

MATERIAL SAFETY DATA SHEET

EM SCIENCE

-1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MANUFACTURER.....:	PREPARATION DATE.: 02/06/93
	DATE MSDS PRINTED.: APR 19, 1993
EM SCIENCE	INFORMATION PHONE NUMBER.: 609-354-9200
A DIVISION OF EM INDUSTRIES	HOURS: MON. TO FRI. 8:30-5
P.O. BOX 70	CHEMTREC EMERGENCY NUMBER: 800-424-9300
480 DEMOCRAT RD.	HOURS: 24 HRS A DAY
GIBBSTOWN, N.J. 08027	

CATALOG NUMBER(S):
 PX0424 PX0425 PX0425P PX0425S PX0425T PX0428
 PX0433

CHEMICAL NAME.....:
 PETROLEUM ETHER
 TRADE NAME.....:
 PETROLEUM SPIRITS, PETROLEUM NAPHTHA, BENZINE
 CHEMICAL FAMILY..: ALIPHATIC HYDROCARBON
 FORMULA.....:
 MIXTURE

MOLECULAR WEIGHT.: N/A

2. COMPOSITION / INFORMATION ON INGREDIENTS

COMPONENT	CAS #	APPR %
2-METHYLPENTANE	107-83-5	1-5%
PENTANE	109-66-0	60-80%
CYCLOPENTANE	287-92-3	1-5%
BUTANE, 2,2-DIMETHYL-	75-83-2	1-5%
2,3-DIMETHYLBUTANE	79-29-8	1-5%
PENTANE, 3-METHYL-	96-14-0	5-10%
2-METHYLBUTANE	78-78-4	1-5%

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

EXTREMELY FLAMMABLE LIQUID AND VAPOR.
HARMFUL OR FATAL IF SWALLOWED.
MAY CAUSE DAMAGE TO LUNGS, THORAX, CENTRAL NERVOUS SYSTEM, AND
KIDNEYS.
VAPOR HARMFUL.

APPEARANCE.....:

COLORLESS LIQUID, GASOLINE-LIKE ODOR

POTENTIAL HEALTH EFFECTS (ACUTE AND CHRONIC)

SYMPTOMS OF EXPOSURE:

HARMFUL IF INHALED OR SWALLOWED.
IRRITATING ON CONTACT WITH SKIN, EYES OR MUCOUS MEMBRANES.
VAPOR IRRITATING TO EYES AND RESPIRATORY PASSAGES.
MAY CAUSE KIDNEY DAMAGE, NAUSEA, DIZZINESS, CENTRAL NERVOUS SYSTEM
DEPRESSION, RESPIRATORY AND CARDIAC EFFECTS.

MEDICAL COND. AGGRAVATED BY EXPOSURE:

HEART, KIDNEY, AND RESPIRATORY
CONDITIONS

ROUTES OF ENTRY.....:

INHALATION, INGESTION

CARCINOGENICITY.....:

THE MATERIAL IS NOT LISTED (IARC, NTP, OSHA) AS CANCER CAUSING
AGENT.

4. FIRST AID MEASURES

EMERGENCY FIRST AID:

GET MEDICAL ASSISTANCE FOR ALL CASES OF OVEREXPOSURE.
SKIN: IMMEDIATELY FLUSH THOROUGHLY WITH LARGE AMOUNTS OF WATER.
EYES: IMMEDIATELY FLUSH THOROUGHLY WITH WATER FOR AT LEAST 15
MINUTES.
INHALATION: REMOVE TO FRESH AIR; GIVE ARTIFICIAL RESPIRATION IF
BREATHING HAS STOPPED.
INGESTION: CALL A PHYSICIAN IMMEDIATELY. ONLY INDUCE VOMITING AT THE
INSTRUCTIONS OF A PHYSICIAN. NEVER GIVE ANYTHING BY MOUTH TO AN
UNCONSCIOUS PERSON.

5. FIRE FIGHTING MEASURES

FLASH POINT (F).....: -50F (EST.)
FLAMMABLE LIMITS LEL (%): 1.10
FLAMMABLE LIMITS UEL (%): 5.90

EXTINGUISHING MEDIA.....:
CO2, DRY CHEMICAL, "ALCOHOL" FOAM

FIRE FIGHTING PROCEDURES.:
WEAR SELF-CONTAINED BREATHING APPARATUS AND PROTECTIVE CLOTHING.

