Appendix A
Material Safety Data Sheets (MSDSs) for Certain Coatings and Inks

MSDSs for Hydro-Aire Primer and Topcoat

MATERIAL SAFETY DATA SHEET

SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME : MIL-P-7962D YELLOW
IDENTIFICATION NUMBER: PT-562 DATE PRINTED: 08/02/01
PRODUCT USE/CLASS : YELLOW CHROMATE PRIMER

SUPPLIER:
PRODUCTS/TECHNIQUES, INC.
3271 S. RIVERSIDE AVE.
RIALTO, CA. 92376
P.O. BOX 760
BLOOMINGTON, CA. 92316
1-909-877-3951 8 am-4:30 pm

AFTER HOURS EMERGENCY PHONE:
1-800-424-9300 CHEMTREC

MANUFACTURER:
PRODUCTS/TECHNIQUES, INC.
3271 S. RIVERSIDE AVE.
RIALTO, CA. 92376
P.O. BOX 760
BLOOMINGTON, CA. 92316
1-909-877-3951 8 am-4:30 pm

AFTER HOURS EMERGENCY PHONE:
1-800-424-9300 CHEMTREC

PREPARER: B.BODEN, PHONE: 909 877-3951, PREPARE DATE: 03/30/99

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

ITEM	CHEMICAL NAME	CAS NUMBER	WT/WT % EQUAL TO
01	ALKYD RESIN	PROPRIETARY	18.3 %
02	MAGNESIUM SILICATE HYDRATE	14807-96-6	11.6 %
03	ZINC CHROMATE PIGMENT (SEE SEC. 3)	11103-86-9	11.4 %
04	TOLUENE	108-88-3	11.4 %
05	METHYL ISOBUTYL KETONE M.I.B.K.	108-10-1	7.0 %
06	ALIPHATIC PETROLEUM DISTILLATES	64742-89-8	6.7 %
07	XYLENE	1330-20-7	5.9 %
08	CELLULOSE NITRATE	9004-70-0	5.7 %
09	N-BUTYL ALCOHOL	71-36-3	5.6 %
10	ETHYL ACETATE	141-78-6	5.6 %
11	ISOPROPANOL I.P.A.	67-63-0	5.6 %
12	ISOBUTANOL SOLVENT	78-83-1	4.6 %
13	GRINDING ADDITIVE	PROPRIETARY	0.2 %
14	PAINT ADDITIVE	NON HAZARDOUS	0.2 %
15	METHYL ETHYL KETOXIME	96-29-7	0.2 %

	EXPOSURE LIMITS					
	ACGIH		OSHA		VAPOR PRES	MOLE
ITEM	TLV-TWA	TLV-STEL	PEL-TWA	PEL-CEILING	mmHg @ 20C	WT.
01	N/A	N/A	N/A	N/A	N.E.	N.E.
02	2 mg/m3	N/AV	2 mg/m3	N/AV	N.E.	N.E.
03	0.05 mg/m3	N/AV	0.10 mg/m3	N/A	N.E.	N.E.
04	50 PPM SKIN	150 PPM SKIN	100 PPM	150 PPM	24	92

(Continued on Page 2)

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

	EXPOSURE LIMITS					
	ACGIH		OSHA		COMPANY	
ITEM	TLV-TWA	TLV-STEL	PEL-TWA	PEL-CEILING	TLV-TWA	SKIN
05	50 PPM	75 PPM	50 PPM	N/AV	15	100
06	300 PPM	400 PPM	300 PPM	N/AV	10.2	120
07	100 PPM	150 PPM	100 PPM	200 (10 MIN)	6.6	106
08	N.E.	N.E.	N.E.	N.E.	N.E.	N.E.
09	50 PPM SKIN	N/AV	50 PPM SKIN	50 PPM	4.4	74
10	400 PPM	N/AV	400 PPM	N/AV	76	88
11	400 PPM	500 PPM	400 PPM	800 PPM	37	58
12	50 PPM	N/AV	50 PPM	N/AV	8.8	74
13	N.E.	N.E.	N.E.	N.E.	N.E.	N.E.
14	N/A	N/A	N/A	N/A	N.E.	N.E
15	N.E.	N.E.	N.E.	N.E.	N.E.	N.E.

