

## SAFETY DATA SHEET

### SECTION I - IDENTIFICATION OF ITEM & COMPANY

**PRODUCT:** HEMO-De / SAFE-T-SOLV      **SYNONYMS:** D-LIMONENE  
**USE:** REPLACEMENT FOR XYLENE, CARBOL-XYLENE, ETHYL ACETATE  
 GENERALLY RECOGNIZED AS SAFE (GRAS) RATED BY THE FDA.  
**MANUFACTURED BY:** SCIENTIFIC SAFETY SOLVENTS  
 2000-K WHITLEY ROAD  
 KELLER, TEXAS 76248  
**24 HOUR EMERGENCY PHONE:** MSDS DATE: 22-JUL-13  
 CHEMTREC 1-800-424-9300      INTERNATIONAL: +1-703-527-3887 (CALL COLLECT)  
**PREPARED BY:** SHANNON SLOAN      +1-817-379-7328

### SECTION II - HAZARD IDENTIFICATION

#### CLP/GHS CLASSIFICATION:

PHYSICAL:	HEALTH:	ENVIRONMENTAL:
FLAMMABLE LIQUID CATEGORY 3	SKIN IRRITANT CATEGORY 2	AQUATIC ACUTE TOXICITY CATEGORY 1
	SKIN SENSITIZER CATEGORY 1	AQUATIC CHRONIC TOXICITY CATEGORY 1

EU CLASSIFICATION (67/548/EEC): Xi, N, R10, R38, R43, R50/53



Product is Combustible, which is defined as having a flash point between 100°F (37°C) and 200°F (93.3°C).

Slippery when spilled.

Likely routes of Exposure: Eye contact, skin contact, inhalation.

EYE: Causes moderate to severe irritation.

SKIN: May cause slight redness. Prolonged or repeated exposure may cause dry skin.

INHALATION: May cause nose, throat, and respiratory tract irritation, coughing, headache.

INGESTION: Not likely to be toxic, but may cause vomiting, headache or other medical problems.

### SECTION III - COMPOSITION

CAS #	CHEMICAL NAME	PERCENT BY WT.
5989-27-5	TERPENE HYDROCARBONS N.O.S.	99.96%
25013-16-5	BUTYLATED HYDROXYANISOLE (BHA)	<0.04%

### SECTION IV - FIRST AID MEASURES

**EYES:** REMOVE CONTACT LENSES. FLUSH EYES WITH PLENTY OF WATER FOR AT 15 MINUTES, OCCASIONALLY LIFTING THE UPPER AND LOWER EYELIDS. GET MEDICAL AID.

**SKIN:** REMOVE CONTAMINATED CLOTHING AND SHOES. WASH SKIN WITH SOAP AND WATER FOR 15 MINUTES. GET MEDICAL AID IF IRRITATION DEVELOPS OR PERSISTS. WASH CLOTHING BEFORE REUSE.

**INGESTION:** IF SWALLOWED, SEEK MEDICAL ADVICE IMMEDIATELY.

**INHALATION:** SEEK FRESH AIR IF BREATHING IS DIFFICULT.

**NOTES TO PHYSICIAN OR FIRST AID PROVIDERS:** TREAT SYMPTOMATICALLY

AS WITH ANY CHEMICAL, EMPLOYEES SHOULD THOROUGHLY WASH HANDS WITH SOAP AND WATER AFTER HANDLING THIS MATERIAL.



## SECTION V - FIRE FIGHTING MEASURES

**GENERAL INFORMATION:** AS IN ANY FIRE, WEAR A SELF-CONTAINED BREATHING APPARATUS IN PRESSURE-DEMAND, MSHA/NIOSH (APPROVED OR EQUIVALENT), AND FULL PROTECTIVE GEAR. CONTAINERS MAY EXPLODE IN THE HEAT OF A FIRE. VAPORS ARE HEAVIER THAN AIR AND MAY TRAVEL TO A SOURCE OF IGNITION AND FLASH BACK. VAPORS CAN SPREAD ALONG THE GROUND AND COLLECT IN LOW OR CONFINED AREAS. THIS LIQUID FLOATS ON WATER AND MAY TRAVEL TO A SOURCE OF IGNITION AND SPREAD FIRE.

