



MATERIAL SAFETY DATA SHEET

SECTION 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION		
Product Name	Bio-Clear 5000	Code
Other Names	Previously called Bio-Clear 50	
Supplier	Trican Well Service 1517 Center Place Drive Denton, Texas, 76205 For Product Information/MSDS Call: (940) 243-1120 (8:00 AM – 5:00 PM CST, Monday – Friday)	Revision Date
Product Uses	Biocide	Supersedes Date New issue
24 Hour Emergency Numbers	CHEMTREC 1-800-424-9300	Original Creation September 2, 2010

SECTION 2. HAZARDS IDENTIFICATION	
Hazard Summary	DANGER! CORROSIVE. CAUSES IRREVERSIBLE EYE DAMAGE. Causes skin irritation. Harmful if swallowed. Harmful if absorbed through skin. Prolonged or frequently repeated skin contact may cause allergic skin reaction in some individuals. Causes asthmatic signs and symptoms in hyper-reactive individuals. Aspiration hazard. Can enter lungs and cause damage. Causes respiratory tract irritation. May cause central nervous system effects; can cause death if too much is inhaled. This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA. May cause long-term adverse effects in the environment.
OSHA Regulatory Status	This product is considered hazardous under OSHA Hazard Communication Standard 29CFR 1910.1200.
Routes of Exposure	Eyes, skin, inhalation and ingestion.
Potential Acute Health Effects	
Eyes Contact	Direct liquid contact with eyes may cause severe eye irritation or burns to eyes. Vapours or mists may cause eye irritation.
Skin Contact/Absorption	Repeated liquid contact with skin may cause severe skin irritation or burns to skin. Prolonged contact may cause severe skin irritation with local redness and discomfort. Allergic reactions are possible.
Inhalation	Excessive exposure may cause severe irritation or burns to upper respiratory tract (nose and throat) and lungs.
Ingestion	Harmful if swallowed. Small amounts swallowed incidentally as a result of normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause serious injury, even death.
Medical Conditions Aggravated by Exposure	Not available
<i>See also Toxicological Information (Section 11)</i>	
Additional Remarks	None

SECTION 3. COMPOSITION AND INFORMATION ON INGREDIENTS		
Name	CAS #	% (wt)
Polyethylene glycol	25322-68-3	40-70
2,2-dibromo-3-nitrilopropionamide	10222-01-2	5-10

SECTION 4. FIRST AID MEASURES	
Eye Contact	Immediately flush eyes with plenty of water for at least 30 minutes while holding eyelids open. If wearing contact lenses, do NOT delay irrigation by trying to remove lens. Seek medical attention immediately after flushing.
Skin Contact	Remove contaminated clothing immediately. Wash thoroughly with soap and water for at least 15 minutes. Call physician or poison control centre

	immediately. Launder clothing separately before reuse.
Inhalation	Remove person to fresh air. If not breathing, provide artificial respiration. If breathing is difficult or symptoms develop, seek immediate medical attention.
Ingestion	If material is ingested, immediately contact a physician or poison control centre. Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of material into lungs.
Notes to Physician	If product is ingested, probable mucosal damage may contraindicate the use of gastric lavage. Treat symptomatically. Keep victim warm. Symptoms may be delayed.
Additional Remarks	None

SECTION 5. FIRE FIGHTING MEASURES

Conditions of Flammability	When heated to high temperatures above its flashpoint, this product can release flammable vapours. When mixed with air and exposed to ignition source, vapours from heated product can burn. Burning liquid may float on water.
Extinguishing Media	Use alcohol foam, CO ₂ , dry chemical or water fog. Do not use solid water stream as it may scatter material and spread the fire. Water spray may be used to cool containers exposed to fire conditions. Continue to cool containers with flooding quantities of water until well after fire is out.
Protection of Firefighters	As in any fire, wear full fire fighting gear including NIOSH-approved positive pressure self-contained breathing apparatus.
Hazardous Combustion Products	Carbon monoxide, carbon dioxide and other toxic vapours.
Additional Remarks	None