FIRE & EXPLOSION HAZARDS.:
DANGEROUS FIRE AND EXPLOSIVE HAZARD.
CONFINED MATERIAL MAY EXPLODE UPON HEATING.
VAPOR CAN TRAVEL DISTANCES TO IGNITION SOURCE AND FLASH BACK.

6. ACCIDENTAL RELEASE MEASURES

SPILL RESPONSE:
EVACUATE THE AREA OF ALL UNNECESSARY PERSONNEL.
WEAR SUITABLE PROTECTIVE EQUIPMENT LISTED UNDER EXPOSURE /
PERSONAL PROTECTION.
ELIMINATE ANY IGNITION SOURCES UNTIL THE AREA IS DETERMINED TO BE
FREE FROM EXPLOSION OR FIRE HAZARDS.
CONTAIN THE RELEASE AND ELIMINATE ITS SOURCE, IF THIS CAN BE DONE
WITHOUT RISK.
TAKE UP AND CONTAINERIZE FOR PROPER DISPOSAL AS DESCRIBED UNDER
DISPOSAL.
COMPLY WITH FEDERAL, STATE, AND LOCAL REGULATIONS ON REPORTING
RELEASES. REFER TO REGULATORY INFORMATION FOR REPORTABLE
QUANTITY AND OTHER REGULATORY DATA.
EM SCIENCE RECOMMENDS SPILL-X ABSORBENT AGENTS FOR VARIOUS TYPES
OF SPILLS. ADDITIONAL INFORMATION ON THE SPILL-X PRODUCTS CAN BE
PROVIDED THROUGH THE EM SCIENCE TECHNICAL SERVICE DEPARTMENT
(609) 354-9200.
THE FOLLOWING EM SCIENCE SPILL-X ABSORBENT IS RECOMMENDED FOR
THIS PRODUCT:

SX0863 SOLVENT SPILL TREATMENT KIT

7. HANDLING AND STORAGE

HANDLING & STORAGE:
KEEP CONTAINER TIGHTLY CLOSED.
STORE IN A COOL AREA AWAY FROM IGNITION SOURCES AND OXIDIZERS.
DO NOT BREATHE VAPOR.
DO NOT GET IN EYES, ON SKIN, OR ON CLOTHING.
RETAINED RESIDUE MAY MAKE EMPTY CONTAINERS HAZARDOUS; USE
CAUTION!
ELECTRICALLY GROUND ALL EQUIPMENT WHEN HANDLING THIS PRODUCT.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS AND PERSONAL PROTECTIVE EQUIPMENT:

VENTILATION, RESPIRATORY PROTECTION, PROTECTIVE CLOTHING, EYE PROTECTION
 RESPIRATORY PROTECTION: IF WORKPLACE EXPOSURE LIMIT(S) OF PRODUCT OR ANY COMPONENT IS EXCEEDED (SEE TLV/PEL), A NIOSH/MSHA APPROVED AIR SUPPLIED RESPIRATOR IS ADVISED IN ABSENCE OF PROPER ENVIRONMENTAL CONTROL. OSHA REGULATIONS ALSO PERMIT OTHER NIOSH/MSHA RESPIRATORS (NEGATIVE PRESSURE TYPE) UNDER SPECIFIED CONDITIONS (SEE YOUR SAFETY EQUIPMENT SUPPLIER). ENGINEERING AND/OR ADMINISTRATIVE CONTROLS SHOULD BE IMPLEMENTED TO REDUCE EXPOSURE.
 MATERIAL SHOULD BE HANDLED OR TRANSFERRED IN AN APPROVED FUME HOOD OR WITH ADEQUATE VENTILATION.
 PROTECTIVE GLOVES (NITRILE, VITON OR EQUIVALENT) SHOULD BE WORN TO PREVENT SKIN CONTACT
 SAFETY GLASSES WITH SIDE SHIELDS SHOULD BE WORN AT ALL TIMES.
 IMPERVIOUS PROTECTIVE CLOTHING SHOULD BE WORN TO PREVENT SKIN CONTACT.

WORK / HYGENIC PRACTICES:

WASH THOROUGHLY AFTER HANDLING.
 DO NOT TAKE INTERNALLY.
 EYE WASH AND SAFETY EQUIPMENT SHOULD BE READILY AVAILABLE.

