



PERMIT APPLICATION

PLEASE TYPE OR PRINT AND SUBMIT IN DUPLICATE FOR EACH EMISSION SOURCE, ATTACH APPROPRIATE SOURCE DESCRIPTION FORMS.

1. ORGANIZATION'S LEGAL NAME TATE FABRICATING COMPANY, INC. APC COMPANY-POINT NO. 74-0087-01
2. MAILING ADDRESS (ST/RO/P.O.BOX) 419 INDUSTRIAL DR APC LOG/PERMIT NO. 37513
CITY WHITE HOUSE STATE TN ZIP CODE 37188-9174 PHONE WITH AREA CODE (615) 672-4909
3. PRINCIPAL TECHNICAL CONTACT HAROLD TATE PHONE WITH AREA CODE (615) 672-4909
4. SITE ADDRESS (ST/RO/HWY) SAME AS ABOVE COUNTY NAME ROBERTSON
CITY OR DISTANCE TO NEAREST TOWN WHITE HOUSE ZIP CODE 37188 PHONE WITH AREA CODE (615) 672-4909
5. EMISSION SOURCE NO. (NUMBER WHICH UNIQUELY IDENTIFIES THIS SOURCE) 001 PERMIT RENEWAL YES (), NO (X).

6. BRIEF DESCRIPTION OF EMISSION SOURCE

FABRICATED STRUCTURAL STEEL BUILDING COMPONENTS ARE COATED IN AN OPEN AREA. ALSO ORNAMENTAL ITEMS SUCH AS CHAIRS/TABLES, ETC ARE LACQUER COATED

7. TYPE OF PERMIT REQUESTED (COMPLETE ONE LINE ONLY)

CONSTRUCTION | STARTING DATE | COMPLETION DATE | DATE WAIVER APPROVED (IF APPLICABLE)
(X) | 1970 | 1970 |
OPERATING | DATE CONSTRUCTION | DATE COMPLETED | LAST PERMIT NO. | EMISSION SOURCE REFERENCE
| STARTED | | | NUMBER

LOCATION TRANSFER | TRANSFER DATE | LAST PERMIT NO. | EMISSION SOURCE REFERENCE
| | | NUMBER
ADDRESS OF LAST LOCATION

8. DESCRIBE CHANGES THAT HAVE BEEN MADE TO THIS EQUIPMENT OR OPERATION SINCE THE OPERATING PERMIT APPLICATION.

Per phone call to Mr. Tate on July 20, 95:
Coating operation now taking place inside the building.
YA

9. SIGNATURE (APPLICATION MUST BE SIGNED BEFORE IT WILL BE PROCESSED) | DATE
Harold Tate | 7-23-93
10. SIGNER'S NAME (TYPE OR PRINT) | TITLE | PHONE WITH AREA CODE
HAROLD TATE | OWNER | (615) 672-4909

This source has been constructed & operated since 1970; it does not need const. Permit SMB

SURFACE COATING DESCRIPTION

PLEASE TYPE OR PRINT AND SUBMIT IN DUPLICATE FOR EACH SPRAY BOOTH, DIP TANK OR OTHER SURFACE COATING EQUIPMENT, ATTACH TO THE PERMIT APPLICATION.

1. ORGANIZATION NAME TATE FABRICATING CO, INC. |☐| APC COMPANY-POINT NO. |☐|
|☐| FOR |
2. EMISSION SOURCE NO. (AS ON PERMIT APPLICATION) |001 | SIC CODE 3441 |☐| APC SEQUENCE NO. |☐|
|☐| APC |
3. SOURCE LATITUDE | LONGITUDE | UTM VERTICAL | UTM HORIZONTAL
4. TYPE OF COATING | SPRAY BOOTH | DIP TANK | OTHER (DESCRIBE)
OPERATION -> OPEN AREA
5. MANUFACTURER NONE | MODEL NUMBER | SERIAL NUMBER (OR PLANT ID)
CONSTRUCTION DATE | MODIFICATION DATE

DESCRIBE ANY MODIFICATIONS *

* APPLICANT WISHES TO LIMIT ANNUAL USAGE TO 260 DAY/YR AND MAXIMUM DAILY USAGES IE - JUST UNDER 10 TPDY TOTAL FACILITY

6. DESCRIBE ARTICLES COATED

LARGE STRUCTURAL STEEL BUILDING COMPONENTS ARE SPRAY COATED IN ASSEMBLY AREA. - RED OXIDE PRIMER.

