

MATERIAL SAFETY DATA SHEET

FLORAN CATALYST

Section 1 Chemical Product and Company Identification

PRODUCT NAME / DESCRIPTION: FLORAN CATALYST

DISTRIBUTED / MANUFACTURED BY:

WaterWhole International, Incorporated dba FLORAN Technologies
P.O. Box 1263
NORMAN, OK 73070-1263

DATE: 06/01/2002
PHONE: 866-GO-FLORAN (463-5672)
EMERGENCY PHONE: 800-255-3924

Section 2 Hazardous Components

CHEMICAL NAME	%W/W	CAS NUMBER	OSHA (ACGIH) EXPOSURE LIMITS				OTHER
			TWA ppm	mg/m ³	STEL ppm	mg/m ³	
PROPRIETARY INORGANIC PEROXIDE BLEND	>15%		1				PEL/TWA

INGREDIENTS HAVE BEEN APPROVED
BY NSF FOR PRODUCT'S INTENDED USE.

NE = NOT ESTABLISHED

Section 3 Health Hazards

IRRITATION SKIN SEVERE MODERATE
 EYE SEVERE MODERATE MILD (TRANSIENT)

CORROSIVITY SKIN 4HRS. (DOT) 24 HRS. (CPSC)
 EYE MAY CAUSE BLINDNESS

SENSITIZATION SKIN RESPIRATORY ALLERGEN OTHER: NONE KNOWN

INHALATION EFFECTS NARCOTIC EFFECT CYANOSIS ASPHYXIAN
 OTHER: NONE KNOWN

LUNG EFFECTS (SPECIFY): NOT KNOWN

OTHER (SPECIFY): REPEATED CONTACT: SKIN DEFATTER OTHER (SPECIFY): NONE KNOWN

Section 4 First Aid

INGESTION

INDUCE VOMITING DON'T INDUCE VOMITING GIVE PLENTY OF WATER
 GET MEDICAL ATTENTION NOTE: NEVER GIVE ANYTHING TO AN UNCONSCIOUS PERSON

DERMAL

FLUSH WITH SOAP & WATER GET MEDICAL ATTENTION CONTAMINATED CLOTHING-REMOVED & LAUNDER
 CONTAMINATED SHOE DESTROY
 OTHER (SPECIFY): NONE KNOWN

EYE CONTACT

FLUSH WITH WATER FOR 15 MINUTES GET MEDICAL ATTENTION
 OTHER (SPECIFY): LIFT EYELIDS FOR PROPER FLUSHING.

INHALATION

REMOVE TO FRESH AIR IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION
 GIVE OXYGEN GET MEDICAL ATTENTION OTHER (SPECIFY): NONE KNOW



Section 5 Fire and Explosion Data

CHARACTERISTICS:

FLASH POINT NA
 FLASH POINT METHOD(S) NA
 UPPER EXPLOSION LIMIT (UEL) NA
 LOWER EXPLOSION LIMIT (LEL) NA
 AUTOIGNITION TEMPERATURE NA
 FIRE HAZARD CLASSIFICATION (OSHA/NFPA) 0

EXTINGUISHING MEDIA

WATER SPRAY WATER FOR WATER STREAM DRY CHEMICAL
 ALCOHOL FOAM FOAM EARTH OR SAND AS REQUIRED FOR FIRE BEING FOUGHT

SPECIAL FIRE FIGHTING PROCEDURES

DON'T ENTER BUILDING ALLOW FIRE TO BURN WATER MAY CAUSE FROTHING DON'T USE WATER
 USE BREATHING APPARATUS OTHER (SPECIFY): NONE KNOWN

UNUSUAL FIRE AND EXPLOSION HAZARDS

DUST EXPLOSION HAZARD SENSITIVE TO SHOCK CONTAMINATION
 TEMPERATURE OTHER (SPECIFY): NONE KNOWN



Section 6 Accidental Release Measures

STEP TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED

FLUSH WITH WATER ABSORB WITH SAND OR INERT MATERIAL
 NEUTRALIZE SWEEP OR SCOOP UP & REMOVE KEEP UPWIND
 PREVENT SPILLS DISPOSE OF PROMPTLY
 OTHER (SPECIFY): IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL REGULATIONS.



