

BIOLOGIC CHEMICAL WORKS

MATERIAL SAFETY DATA SHEET

MFG.CODE # 197

SECTION I

MANUFACTURER'S NAME BioLogic Chemical Works		EMERGENCY TELEPHONE NO. 248-941-0347	
ADDRESS (Street, City, State and Zip Code) P.O. Box 82501 Rochester, MI 48308			
CHEMICAL NAME AND SYNONYMS N/A		TRADE NAME AND SYNONYMS ECO ORANGE	
CHEMICAL FAMILY N/A		FORMULA N/A	

SECTION II – HAZARDOUS INGREDIENTS

HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES	%	TLV (UNITS)
D-Limonene	(CAS# 5989-27-5)	>1 Not est.
Non-Ionic Surfactant	(CAS# 68131-40-8)	>1 N/A
Non-Ionic Surfactant	(CAS# 9016-45-9)	>1 N/A

All components of this product are listed on the E.P.A./TSCA inventory of chemical substances.

SECTION III – PHYSICAL DATA

BOILING POINT °F	340	SPECIFIC GRAVITY (H2O = 1)	0.90
VAPOR PRESSURE (mm. Hg.)	Not deter.	PERCENT VOLATILE BY VOLUME (%)	94
VAPOR DENSITY (AIR = 1)	Heavier	EVAPORATION RATE (=1) Butyl Acetate	Slower
SOLUBILITY IN WATER	Emulsifies	PH	N/A

APPEARANCE AND ODOR
Clear orange colored liquid with fragrance of oranges.

SECTION IV – FIRE AND EXPLOSION DATA

FLASH POINT (Method Used) 115°F T.O.C.	FLAMMABLE LIMITS	LeI	UeI
		0.7%	6.1%

EXTINGUISHING MEDIA
Carbon Dioxide, Dry Chemical, Foam

SPECIAL FIRE FIGHTING PROCEDURES
Fire fighters should wear full protective clothing including self-contained respiratory equipment operated in a positive mode. Do not use streams of water- may scatter liquid.

UNUSUAL FIRE AND EXPLOSION HAZARDS
“Empty” containers will retain residues- do not cut, weld, pressurize, expose to open flame or other ignition sources.

(Continued on reverse side)

SECTION V – HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE Not established	PRIMARY ROUTES OF ENTRY Inhalation X Skin Contact X Other (Specify)		
EFFECTS OF OVEREXPOSURE Eyes- irritation, blurred vision. Skin- defatting, irritation, dermatitis. Inhalation- irritation to respiratory tract, headache, dizziness. Ingestion- intestinal irritation, nausea.			
EMERGENCY AND FIRST AID PROCEDURE Eyes- flush with copious amounts of water lifting lids and removing contact lenses to ensure complete irrigation- get medical attention. Skin- flush with water and then wash with soap and water, launder contaminated clothing before reuse- get medical attention if irritation persists. Inhalation- remove to fresh air and assist breathing as necessary- get medical attention. Ingestion- give several glasses of water- get medical attention.			
MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE None Known			
CARCINOGEN: No	NTP	IARC	OTHER

SECTION VI – REACTIVITY DATA

STABILITY	UNSTABLE		CONDITIONS TO AVOID Ignition Sources
	STABLE	X	
INCOMPATIBILITY (Materials to avoid) Strong Oxidizers			
HAZARDOUS DECOMPOSITION PRODUCTS Oxides of Carbon			
HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID None
	WILL NOT OCCUR	X	

SECTION VII – SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED Eliminate all sources of ignition and ventilate area. Dike area to contain spill. Use absorbent material to soak up spill. Shovel or sweep into container for disposal.	
WASTE DISPOSAL METHOD In accordance with all Local, State, and Federal Regulations.	

SECTION VIII – SPECIAL PROTECTION INFORMATION

SPECIAL RESPIRATORY PROTECTION (Specify type) Use NIOSH approved respirator in areas of high vapor concentrations.		
VENTILATION	LOCAL EXHAUST At points of vapor emission	SPECIAL N/A
	MECHANICAL (General) Normal ventilation adequate	OTHER N/A
PROTECTIVE GLOVES Impervious	EYE PROTECTION Chemical Goggles	
OTHER PROTECTIVE EQUIPMENT Eyewash and safety shower.		

SECTION IX – SPECIAL PRECAUTIONS

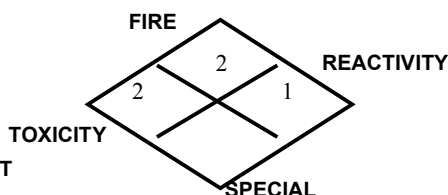
PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING Avoid contact- wear protective clothing and wash thoroughly after using. Avoid inhalation of vapors- use only with adequate ventilation. Do not take internally. Do not store or use near sources of ignition. Keep container closed when not in use.	
OTHER PRECAUTIONS <p style="text-align: center;">Keep Out of Reach of Children</p>	

HMIS SYMBOL

HEALTH	2
FLAMMABILITY	2
REACTIVITY	1

	HMIS		NFPA
SEVERE	4	EXTREME	
SERIOUS	3	HIGH	
MODERATE	2	MODERATE	
SLIGHT	1	SLIGHT	
MINIMAL	0	INSIGNIFICANT	

NFPA SYMBOL



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PAGE TWO:	ECO ORANGE