7. NORMAL OPERATION: | HOURS/DAY | DAYS/WEEK | WEEKS/YEAR | DAYS/YEAR 260 *
-> 8 5 52
8. SPRAY BOOTH | WIDTH | HEIGHT | DEPTH | NUMBER OF OPEN SIDES
DIMENSIONS (FT): ->
9. METHOD OF SPRAY: | AIRLESS | AIR | ELECTROSTATIC | OVERSPRAY | DATE
| | ATOMIZED | AIRLESS | DISC | AIR | (PERCENT) | PURCHASED *
-> | | X | | | | ATOMIZED | |
10. EXHAUST FAN DATA: | NUMBER OF FANS | TOTAL HORSEPOWER | TOTAL VOLUME (CFM)
-> NONE - OPEN AREA.
11. EXHAUST CONTROL: | NONE | WATERWASH | EXHAUST | BAFFLE | ADSORP- | OTHER **
-> | | | | FILTERS | PLATES | TION** |
12. EXHAUST STACK | DIAMETER | HEIGHT (FT) | FLOW (CFM) | SPECIFY SERIAL NOS. THAT SHARE
DATA: *** | (FT) | ABOVE GRADE | | THIS VENT
-> | | | | |
| | | | |
| | | | |

* THE ACTUAL SURFACE COATING EQUIPMENT (SPRAY GUN, SPRAY HEADS, ETC.), AND NOT THE SPRAY BOOTH PER SE, DETERMINES THE STATUS OF THE SOURCE (NEW OR EXISTING).

** ATTACH A DETAILED DESCRIPTION.

*** COMPLETE ONE LINE FOR EACH STACK OR VENT.

 * NOTE: THIS APPLICATION WILL NOT BE PROCESSED UNLESS ALL OF THE FOLLOWING *
 * INFORMATION IS PROVIDED. *

13. COATINGS AND THINNERS USED: LIST ALL TYPES OF COATINGS AND THINNERS USED AND ATTACH A STATEMENT OF THE CHEMICAL COMPOSITION OF EACH. THIS STATEMENT USUALLY MAY BE OBTAINED FROM THE COATING OR THINNER SUPPLIER. THE MINIMUM INFORMATION REQUIRED IS THE PERCENT OF SOLIDS BY WEIGHT, THE PERCENT VOLATILE BY WEIGHT, THE HYDROCARBON COMPOSITION AND/OR DESCRIPTION OF THE VOLATILE COMPONENT, AND THE DENSITY OF THE COATING OR THINNER IN POUNDS PER GALLON.

LINE ID	COATING NAME	% SOLIDS BY WT	% VOLATILE BY WT	DENSITY (LBS/GAL)	QUANTITY USED		
					GALLONS/DAY AVERAGE	GAL/MO MAXIMUM *	AVERAGE
A.	H1 SOL RED OXIDE PRIM.	74	26	12.48		18.5	
B.	3.25 # VOC/GAL						
C.	EXT CLEAR LACQUER	22	78	7.5		0.25	
THINNER NAME							
D.	TOLUENE	0	100	7.24		2.1	
E.							
F.							
CLEAN-UP SOLVENT NAME							
G.	NONE						
H.							

14. SIGNATURE

DATE

Harold Tate Jr

7-23-93

* NOTE: FOR NEW CONSTRUCTION THIS QUANTITY WILL BE USED AS A PERMIT LIMITATION ON CAPACITY.

JULY 23, 1993

TATE FABRICATING COMPANY, INC.
WHITE HOUSE, TENNESSEE

MAXIMUM ANNUAL VOC EMISSIONS CALCULATIONS

SOURCE 001

COATING OF LARGE STRUCTURAL STEEL BUILDING COMPONENTS WITH HI SOL
RED OXIDE PRIMER AND LACQUER COATING OF CHAIRS/TABLES, ETC.