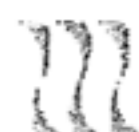
Section 7 Handling and Storage

PRECAUTIONARY LABELING

WASH AFTER HANDLING DON'T GET IN EYES, SKIN, CLOTHING DON'T BREATHE DUST, VAPOR, GAS
 KEEP CONTAINER CLOSED KEEP AWAY FROM HEAT, SPARKS, & OPEN FLAMES
 STORE IN TIGHTLY CLOSED CONTAINERS
 DON'T STORE NEAR COMBUSTIBLES KEEP FROM CONTACT WITH CLOTHING
 EMPTY CONTAINER MAY CONTAIN HAZARDOUS RESIDUE USE EXPLOSION PROOF EQUIPMENT
 OTHER (SPECIFY): NONE KNOWN

OTHER HANDLING AND STORAGE CONDITIONS

DO NOT SMOKE WHEN HANDLING CHEMICALS. KEEP OUT OF REACH OF CHILDREN



Section 8 Personal Protection / Exposure Controls

VENTILATION REQUIREMENTS ALWAYS DEEP EXPOSURE BELOW PERMISSIBLE EXPOSURE LIMITS

CONSULT AN INDUSTRIAL HYGIENIST LOCAL EXHAUST USE ADEQUATE VENTILATION
 CHECK FOR AIR CONTAMINANT OTHER (SPECIFY): NONE KNOWN

EYE

FACE SHIELD & GOGGLES SAFETY GLASSES GOGGLES

HAND

BUTYL RUBBER POLYVINYL ALCOHOL
 POLYVINYL CHLORIDE POLYETHYLENE NATURAL RUBBER
 NEOPRENE OTHER (SPECIFY):

RESPIRATORY

SELF-CONTAINED SUPPLIED AIR
 CAN OR CARTRIDGE GAS OR VAPOR FILTER-DUST, FUME, MIST
 OTHER (SPECIFY): REQ. IF PPM EXCEED 10. DO NOT USE OXIDIZABLE SORBANTS.

OTHER PROTECTIVE EQUIPMENT

RUBBER BOOTS APRON

OTHER: SAFETY SHOWER AND EYEWASH.





Section 9 Typical Physical and Chemical Properties

PHYSICAL FORM	LIQUID
COLOR	CLEAR
ODOR	ODORLESS
pH	2.0-3.5
VAPOR PRESSURE (mm Hg)	23-25
VAPOR DENSITY (AIR = 1)	NE
BOILING POINT	218 DEG F
FREEZING / MELTING POINT	6 DEG F
SOLUBILITY IN WATER	COMPLETE
SPECIFIC GRAVITY (WATER = 1)	1.07 @ 20/20 DEG C
EVAPORATION RATE (BUTYLACETATE = 1)	NE
VISCOSITY (CPS)	NE
MOLECULAR WEIGHT	NE

NA = NOT APPLICABLE NE = NOT ESTABLISHED



Section 10 Stability and Reactivity

STABILITY STABLE UNSTABLE

CONDITIONS CONTRIBUTING TO INSTABILITY:

THERMAL DECOMPOSITION PHOT DEGRADATION POLYMERIZATION CONTAMINATION
OTHER (SPECIFY): NONE KNOWN

INCOMPATIBILITY AVOID CONTACT WITH

STRONG ACIDS STRONG ALKALIS STRONG OXIDIZERS
OTHER (SPECIFY): NONE KNOWN

HAZARDOUS DECOMPOSITION PRODUCTS THERMAL & OTHER (LIST) : OXYGEN THAT SUPPORTS COMBUSTION.

CONDITIONS TO AVOID HEAT OPEN FLAMES SPARKS IGNITION SOURCES
OTHER (SPECIFY): NONE KNOWN



Section 11 Toxicological Properties

ACUTE TOXICITY EFFECTS DATA

ORAL: CORROSIVE.

DERMAL: MAY CAUSE SKIN IRRITATION.

EYE: CORROSIVE. MAY CAUSE IRREVERSIBLE DAMAGE.

INHALATION: CORROSIVE

IRRITATION EFFECTS DATA: FLORAN CATALYST AT THESE CONCENTRATIONS IS A STRONG OXIDANT. DIRECT CONTACT WITH THE EYE IS LIKELY TO CAUSE CORNEAL DAMAGE ESPECIALLY IF NOT WASHED IMMEDIATELY. CAREFUL OPHTHALMOLOGIC EVALUATION IS RECOMMENDED AND THE POSSIBILITY OF LOCAL CORTICOSTEROID THERAPY SHOULD BE CONSIDERED.