(See Section 16 for abbreviation legend)

SECTION 3 - HAZARDS IDENTIFICATION

*** EMERGENCY OVERVIEW ***: NOTICE: 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.

NOTICE: THIS PRODUCT IS SOLD TO YOU AS THE SOLE USER. THIS PRODUCT IS SOLD AS AN "INDUSTRIAL PRODUCT ONLY". THIS PRODUCT IS NOT INTENDED NOR IS IT CLASSIFIED AS A CONSUMER PRODUCT. THIS PRODUCT IS NOT TO BE USED BY THE GENERAL PUBLIC.

NOTE: ALL PERCENT BY WEIGHTS AND VOC'S ARE APPROXIMATE AND MAY VARY SLIGHTLY FROM BATCH TO BATCH, AND DUE TO SOLVENT EVAPORATION, AFTER EACH USE. THE VOC'S ARE "AS PACKAGED MATERIAL".

IF THIS PRODUCT IS IN AN AEROSOL CAN, THE PERCENT OF VOC BY WEIGHT, AS DEFINED BY THE CALIF. AIR RESOURCES BOARD, IS LISTED BELOW. IF THE PRODUCT IS IN A BULK CONTAINER, THE VOC's IN GRAMS PER LITTER OR LBS PER GALLON ARE LISTED IN SECTION 16.

PERCENT VOC BY WEIGHT:_____

CATEGORIES FOR AEROSOL PAINTS ONLY:
PIGMENTED PAINTS--- EXACT MATCH FINISHES, INDUSTRIAL
UNPIGMENTED PAINTS-- CLEAR COATINGS

ZINC CHROMATE PIGMENT FROM SEC. 2:

The Zinc Chromate pigment herein is 24% Chromium (CAS# 7440-47-3).

EFFECTS OF OVEREXPOSURE - EYE CONTACT: Direct contact with the liquid or exposure to vapors or mist may cause stinging, tearing, redness, swelling and eye damage.

(Continued on Page 3)

SECTION 3 - HAZARDS IDENTIFICATION

EFFECTS OF OVEREXPOSURE - SKIN CONTACT: May cause skin sensitization, an allergic reaction, which becomes evident on reexposure to this material. Prolonged or repeated contact can result in defatting and drying of the skin which may result in skin irritation and dermatitis (rash).

EFFECTS OF OVEREXPOSURE - INHALATION: Headaches, dizziness, nausea, decreased blood pressure, changes in heart rate and cyanosis may result from over-exposure to vapor or skin exposure.

EFFECTS OF OVEREXPOSURE - INGESTION: This material may be harmful or fatal if swallowed.

EFFECTS OF OVEREXPOSURE - CHRONIC HAZARDS: No Information.

PRIMARY ROUTE(S) OF ENTRY: SKIN CONTACT SKIN ABSORPTION INHALATION INGESTION EYE CONTACT

SECTION 4 - FIRST AID MEASURES

FIRST AID - EYE CONTACT: Immediately move victim away from exposure and into fresh air. If irritation or redness develops, flush eyes with clean water and seek immediate medical attention. For direct contact, immediately hold eyelids apart and flush affected eye(s) with clean water for at least 20 minutes. Seek immediate medical attention.

FIRST AID - SKIN CONTACT: Wash with soap and water. Get medical attention if irritation develops or persists. Remove contaminated clothing. Wash skin with soap and water. Get medical attention.

FIRST AID - INHALATION: Rescuers should put on appropriate protective gear. Remove from area of exposure. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Keep victim warm. Get immediate medical attention.

FIRST AID - INGESTION: HAVE M.S.D.S. HAZARDOUS INGREDIENT SECTION (SECT. 2) READILY AVAILABLE FOR EMERGENCY PERSONNEL OR DOCTOR. Get medical attention immediately.

