

MATERIAL SAFETY DATA SHEET SAF-SOL 20/20

DATE OF ISSUE: 08/18/1998
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SECTION I - GENERAL INFORMATION

Chemical Name & Synonyms: N/A Trade Name & Synonyms: SAF-SOL 20/20
Chemical Family: CHLORINATED HYDROCARBON BLEND Formula Mixture: X
Manufacturer's Name: CERTIFIED LABS, DIV. OF NCH CORP.
Address: BOX 152170
IRVING, TEXAS 75015
Prepared By: G ZIMMERMAN/CHEMIST
Product Code Number: 0688
Emergency Phone Number: 800-424-9300

SECTION II - HAZARDOUS INGREDIENTS

THE HAZARDS PRESENTED BELOW ARE THOSE OF THE INDIVIDUAL COMPONENTS:

Chemical Name (Ingredients): METHYLENE CHLORIDE
Hazard: CARC. 4
TLV: 50 PPM 1.
PEL: 25 PPM 2.
STEL: N/E
CAS#: 75-09-2

Chemical Name (Ingredients): PERCHLOROETHYLENE
Hazard: CARC. 4
TLV: 50 PPM 1.
PEL: 25 PPM 2.
STEL: N/E
CAS#: 127-18-4

Chemical Name (Ingredients): MEDIUM ALIPHATIC SOLVENT NAPHTHA
Hazard: IRRITANT
TLV: 5MG/M3 \$1.
PEL: 5MG/M3 \$2.
STEL: N/E
CAS#: 64742-88-7

Chemical Name (Ingredients): \$ DENOTES OIL MIST VALUE
Hazard:
TLV:
PEL:
STEL:
CAS#:

SECTION III - PHYSICAL DATA

Boiling Point (f): 154
Specific Gravity (H2O=1): 1.053
Vapor Pressure (MM HG): 116
Color: COLORLESS-LT YELLOW
Vapor Density (Air=1): 3.1
Odor: ETHER-LIKE
PH @ 100%: N/A
Clarity: TRANSPARENT
Volatile by Volume: 100
Evaporation Rate (BU A/C=1): 14
H2O Solubility: NEGLIGIBLE
Viscosity: NON-VISCOUS

SECTION IV - FIRE AND EXPLOSION HAZARD

Flash Point: >200 F / SETAFLASH
Flammable Limits: SOLVENT NAPHTHA LEL: 0.7% UEL:6%

Extinguishing Media:

Foam: X Alcohol Foam: CO2: X
Dry Chemical: X Water Spray: X 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:

PHOSGENE GAS AND OTHER TOXIC COMPOUNDS CAN BE GENERATED VIA THERMAL DEGRADATION. CONCENTRATED VAPORS CAN IGNITE BY INTENSE IGNITION SOURCE.

Aerosol Level (NFPA 30B): N/A

NFPA 704 Hazard Rating:

(0=Insignificant 1=Slight 2=Moderate 3=High 4=Extreme)

Health: 2 Flammability: 1 Instability: 0 Special:

SECTION V - HEALTH HAZARD DATA

Threshold Limit Value:

NOT ESTABLISHED FOR PRODUCT MIXTURE. SEE SECTION II.

Effects of Overexposure:

-Acute(Short Term Exposure)

INHALATION: INHALATION OF MIST MAY CAUSE IRRITATION TO THE RESPIRATORY TRACT. INHALATION OF CONCENTRATIONS OF LOW VAPOR MAY CAUSE DIZZINESS, HEADACHE AND LOSS OF CONCENTRATION. HIGH VAPOR CONCENTRATIONS MAY RESULT IN CENTRAL NERVOUS SYSTEM DEPRESSION (INTOXICATION), UNCOORDINATION, DRUNKENESS, NUMBNESS, TINGLING IN THE ARMS AND LEGS, RAPID HEART BEAT, UNCONCIOUSNESS, AND IN EXTREME CASES DEATH. SKIN

CONTACT: CAUSES IRRITATION SEEN AS ITCHING AND REDNESS. MAY BE SEVERELY IRRITATING IF CONFINED TO THE SKIN FOR A SIGNIFICANT LENGTH OF TIME. ABSORPTION IS POSSIBLE UPON PROLONGED CONTACT. PROLONGED OR REPEATED EXPOSURE MAY CAUSE DERMATITIS. INGESTION: INGESTION AND SUBSEQUENT VOMITING OF THIS PRODUCT CAN LEAD TO ASPIRATION OF THE PRODUCT INTO THE LUNGS WHICH CAN CAUSE DAMAGE AND MAY BE FATAL. IF ASPIRATED, MAY BE ABSORBED THROUGH THE LUNGS AND CAUSE INJURY TO OTHER BODY SYSTEMS. ALCOHOL MAY EXACERBATE THE EFFECTS OF OVEREXPOSURE. EYE CONTACT: CAUSES IRRITATION SEEN AS PAIN, TEARING AND REDNESS. LIQUID MAY CAUSE TRANSIENT CORNEAL INJURY.