FLAMMABLE LIMITS IN AIR:	302°F	UPPER: 6.1%	LOWER: 0.7%	(%BY VOLUME)
FLASH POINT		F: 121°F	C: 49.4°C	METHOD USED: TCC
AUTO IGNITION TEMPERATURE:		F: 491°F	C: 255°C	

NFPA HAZARD CLASSIFICATION:				
HEALTH:	1	FIRE:	2	REACTIVITY: 0
				SPECIFIC HAZARD: NONE

**EXTINGUISHING MEDIA:** DRY POWDER, FOAM, CARBON DIOXIDE (CO<sub>2</sub>)

**SPECIAL FIRE FIGHTING PROCEDURES:** SCBA RECOMMENDED; SMOTHER, EXCLUDE AIR, DO NOT USE WATER; HANDLE AS AN OIL FIRE.

**HAZARDOUS DECOMPOSITION PRODUCTS:** CARBON DIOXIDE OR CARBON MONOXIDE ON COMBUSTION

**NOTES:** DO NOT MIX WITH BLEACH. MAY CROSS REACT WITH TURPENTINE. AVOID STRONG OXIDIZING AGENTS.

## SECTION VI - ACCIDENTIAL RELEASE MEASURES

**PERSONAL:** USE PERSONAL PROTECTION RECOMMENDED IN SECTION 8. PRODUCT SLIPPERY WHEN SPILLED.

**ENVIRONMENTAL:** AVOID RELEASES OF THIS MATERIAL TO ENVIRONMENT AND WATERWAYS.

**SPILLS / LEAKS:** ABSORB SPILL WITH INERT MATERIAL (E.G. VERMICULITE, SAND OR EARTH), PLACE IN SUITABLE CONTAINER.

**OTHER:** ELIMINATE ALL IGNITION SOURCES. USE EQUIPMENT RATED FOR USE AROUND COMBUSTIBLE MATERIALS. OIL SOAKED RAGS MAY SPONTANEOUSLY COMBUST; PLACE IN APPROPRIATE DISPOSAL CONTAINER.

**DISPOSAL:** DISPOSE OF ACCORDING TO FEDERAL, STATE AND / OR LOCAL REQUIREMENTS.

WASTE MAY BE INCINERATED OR HANDLED THROUGH EPA SPILL CONTROL VIA LANDFILL OR DILUTION. MAY BE RECYCLED.

## SECTION VII - HANDLING AND STORAGE

**HANDLING:**

KEEP AWAY FROM HEAT, SPARKS AND FLAME. DO NOT ALLOW THIS MATERIAL TO COME IN CONTACT WITH EYES. AVOID PROLONGED CONTACT WITH SKIN. USE IN WELL VENTILATED AREAS. WASH HANDS THOROUGHLY WITH SOAP AND WATER AFTER HANDLING THIS MATERIAL.

**STORAGE:**

STORAGE TEMPERATURE SHOULD NOT EXCEED THE FLASH POINT FOR EXTENDED PERIODS OF TIME. KEEP CONTAINERS CLOSED WHEN NOT IN USE. FILL PARTIALLY FILLED CONTAINER WITH NITROGEN OR CARBON DIOXIDE.

## SECTION VIII - EXPOSURE CONTROLS/PERSONAL PROTECTION

**CONTROL MEASURES:** FACILITY NEEDS ADEQUATE VENTILATION TO KEEP AIRBORNE CONCENTRATIONS LOW.

**PERSONAL PROTECTIVE EQUIPMENT**

EYES	WEAR CHEMICAL SPLASH GOGGLES
SKIN	WEAR PROTECTIVE NITRILE GLOVES
RESPIRATORY	NOT REQUIRED UNLESS HIGH HEAT IS PRESENT, THEN USE NIOSH APPROVED VAPOR RESPIRATOR.

**HYGIENIC PRACTICES:** NONE, OTHER THAN REQUIRED BY YOUR COMPANY POLICY.

**GENERAL HYGIENE CONSIDERATIONS:** WASH HANDS THOROUGHLY AFTER HANDLING. HAVE EYEWASH AND EMERGENCY SHOWER FACILITIES IMMEDIATELY AVAILABLE. LAUNDRY CONTAMINATED CLOTHING BEFORE REUSE.

THERE ARE NO OSHA VAPOR PELs LISTED OR EXPOSURE GUIDELINES FOR THIS CHEMICAL.