SECTION 5 - FIRE FIGHTING MEASURES

FLASH POINT: 24 F - ETHYL ACETATE
(TAGLIABUE CLOSED CUP)
LOWER EXPLOSIVE LIMIT: 0.9 % UPPER EXPLOSIVE LIMIT: 12.0 %

AUTOIGNITION TEMPERATURE: N/E

EXTINGUISHING MEDIA: ALCOHOL FOAM CO2 DRY CHEMICAL FOAM WATER FOG

UNUSUAL FIRE AND EXPLOSION HAZARDS: Vapors can travel to a source of ignition and flash back. Flammable Liquid. Can release vapors that form

(Continued on Page 4)

SECTION 5 - FIRE FIGHTING MEASURES

:plosive mixtures at temperatures at or above the flashpoint. "Empty" ontainers retain product residue (liquid and/or vapor) and can be dangerous. DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION; THEY MAY EXPLODE AND CAUSE INJURY OR DEATH. Empty drums should be completely drained, properly bunged and promptly returned to a drum reconditioner, or properly disposed of.

SPECIAL FIREFIGHTING PROCEDURES: Containers can build up pressure if exposed to heat (fire). As in any fire, wear self-contained breathing apparatus pressure-demand (MSHA/NIOSH approved or equivalent) and full protective gear. Water runoff can cause environmental damage. Dike and collect water used to fight fire.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Absorb spill with inert material (e.g. dry sand or earth), then place in a chemical waste container. Avoid runoff into storm sewers and ditches which lead to waterways.

SECTION 7 - HANDLING AND STORAGE

"ANDLING: Wash thoroughly after handling.

.ORAGE: Keep away from heat, sparks and flame. Keep container closed when not in use. Store in a cool dry area at a temperature between 50 and 95 degrees F. Do not store outside in direct sunlight.

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Good general ventilation should be sufficient to control airborne levels. Local exhaust ventilation may be necessary to control any air contaminants to within their TLVs during the use of this product. Use explosion-proof ventilation equipment. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

RESPIRATORY PROTECTION:
All individual company safety policies should be reviewed. If a company determines that threshold limit values and air quality contaminant levels have not been exceeded, then that company should set it's own policies regarding the use of respirators. Always follow all local, state, and federal laws and regulations regarding the use of respirators. A NIOSH/MSHA approved air purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure

(Continued on Page 5)

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

ir supplied respirator if there is any potential for an uncontrolled elease, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection. A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. Wear a MSHA/NIOSH approved (or equivalent) full-facepiece airline respirator in the positive pressure mode with emergency escape provisions.

SKIN PROTECTION: Where contact is likely, wear chemical resistant gloves, such as neoprene or solvent resistant nitrile. To prevent repeated or prolonged skin contact, wear impervious clothing such as a chemical suit, rubber boots, and/or chemical safety goggles plus a face shield if such should be necessary. If the equipment to be worn is not available or the type of equipment for a specific job is not known, consult a reputable safety equipment supply company. Use chemical splash goggles and face shield (ANSI Z87.1 or approved equivalent).

EYE PROTECTION: Wear safety glasses with side shields (or goggles) and a face shield.

OTHER PROTECTIVE EQUIPMENT: Where splashing is possible, full chemically resistant protective clothing (e.g. acid suit) and boots are required.

HYGIENIC PRACTICES: Wash hands before eating. Remove contaminated clothing and wash before reuse. Use only in a well ventilated area. Follow all MSDS/label precautions even after container is emptied because hey may retain product residues. Ground and bond containers when ansferring material. Use spark-proof tools and explosion proof quipment. Avoid prolonged or repeated contact with skin. Avoid breathing vapors from heated material. Avoid contact with eyes, skin, and clothing.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

BOILING RANGE	: 168 - 300 F	VAPOR DENSITY	: Is heavier than air
ODOR	: SOLVENT LIKE	ODOR THRESHOLD	: N/E
APPEARANCE	: YELLOW LIQUID	EVAPORATION RATE	: Is slower than Butyl Acetate
SOLUBILITY IN H2O	: NONE		
FREEZE POINT	: N/E	SPECIFIC GRAVITY	: 1.1105
VAPOR PRESSURE	: N/E	pH @ 0.0 %	: N/E
PHYSICAL STATE	: LIQUID	VISCOSITY	:

COEFFICIENT OF WATER/OIL DISTRIBUTION: N/E

(See Section 16 for abbreviation legend)

SECTION 10 - STABILITY AND REACTIVITY

CONDITIONS TO AVOID: Avoid all possible sources of ignition.

