

BRODI SPECIALTY PRODUCTS LTD
3175 14th AVENUE, UNIT 1
MARKHAM; ONTARIO; L3R 0H1
CANADA

PRODUCT: 0290-01-003 TURN**Section 01: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**

MANUFACTURER Brodi Specialty Products Ltd.
3175 14th Avenue, Unit 1
Markham,
Ontario
Canada
L3R 0H1
905-475-6084

PRODUCT NAME..... 0290-01-003 TURN
CHEMICAL FAMILY..... MIXTURE.
MOLECULAR WEIGHT..... NOT APPLICABLE.
CHEMICAL FORMULA..... NOT APPLICABLE.
TRADE NAMES & SYNONYMS..... 0290-01-003 TURN
PRODUCT USES..... LUBRICANT.
FORMULA/LAB BOOK #..... F 01-287/004-3-287.

Section 02: COMPOSITION/INFORMATION INGREDIENTS

Hazardous Ingredients	%	Exposure Limit	C.A.S.#	LD/50, Route,Species	LC/50 Route,Species
1,1,2-TRICHLOROETHYLENE	60-100	50 ppm	79-01-6	7193 mg/kg ORAL-RAT	8450 ppm (4h) RAT-INHAL
PETROLEUM OIL BLEND (MIXTURE)	10-20	5 mg/m3	64742-52-5/64742-53-6	NOT AVAILABLE	NOT AVAILABLE
KEROSENE	1-5	100 ppm	64742-81-0	28 g/kg ORAL - RABBIT	NOT AVAILABLE
ETHYLENE GLYCOL MONOBUTYL ETHER	1-5	25 ppm	111-76-2	530 - 2616 mg/kg ORAL - RAT	450 ppm (4 hr) INHAL - RAT
CARBON DIOXIDE	1-5	5000 ppm	124-38-9	NOT APPLICABLE	NOT AVAILABLE

Section 03: HAZARDS IDENTIFICATION

ROUTE OF ENTRY:
INGESTION..... ETHYLENE GLYCOL MONOBUTYL ETHER MAY CAUSE RED BLOOD CELL HEMOLYSIS AND POSSIBLE LIVER AND KIDNEY DAMAGE.

INHALATION..... 1,1,2-TRICHLOROETHYLENE:IN CONFINED OR POORLY VENTILATED AREAS, VAPOURS WHICH READILY ACCUMULATE CAN CAUSE UNCONSCIOUSNESS. PROPELLANT IS A SIMPLE ASPHYXIANT.

EYE CONTACT..... ETHYLENE GLYCOL MONOBUTYL ETHER CAUSES MODERATE IRRITATION AND POSSIBLE CORNEAL INJURY. IRRITATION UPON DIRECT CONTACT.

SKIN ABSORPTION..... ETHYLENE GLYCOL MONOBUTYL ETHER PENETRATES SKIN READILY. FREQUENT OR WIDE SPREAD CONTACT MAY RESULT IN THE ABSORPTION OF POTENTIALLY HARMFUL AMOUNTS. SIGNS AND SYMPTOMS OF TOXICITY ARE SIMILAR TO THOSE OF SWALLOWING. May cause irritation, defatting, drying and cracking of skin.

SKIN CONTACT..... MAY CAUSE IRRITATION.

EFFECTS OF ACUTE EXPOSURE..... 1,1,2-TRICHLOROETHYLENE OVEREXPOSURE MAY LEAD TO CENTRAL NERVOUS SYSTEM DEPRESSION AND CARDIAC SENSITIZATION. DIZZINESS, NAUSEA. IRRITATION TO SKIN & EYES.

EFFECTS OF CHRONIC EXPOSURE..... ETHYLENE GLYCOL MONOBUTYL ETHER MAY CAUSE HEMOLYSIS OF THE RED BLOOD CELLS LEADING TO POSSIBLE LIVER AND KIDNEY DAMAGE.

EXPOSURE LIMIT OF MATERIAL..... SEE SECTION 2.

Section 04: FIRST AID MEASURES

EMERGENCY FIRST AID PROCEDURE IN CASE OF EYE CONTACT, FLUSH IMMEDIATELY WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES AND GET MEDICAL ATTENTION. FOR SKIN, WASH THOROUGHLY WITH SOAP AND WATER. IF AFFECTED BY INHALATION OF VAPOUR OR SPRAY MIST, REMOVE TO FRESH AIR. IF SWALLOWED; DO NOT INDUCE VOMITING, GET MEDICAL ATTENTION.

Section 05: FIRE FIGHTING MEASURES

AUTO IGNITION TEMPERATURE (°C)..... 420.

SPECIAL PROCEDURES..... WATER FROM FOGGING NOZZLES MAY BE USED TO COOL CLOSED CONTAINERS TO PREVENT BUILD-UP IF EXPOSED TO EXTREME TEMPERATURES. FULL PROTECTIVE EQUIPMENT INCLUDING SELF CONTAINED BREATHING APPARTATUS SHOULD BE WORN IN A FIRE INVOLVING THIS MATERIAL.