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	Isolate hazard area and restrict access. Try to work upwind of spill. Do not touch or walk through spilled material. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see section 8). Shut off leak if it can be done safely.
Environmental Precautions	Prevent substance from entering natural bodies of water and sewer systems. Spilled product may pose a risk to the aquatic ecosystem if released.
Clean Up Methods	Move containers from spill area. Approach release from upwind. Dike spill area and do not allow product to reach sewage system or surface or ground water. Cover wet spills with 10% sodium bicarbonate solution, water and then an inert, noncombustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal as described for pesticide disposal. If drum contents are contaminated or decomposing, isolate unsealed drum in the open or in a well-ventilated area. Flood with 10% sodium bicarbonate solution and large volume of water, if necessary.
Additional Remarks	Waste must be disposed of in accordance with federal, provincial and local environmental control regulations.

SECTION 7. HANDLING AND STORAGE

Equipment	Locate safety shower and eyewash station in immediate use area.
Procedures	
Fire Prevention	Do not handle or store near open flame, heat or other sources of ignition. Do NOT cut, weld, braze, solder, drill, grind or expose empty containers to heat, flame, sparks, or other sources of ignition.
Worker Contact	Wear appropriate personal protective equipment. Avoid contact with eyes, skin, and clothing. Avoid breathing vapours or spray mists. Use only with adequate ventilation. Maintain good personal hygiene. Do not smoke, eat or drink when handling this product. Wash thoroughly after handling product and before eating, drinking or smoking.
Storage Requirements	Store in a cool, well-ventilated area, away from incompatible materials. Keep container tightly closed when not in use.
Additional Remarks	None

SECTION 8. EXPOSURE CONTROL/PERSONAL PROTECTION

Exposure Guidelines / Limits	Not established.
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Please consult with local authorities for acceptable provincial exposure limits since values can vary from jurisdiction to jurisdiction.

Engineering Controls Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapours or mists below their respective occupational exposure limits. Ensure that eyewash stations and safety showers are near the work location.

Personal Protection

Personal Protective Equipment recommendations are based on anticipated known manufacturing and use conditions. These conditions are expected to result in only incidental exposure. A thorough review of the job tasks and conditions by a safety professional is recommended, however, to determine the level of person protective equipment appropriate for these job tasks and conditions.

- Respirator** A respirator should be worn if there is potential for inhalation of high concentrations of vapours or mist. A NIOSH approved air-purifying mask equipped with organic vapour cartridges with P95 prefilters is recommended. In poorly ventilated areas or emergency situations use a NIOSH-approved atmosphere-supplying respirator.
- Hands** Butyl rubber, PVC, nitrile or neoprene gloves.
- Eyes** Chemical safety goggles or face shield when splashing is likely.
- Body** Wear long sleeves and pants to prevent prolonged skin contact. Remove contaminated clothing and launder separately before reuse.
- Feet** Steed toed, chemical resistant boots.
- Other** Emergency eyewash fountains and safety showers should be in the immediate vicinity of any potential exposure.

Protective Clothing (Pictograms)



Additional Remarks None

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid
Odor and Appearance	Odorless; clear, colorless to light yellow.
Odor Threshold	Not available
Specific Gravity	1.1 - 1.2
Flashpoint	240 F (117 °C) estimated
Upper Flammable Limit	Not available
Lower Flammable Limit	Not available
Autoignition Temperature	Not available
Vapour Density (air=1)	Not available
Vapour Pressure	Not available
Evaporation Rate	Not available
Boiling Point	> 158 F (> 70 °C)
Freezing / Melting Point	32 F (0 °C) estimated
pH	2 - 4
Viscosity	Not available
Solubility in Water	Not available
Coefficient of Water/Oil	Not available
VOC	50% estimated

