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DATE OF ISSUE
11/26/2002

SUPERSEDES
5/20/2002

SECTION I - GENERAL INFORMATION

Chemical Name & Synonyms

Trade Name & Synonyms

Chemical Family:
ORANGE TERPENE/ALKENE EMULSION

MERLIN AEROSOL
Formula Mixture --> X

Manufacturer's Name:
MANTEK, DIVISION OF NCH CORP.

Address:
BOX 152170
IRVING, TEXAS 75015

Prepared By:
C Williamson/Chemist

Product Code Number
5498

Emergency Phone Number
800-424-9300

SECTION II - HAZARDOUS INGREDIENTS
THE HAZARDS PRESENTED BELOW ARE THOSE OF THE INDIVIDUAL COMPONENTS

Chemical Name (Ingredients)	Hazard	TLV	PEL	STEL	CAS #
D-LIMONENE	COMB/IRR	N/E 1	N/E 2	N/E	5989-27-5
TETRADECENE	IRRITANT	N/E 1	N/E 2	N/E	1120-36-1
TALL-OIL FATTY AMIDE, N,N-BIS(HYDROXYETHYL)	IRRITANT	N/E 1	N/E 2	N/E	68155-20-4
PROPANE	FLAM/ASPHY	2500 PPM 1	1000 PPM 2	N/E	74-98-6
ISOBUTANE	FLAM/ASPHY	N/E 1	N/E 2	N/E	75-28-5

SECTION III - PHYSICAL DATA

Boiling Point (F):	208°	Specific Gravity (H2O=1):	0.945
Vapor Pressure (MM HG):	223.83	Color:	WHITE/OFF-WHITE
Vapor Density (Air=1):	1.9	Odor:	ORANGE
PH @ 100% :	9.4	Clarity:	OPAQUE
Evaporation Rate by Volume:	100	Evaporation Rate (BU A/C=1):	15.13
H2O Solubility:	EMULSIFIABLE	Viscosity:	SEMI-VISCOUS

SECTION IV - FIRE AND EXPLOSION HAZARD

Flash Point 159°F / T.C.C.	Flammable Limits TETRADECENE/HYDROCARBONS	LEL 0.3%	UEL 9.5%
Extinguishing Media X <--Foam <--Alcohol Foam X <--CO2 X <--Dry Chemical X <--Water Spray <--Other			
Special Fire Fighting Procedures: FIREFIGHTERS SHOULD WEAR A SELF-CONTAINED BREATHING APPARATUS AND FULL PROTECTIVE GEAR. COOL FIRE-EXPOSED CONTAINERS WITH WATER SPRAY TO PREVENT BURSTING.			
Unusual Fire and Explosion Hazards: VAPORS ARE HEAVIER THAN AIR AND MAY TRAVEL TO DISTANT SOURCES OF IGNITION AND FLASHBACK. FLAME EXTENSION IS >30 INCHES, BURNBACK IS 0 INCHES.			
Aerosol Level (NFPA 30B):	1		
NFPA 704 Hazard Rating (0=Insignificant 1=Slight 2=Moderate 3=High 4=Extreme) 2 <--Health 4 <--Flammability 0 <--Instability <--Special			

SECTION V - HEALTH HAZARD DATA

Threshold Limit Value: 2500 PPM AS PROPANE 1.	
Effects of Overexposure: -Acute (Short Term Exposure) INHALATION: MAY CAUSE IRRITATION OF THE RESPIRATORY TRACT SEEN AS COUGHING AND SNEEZING OR AN ALLERGIC RESPIRATORY REACTION. FOR INHALATION AT LOW LEVELS, NO HARMFUL EFFECTS ARE EXPECTED. AT HIGH VAPOR CONCENTRATIONS, INHALATION MAY CAUSE CENTRAL NERVOUS SYSTEM EFFECTS SUCH AS HEADACHE, DIZZINESS DROWSINESS, WEAKNESS, UNCONCIOUSNESS AND POSSIBLE ANESTHETIC EFFECTS FROM CENTRAL NERVOUS SYSTEM DEPRESSION. SKIN CONTACT: MAY CAUSE IRRITATION SEEN AS ITCHING AND REDNESS OR DEBATTING OF SKIN ON PROLONGED CONTACT; MAY CAUSE ALLERGIC SKIN REACTION. EYE CONTACT: CAUSES IRRITATION SEEN AS REDNESS AND TEARING; REPEATED OR PROLONGED CONTACT MAY CAUSE CONJUNCTIVITIS. INGESTION: MAY CAUSE IRRITATION WITH POSSIBLE NAUSEA, VOMITING AND DIARRHEA.	
-Chronic (Long Term Exposure) MAY CAUSE RESPIRATORY OR SKIN SENSITIZATION IN INDIVIDUALS SENSITIVE TO ORANGE OIL (D-LIMONENE). MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE ARE PRE-EXISTING RESPIRATORY AND SKIN CONDITIONS SUCH AS ASTHMA, EMPHYSEMA, AND DERMATITIS. TARGET ORGANS: CENTRAL NERVOUS SYSTEM AND BLOOD-FORMING ORGANS.	
Primary Routes of Entry:	X <--Inhalation <--Ingestion X <--Absorption
Emergency and First Aid Procedures: -Inhalation:	