FLAMMABILITY..... NOT A FLAMMABLE PRODUCT (AS PER CANADIAN AEROSOL REGULATIONS).

IF YES, UNDER WHICH CONDITIONS?..... EXCESSIVE HEAT, SPARKS AND OPEN FLAME.

EXTINGUISHING MEDIA..... WATER, CARBON DIOXIDE, DRY CHEMICAL, FOAM.

UPPER FLAMMABLE LIMIT..... 12.5.

(% BY VOLUME)

LOWER FLAMMABLE LIMIT..... 8.0.

PRODUCT: 0290-01-003 TURN**Section 05: FIRE FIGHTING MEASURES**

(% BY VOLUME)

EXPLOSION DATA

SENSITIVITY TO STATIC DISCHARGE.....	NOT APPLICABLE.
SENSITIVITY TO IMPACT.....	NOT APPLICABLE.
HAZARDOUS COMBUSTION.....	CARBON DIOXIDE.
PRODUCTS.....	POSSIBLE PHOSGENE OVER 250 DEG C, CHLORINE GAS, HYDROCHLORIC ACID. HYDROCARBON FUMES AND SMOKE. CARBON MONOXIDE WHERE COMBUSTION IS INCOMPLETE.

AEROSOL FLAME PROJECTION

CLASSIFIED AS:.....	0 cm.
FLASHBACK.....	NONE.
FLASH POINT(°C),TAG CLOSED-CUP	NONE. >37.8.

(CONCENTRATE)

Section 06: ACCIDENTAL RELEASE MEASURES

LEAK/SPILL.....	REMOVE ALL SOURCES OF IGNITION. USE AN INERT ABSORBENT MATERIAL, AND NON-SPARKING TOOLS. VENTILATE AREA. PREVENT FROM ENTERING A WATERCOURSE.
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Section 07: HANDLING AND STORAGE

STORAGE NEEDS.....	KEEP AWAY FROM HEAT, SPARKS, AND OPEN FLAMES.
ENGINEERING CONTROLS.....	VENTILATION - LOCAL (MECHANICAL IF USED INDOORS ON A CONTINUOUS BASIS).
HANDLING PROCEDURES AND EQUIPMENT.....	STORE IN A COOL, WELL VENTILATED AREA NOT TO EXCEED 50 DEG C.
SYNERGISTIC MATERIALS.....	NONE KNOWN.

Section 08: EXPOSURE CONTROLS/PERSONAL PROTECTION

GLOVES/ TYPE.....	WEAR CHEMICAL RESISTANT GLOVES.
RESPIRATORY/TYPE.....	IF USED INDOORS ON A CONTINUOUS BASIS, USE OF A CARTRIDGE TYPE RESPIRATOR (NIOSH/MSHATC 23C OR EQUIVALENT) IS RECOMMENDED.
EYE/TYPE.....	SAFETY GLASSES.
FOOTWEAR/TYPE.....	NOT NORMALLY REQUIRED.
OTHER/TYPE.....	NOT REQUIRED.

Section 09: PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE.....	AEROSOL.
APPEARANCE.....	CLEAR LT. YELLOW LIQUID.
ODOR.....	CHARACTERISTIC.
ODOR THRESHOLD.....	NOT AVAILABLE.
VAPOUR PRESSURE(PSIG)-AEROSOL.....	80-90.
@ 20 C	
BOILING POINT (°C)(CONC).....	87-213.
EVAPORATION RATE.....	GREATER THAN 1.
n-BUTYL ACETATE = 1	
VAPOUR DENSITY (AIR=1).....	GREATER THAN 1.
(BY WEIGHT)	
SOLUBILITY IN WATER g/L (20°C).....	NEGLIGIBLE.
pH.....	NOT APPLICABLE.
SPECIFIC GRAVITY (LIQUID).....	1.29-1.33.
COEFFICIENT OF WATER/OIL DIST.....	NOT AVAILABLE.
FREEZING POINT: (°C).....	NOT AVAILABLE.
AEROSOL PERCENT VOLATILE.....	80-85.
(BY WEIGHT).	
SPECIFIC GRAVITY (AEROSOL).....	1.29-1.33.

Section 10: STABILITY AND REACTIVITY

HAZARDOUS PRODUCTS OF DECOMPOSITION.....	POSSIBLE PHOSGENE OVER 250 DEG C, CHLORINE GAS, HYDROCHLORIC ACID. HYDROCARBON FUMES AND SMOKE. CARBON MONOXIDE WHERE COMBUSTION IS INCOMPLETE.
CHEMICAL STABILITY:	
YES.....	UNDER NORMAL CONDITIONS.
NO, WHICH CONDITIONS?.....	NOT APPLICABLE.
COMPATIBILITY WITH OTHER SUBSTANCES:	
NO, WHICH ONES?.....	STRONG OXIDIZING AGENTS.
REACTIVITY CONDITIONS?.....	NOT APPLICABLE.