SECTION 10. STABILITY AND REACTIVITY DATA

Chemical Stability	Stable
Conditions of Instability	Heat, flames and sparks.
Incompatible Material	Bases, strong oxidizing agents, reducing agents.
Conditions of Reactivity	None specified
Hazardous Decomposition Products	Not available
Hazardous Polymerization	Will not occur
Additional Remarks	None

SECTION 11. TOXICOLOGICAL INFORMATION

Acute Toxicity	Acute LD50 (rat, oral): 56000 mg/kg estimated. Acute LD50 (rat, dermal): 40000 mg/kg estimated.
Acute Toxicity for Components	

Polyethylene glycol (25322-68-3)	Acute LD50 (rat, oral): 28 g/kg Acute LD50 (rabbit, dermal): >20 g/kg
Effects of Acute Exposure	<i>See Hazards Identification (Section 2)</i>
Effects of Chronic Exposure	Excessive exposure may increase the blood and tissue levels of bromine. Observations in animals include kidney effects following repeated ingestions of active ingredients, but no evidence of systemic toxicity following repeated dermal exposure at maximum attainable doses.
Irritancy of Product	<i>See Hazards Identification (Section 2)</i>
Skin Sensitization	Not expected
Respiratory Sensitization	Not expected
Carcinogenicity	No components listed as carcinogenic by ACGIH, IARC, OSHA or NTP.
Reproductive Toxicity	Not expected
Teratogenicity	Not expected
Embryotoxicity	Not expected
Mutagenicity	Not expected
Synergistic Products/Effects	None expected
Additional Remarks	None

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity	Components of this product have been identified as having potential environmental concerns.
Aquatic Toxicity for Components	
Polyethylene glycol (25322-68-3)	Freshwater Fish: 24 hr LC50 Carassius auratus: >5000 mg/L (PEG 200, 400, 800)
	Microtox: 15 min EC50 Photobacterium phosphoreum: 100000 mg/L (polymer unspecified)
Degradability	Not available
Bioaccumulation	Not available
Mobility	Not available
Additional Remarks	Do not allow product or run-off from fire control to enter storm or sanitary sewers, lakes, rivers, streams or public waterways. Block off drains and ditches. May be harmful to aquatic life.

SECTION 13. DISPOSAL CONSIDERATIONS

This product, in its present state, when discarded or disposed of, is not a hazardous waste according to Federal regulations (40 CFR 261.4(b)(4)). Processing, use, dilution or contamination of this product may cause its physical and chemical properties to change. Under RCRA, it is the responsibility of the user of the product to determine, at the time of disposal, whether the product meets RCRA criteria for hazardous waste.	
Additional Remarks	Note that these regulations may also apply to empty containers, liners and rinsate.

SECTION 14. TRANSPORT INFORMATION

DOT Classification	Not regulated by US DOT regulations.	
Marine Pollutant	Not available	
Additional Transport Information	Not available	
Emergency Response Guide	Not available	

SECTION 15. REGULATORY INFORMATION

Federal Regulations	
OSHA	This product is considered hazardous as defined by OSHA Hazard Communication Standard 29CFR 1910.1200.
EPA	CERCLA Reportable Quantity: None
	SARA 302 Extremely Hazardous Substance: No
	SARA 311 Hazardous Chemical: Yes

	Hazard Categories: Acute: Yes Chronic : No Fire: No Pressure: No Reactivity: No
TSCA Inventory Status	All components are included or are exempted from listing on the US Toxic Substances Control Act Inventory.

SECTION 16. OTHER INFORMATION	
NFPA Rating	Health: 2 Flammability: 1 Instability: 0 Special: none
HMS Rating	Health: 2 Flammability: 1 Reactivity: 0 Other: none <i>0=Insignificant 1 = Slight 2= Moderate 3= High 4 = Extreme</i>
Revisions	New issue.
Prepared by	Trican Well Service Corporate Health, Safety & Environment Department (403) 723-3688
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END OF MATERIAL SAFETY DATA