- A. Maximum daily usages: 18.5 gpd of primer and 2.1 gpd of toluene thinner.
- B. Maximum annual days: 260
- C. Annual VOC:

VOC from Primer: $((18.5 \text{ gal primer})(3.25 \text{ lb VOC/gal}) + (2.1 \text{ gal toluene})(7.24 \text{ lb VOC/gal})(260 \text{ days/yr operation}))/2000 \text{ lb/ton} = 9.79$
TPY of VOC

VOC from Lacquer: $(0.25 \text{ gal lacquer})(.78)(7.5)(260 \text{ days/yr})/2000 \text{ lb/ton} = 0.19$
TPY of VOC

Total Annual VOC = $9.79 + 0.19 = 9.98$ TPY

ATERIAL SAFETY DATA SHEET

PRODUCT NAME: HI SOL RED OXIDE PRIMER
 PRODUCT CODE: 28DR147

HMIS CODES: H F R P
 2 3 0

===== SECTION I - MANUFACTURER IDENTIFICATION =====

MANUFACTURER'S NAME: MOBILE PAINT MANUFACTURING CO. INC.
 ADDRESS: P.O. BOX 717, THEODORE, AL 36582
 EMERGENCY PHONE: 1-800-255-3924 INFORMATION PHONE: (205)443-6110
 DATE REVISED : 01-15-91 NAME OF PREPARER : JULIE HOAGLAND
 REASON REVISED : NEW

===== SECTION II - HAZARDOUS INGREDIENTS/SARA III INFORMATION =====

HAZARDOUS COMPONENTS	CAS NUMBER	OCCUPATIONAL EXPOSURE LIMITS			VAPOR PRESSURE		WEIGHT PERCENT
		OSHA PEL	ACGIH TLV	OTHER	mm Hg	@ TEMP	
VM & P NAPHTHA	8030-30-6		300 PPM	1350 MG/M3	12.0	68F	(5.0%
*XYLENE	1330-20-7	100 PPM	100 PPM	435 MG/M3	6.0	68F	10
*TOLUENE	108-88-3	100 PPM	100 PPM	375 MG/M3	22.0	68F	9
CALCIUM CARBONATE	1317-65-3	15 MG/M3	10 MG/M3		N/A		30
HYDROUS CALCIUM MAGNESIUM SILICATE	14807-96-6	20 MPPCF	2 MG/M3		N/A		5
MINERAL SPIRITS	8052-41-3	100 PPM	100 PPM	525 MG/M3	2.0	68F	(5.0%

* Indicates toxic chemical(s) subject to the reporting requirements of section 313 of Title III and of 40 CFR 372.

===== SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS =====

BOILING RANGE: 200 to 300 Deg F SPECIFIC GRAVITY (H2O=1): 1.5
 VAPOR DENSITY: HEAVIER THAN AIR EVAPORATION RATE: SLOWER THAN ETHER
 COATING V.O.C. : 3.25 LB/GL (389 G/L)
 SOLUBILITY IN WATER: NEGLIGIBLE
 APPEARANCE AND ODOR: TYPICAL PAINT SOLVENT ODOR

===== SECTION IV - FIRE AND EXPLOSION HAZARD DATA =====

FLASH POINT: <73 F METHOD USED: SETAFLASH
 FLAMMABLE LIMITS IN AIR BY VOLUME- LOWER: 0.9% UPPER: 7.0%

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

SPECIAL FIREFIGHTING PROCEDURES

IF EMERGENCY CONDITIONS OVEREXPOSURE TO DECOMPOSITION PRODUCTS MAY CAUSE A HEALTH HAZARD. SYMPTOMS MAY NOT BE IMMEDIATELY APPARENT. OBTAIN MEDICAL ATTENTION. KEEP CONTAINERS TIGHTLY CLOSED. ISOLATE FROM HEAT, SPARKS, AND OPEN FLAME.

UNUSUAL FIRE AND EXPLOSION HAZARDS

CLOSED CONTAINERS MAY EXPLODE WHEN EXPOSED TO EXTREME HEAT. APPLICATION TO HOT SURFACES REQUIRES SPECIAL PRECAUTIONS. FULL PROTECTIVE EQUIPMENT INCLUDING SELF-CONTAINED BREATHING APPARATUS SHOULD BE USED. WATER SPRAY MAY BE INEFFECTIVE. IF WATER IS USED, FOG NOZZLES ARE PREFERABLE. WATER MAY BE USED TO COOL CLOSED CONTAINERS TO PREVENT PRESSURE BUILD-UP.