INCOMPATIBILITY: (Materials to avoid):
strong acids and bases, oxidizers, and selected amines.

(Continued on Page 6)

SECTION 10 - STABILITY AND REACTIVITY

HAZARDOUS DECOMPOSITION PRODUCTS: CO and CO2. Other unknown hazardous products are possible.

HAZARDOUS POLYMERIZATION: Will not occur under normal conditions.

STABILITY: This product is stable under normal storage conditions.

SECTION 11 - TOXICOLOGICAL PROPERTIES

No product or component toxicological information is available.

SECTION 12 - ECOLOGICAL INFORMATION

ECOLOGICAL INFORMATION: No Information.

SECTION 13 - DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: Dispose of in accordance with all local, state, and federal regulations.

SECTION 14 - TRANSPORTATION INFORMATION

DOT PROPER SHIPPING NAME: PAINT

DOT TECHNICAL NAME: N/A

DOT HAZARD CLASS: 3, FLAMMABLE LIQUID HAZARD SUBCLASS: N/A

DOT UN/NA NUMBER: UN 1263 PACKING GROUP: II RESP. GUIDE PAGE: 127

SECTION 15 - REGULATORY INFORMATION

THE FOLLOWING COMPONENTS ARE NOT SUBJECT TO REPORTING IN SECTION 2:

---------- CHEMICAL NAME ---------- CAS NUMBER WT/WT %
No non-hazardous components exist

U.S. FEDERAL REGULATIONS: AS FOLLOWS -

OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200)

(Continued on Page 7)

SECTION 15 - REGULATORY INFORMATION

ERCLA - SARA HAZARD CATEGORY:
his product has been reviewed according to the EPA 'Hazard Categories' promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

IMMEDIATE HEALTH HAZARD CHRONIC HEALTH HAZARD FIRE HAZARD

SARA SECTION 313:
This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:

---------- CHEMICAL NAME ----------	CAS NUMBER	WT/WT %
ZINC CHROMATE PIGMENT (SEE SEC. 3)	11103-86-9	11.4 %
TOLUENE	108-88-3	11.4 %
METHYL ISOBUTYL KETONE M.I.B.K.	108-10-1	7.9 %
ALIPHATIC PETROLEUM DISTILLATES	64742-89-8	6.7 %
XYLENE	1330-20-7	5.9 %
N-BUTYL ALCOHOL	71-36-3	5.6 %
ISOPROPANOL I.P.A.	67-63-0	5.6 %

TOXIC SUBSTANCES CONTROL ACT:
The chemical substances in this product are on the TSCA Section 8 Inventory.

This product contains the following chemical substances subject to the reporting requirements of TSCA 12(B) if exported from the United States:

---------- CHEMICAL NAME ---------- CAS NUMBER
No information is available.

U.S. STATE REGULATIONS: AS FOLLOWS -

NEW JERSEY RIGHT-TO-KNOW:
The following materials are non-hazardous, but are among the top five components in this product:

---------- CHEMICAL NAME ---------- CAS NUMBER
No non-hazardous materials are among the top five ingredients.

PENNSYLVANIA RIGHT-TO-KNOW:
The following non-hazardous ingredients are present in the product at greater than 3%:

---------- CHEMICAL NAME ---------- CAS NUMBER
No non-hazardous ingredients are present at greater than 3%.