OTHER ACUTE EFFECTS: WITH LIKELIHOOD OF CORROSIVE EFFECTS ON GASTROINTESTINAL TRACT AFTER INGESTION, AND UNLIKELIHOOD OF SYSTEMIC EFFECTS, EVACUATING STOMACH VIA EMESIS INDUCTION OR GASTRIC LAVAGE SHOULD BE AVOIDED. THERE IS REMOTE POSSIBILITY THAT A NASOGASTRIC OR OROGASTRIC TUBE MAY BE REQUIRED FOR REDUCTION OF SEVERE DISTENTION DUE TO GAS FORMATION.

CHRONIC/SUBCHRONIC DATANOTE: THIS PRODUCT IS NOT CONSIDERED TO BE A CARCINOGEN BY NTP, IARC, OSHA OR EPA.

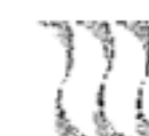


Section 12 Ecological Information

ECOTOXICITY: NA

ENVIRONMENTAL FATE: NA

ADDITIONAL INFORMATION: NA



Section 13 Disposal Considerations

WASTE DISPOSAL METHOD

IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL REGULATIONS.



www.florantechologies.com

Section 14 Transport Information

OXIDIZING SUBSTANCES, LIQUID, N.O.S.
(CONTAINS PROPRIETARY INORGANIC PEROXIDE BLEND)
5.1. UN3139, PG-III
OXIDIZER LABEL REQUIRED

Section 15 Regulatory Information

US FEDERAL REGULATIONS

SARA (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT):
SARA 302 EXTREMELY HAZARDOUS SUBSTANCES LIST: NA

SARA 312 HAZARD CATEGORY: NA

SARA 313 TOXIC CHEMICALS LIST: NE

CERCLA (COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION AND LIABILITY ACT): RQ 100 LBS.

RCRA (RESOURCE CONSERVATION AND RECOVERY ACT) LISTED HAZARDOUS WASTES: NA

CWA (CLEAN WATER ACT) LISTED SUBSTANCES: NA

FDA (FOOD AND DRUG ADMINISTRATION): NA

TOXIC SUBSTANCES CONTROL ACT (TSCA): ALL INGREDIENTS ARE LISTED.

NFPA HAZARD INFORMATION SIGN

[2] HEALTH HAZARD (BLUE DIAMOND)	[1] REACTIVITY HAZARD (YELLOW DIAMOND)
4 DEADLY	4 MAY DETONATE
3 EXTREME DANGER	3 SHOCK AND HEAT MAY DETONATE
2 HAZARDOUS	2 VIOLENT CHEMICAL CHANGE
1 SLIGHTLY HAZARDOUS	1 UNSTABLE IF HEATED
0 NORMAL MATERIAL	0 STABLE
[0] FIRE HAZARD (RED DIAMOND)	[OXY] SPECIFIC HAZARD (WHITE DIAMOND)
FLASH POINTS:	OXY OXIDIZER
4 BELOW 73 F	ACID ACID
3 BELOW 100 F	ALK ALKALI
2 BELOW 200 F	COR CORROSIVE
1 ABOVE 200 F	W USE NO WATER
0 WILL NOT BURN	

Section 16 International Regulations

CANADA

DSL: NA

WHMIS HAZARD CLASSIFICATION: NA

WHMIS TRADE SECRET REGISTRY NUMBER(S): NA

WHMIS HAZARDOUS INGREDIENTS: NA

WHMIS SYMBOLS: NA

EUROPEAN ECONOMIC COMMUNITY (EEC)

EINECS MASTER INVENTORY: NA

EEC PRIMARY RISK SYMBOL: NA

EEC RISK AND SAFETY PHRASES: NA

THIS INFORMATION IS OFFERED IN GOOD FAITH AS TYPICAL VALUES AND NOT AS A PRODUCT SPECIFICATION. NO WARRANTY, EXPRESSED OR IMPLIED, IS HEREBY MADE. THE RECOMMENDED INDUSTRIAL HYGIENE AND SAFE HANDLING PROCEDURES ARE BELIEVED TO BE GENERALLY APPLICABLE. HOWEVER, EACH USER SHOULD REVIEW THESE RECOMMENDATIONS IN THE SPECIFIC CONTEXT OF THE INTENDED USE AND DETERMINE WHETHER THEY ARE APPROPRIATE.

PREPARED BY: JEFF SCHULHOFF