 EXPOSURE GUIDELINES

OSHA - PEL:

COMPONENT	TWA		STEL		CL		SKIN
	PPM	MG/M3	PPM	MG/M3	PPM	MG/M3	
2-METHYLPENTANE							
PENTANE	600	1800	750	2250			
CYCLOPENTANE	600	1720					
BUTANE, 2,2-DIMETHYL-							
2,3-DIMETHYLBUTANE							
PENTANE, 3-METHYL-							
2-METHYLBUTANE							

 ACGIH - TLV:

COMPONENT	TWA		STEL		CL		SKIN
	PPM	MG/M3	PPM	MG/M3	PPM	MG/M3	
2-METHYLPENTANE							

PENTANE
600 1770 750 2210
CYCLOPENTANE
600 1720
BUTANE, 2,2-DIMETHYL-
2,3-DIMETHYLBUTANE
PENTANE, 3-METHYL-
2-METHYLBUTANE

9. PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT (C 760 MMHG): 30(MIN)
MELTING POINT (C): <-40C
SPECIFIC GRAVITY (H2O = 1): 0.642
VAPOR PRESSURE (MM HG): 40 20C
PERCENT VOLATILE BY VOL (%): 99.9+
VAPOR DENSITY (AIR = 1): 2.5
EVAPORATION RATE (BUAC = 1): 10
SOLUBILITY IN WATER (%): INSOLUBLE
APPEARANCE:
COLORLESS LIQUID, GASOLINE-LIKE ODOR

10. STABILITY AND REACTIVITY

STABILITY: YES

HAZARDOUS POLYMERIZATION:
DOES NOT OCCUR

HAZARDOUS DECOMPOSITION.:
COX

CONDITIONS TO AVOID.:
HEAT; CONTACT WITH IGNITION SOURCE.

MATERIALS TO AVOID.:
() WATER
() ACIDS
() BASES
() CORROSIVES
(X) OXIDIZERS
() OTHER :

11. TOXICOLOGICAL INFORMATION

TOXICITY DATA:
NONE ESTABLISHED

TOXICOLOGICAL FINDINGS:
NONE
CITED IN REGISTRY OF TOXIC EFFECTS OF SUBSTANCES (RTECS)

12. DISPOSAL CONSIDERATIONS

EPA WASTE NUMBERS: D001
TREATMENT:
INCINERATION, FUELS BLENDING OR RECYCLE. CONTACT YOUR LOCAL PERMITTED WASTE DISPOSAL SITE (TSD) FOR PERMISSIBLE TREATMENT SITES.
ALWAYS CONTACT A PERMITTED WASTE DISPOSER (TSD) TO ASSURE COMPLIANCE WITH ALL CURRENT LOCAL, STATE AND FEDERAL REGULATIONS.

13. TRANSPORT INFORMATION

DOT PROPER SHIPPING NAME...:
PETROLEUM SPIRIT

DOT ID NUMBER.....: UN1271

14. REGULATORY INFORMATION

TSCA INVENTORY.....:
THIS PRODUCT IS A "MIXTURE". THE CAS NUMBERS OF ALL COMPONENTS ARE LISTED ON THE TSCA INVENTORY.

COMPONENT	SARA EHS (302)	SARA EHS TPQ (LBS)	CERCLA RQ (LBS)
2-METHYLPENTANE			
PENTANE			
CYCLOPENTANE			
BUTANE, 2,2-DIMETHYL-			
2,3-DIMETHYLBUTANE			
PENTANE, 3-METHYL-			

2-METHYLBUTANE

COMPONENT	OSHA FLOOR LIST	SARA 313	DEMINIMIS FOR SARA 313 (%)
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2-METHYLPENTANE

PENTANE

Y

CYCLOPENTANE

Y

BUTANE, 2,2-DIMETHYL-

2,3-DIMETHYLBUTANE

PENTANE, 3-METHYL-

2-METHYLBUTANE

15. OTHER INFORMATION

COMMENTS:

NONE

NFPA HAZARD RATINGS:

HEALTH : 1
FLAMMABILITY : 4
REACTIVITY : 0
SPECIAL HAZARDS :

REVISION HISTORY:

08/01/81 06/01/84 12/08/86 06/11/87 10/27/87 02/11/88 08/24/88
03/01/91

- = REVISED SECTION

N/A = NOT AVAILABLE

N/E = NONE ESTABLISHED

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