(Continued on Page 8)

SECTION 15 - REGULATORY INFORMATION

\LIFORNIA PROPOSITION 65:
ARNING: The chemicals noted below and contained in this product, are known to the state of California to cause cancer and birth defects or other reproductive harm:

---------- CHEMICAL NAME ----------	CAS NUMBER
ZINC CHROMATE PIGMENT (SEE SEC. 3)	11103-86-9
TOLUENE	108-88-3

INTERNATIONAL REGULATIONS: AS FOLLOWS -

CANADIAN WHMIS: This MSDS has been prepared in compliance with Controlled Product Regulations except for use of the 16 headings.

CANADIAN WHMIS CLASS: No information available.

SECTION 16 - OTHER INFORMATION

HMIS RATINGS - HEALTH: 2 FLAMMABILITY: 3 REACTIVITY: 0

PREVIOUS MSDS REVISION DATE: 01/25/99

REASON FOR REVISION: NEW COMPUTER SYSTEM

VOLATILE ORGANIC COMPOUNDS (VOCS): 4.86 lbs/gal, 583 grams/ltr

:GEND: N.A. - Not Applicable, N.E. - Not Established,
N.D. - Not Determined

To comply with the requirements of the safe drinking water and toxic enforcement act of 1986 (Proposition 65) we are required to **WARN YOU** that this material is known to the State of California to cause cancer, birth defects or other reproductive harm. Safe handling is absolutely mandatory. Please review safe handling procedures with your supervisor before working with this material.

The information in this document is believed to be correct as of the date printed. HOWEVER, NO WARRANTY OF MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR ANY OTHER WARRANTY IS EXPRESSED OR IS TO BE IMPLIED REGARDING THE ACCURACY OR COMPLETENESS OF THIS INFORMATION, THE RESULTS TO BE OBTAINED FROM THE USE OF THIS INFORMATION OR THE PRODUCT, THE SAFETY OF THIS PRODUCT, OR THE HAZARDS RELATED TO ITS USE. This information and product are furnished on the condition that the person receiving them shall make his own determination as to the suitability of the product for his particular purpose and on the condition that he assumes the risk of his use thereof.

'ND OF MSDS>

MATERIAL SAFETY DATA SHEET

Printed : 09/16/01

For Coatings, Resins and Related Materials

Revised : 05/30/00

SECTION I - PRODUCT IDENTIFICATION

Manufacturer: DEFT, INC. (CAGE CODE 33461)
17451 VON KARMAN AVENUE
IRVINE CA
92614

Information Phone: (949) 474-0400
Emergency Phone: (800) 424-9300
CHEMTREC Phone: 800-424-9300

Product Class: TYPE I, POLYURETHANE
Trade Name : MIL-PRF-85285C,36231,TY I
Product Code : 03W3332;36231
C.A.S. Number: NONE

Hazard Ratings: Health - 3
none -> extreme Fire - 3
0 ---> 4 Reactivity - 1

SECTION II - HAZARDOUS INGREDIENTS

Ingredient	CAS #	Weight %	Exposure Limits ACGIH TLV	ACGIH STEL	OSHA PEL	OSHA STEL	VP mm HG
n-BUTYL ACETATE	123-86-4	5.	150 ppm	200 ppm	150 ppm	200 ppm	15 @ 68F
ETHYL 3-ETHOXYPROPIONATE	763-69-9	5.	N.E.	N.E.	N.E.	N.E.	.7 @ 68F
	Manufacturer recommends a workplace exposure limit of 50 PPM-TWA; 100 PPM-STEL.						
XYLENE	1330-20-7	< 1.	100 ppm	150 ppm	100 ppm	150 ppm	5.1 @ 68F
ETHYL BENZENE	100-41-4	< 1.	100 ppm	125 ppm	100 ppm	125 ppm	7.1 @ 68F
	IARC has determined that ethylbenzene is possibly carcinogenic to humans.						
ANTI FLOAT AGENT	1317-65-3	< 1.	10 mg/M3	N.E.	10 mg/M3	N.E.	
METHYL n-AMYL KETONE	110-43-0	20.	50 ppm	N.E.	100 ppm	N.E.	2.1 @ 68F
ANTI MAR AGENT	9038-95-3	< 0.1	N.E.	N.E.	N.E.	N.E.	
ANTI MAR AGENT	TRADE SECRET	< 0.1	N.E.	N.E.	N.E.	N.E.	
	New Jersey TSRN is 800963-3533						
FLOW AGENT	26376-86-3	< 1.	N.E.	N.E.	N.E.	N.E.	
DIBUTYLTIN DILAURATE	77-58-7	< 0.1	N.E.	N.E.	.1 mg/M3	.3 mg/M3	.2 @320F
	Causes skin and eye irritation. Harmful if swallowed or absorbed through skin. May cause liver and kidney damage.						
2-4 PENTANEDIONE	123-54-6	< 5.	N.E.	N.E.	N.E.	N.E.	6.9 @ 68F
	Union Carbide recommends a TLV of 20 ppm-TWA.						
BUTYL CARBITOL ACETATE	124-17-4	< 5.	N.E.	N.E.	N.E.	N.E.	0 @ 68F