-Chronic (Long Term Exposure)

MEDICAL CONDITIONS AGGRAVATED: PRE-EXISTING LIVER, KIDNEY AND LUNG DISEASES ANEMIA, CORONARY DISEASE, AND ALCOHOLISM. PRE-EXISTING RESPIRATORY AND SKIN CONDITIONS SUCH AS ASTHMA, EMPHYSEMA, AND DERMATITIS. TARGET ORGANS: LIVER, KIDNEY, HEART, CENTRAL NERVOUS SYSTEM. LONG-TERM SKIN CONTACT OR INHALATION EXPOSURE TO PERCHLOROETHYLENE OR METHYLENE CHLORIDE HAS CAUSED CANCER IN LABORATORY ANIMALS AND HAS BEEN DETERMINED TO BE A HUMAN CANCER RISK. REPEATED AND PROLONGED EXPOSURE MAY CAUSE ELEVATION OF THE CARBOXYHEMOGLOBIN LEVELS. OVER-EXPOSURE TO VAPORS MAY PRODUCE MYOCARDIAL INSTABILITY. TOXIC HAZARDS ARE INCREASED BY PRESENCE OF ALCOHOL, SMOKING, CARBON MONOXIDE AND HEAVY LABOR. THOSE WORKERS WITH A HISTORY OF CARDIOVASCULAR DISEASE, HEAVY DRINKERS AND HEAVY SMOKERS SHOULD AVOID EXPOSURE.

Primary Routes of Entry: Inhalation: X Ingestion: Absorption: X

Emergency and First Aid Procedures:

-Inhalation:

REMOVE FROM THE AREA TO FRESH AIR. IF NOT BREATHING, CLEAR THE AIRWAY AND START MOUTH TO MOUTH ARTIFICIAL RESPIRATION. GET IMMEDIATE MEDICAL ATTENTION.

-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 LARGE AMOUNTS OF SOAP AND WATER FOR 15 MINUTES. REMOVE CONTAMINATED CLOTHING AND SHOES. SEEK MEDICAL ATTENTION IF IRRITATION PERSISTS. WASH CLOTHING AND CLEAN SHOES BEFORE REUSE.

-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:

INGESTION AND SUBSEQUENT VOMITING OF THIS PRODUCT CAN LEAD TO ASPIRATION OF THE PRODUCT INTO THE LUNGS WHICH CAN CAUSE DAMAGE AND MAY BE FATAL.

SECTION VI - TOXICITY INFORMATION

Product Contains Chemicals Listed as Carcinogen or Potential Carcinogen By:

IARC: Yes

NTP: Yes

OSHA: No

ACGIH: Yes

PERCHLOROETHYLENE
 ORL-RAT LD50:2629 MG/KG 3.
 SKN-RBT 810MG/KG 24HR 3.
 -----CANCER STUDIES-----
 ORL-MUS 500 MG/KG D 3.
 ORL-RAT LD50:8100 MG/KG 5.
 IHL-HMN TCLO:96 PPM/7H:SYS 5.
 IHL-MAN TCLO:280 PPM/2H:EYE 5.
 -----TERATOGENESIS-----
 IHL-RAT 300 PPM/7H/D 3.
 METHYLENE CHLORIDE
 ORL-RAT LD50: 1600 MG/KG 3.
 IHL-GPG LCLO: 500 PPM 2 HR 3.
 SKN-RBT 810 MG/24H SEV 3.
 EYE-RBT 162 MG/MOD 3.
 -----CANCER STUDIES-----
 IHL-RAT 500 MG/KG LIFETIME 3.
 A PROPORTIONATE MORTALITY STUDY SHOWED NO INCREASE IN DEATH FROM
 MALIGNANT
 NEOPLASMS AMONG WORKERS EXPOSED FOR UP TO 30 YEARS TO MEAN
 CONCENTRATIONS
 OF 33 PPM - 118.8 PPM WHEN COMPARED TO CONTROL POPULATIONS 5.
 INHALATION STUDIES AT CONCENTRATIONS OF 2000 PPM AND 4000 PPM INCREASED
 THE
 INCIDENCE OF BENIGN LIVER AND LUNG TUMORS IN MICE. THREE INHALATION
 STUDIES
 OF RATS HAVE SHOWN INCREASED INCIDENCE AT 500 PPM AND ABOVE, AND THE
 SAME
 IN MALES AT CONCENTRATIONS OF 1500 PPM AND ABOVE 6.