===== SECTION V - REACTIVITY DATA =====

STABILITY: STABLE
CONDITIONS TO AVOID
HIGH TEMPERATURES

INCOMPATIBILITY (MATERIALS TO AVOID)
OXIDIZING MATERIALS

HAZARDOUS DECOMPOSITION OR BYPRODUCTS
MAY PRODUCE HAZARDOUS FUMES WHEN HEATED TO DECOMPOSITION AS IN WELDING.

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

===== SECTION VI - HEALTH HAZARD DATA =====

INHALATION HEALTH RISKS AND SYMPTOMS OF EXPOSURE
ANESTHETIC. EXCESSIVE INHALATION CAN CAUSE IRRITATION OF THE RESPIRATORY TRACT, OR ACUTE NERVOUS SYSTEM DEPRESSION CHARACTERIZED BY HEADACHE, DIZZINESS, STAGGERING GAIT, CONFUSION, UNCONSCIOUSNESS, COMA AND EVEN ASPHYXIATION.

SKIN AND EYE CONTACT HEALTH RISKS AND SYMPTOMS OF EXPOSURE
SKIN: MODERATE IRRITATION, DEFATTING, DERMATITIS. MAY BE A SENSITIZER IN SOME INDIVIDUALS.
EYES: SEVERE IRRITATION, REDNESS, TEARING, BLURRED VISION. MAY BE A SENSITIZER IN SOME INDIVIDUALS.

SKIN ABSORPTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE
LIQUID CAN BE ABSORBED THROUGH THE SKIN RESULTING IN SYMPTOMS SIMILAR TO THE INHALATION EFFECTS ABOVE.

INGESTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE
GASTROINTESTINAL IRRITATION, NAUSEA, VOMITING AND DIARRHEA. ASPIRATION INTO THE LUNGS DURING INGESTION OR VOMITING MAY CAUSE MILD TO SEVERE PULMONARY INJURY AND POSSIBLY EVEN DEATH.

HEALTH HAZARDS (ACUTE AND CHRONIC)
REPORTS HAVE ASSOCIATED REPEATED AND PROLONGED OCCUPATIONAL OVEREXPOSURE TO SOLVENTS WITH PERMANENT BRAIN AND NERVOUS SYSTEM DAMAGE. INTENTIONAL MISUSE BY DELIBERATELY CONCENTRATING AND INHALING THE CONTENTS MAY BE HARMFUL OR FATAL.

CARCINOGENICITY: NTP? NO IARC MONOGRAPHS? NO OSHA REGULATED? NO

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE
EXPOSURE TO PETROLEUM SOLVENTS MAY AGGRAVATE PREEXISTING DERMATITIS.

EMERGENCY AND FIRST AID PROCEDURES
INHALATION: REMOVE TO FRESH AIR. ADMINISTER OXYGEN IF BREATHING IS DIFFICULT. RESTORE BREATHING IF NECESSARY. TREAT SYMPTOMATICALLY. CONSULT A PHYSICIAN.
SKIN: WASH AFFECTED AREAS WITH SOAP AND WATER. REMOVE AND LAUNDER CONTAMINATED CLOTHING. CONSULT A PHYSICIAN IF NEEDED.
EYES: FLUSH IMMEDIATELY WITH LARGE AMOUNTS OF WATER FOR AT LEAST 15 MINUTES. TAKE TO A PHYSICIAN FOR MEDICAL TREATMENT.
INGESTION: DRINK 1 OR 2 GLASSES OF WATER TO DILUTE. DO NOT INDUCE VOMITING. GET MEDICAL HELP IMMEDIATELY.

===== SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE =====

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

REMOVE ALL SOURCES OF IGNITION (FLAME, HOT SURFACES, AND ELECTRICAL, STATIC, OR FRICTIONAL SPARKS). AVOID BREATHING VAPORS. VENTILATE AREA. CONTAIN AND REMOVE WITH INERT ABSORBENT AND NON-SPARKING TOOLS.

WASTE DISPOSAL METHOD

DISPOSE OF IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS. INCINERATE IN APPROVED FACILITY. DO NOT INCINERATE CLOSED CONTAINERS.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

DO NOT STORE ABOVE 120 F. STORE LARGE QUANTITIES ONLY IN BUILDINGS DESIGNED TO COMPLY WITH OSHA 1910.106. KEEP CLOSURES TIGHT AND CONTAINER UPRIGHT TO PREVENT LEAKAGE. DO NOT STORE OR USE NEAR HEAT, SPARKS OR FLAME. NEVER USE PRESSURE TO EMPTY. DRUM MUST NOT BE WASHED OUT OR USED FOR OTHER PURPOSES. DRUMS OF THIS MATERIAL SHOULD BE GROUNDED WHEN POURING.