THE ABOVE LISTED INGREDIENTS ARE ON THE TSCA INVENTORY LIST.ALSO ANY UNLISTED INGREDIENTS.

N.E. = Not Established

SECTION III - PHYSICAL DATA

Boiling Range: 260 - 475 Deg. F
Evap. Rate: 0.4 x n-Butyl Acetate
Volatiles vol % 53.6 Wgt% 37.4

Vapor Density: Heavier than Air.
Liquid Density: Heavier than Water.
Wgt per gallon: 10.28 Pounds.
Spec. Gravity: 1.23409

Appearance: GRAY LIQUID WITH SOLVENT ODOR
V.O.C.: 461.92/L
SOLUBILITY IN WATER: Insoluble PH: Not applicable
AUTOIGNITION TEMPERATURE: No information found
DECOMPOSITION TEMPERATURE: No information found
CORROSION RATE: No information found
VISCOSITY: This liquid to heavy viscous material

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Flammability Class: IB Flash Point:67 F TCC LEL: 0.968 UEL: 11.80%

-EXTINGUISHING MEDIA:
FOAM, ALCOHOL FOAM, CO2, DRY CHEMICAL, WATER FOG, WATER SPRAY
-SPECIAL FIREFIGHTING PROCEDURES:
Full fire fighting equipment with self-contained breathing apparatus and full protective clothing should be worn by fire fighters. Water may be used to cool closed containers to prevent pressure build-up, auto ignition or explosion.
-UNUSUAL FIRE & EXPLOSION HAZARDS:
Keep containers tightly closed. Isolate from heat, sparks, electrical equipment and open flame. Closed containers may explode when exposed to extreme heat. Application to hot surfaces requires special precautions. During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent.

SECTION V - HEALTH HAZARD DATA

-PERMISSIBLE EXPOSURE LEVEL:
SEE SECTION II, HAZARDOUS INGREDIENTS.
-EFFECTS OF OVEREXPOSURE:
INHALATION: Irritation of the respiratory tract & acute nervous system depression characterized by the following progressive steps: headache, dizziness, staggering gait, confusion, unconsciousness or coma.

SKIN AND EYE CONTACT: SKIN: Contact with the skin can cau irri'ation. Symptoms may be swelling, redness, and rash. EYES: Liquid, aerosols, or vapors are irritating and may cause tearing, redness, and swelling accompanied by a stinging sensation.

SKIN ABSORPTION: Prolonged or repeated contact can cause moderate irritation, drying, and defatting of the skin which can cause the skin to crack.

INGESTION: Acute: Can result in irritation and possible corrosive action in the mouth, stomach tissue and digestive tract. Vomiting may cause aspiration of the solvent, resulting in chemical pneumonitis.

HEALTH HAZARDS (ACUTE AND CHRONIC)
ACUTE: Vapors are irritating to eyes, nose, and throat. Inhalation may cause headaches, difficult breathing and loss of consciousness.
CHRONIC: Prolonged contact will cause drying and cracking of the skin, due to defatting action. Skin sensitization, asthma or other allergic responses may develop.

