

MATERIAL SAFETY DATA SHEET
 May be used to comply with OSHA's Hazard
 Communication Standard,
 29CFR 1910.1200. Standard must
 be consulted for specific requirements.

U.S. Department of Labor
 OCCUPATIONAL SAFETY AND
 HEALTH ADMINISTRATION

SIMILAR TO FORM OSHA 174

IDENTITY (As Used on Label and List)
SAFETY SOLVENT 22

	ACUTE HEALTH	FIRE	REACTIVITY
NFPA	0	2	0
	0=LEAST	1=SLIGHT	2=MODERATE
		3=HIGH	4=EXTREME

Section 1

MANUFACTURER'S NAME
TITAN LABORATORIES

EMERGENCY TELEPHONE NUMBER
SEE BELOW OR 800-255-3924 EMERGENCY ONLY

ADDRESS
**2235 MORA DRIVE
 MOUNTAIN VIEW, CA 94040**

TELEPHONE NUMBER FOR INFORMATION
650-965-9900 • FAX 650.964.4400

DATE PREPARED **July 01, 2002 V1.32**

Section II --- Hazardous Ingredients/Identify Information

HAZARDOUS COMPONENTS (Specific Chemical Identity; Common Name(s))	OSHA PEL	ACGIH TLV	% (optional)
ALIPHATIC HYDROCARBONS CAS # 8052-41-3	100	100	>20%

Meets Mil Spec PD-680, Type 1 as a dry cleaning fluid
Non-photochemically reactive. Meets Calif. SCAQMD Rule 102 and BAAQMD Regulation 8
Contains no chlorinated solvents, CFC's, benzene, toluene or xylene

Section III --- Physical/Chemical Characteristics

BOILING POINT	315°F @ 700 mmHg	SPECIFIC GRAVITY (H ₂ O = 1)	0.78
VAPOR PRESSURE (MM HG)	3 mm Hg @ 68°F	DIELECTRIC STRENGTH	28 TO 40 KV
		DIELECTRIC CONSTANT	1.98
VAPOR DENSITY (AIR = 1)	4.7	EVAPORATION RATE (N-Butyl Acetate = 1)	0.20
SOLUBILITY IN WATER	<1%	LIQUID DENSITY:	6.42 Lbs/Gal
APPEARANCE AND ODOR	CLEAR LIQUID. LOW ODOR.		

Section IV --- Fire and Explosion Hazard Data

FLASH POINT (METHOD USED)	105°F	FLAMMABLE LIMITS	LEL	1.0	UEL	6.0
EXTINGUISHING MEDIA	FOAM, CARBON DIOXIDE OR DRY CHEMICALS		AUTOIGN. TEMP:	500°F		

SPECIAL FIRE FIGHTING PROCEDURES **WEAR SELF-CONTAINED BREATHING APPARATUS WITH FULL
 FACEPIECE OPERATED IN THE POSITIVE PRESSURE DEMAND MODE.**

UNUSUAL FIRE AND EXPLOSION HAZARDS **DO NOT WELD ON OR NEAR DRUMS EVEN IF EMPTY.
 VAPORS ARE HEAVIER THAN AIR AND MAY TRAVEL ALONG THE GROUND TO A PILOT LIGHT OR
 OTHER FLAME AT A DISTANT LOCATION.**

Section V --- Reactivity Data

MSDS SAFETY SOLVENT 22 • PG. 2, V1.32

STABILITY : **STABLE** INCOMPATIBILITY Materials to Avoid) **STRONG OXIDIZING AGENTS**

HAZARDOUS DECOMPOSITION OR BYPRODUCTS **MAY FORM CARBON MONOXIDE, CARBON DIOXIDE, VARIOUS HYDROCARBONS.**

HAZARDOUS POLYMERIZATION: **WILL NOT OCCUR**

Section VI --- Health Hazard Data

ROUTE(S) OF ENTRY: INHALATION? SKIN? INGESTION?

YES **YES** **YES**

HEALTH HAZARDS (Acute and Chronic) **PROLONGED INHALATION OF VAPORS: NAUSEA, DROWSINESS. THE SHORT TERM INHALATION TOXICITY IS LOW. • SKIN: POSSIBLE LOCAL IRRITATION, DRYNESS, CHAPPING OR DERMATITIS. GENERALLY LOW RISK UNDER NORMAL CONDITIONS OF HANDLING AND USE • INGESTION: SWALLOWING SMALL AMOUNTS NOT LIKELY TO CAUSE HARMFUL EFFECTS BECAUSE OF LOW ORAL TOXICITY. LARGE AMOUNTS MAY CAUSE LUNG INFLAMMATION AND/OR DAMAGE. • EYES: POSSIBLE MILD EYE IRRITATION.**

CARCINOGENICITY: NTP? IARC MONOGRAPHS? OSHA REGULATED?

NONE KNOWN **NONE** **NO**

SIGNS AND SYMPTOMS OF EXPOSURE **SEE "HEALTH HAZARDS"**

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE
POSSIBLY PRE-EXISTING SKIN OR RESPIRATORY DISORDERS

EMERGENCY AND FIRST AID PROCEDURES
INHALATION: REMOVE TO FRESH AIR • SKIN: FLUSH WITH WATER. • INGESTION: RINSE MOUTH. DO NOT INDUCE VOMITING. IF VOMITING OCCURS, KEEP HEAD BELOW HIPS TO PREVENT ASPIRATION TO LUNGS. IF SYMPTOMS PERSIST, GET MEDICAL HELP. • EYES: FLOOD GENTLY WITH WATER WHILE HOLDING EYELIDS OPEN. REMOVE CONTACT LENSES IF WORN. GET MEDICAL HELP IF SYMPTOMS PERSIST.

Section VII --- Precautions for Safe Handling and Use

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED **ABSORB WITH SAND, DIATOMACEOUS EARTH, VERMICULITE, RICE HULL ASH, OR OTHER ABSORBENT MATERIAL**

WASTE DISPOSAL METHOD **SMALL SPILL: ABSORB AS ABOVE. LARGE SPILL: ELIMINATE ALL IGNITION SOURCES. ABSORB OR RECOVER SPILL. OBSERVE WASTE WATER STANDARDS, DISPOSE OF WASTE PROPERLY.**

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING **AVOID SPARKS, FLAMES, CIGARETTES, ETC.**

OTHER PRECAUTIONS **KEEP CONTAINERS CLOSED WHEN NOT IN USE. KEEP OUT OF REACH OF CHILDREN. DO NOT TRANSFER INTO UNMARKED OR UNAPPROVED PLASTIC CONTAINERS.**

Section VIII --- Control Measures

RESPIRATORY PROTECTION (Specify Type) **IF CONCENTRATION OF VAPORS EXCEEDS TLV LIMITS, INCREASE VENTILATION OR USE RESPIRATOR. GENERALLY NOT NEEDED.**

VENTILATION LOCAL EXHAUST **IF NEEDED. GENERALLY NOT NEEDED.**

PROTECTIVE GLOVES **NITRILE OR NEOPRENE** EYE PROTECTION **IF EXPOSED TO SPLASHING**

OTHER PROTECTIVE CLOTHING OR EQUIPMENT **IMPERVIOUS CLOTHING OR BOOTS**

WORK/HYGIENIC PRACTICES **WASH THOROUGHLY AFTER HANDLING.**