OTHER PRECAUTIONS

DO NOT GET IN EYES. AVOID SKIN CONTACT. CAN CAUSE ALLERGIC RESPIRATORY REACTION. CAN CAUSE ALLERGIC SKIN REACTION. PREVENT PROLONGED OR REPEATED BREATHING OF VAPORS OR SPRAY MIST. AVOID BREATHING OF SANDING DUST. WASH CONTAMINATED CLOTHING THOROUGHLY. WASH SKIN THOROUGHLY WITH SOAP AND WATER AFTER HANDLING. CLOSE CONTAINER AFTER EACH USE. DO NOT TRANSFER THIS PRODUCT TO UNLABELED CONTAINERS. DO NOT HANDLE UNTIL THE MANUFACTURERS SAFETY PRECAUTIONS HAVE BEEN READ AND UNDERSTOOD. KEEP OUT OF REACH OF CHILDREN.

===== SECTION VIII - CONTROL MEASURES =====

RESPIRATORY PROTECTION

IN OUTDOOR OR OPEN AREAS USE NIOSH/MSHA APPROVED MECHANICAL FILTER RESPIRATOR TO REMOVE SOLID AIR BORNE PARTICLES. IN RESTRICTED VENTILATION AREAS USE NIOSH/MSHA APPROVED CHEMICAL-MECHANICAL FILTERS DESIGNED TO REMOVE A COMBINATION OF PARTICULATE AND GAS AND VAPOR. IN CONFINED AREAS USE NIOSH/MSHA APPROVED AIR LINE TYPE RESPIRATORS OR HOODS.

VENTILATION

ALL APPLICATION AREAS SHOULD BE VENTILATED IN ACCORDANCE TO OSHA REGULATION 29 CFR 1910.94, 1910.107, 1910.108. REMOVE DECOMPOSITION PRODUCTS FORMED DURING WELDING OR FLAME CUTTING ON SURFACE COATED WITH THIS PRODUCT. IF BAKING VENT FUMES.

PROTECTIVE GLOVES

RECOMMENDED.

EYE PROTECTION

SAFETY EYEWEAR INCLUDING SPLASH GUARDS OR SIDE SHIELDS RECOMMENDED.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT

USE PROTECTIVE OUTER-WEAR AND PREVENT PROLONGED SKIN CONTACT WITH CONTAMINATED CLOTHING.

WORK/HYGIENIC PRACTICES

AVOID BREATHING VAPORS AND CONTACT WITH SKIN. WASH SKIN THOROUGHLY BEFORE BREAKS AND MEALS AND AT END OF WORK PERIOD.

===== SECTION IX - DISCLAIMER =====

DISCLAIMER

THE INFORMATION PROVIDED IN THIS MSDS HAS BEEN OBTAINED FROM SOURCES BELIEVED TO BE ACCURATE AND RELIABLE. IT IS FURNISHED WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED. RECIPIENTS SHOULD DETERMINE THAT THE INFORMATION IS CURRENT AND SUITABLE FOR THE PROTECTION OF THE ENVIRONMENT AND THE HEALTH AND SAFETY OF YOUR EMPLOYEES AND USERS OF THIS PRODUCT.