PRIMARY ROUTE(S) OF ENTRY:
TOPICAL (SKIN CONTACT): Yes
INGESTION (GASTRO-INTESTINAL): No
INHALATION (LUNGS): Yes

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

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:
Asthma and any other respiratory disorders. Skin allergies, eczema, and dermititis.
-FIRST AID:
INHALATION: Move to an area free from risk of further exposure Restore breathing. Asthmatic type symptoms may develop and may be immediate or delayed by several hours. Obtain medical attention.

SKIN: Remove contaminated clothing. Wash affected areas thoroughly with soap and water. Wash contaminated clothing thoroughly before reuse.

EYES: Flush with clean lukewarm water (low pressure) for at least 15 minutes, occasionally lifting eyelids. Obtain medical attention.

INGESTION: Do not induce vomiting. Do not give anything to an unconscious person. Obtain medical attention.

SECTION VI - REACTIVITY DATA

STABILITY: [ ] Unstable [x] Stable
HAZARDOUS POLYMERIZATION: [ ] May occur [x] Will not occur
-INCOMPATIBILITY
STRONG OXIDIZING AGENTS.
-CONDITIONS TO AVOID:
HIGH TEMPERATURES, SPARKS, OR OPEN FLAMES.
-HAZARDOUS DECOMPOSITION PRODUCTS:
BY HIGH HEAT/TEMPERATURE: Carbon monoxide, carbon dioxide, and oxides of nitrogen.

SECTION VII - SPILL OR LEAK PROCEDURES

-STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED
Evacuate all non-essential personnel. Remove all sources of ignition (flame, spark sources, hot surfaces). Ventilate area Contain and remove with inert absorbent and non-sparking tools
-WASTE DISPOSAL METHOD:
Waste must be disposed of in accordance with federal, state, and local environmental control regulations. Empty containers must be handled with care, due to product residue and flammable vapor DO NOT incinerate closed containers.
ALSO SEE SECTION IV, V, VI, FOR OTHER PRECAUTIONS.
EPA HAZARDOUS WASTE NUMBER/CODE: D001, F003, F005
HAZARDOUS WASTE CHARACTERISTICS:
IGNITABILITY YES
CORROSIVITY NO
REACTIVITY YES

SECTION VIII - SPECIAL PROTECTION INFORMATION:

-RESPIRATORY PROTECTION:
A respirator that is recommended or approved for use in an organic vapor environment (air purifying or fresh air supplied) is necessary. Observe OSHA regulations for respirator use. Ventilation should be provided to keep exposure levels below the OSHA permissible limits.
If TLV limits can be maintained and documented below the OSHA/ACGIH limits, an air supplied respirator may not be requi
(continued on next page)

MATERIAL SAFETY DATA SHEET

Printed : 08/16/01

For Coatings, Resins and Related Materials

Revised : 07/01/99

SECTION I - PRODUCT IDENTIFICATION

Manufacturer: DEFT, INC. (CAGE CODE 33461)
17451 VON KARMAN AVENUE
IRVINE CA
92614

Information Phone: (949) 474-0400
Emergency Phone: (800) 424-9300
CHEMTREC Phone: 800-424-9300

Product Class: TYPE 3, ALIPHATIC ISOCYANATE
Trade Name : CAT,MIL-PRF-85285C,36231,TY 1
Product Code : 03GY332CAT36231
C.A.S. Number: NONE