**NOTE:** FORMS SMOOTH, SLIPPERY SURFACES ON FLOORS, POSING AN ACCIDENT RISK.

REMOVE ALL SOURCES OF IGNITION. PROVIDE VENTILATION.

## SECTION IX - PHYSICAL & CHEMICAL PROPERTIES

APPEARANCE	CLEAR TO COLORLESS LIQUID
ODOR	SLIGHT CITRUS ODOR
PH	4.24
BOILING POINT @760 MM Hg	349°F (176°C)
FLASH POINT	121°F (49°C)
FREEZING POINT	-74°C
VAPOR PRESSURE (MMHg)	<2MMHg @ 68°F(20°C)
VAPOR DENSITY (AIR=1)	4.69
SPECIFIC GRAVITY (H <sub>2</sub> O = 1)	.838 TO 0.843 68°F@ 20°C
SOLUBILITY WITH WATER	INSOLUBLE
EVAPORATION RATE	0.2% (MAXIMUM)
VISCOSITY	3.5 CENTIPOISES @ 25°C

## SECTION X - STABILITY & REACTIVITY

STABILITY: STABLE

STABLE UNDER NORMAL TEMPERATURES AND PRESSURES. OXIDIZES TO A FILM IN AIR.

CONDITIONS TO AVOID: IGNITION SOURCE, EXCESS HEAT, PROLONGED EXPOSURE TO AIR

INCOMPATIBILITY: STRONG OXIDIZING AGENTS, BLEACH, TURPENTINE

HAZARDOUS BY-PRODUCTS: CARBON DIOXIDE OR CARBON MONOXIDE ON COMBUSTION

HAZARDOUS POLYMERIZATION: NONE KNOWN

STABILITY: STABLE

STABLE UNDER NORMAL TEMPERATURES AND PRESSURES. OXIDIZES TO A FILM IN AIR.

CONDITIONS TO AVOID: IGNITION SOURCE, EXCESS HEAT, PROLONGED EXPOSURE TO AIR

INCOMPATIBILITY: STRONG OXIDIZING AGENTS, BLEACH, TURPENTINE

HAZARDOUS BY-PRODUCTS: CARBON DIOXIDE OR CARBON MONOXIDE ON COMBUSTION

HAZARDOUS POLYMERIZATION: NONE KNOWN

## SECTION XI - TOXICOLOGICAL INFORMATION

### ACUTE EFFECTS:

ORANGE TERPENES HAVE BEEN SHOWN TO HAVE LOW ORAL TOXICITY AND LOW DERMAL TOXICITY WHEN TESTED ON RABBITS. ORANGE TERPENES ALSO SHOWED LOW TOXICITY BY INHALATION WHEN TESTED ON MICE. THE SKIN IRRITANCY OF LIMONENE IN GUINEA PIGS AND RABBITS IS CONSIDERED MODERATE AND LOW, RESPECTIVELY. INHALATION MAY CAUSE IRRITATION OF THE NOSE, THROAT, AND RESPIRATORY TRACT.

### CHRONIC EFFECTS:

THIS PRODUCT IS NOT CLASSIFIED AS A CARCINOGEN BY OSHA, IARC, ACGIH, OR NTP. THIS PRODUCT HAS NOT BEEN SHOWN TO PRODUCE GENETIC CHANGES WHEN TESTED ON BACTERIAL OR ANIMAL CELLS. THIS PRODUCT DOES NOT CONTAIN KNOWN REPRODUCTIVE OR DEVELOPMENTAL TOXINS. PROLONGED EXPOSURE CAN CAUSE DRYING OR DERMATITIS OF SKIN. IMPROPER STORAGE AND HANDLING MAY LEAD TO THE FORMATION OF POSSIBLE SKIN SENSITIZER.

## SECTION XII - ECOLOGICAL INFORMATION

ENVIRONMENTAL: AVOID RELEASES OF THIS MATERIAL TO ENVIRONMENT AND WATERWAYS.

SPILLS / LEAKS: ABSORB SPILL WITH INERT MATERIAL (E.G. VERMICULITE, SAND OR EARTH), PLACE IN SUITABLE CONTAINER.

## SECTION XIII - DISPOSAL CONSIDERATIONS

DISPOSAL: DISPOSE OF ACCORDING TO FEDERAL, STATE AND / OR LOCAL REQUIREMENTS.

WASTE MAY BE INCINERATED OR HANDLED THROUGH EPA SPILL CONTROL VIA LANDFILL OR DILUTION.