**MATERIAL SAFETY DATA SHEET
FOR COATINGS, RESINS, AND RELATED MATERIALS**

MANUFACTURER'S NAME

The Egyptian Lacquer Mfg. Co.
Port Ghaubar Drive
Franklin, TN 37064

EMERGENCY TELEPHONE NUMBER

Chemtrec 1-800-624-9300
Egyptian 1-615-790-3881

DATE OF PREPARATION

03/07/89

INFORMATION TELEPHONE NUMBER

Egyptian 1-615-790-3881

customer FATE FABRICATING COMPANY

SECTION I - PRODUCT IDENTIFICATION

PRODUCT NUMBER CH-273

PRODUCT NAME - EXTERIOR CLEAR

PRODUCT CLASS - CELLULOSIC LACQUER

HAZARDOUS MATERIALS IDENTIFICATION SYSTEM H1 F3 R1 P1

SECTION II - HAZARDOUS INGREDIENTS

INGREDIENT	CAS REGISTRY NUMBER	WT & VOL PERCENT CONTENT		OCCUPATIONAL EXPOSURE LIMITS TLV	VOLUME LIMITS PERCENT LEL	VAPOR PRESSURE MM Hg
METHYL ETHYL KETONE	20 17 100					
ISOPROPANOL	67-63-7	5	7	400.0	400.0	2.0
1N-BUTANOL	71-36-3	1	2	50.0	50.0	1.4
1BUTYL CELLOSOLVE	111-76-2	10	11	25.0	35.0	1.1
*METHYL ETHYL KETONE	78-93-5	3	4	200.0	200.0	1.8
*METHYL IS KETONE	108-10-1	6	7	50.0	55.0	1.2
*XYLENE	1330-20-7	11	12	100.0	100.0	1.0
*TOLUENE	108-88-3	35	37	100.0	100.0	1.2

*NOTICE: This chemical is subject to the reporting requirements of Section 313 of Title XII of the Superfund Amendments and Reauthorization Act of 1986 (SARA) and 40 CFR Part 372 (Form R).

SECTION III - PHYSICAL DATA

BOILING RANGE 128 - 131 F

VAPOR DENSITY heavier than air

EVAPORATION RATE slower than water

VOLUME VOLATILE 81

WEIGHT PER GALLON 7.5-48/GAL

WEIGHT VOLATILE 78 78%

WT % VOLATILES 78%

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLAMMABILITY CLASSIFICATION OSHA FLAMMABLE LIQUID CLASS 1B
FLASH POINT 20.0 °F TCC LOWER EXPLOSIVE LIMIT see section II, LEL

EXTINGUISHING MEDIA foam, CO2, dry chemical, class B fire extinguisher

UNUSUAL FIRE AND EXPLOSION HAZARDS Vapors may cause flash fire. Vapor may ignite explosively. Vapors may spread long distances. Prevent buildup of vapors. Extinguish all pilot lights and turn off heaters, non-explosion proof electrical equipment and other sources of ignition during use and until vapors are all gone. Do not weld or cut drums in which paint or thinner has been stored.

SPECIAL FIREFIGHTING PROCEDURES

Water spray may be ineffective to extinguish fire.

Water should be used to cool containers exposed to fire.

Use a self contained breathing apparatus with a full facepiece operated in pressure demand or other positive pressure mode.

SECTION V - HEALTH HAZARD DATA

CARCINOGENICITY: NTP,NO, IARC,NO, OSHA,NO

THRESHOLD LIMIT VALUE see section II, PEL, TLV

EFFECTS OF OVEREXPOSURE

Acute: inhalation -- headache, nausea, impairment of reaction time and coordination. Skin contact -- prolonged and repeated may cause irritation. Ingestion -- upset stomach, irritated mouth and throat. Eye contact -- may cause severe irritation.

Chronic: reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal.

MEDICAL CONDITIONS PRONE TO AGGRAVATION BY EXPOSURE

Persons with known allergies, known impaired health, and pregnant women should consult with their physician before using this product. See msds(s) on the individual listed components in section II for further information.

PRIMARY ROUTE(S) OF ENTRY: dermal, inhalation and ingestion

EMERGENCY AND FIRST AID PROCEDURES

If on skin: thoroughly wash exposed area with soap and water. Remove contaminated clothing. Launder contaminated clothing before re-use.

If in eyes: flush with large amounts of water, lifting upper and lower lids occasionally, and get medical attention.

If swallowed: immediately drink two glasses of water to dilute. Never give anything by mouth to an unconscious person. Get medical attention immediately.

If breathed: if affected, remove individual to fresh air. If breathing is difficult, administer oxygen. If breathing has stopped give artificial respiration. Keep person warm, quiet and get medical attention.

SECTION VI - REACTIVITY DATA

STABILITY material is stable

HAZARDOUS POLYMERIZATION will not occur

HAZARDOUS DECOMPOSITION PRODUCTS

includes carbon monoxide, carbon dioxide, oxides of nitrogen, halogens

CONDITIONS TO AVOID To prevent mishaps, keep closures tight and upright to prevent leakage. Keep container closed when not in use. In case of spillage, absorb with inert material and dispose of in accordance with applicable regulations.