SECTION V - HEALTH HAZARD DATA (Continued)

REMOVE FROM AREA TO FRESH AIR. SEEK MEDICAL ATTENTION IF RESPIRATORY IRRITATION DEVELOPS OR IF BREATHING BECOMES DIFFICULT.

-Eye Contact:

RINSE THE EYES WITH WATER. REMOVE ANY CONTACT LENSES AND CONTINUE FLUSHING WITH PLENTY OF WATER FOR SEVERAL MINUTES. SEEK MEDICAL ATTENTION IF IRRITATION DEVELOPS.

-Skin Contact:

WASH AFFECTED AREAS WITH PLENTY OF SOAP AND WATER FOR SEVERAL MINUTES. SEEK MEDICAL ATTENTION IF IRRITATION DEVELOPS.

-Ingestion:

GIVE 3 TO 4 GLASSES OF WATER, BUT DO NOT INDUCE VOMITING. IF VOMITING OCCURS, GIVE FLUIDS AGAIN. SEEK MEDICAL ATTENTION IF DISCOMFORT OCCURS.

-Notes to Physician:

THERE IS NO SPECIFIC ANTIDOTE. TREAT THE PATIENT SYMPTOMATICALLY.

SECTION VI - TOXICITY INFORMATION

Product Contains Chemicals Listed as Carcinogen or Potential Carcinogen By:

IARC--> No NTP--> No OSHA--> No ACGIH--> No OTHER--> No

VOC CONTENT: 14.8% BY WEIGHT; 135/1 G/L

VOC CONTENT (SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT):

32.6% BY WEIGHT; 297.1 G/L

D-LIMONENE

ORL-RAT LD50: 4400 MG/KG 3.

ORL-MUS LD50: 5600 MG/KG 3.

SKN-RBT LD50: > 5G/KG 3.

ORL-RBT TDLo: 1500 MG/KG/5D-I 3.

TETRADECENE

NO TOXICITY DATA AVAILABLE

TALL-OIL FATTY AMIDE, N,N-BIS(HYDROXYETHYL)

NO TOXICITY DATA AVAILABLE

SECTION VII - REACTIVITY DATA

Stability: X <=Stable <=Unstable

Conditions to Avoid:

AVOID HEAT, HOT SURFACES, SPARKS AND OPEN FLAMES.

Incompatibility (Materials to Avoid):

STRONG OXIDIZING AGENTS SUCH AS CHLORINE BLEACH AND CONCENTRATED HYDROGEN PEROXIDE; STRONG ACIDS. REACTS EXPLOSIVELY WITH IODINE PENTAFLUORIDE AND TETRAFLUOROETHYLENE; CLAYS, ALUMINUM CHLORIDE, HALOGENS, VINYL CHLORIDE, SOME PLASTICS AND RUBBER.

Hazardous Decomposition Products:

OXIDES OF CARBON AND NITROGEN.

Hazardous Polymerization:

<--May Occur X <--Will Not Occur

Conditions to Avoid:

N/A

SECTION VIII - SPILL OR LEAK PROCEDURES

Steps to be Taken if Material is Released or Spilled:

DUE TO THE NATURE OF THE AEROSOL PACKAGING, A LARGE SPILL IS UNLIKELY. FOR A SMALL SPILL, WEAR APPROPRIATE PROTECTIVE CLOTHING. VENTILATE THE AREA, ABSORB WITH AN INERT MATERIAL AND TRANSFER ALL MATERIAL INTO A PROPERLY LABELED CONTAINER FOR DISPOSAL. USE CARE AS SPILLS MAY BE SLIPPERY.

Waste Disposal Method(s):

DISPOSE OF IN ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL REGULATIONS. TYPICAL DISPOSAL IS TO WRAP THE EMPTY AEROSOL CONTAINER IN SEVERAL LAYERS OF NEWSPAPER AND DISPOSE OF IN THE TRASH. AEROSOL RECYCLING PROGRAMS ARE AVAILABLE IN MANY AREAS. DO NOT PUNCTURE OR INCINERATE THIS CONTAINER.