SECTION VII - REACTIVITY DATA

Stability: Stable: E Unstable:

Conditions to Avoid: AVOID HEAT, HOT SURFACES, SPARKS AND OPEN FLAMES.

Incompatibility (Materials to Avoid):

OXIDIZING AGENTS, ACIDS AND BASES, SODIUM, POTASSIUM, LITHIUM, BARIUM, SODIUM, POTASSIUM AND REDUCING AGENTS.

Hazardous Decomposition Products:

OXIDES OF CARBON AND NITROGEN; HYDROGEN CHLORIDE, PHOSGENE GAS, AND CHLORINE GAS.

Hazardous Polymerization:

May Occur: Will Not Occur: X

Conditions to Avoid: N/A

SECTION VIII - SPILL OR LEAK PROCEDURES

Steps to be Taken if Material is Released or Spilled:

ELIMINATE ALL SOURCES OF IGNITION. DIKE AND CONTAIN SPILL IF SAFE TO DO SO. USE ONLY NON-SPARKING EQUIPMENT. ABSORB WITH AN INERT MATERIAL AND

TRANSFER INTO A PROPERLY LABELED CONTAINER FOR DISPOSAL. WEAR APPROPRIATE PROTECTIVE CLOTHING.

Waste Disposal Method(s):

DISPOSE OF IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL REGULATIONS.

Neutralizing Agent:

NONE KNOWN.

SECTION IX - SPECIAL PROTECTION INFORMATION

Required Ventilation:

LOCAL VENTILATION IS RECOMMENDED TO CONTROL EXPOSURE FROM OPERATIONS THAT CAN GENERATE MISTS OR VAPORS.

Respiratory Protection:

A NIOSH/MSHA APPROVED RESPIRATOR IN POORLY VENTILATED AREAS WHERE THE TLV OR PEL IS EXCEEDED OR IF THE OPERATION PRODUCES MISTS.

Glove Protection:

NEOPRENE RUBBER OR VITON GLOVES SHOULD BE WORN.

Eye Protection:

CHEMICAL GOGGLES AND A FACE SHIELD SHOULD BE WORN.

Other Protection:

WEAR PROTECTIVE CLOTHING WHEN HANDLING.

SECTION X - STORAGE AND HANDLING INFORMATION

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

Minimum Temperature: 35 F Maximum Temperature: 120 F

Precautions to be taken in Handling and Storing:

ALWAYS STORE MATERIAL IN ITS ORIGINAL CONTAINER. KEEP CONTAINER TIGHTLY CLOSED WHEN NOT IN USE. DO NOT PRESSURIZE, CUT, WELD, SOLDER, DRILL, GRIND OR EXPOSE EMPTY CONTAINERS TO HEAT, HOT SURFACES, SPARKS OR OPEN FLAMES.

Other Precautions:

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

SECTION XI - REGULATORY INFORMATION

Chemical Name	CAS Number	Upper % Limit	
METHYLENE CHLORIDE	75-09-2		20
PERCHLOROETHYLENE	127-18-4		35

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

SECTION XII - REFERENCES

1. THRESHOLD LIMIT VALUES FOR CHEMICAL SUBSTANCES AND PHYSICAL AGENTS AND BIOLOGICAL EXPOSURE INDICES, ACGIH, 1997. 2. OSHA PEL.
3. SAX'S DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS, EIGHTH EDITION, RICHARD J. LEWIS, SR. 4. IARC.
5. REGISTRY OF TOXIC EFFECTS OF CHEMICAL SUBSTANCES, MICROMEDEX, 1995.
6. PROCTOR ET.AL. 1988.

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, ACHGIH:AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL
HYGIENISTS, TLV:THRESHOLD LIMIT VALUE, PEL:PERMISSIBLE EXPOSURE LEVEL,
STEL:SHORT-TERM EXPOSURE LIMIT, MLD:MILD, MOD:MODERATE, SEV:SEVERE,
MUT:MUTAGENIC, ASPHYX:ASPHYXIAN

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