INCOMPATIBILITY (MATERIALS TO AVOID) Avoid strong mineral acids or alkalies. Keep out of direct sunlight and away from sources of heat.

SECTION VII - SPILL AND LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Remove all sources of ignition, ventilate, and remove with inert absorbent. People not directly involved in the cleanup effort should be excluded from the area. Do not undertake a cleanup effort alone.

WASTE DISPOSAL METHOD

Mix with an inert material and incinerate in an EPA approved incinerator. Do not incinerate closed containers. Observe all Federal, state and local laws concerning health and pollution.

SECTION VIII - SAFE HANDLING AND USE INFORMATION

RESPIRATORY PROTECTION Adequate ventilation is required. Read, understand, and follow product label instructions.

VENTILATION Provide sufficient ventilation in volume and pattern to keep vapor concentration below the given TLV and LEL.

PROTECTIVE GLOVES Required for prolonged or repeated contact.

Wear resistant gloves such as natural rubber, neoprene, buna N, or nitrile.

EYE PROTECTION Use safety eyewear with perforated sideshields.

OTHER PROTECTIVE EQUIPMENT - see next paragraph

HYGIENIC PRACTICES Do not breath vapors or spray mist. Do not get in eyes, on skin or on clothing. Wear appropriate, properly fitted respirator (NIOSH/MSHA approved) during and after application unless air monitoring demonstrates vapor or mist levels are below applicable limits. Follow respirator manufacturer's direction for respirator use.

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

Keep away from heat, sparks, and open flame. Close container after each use. Consult NFPA and OSHA for additional storage requirements. Use approved bonding and grounding procedures. Read, understand, and follow the product label.

OTHER PRECAUTIONS

The information supplied herein is believed to be reliable. Since the use of any of the designated materials or products is completely beyond our control, liability is expressly disclaimed for any loss or injury arising out of the use of this information or the use of any materials or products designated.

TOLUENE

EXXON COMPANY, U.S.A.
A DIVISION OF EXXON CORPORATION

DATE ISSUED 7/1/85

MATERIAL SAFETY DATA SHEET

EXXON COMPANY, U.S.A. P.O. BOX 2180 HOUSTON, TX 77252-2180

RECEIVED

A. IDENTIFICATION AND EMERGENCY INFORMATION

FEB 9 1987

PRODUCT NAME
TOLUENE

PRODUCT CODE
132010 - 00650

TATE FAB CO., INC.

CHEMICAL NAME
Petroleum Solvent

CAS NUMBER
108-88-3

PRODUCT APPEARANCE AND ODOR
Clear water-white liquid
Aromatic hydrocarbon odor

EMERGENCY TELEPHONE NUMBER
(713) 656-3424

B. COMPONENTS AND HAZARD INFORMATION

COMPONENTS

CAS NO. OF
COMPONENTS APPROXIMATE
CONCENTRATION

This product can be defined as:
Toluene

108-88-3 100%

EXPOSURE LIMIT FOR TOTAL PRODUCT
100 ppm (375 mg/m³) for an
8-hour workday

BASIS
Recommended by the American Conference of Governmental
Industrial Hygienists (ACGIH)

C. EMERGENCY AND FIRST AID PROCEDURES

EYE CONTACT

If splashed into the eyes, flush with clear water for 15 minutes or until irritation subsides. If irritation persists, call a physician.

SKIN CONTACT

In case of skin contact, remove any contaminated clothing and wash skin thoroughly with soap and water.

INHALATION

If overcome by vapor, remove from exposure and call a physician immediately. If breathing is irregular or has stopped, start resuscitation, administer oxygen, if available.

INGESTION

If ingested, DO NOT induce vomiting; call a physician immediately.

VENTILATION

Provide greater than 60 feet per minute hood face velocity. Use only with ventilation sufficient to prevent exceeding recommended exposure limit or buildup of explosive concentrations of vapor in air. Use explosion-proof equipment. No smoking or open lights.

RESPIRATORY PROTECTION

Use supplied-air respiratory protection in confined or enclosed spaces, if needed.

PROTECTIVE GLOVES

Use chemical-resistant gloves, if needed, to avoid prolonged or repeated skin contact.

EYE PROTECTION

Use splash goggles or face shield when eye contact may occur.