Neutralizing Agent:

WATER WILL EMULSIFY THE PRODUCT.

SECTION IX - SPECIAL PROTECTION INFORMATION

Required Ventilation:

LOCAL VENTILATION IS RECOMMENDED TO CONTROL EXPOSURE FROM OPERATIONS THAT CAN GENERATE EXCESSIVE LEVELS OF VAPORS OR MISTS. LOCAL VENTILATION IS PREFERRED, BECAUSE IT PREVENTS DISPERSION INTO WORK AREAS BY CONTROLLING IT AT ITS SOURCE.

Respiratory Protection:

NONE REQUIRED UNDER NORMAL CONDITIONS OF USE. A NIOSH/MSHA APPROVED RESPIRATOR IN POORLY VENTILATED AREAS OR WHERE MISTING EXISTS.

Glove Protection:

NEOPRENE OR NITRILE RUBBER GLOVES SHOULD BE WORN.

Eye Protection:

SAFETY GLASSES WITH SIDE SHIELDS IF THE METHOD OF APPLICATION PRESENTS THE LIKELIHOOD OF EYE CONTACT.

Other Protection:

WEAR GENERAL-DUTY WORK CLOTHES AND SHOES.

SECTION X - STORAGE AND HANDLING INFORMATION

Storage Temperature: Indoors--> X Outdoors--> Heated--> Refrigerated-->

Minimum Temperature: 40°F Maximum Temperature: 120°F

SECTION X - STORAGE AND HANDLING INFORMATION (Continued)

Precautions to be Taken in Handling and Storing:
KEEP AWAY FROM ALL SOURCES OF IGNITION. STORE IN A COOL, WELL-VENTILATED AREA.

Other Precautions:
KEEP OUT OF REACH OF CHILDREN. READ THE ENTIRE LABEL BEFORE USING THE PRODUCT. FOLLOW THE LABEL DIRECTIONS.

SECTION XI - REGULATORY INFORMATION

<u>Chemical Name</u>	<u>CAS Number</u>	<u>Upper % Limit</u>
None		

Those ingredients listed above are subject to the reporting requirements of 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR part 372.

Please call 1-800-527-9919 for additional information if you are a California customer.
This MSDS is not intended for users in the state of California.

SECTION XII - REFERENCES

1. THRESHOLD LIMIT VALUES FOR CHEMICAL SUBSTANCES AND PHYSICAL AGENTS AND BIOLOGICAL EXPOSURE INDICES, ACGIH, 2002.
 2. OSHA PEL.
 3. REGISTRY OF TOXIC EFFECTS OF CHEMICAL SUBSTANCES, CCINFODisc, 2002.
 4. VENDOR'S MSDS.
- ALL THE COMPONENTS OF THIS PRODUCT ARE IN COMPLIANCE WITH THE TOXIC SUBSTANCES CONTROL ACT (TSCA) AND ARE EITHER LISTED ON THE TSCA INVENTORY OR OTHERWISE EXEMPTED FROM LISTING.

IRR: IRRITANT, FLAM/FLAMM: FLAMMABLE, COMB: COMBUSTIBLE, CORR: CORROSIVE, CARC: CARCINOGENIC, TOX: TOXIC, N/A: NOT APPLICABLE, N/E: NOT ESTABLISHED,
COC: CLEVELAND OPEN CUP, PMCC: PENSKY-MARTIN CLOSED CUP, TCC: TAGLIABUE CLOSED CUP,
LEL: LOWER EXPLOSION LIMIT, UEL: UPPER EXPLOSION LIMIT, NFPA: NATIONAL FIRE PROTECTION ASSOCIATION, IARC: INTERNATIONAL AGENCY FOR THE RESEARCH ON
CANCER, NTP: NATIONAL TOXICOLOGY PROGRAM, OSHA: OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION, ACGIH: AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL
HYGIENISTS, TLV: THRESHOLD LIMIT VALUE, PEL: PERMISSIBLE EXPOSURE LIMIT, STEL: SHORT-TERM EXPOSURE LIMIT, MLD: MILD, MOD: MODERATE, SEV: SEVERE,
MUT: MUTAGENIC, ASPHYX: ASPHYXANT, PPOS: PARTICULATES (INSOLUBLE) NOT OTHERWISE SPECIFIED, SDT: STANDARD DRAIZE TEST, ORL: ORAL, IHL: INHALATION,
HMN: HUMAN

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