Section 11: TOXICOLOGICAL INFORMATION

REPRODUCTIVE EFFECTS.....	NO INFORMATION IS AVAILABLE AND NO ADVERSE REPRODUCTIVE EFFECTS ARE ANTICIPATED.
IRRITANCY OF MATERIAL.....	SKIN/EYE IRRITANT.
SENSITIZING CAPABILITY OF MATERIAL.....	CATECHOLAMINE DRUGS.
CARCINOGENICITY OF MATERIAL.....	IARC CLASSIFIES TRICHLOROETHYLENE AS 2A. "PROBABLY CARCINOGENIC TO HUMANS BASED ON EVIDENCE OF CARCINOGENICITY IN EXPERIMENTAL ANIMALS." TRICHLOROETHYLENE NOT CLASSIFIED AS CARCINOGENIC BY ACGIH, OR OSHA, AND NOT LISTED AS A CARCINOGEN BY NTP. (1993) ACGIH CLASSIFIES TRICHLOROETHYLENE AS A5. "NOT SUSPECTED AS A HUMAN CARCINOGEN."

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Section 11: TOXICOLOGICAL INFORMATION

TERATOGENICITY..... NO INFORMATION IS AVAILABLE AND NO ADVERSE TERATOGENIC EFFECTS ARE ANTICIPATED.
 MUTAGENICITY..... NO INFORMATION IS AVAILABLE AND NO ADVERSE MUTAGENIC EFFECTS ARE ANTICIPATED.

Section 12: ECOLOGICAL CONSIDERATIONS

ENVIRONMENTAL..... NOT AVAILABLE.

Section 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL..... DO NOT PUNCTURE OR INCINERATE CONTAINERS, EVEN WHEN EMPTY. DISPOSE OF IN ACCORDANCE WITH LOCAL, PROVINCIAL AND FEDERAL REGULATIONS.

Section 14: TRANSPORTATION INFORMATION

T.D.G. CLASSIFICATION..... CONSUMER COMMODITY (AEROSOLS, UN1950, CLASS 2.2 (6.1)).
 D.O.T. CLASSIFICATION..... CONSUMER COMMODITY, ORM-D.

Section 15: REGULATORY INFORMATION**CANADIAN REGULATIONS:**

WHMIS CLASSIFICATION..... A,D1A,D1B,D2A,D2B.
 CNFC SECTION 3.3.5..... LEVEL 1.
 CEPA (Canadian Environmental Protection Act) ALL SUBSTANCES IN THIS PRODUCT ARE LISTED ON THE CANADIAN DOMESTIC SUBSTANCES LIST (DSL) OR ARE NOT REQUIRED TO BE LISTED.

U.S. REGULATIONS:

HMIS RATING HEALTH..... 2 MODERATE HAZARD.
 HMIS RATING FLAMMABILITY..... 1 SLIGHT HAZARD.
 HMIS RATING REACTIVITY..... 0 MINIMAL HAZARD.
 HMIS RATING PERSONAL PROTECTION..... B.
 NFPA CODE 30B..... LEVEL 1.
 SARA 313 INFORMATION: THIS PRODUCT CONTAINS THE FOLLOWING SUBSTANCES SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF TITLE III OF THE SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 AND 40 CFR PART 372:

CAS #: CHEMICAL NAME:
 *111-76-2 ETHYLENE GLYCOL MONOBUTYL ETHER
 *79-01-6 1,1,2-TRICHLOROETHYLENE

CALIFORNIA PROPOSITION 65: THE FOLLOWING STATEMENT IS MADE IN ORDER TO COMPLY WITH THE CALIFORNIA SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT OF 1986:
 WARNING: THIS PRODUCT CONTAINS A CHEMICAL KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER.

CAS #: CHEMICAL NAME:
 *79-01-6 1,1,2-TRICHLOROETHYLENE.

TSCA (Toxic Substances Control Act)..... ALL COMPONENT OF THIS PRODUCT ARE LISTED ON THE TSCA INVENTORY. ANY IMPURITIES PRESENT IN THIS PRODUCT ARE EXEMPT FROM LISTING.

VOC (w/w%)..... 82-83.

Section 16: OTHER INFORMATION

NOTICE FROM BRODI SPECIALTY PRODUCTS LTD. THE INFORMATION ON THIS MATERIAL SAFETY DATA SHEET IS PROVIDED BY BRODI SPECIALTY PRODUCTS LTD. FREE OF CHARGE. WHILE BELIEVED TO BE RELIABLE, IT IS INTENDED FOR USE BY SKILLED PERSONS AT THEIR OWN RISK. BRODI SPECIALTY PRODUCTS LTD. ASSUMES NO RESPONSIBILITY FOR EVENTS RESULTING OR DAMAGES INCURRED FROM ITS USE. THE INFORMATION ON THIS MATERIAL SAFETY DATA SHEET RELATES ONLY TO THE SPECIFIC MATERIAL DESIGNATED HEREIN AND DOES NOT RELATE TO USE IN COMBINATION WITH ANY OTHER MATERIAL OR IN ANY PROCESS.

PREPARED BY..... TECHNICAL SERVICES
 PREPARATION DATE Apr15/10