OTHER PROTECTIVE EQUIPMENT

Use chemical-resistant apron or other impervious clothing, if needed, to avoid contaminating regular clothing which could result in prolonged or repeated skin contact.

WORK PRACTICES / ENGINEERING CONTROLS

Keep containers closed when not in use. Do not handle or store near heat, sparks, flame or strong oxidants. To prevent fire or explosion risk from static accumulation and discharge, effectively ground product transfer system in accordance with the National Fire Protection Association standard for petroleum products.

PERSONAL HYGIENE

Minimize breathing vapor or mist. Avoid prolonged or repeated contact with skin. Remove contaminated clothing; launder or dry-clean before reuse. Remove contaminated shoes and thoroughly clean and dry before reuse. Cleanse skin thoroughly after contact, before breaks and meals, and at end of work period. Product is readily removed from skin by waterless hand cleaners followed by washing thoroughly with soap and water.

J. TRANSPORTATION INFORMATION

TRANSPORTATION INCIDENT INFORMATION

For further information relative to spills resulting from transportation incidents, refer to latest Department of Transportation Emergency Response Guidebook for Hazardous Materials Incidents, DOT P 5800.3.

The information and recommendations contained herein are, to the best of Exxon's knowledge and belief, accurate and reliable as of the date issued. Exxon does not warrant or guarantee their accuracy or reliability, and Exxon shall not be liable for any loss or damage arising out of the use thereof.

The information and recommendations are offered for the user's consideration and examination, and it is the user's responsibility to satisfy itself that they are suitable and complete for its particular use.

FOR ADDITIONAL INFORMATION ON HEALTH EFFECTS CONTACT:

DIRECTOR OF INDUSTRIAL HYGIENE
EXXON COMPANY, U.S.A.
P. O. BOX 2180 ROOM 2737
HOUSTON, TX 77252-2180
(713) 656-2443

FOR OTHER PRODUCT INFORMATION CONTACT:

MANAGER, MARKETING TECHNICAL SERVICES
EXXON COMPANY, U.S.A.
P. O. BOX 2180 ROOM 2455
HOUSTON, TX 77252-2180
(713) 656-5949

TOXICITY INFORMATION

Product has a low order of acute oral toxicity, but minute amounts aspirated into the lungs during ingestion may cause severe pulmonary injury or death.

F. PHYSICAL DATA

The following data are approximate or typical values and should not be used for precise design purposes.

BOILING RANGE

110.2-111.0°C (230.4-231.8°F)

VAPOR PRESSURE

Approximately 54 mm Hg @ 25°C
ASTM D 2879

SPECIFIC GRAVITY (15.6 C/15.6 C)

0.87

VAPOR DENSITY (AIR = 1)

Approximately 3.2

MOLECULAR WEIGHT

92

PERCENT VOLATILE BY VOLUME

100 @ 1 atm. and 25°C (77°F)

PH

Essentially neutral

EVAPORATION RATE @ 1 ATM. AND 25 C (77 F)

(n-BUTYL ACETATE = 1)

1.8

POUR, CONGEALING OR MELTING POINT

Less than -18°C (0°F)

Pour Point by ASTM D 97

SOLUBILITY IN WATER @ 1 ATM. AND 25 C (77 F)

Negligible: less than 0.1%

VISCOSITY

0.57 cP @ 25°C ASTM D 445

G. REACTIVITY

This product is stable and will not react violently with water. Hazardous polymerization will not occur. Avoid contact with strong oxidants such as liquid chlorine, concentrated oxygen, sodium hypochlorite or calcium hypochlorite.

H. SPILL OR LEAK PROCEDURES**STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED**

Shut off and eliminate all ignition sources. Keep people away. Recover free product. Add sand, earth or other suitable absorbent to spill area. Minimize breathing vapors. Minimize skin contact. Ventilate confined spaces. Open all windows and doors. Keep product out of sewers and watercourses by diking or impounding. Advise authorities if product has entered or may enter sewers, watercourses, or extensive land areas. Assure conformity with applicable governmental regulations. Continue to observe precautions for volatile, flammable vapors from absorbed material.

REPORTABLE QUANTITY (RQ), EPA REGULATION 40 CFR 302

RQ for toluene (1,000 pounds): 1,000 pounds of product or 454 kg or 138 gallons.

I. PROTECTION AND PRECAUTIONS