

12/88 Cliff Patenaude - BKH



PLAINTIFF'S EXHIBIT

BIR-830

REPLY TO: EAST WALPOLE, MA 02032
TEL: 617-668-2500

September 9, 1981

Howe & French
Division of Hamblet & Hayes Company
Colonial Road
Salem, MA 01970

Dear Sir:

Would you please furnish us Material Safety Handling Sheets for the following chemicals. We need these to conform to the storage of these chemicals in accordance with the chemical manufacturer's recommendations.

- ✓ METHYL ETHYL KETONE - UNION CARBIDE
- ✓ STODDARD SOLVENT Correct Desig. Varsol #1 - EXXON CO. USA
- ✓ ISOPROPYL ALCOHOL 99% C-206 - EXXON CHEMICALS
- ✓ BUTYL CELLOSOLVE - UNION CARBIDE
- ✓ PROPRIETARY SOLVENT #III Correct Desig. Synasol 190 - UNION CARBIDE
(Industrial Denatured Alcohol Solvent)

Very truly yours,

H. W. Church

Herbert W. Church
Purchasing Analyst *AS*

HC/ns

CORPORATE HEADQUARTERSEAST WALPOLE, MA • BRANCH OFFICES AND PLANTSMARTINEZ, CA
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BIRD 013237



MATERIAL SAFETY DATA SHEET

(Approved by U.S. Department of Labor "Essentially Similar" to Form LSH-00S-4)



CHEMICAL NAME: SYNASOL® SOLVENT 190, PM 41 (GOVERNMENT FORMULATION #1)

SYNONYMS: —

CHEMICAL FAMILY: Alcohols (Mixture)

FORMULA: —

MOLECULAR WEIGHT: —

TRADE NAME AND SYNONYMS: SYNASOL Solvent 190, PM 41

I. PHYSICAL DATA

BOILING POINT, 760 mm. Hg	78.2 °C. (172.8 °F.)	FREEZING POINT	-123 °C.
SPECIFIC GRAVITY (H ₂ O = 1)	0.8038 at 20/20 °C.	VAPOR PRESSURE AT 20°C.	43 mm. Hg
VAPOR DENSITY (air = 1)	1.5	SOLUBILITY IN WATER, % by wt. at 20 °C.	Complete
PER CENT VOLATILES BY VOLUME	100	EVAPORATION RATE (Butyl Acetate = 1)	3.2
APPEARANCE AND ODOR	Water-white liquid; mild and nonresidual odor.		

II. HAZARDOUS INGREDIENTS

MATERIAL	%	TLV (Units)
Ethyl Alcohol	~84	1,000 ppm. ACGIH OSHA
Methyl Alcohol	~ 5	200 ppm. ACGIH OSHA
Ethyl Acetate	~ 5	400 ppm. ACGIH OSHA

III. FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (test method)	53 °F., closed cup	AUTOIGNITION TEMPERATURE	685 °F. (ethanol)		
FLAMMABLE LIMITS IN AIR, % by volume		LOWER	3.3 (ethanol)	UPPER	19.0 (ethanol)
EXTINGUISHING MEDIA	Use carbon dioxide or dry chemical for small fires. Use alcohol or polymer foam or water for large fires.				
SPECIAL FIRE FIGHTING PROCEDURES	Water spray will reduce the intensity of flames.				
UNUSUAL FIRE AND EXPLOSION HAZARDS	None				

EMERGENCY PHONE NUMBER

304/744-3487

This number is available days, nights, weekends, and holidays.

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UNION CARBIDE CORPORATION • CHEMICALS AND PLASTICS • 270 PARK AVENUE, NEW YORK, N.Y. 10017

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VII. SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (specify type)		Air-supplied mask in confined areas	
VENTILATION	LOCAL EXHAUST	Preferred	SPECIAL —
	MECHANICAL (general)	Acceptable	OTHER —
PROTECTIVE GLOVES		Plastic	EYE PROTECTION Safety glasses
OTHER PROTECTIVE EQUIPMENT		Eye bath and safety shower	

VIII. SPECIAL PRECAUTIONS

PRECAUTIONARY LABELING	SYNASOL® SOLVENT denatured ethyl alcohol mixture WARNING! FLAMMABLE Keep away from heat, sparks, and open flame. Keep container closed. Use with adequate ventilation.  POISON  If taken internally will cause serious consequences to health or possibly death. FOR INDUSTRY USE ONLY
OTHER HANDLING AND STORAGE CONDITIONS	