritation. Direct contact with liquid may burn skin and cause permanent damage.
Chronic	No data found

INGESTION

Acute	Oral burns, sore throat, vomiting, esophageal and stomach burns, difficulty breathing, headache, dizziness, and cyanosis.
Chronic	Stomach disorders seen in oral rat studies

ANIMAL TOXICOLOGY

RTECS #	PB6300000 (Chloropicrin)	
Eye Effects	See Human Toxicology section	
Skin Effects	Rabbit, LD_{50} = 100 mg/kg (24-hr, 14 day observation)	
Acute Oral Effects	Rat, LD_{50} = 250 mg/kg	LD_{50} – Lethal dose, 50% test animals die from oral or dermal exposure
Acute Inhalation Effects	Rat, LC_{50} = 25.5 ppm (1-hr, 14 day obs) Rat, LC_{50} = 12 ppm/4-hour Rat, LC_{50} = 340 ppm (one minute) Mouse, RD_{50} = 8 ppm (sensory irritation)	LC_{50} – Lethal concentration, 50% of test animals die from inhalation RD_{50} – Respiratory Distress
Chronic Effects	NOAEL, Rat, oral = 8 mg/kg (90 days)	NOAEL – No Observable Adverse Effects Level
Carcinogen	OSHA No IARC Not listed NTP Not listed ACGIH A4 – Not classifiable as a Human Carcinogen	
Mutagenicity	Has been shown to be positive in some *in vitro* ('test tube') studies and negative in others.	
Teratogenicity	In animal inhalation studies there were no treatment-related fetal malformations although the incidences of developmental variations increased with dose.	
Reproductive	Reproductive fitness was not adversely affected in a two-generation inhalation rat study.	

Neurotoxicity	No information available.

Conversion	To convert inhalation results for Chloropicrin: mg/m^3 to ppm x 0.14875 (NTP) x 0.13628 (STP) ppm to mg/m^3 x 6.72 (NTP) x 7.3380 (STP)

12. ECOLOGICAL INFORMATION

Ecotoxicity	• Chloropicrin applied to the soil will rapidly volatilize and leach. It should photolyze on the soils surface. May degrade in soil by chemical or biological processes. Degradation rate is unknown. • In water – readily volatizes. Will photodegrade in the surface layers of water (half-life about 3 days). • Not expected to adsorb to sediment or bioconcentrate in fish.
Environmental Fate	• To air, will photolyze (half-life 20 days), producing phosgene and nitrosyl chloride. Being relatively soluble in water, it may be washed out by rain.
Aquatic Toxicity	• Fathead Minnow: LC_{50} = 3.72 mg/L; 96 Hr; Unspecified • Trout: LC_{50} = 2.87 mg/L; 96 Hr; Unspecified • Bluegill/Sunfish: LC_{50} = 2.82 mg/L; 96 Hr; Unspecified

13. DISPOSAL CONSIDERATIONS

Return of Cylinders:	• Cylinders are the property of Cardinal Professional Products and should be returned promptly by collect auto freight according to label instructions on the cylinder. • Close the valve when the cylinder is empty and install the safety cap and bonnet. • Do not ship cylinders without safety caps or valve protection bonnets. • When a cylinder is partially full and there is no further requirement for the product, contact the company for return instructions.
Discharge	• Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans or other waters unless in accordance with the requirements of a national discharge elimination system (NPDES) permit. • Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority.
Disposal	• Do not contaminate water, food, or feed by storage or disposal. Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. • If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, the Hazardous Waste representative at the nearest EPA Regional Office, or the product manufacturer or distributor for guidance.