MAY BE RECYCLED.

## SECTION XIV - TRANSPORT INFORMATION

	UN NUMBER	PROPER SHIPPING NAME	HAZARD CLASS	PACKING GROUP	ENVIRONMENTAL HAZARDS
US DOT	UN2319	TERPENE HYDROCARBONS, N.O.S. LIQUIDS WITH A FLASH POINT 100°F OR GREATER CAN BE RECLASSIFIED AS A COMBUSTIBLE LIQUID FOR GROUND TRANSPORT. SEE 49CFR178.150-(F)	3	III	No
CANADIAN TDG	UN2319	TERPENE HYDROCARBONS, N.O.S. LIQUIDS WITH A FLASH POINT 100°F OR HIGHER IN SMALL MEANS OF CONTAINMENT ARE NOT REGULATED. SEE 1.33	3	III	No
EU ADR/RID	UN2319	TERPENE HYDROCARBONS, N.O.S.	3	III	Yes
IMDG	UN2319	TERPENE HYDROCARBONS, N.O.S.	3	III	MARINE POLLUTANT
IATA/ICAO	UN2319	TERPENE HYDROCARBONS, N.O.S.	3	III	No

NOTES: CLASS 3 FLAMMABLE LIQUIDS ALLOWED ON BOTH PASSENGER AND CARGO AIRCRAFT UP TO 60 L (15.85 GALLONS)

THE LISTED TRANSPORTATION CLASSIFICATION DOES NOT ADDRESS REGULATORY VARIATIONS DUE TO CHANGES IN PACKAGE SIZE, MODE OF SHIPMENT, OR OTHER RE

## SECTION XV - REGULATORY INFORMATION

OSHA HAZARD CLASSIFICATION: FLAMMABLE, IRRITANT, SENSITIZER

EPA SARA 302: THIS PRODUCT DOES NOT CONTAIN CHEMICALS REGULATED UNDER SARA SECTION 302.

EPA SARA 311 HAZARD CLASSIFICATION: ACUTE HEALTH, FIRE HAZARD

CALIFORNIA PROPOSITION 65: THIS PRODUCT DOES NOT CONTAIN CHEMICALS KNOWN TO CAUSE CANCER, REPRODUCTIVE TOXICITY OR BIRTH DEFECTS.

HMIS RATING: HEALTH: 2 FIRE: 2 PHYSICAL HAZARD: 0

NFPA RATING: HEALTH: 2 FIRE: 2 INSTABILITY: 0

EINECS NUMBER: 232-433-8

OTHER REGULATORY REQUIREMENTS:

LISTED IN TSCA INVENTORY

SARA CODES: NOT LISTED AS A TPQ; IMMEDIATE, FIRE

NOT REPORTABLE UNDER SECTION 313

EUROPEAN/INTERNATIONAL REGULATIONS

HAZARD SYMBOL:	XI N	IRRITATING TO SKIN	R 38
FLAMMABLE	R 10	SKIN SENSITATION	R 43
LUNG DAMAGE IF SWALLOWED	R 65	TOXIC FOR AQUATICS	R 50/53

CANADA REGULATIONS: WHIMS: B3, D2B

## SECTION XVI - OTHER INFORMATION

THIS SAFETY DATA SHEET HAS BEEN PREPARED IN ACCORDANCE WITH REACH REGULATIONS IN THE EU AND THE GLOBALLY HARMONIZED SYSTEM FOR THE CLASSIFICATION AND LABELING OF CHEMICALS(GHS). IT COMPLIES WITH THE REQUIREMENTS OF THE CANADIAN CONTROLLED PRODUCTS REGULATIONS AND US 29CFR 1910.1200. TO THE BEST OF OUR KNOWLEDGE, THE INFORMATION CONTAINED HEREIN IS ACCURATE. HOWEVER, NEITHER THE ABOVE NAMED SUPPLIER NOR ANY OF ITS SUPPLIERS MAKES ANY WARRANTY OF MERCHANTABILITY OR ANY OTHER WARRANTY, EXPRESSED OR IMPLIED, WHICH RESPECT TO SUCH INFORMATION, AND WE ASSUME NO LIABILITY RESULTING FROM ITS USE. IN NO EVENT SHALL SCIENTIFIC SAFETY SOLVENTS 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 RESULTING FROM USE OF OR RELIANCE UPON THIS INFORMATION.