14. TRANSPORT INFORMATION

Land U.S. DOT	Cylinder Marking: Chloropicrin, UN 1580 Basic Description for Shipping Papers of Full Cylinders: Chloropicrin, 6.1, UN 1580, PG I Poison-Inhalation Hazard, Hazard Zone B Basic Description for Shipping Papers of Empty Cylinders: RESIDUE, Last Contained Chloropicrin 6.1, UN 1580, PG I Poison-Inhalation Hazard, Hazard Zone B
Water (IMO/IMDG)	Same as Land above
Air (IATA/ICAO)	Forbidden
DOT Label / Placard	Poison Inhalation Hazard / Poison Inhalation Hazard
Reportable Quantity	There is no RQ for Chloropicrin
Emergency Guide	154 (NAERG – North American Emergency Response Guide, 2000)
Transport Emergency Card	TEC (R)-162 (International Programme on Chemical Safety/European Commission, 1999)

15. REGULATORY INFORMATION

U.S FEDERAL

TSCA

TSCA Inventory:	Chloropicrin, CAS# 76-06-2 is listed
Health & Safety Reporting List	Not listed
Chemical Test Rules	Not listed under these rules
Section 12b	Not listed under this section
TSCA Significant New Use Rule	Not listed under this rule

SARA

Section 302 (RQ)	Chloropicrin does not have an RQ (Reportable Quantity)
Section 302 (TPQ)	Chloropicrin does not have a TPQ (Threshold Planning Quantity)
Sara Codes	Chloropicrin, CAS# 76-06-2 Acute, Chronic
Section 313	This product contains the following EPCRA section 313 chemicals subject to the reporting requirements of EPCRA section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372): **CAS Registry Number** / **Chemical Name** / **% by Weight** 76-06-2 / Chloropicrin / 100.0

RCRA (HAZARDOUS WASTES)

Listed U or P	Chloropicrin is not specifically listed; however, prior to disposal of waste Chloropicrin or Chloropicrin-contaminated materials , the generator will need to evaluate if its waste characteristics are hazardous or non-hazardous.

Clean Air Act

Hazardous Air Pollutants	Not listed
Class 1 or 2 Ozone depletors	Not listed

Clean Water Act / Oil Pollution Act of 1990

Section 311 (40 CFR 110)	Not listed
Hazardous Substances	Not listed
Priority Pollutants	Not listed
Toxic Pollutants	Not listed

STATE

Chloropicrin can be found on the following state right-to-know lists: California, New Jersey, Florida, Pennsylvania, Minnesota, Massachusetts
California – No Significant Risk Level: Chloropicrin is not listed

EUROPEAN / INTERNATIONAL REGULATIONS

European Labeling in Accordance with EC Directive 67/548/EC

Hazard Symbols:	T+	Very toxic
	Xn	Harmful
	Xi	Irritant
Risk Phrases:	R 22	Harmful if swallowed
	R 26	Very toxic by inhalation
	R 36/37/38	Irritating to eyes, respiratory system, and skin
Safety Phrases:	S 36/37	Wear suitable protective clothing and gloves
	S 38	In case of insufficient ventilation wear suitable respiratory equipment
	S 45	In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible)

CANADA

DSL/NDSL List	Chloropicrin is listed
WHMIS Classification	Chloropicrin is D1A, D2B
Ingredient Disclosure List	Chloropicrin is not listed

EXPOSURE LIMITS (Chloropicrin)

United Kingdom	TWA = 0.1 ppm STEL = 0.3 ppm STEL means Short Term Exposure Limit
France	TWA = 0.1 ppm
Germany	TWA = 0.1 ppm
Mexico	Unknown
Chile	Unknown
Japan	TWA = 0.1 ppm

16. ADDITIONAL INFORMATION

Hazard Rating Systems`

	NFPA 704*	NPCA-HMIS**
Category	Chloropicrin	Chloropicrin
Health	4	4
Flammability	0	0
Reactivity	3	3

Hazard Key
4 - Severe
3 - Serious
2 - Moderate
1 - Slight
0 - Minimal

* NFPA 704– National Fire Code Standard No. 704)
Standard System for the Identification of the Hazards of Materials for Emergency Response

** NPCA-HMIS – National Paint Coatings Association, Hazardous Material Information System

WARRANTY

Notice: The information above is believed to be accurate and represents the best information currently available to us. Seller warrants that this product conforms to its chemical description and is reasonably fit for the purposes stated on the label when used in accordance with directions under normal conditions of use, but neither this warranty nor any other warranty of merchantability or fitness for a particular purpose, express or implied, extends to the use of this product contrary to label instructions, or under abnormal conditions, or under conditions not reasonably foreseeable to seller, and buyer assumes the risk of any such use. In no way shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages, howsoever arising, even if the company has been advised of the possibility of such damages.