Hazard Ratings: Health - 4
none -> extreme Fire - 3
0 ---> 4 Reactivity - 1

SECTION II - HAZARDOUS INGREDIENTS

Ingredients	CAS #	Weight %	ACGIH TLV	ACGIH STEL	OSHA PEL	OSHA STEL	VP mm HG
POLYMERIC HEXAMETHYLENE DIISOCYANAT E	28182-81-2	35.	N.E.	N.E.	N.E.	N.E.	
	822-06-0	HEXAMETHYLENE DIISOCYANATE (HDI) CAS NO. 822-06-0, free monomer content averages 0.10% based on resin solids at the time of manufacture. However, after 12 months storage, the free monomer content may rise to a maximum of 0.14%. The ACGIH has a TLV of 0.005 ppm TWA.					
POLYMERIC HEXAMETHYLENE DIISOCYANAT E	28182-81-2	40.	N.E.	N.E.	N.E.	N.E.	
	822-06-0	HEXAMETHYLENE DIISOCYANATE (HDI) CAS NO. 822-06-0, free monomer content average 0.10% based on resin solids at the time of manufacture. However, after 12 months storage, the free monomer content may rise to a maximum of 0.14% The ACGIH has a TLV of 0.005ppm TWA.					
AROMATIC HYDROCARBON	64742-95-6	< 1.	N.E.	N.E.	N.E.	N.E.	3 @ 68F
XYLENE	1330-20-7	< 0.1	100 ppm	150 ppm	100 ppm	150 ppm	5.1 @ 68F
1,2,4 TRIMETHYLBENZENE	95-63-6	< 1.	100 ppm	150 ppm	100 ppm	N.E.	
CUMENE	98-82-8	< 0.1	50 ppm	N.E.	50 ppm	N.E.	
1,3,5 TRIMETHYLBENZENE	108-67-8	< 1.	N.E.	N.E.	N.E.	N.E.	
DIETHYLBENZENE	25340-17-4	< 1.	N.E.	N.E.	N.E.	N.E.	
ETHYL BENZENE	100-41-4	< 0.1	100 ppm	125 ppm	100 ppm	125 ppm	7.1 @ 68F
		IARC has determined that ethylbenzene is possibly carcinogenic to humans.					
n-BUTYL ACETATE	123-86-4	< 3.	150 ppm	200 ppm	150 ppm	200 ppm	13 @ 68F
ETHYL 3-ETHOXYPROPIONATE	763-69-9	20.	N.E.	N.E.	N.E.	N.E.	.7 @ 68F
		Manufacturer recommends a workplace exposure limit of 20 PPM-TWA; 100 PPM-STEL.					

THE ABOVE LISTED INGREDIENTS ARE ON THE TSCA INVENTORY LIST, ALSO ANY UNLISTED INGREDIENTS.

N.E. = Not Established

SECTION III - PHYSICAL DATA

Boiling Range: 260 - 428 Deg. F
Evap. Rate: 0.16 x n-Butyl Acetate
Volatiles vol % 30.1 Wgt% 26.0

Vapor Density: Heavier than Air.
Liquid Density: Heavier than Water.
Wgt per gallon: 9.01 Pounds.
Spec. Gravity: 1.08163

Appearance: AMBER LIQUID WITH SOLVENT ODOR
V.O.C.: 281 G/L
SOLUBILITY IN WATER: Insoluable PH: Not applicable
AUTOIGNITION TEMPERATURE: No information found
DECOMPOSITION TEMPERATURE: No information found
CORROSION RATE: No information found
VISCOSITY: This liquid to heavy viscous material

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Flammability Class: IB Flash Point:67 F TCC LEL: 0.90% UEL: 7.60%

-EXTINGUISHING MEDIA:
FOAM, ALCOHOL FOAM, CO2, DRY CHEMICAL, WATER FOG, WATER SPRAY

-SPECIAL FIREFIGHTING PROCEDURES:
Full fire fighting equipment with self-contained breathing apparatus and full protective clothing should be worn by fire fighters. Water may be used to cool closed containers to prevent pressure build-up, auto ignition or explosion. During a fire NDI vapors and other irritating vapors may be generated by combustion or thermal decomposition.

-UNUSUAL FIRE & EXPLOSION HAZARDS:
Keep containers tightly closed. Isolate from heat, sparks, electrical equipment and open flame. Closed containers may explode when exposed to extreme heat. Application to hot surfaces requires special precautions. During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent.

SECTION V - HEALTH HAZARD DATA

-PERMISSIBLE EXPOSURE LEVEL:
SEE SECTION II. HAZARDOUS INGREDIENTS.

-EFFECTS OF OVEREXPOSURE:
INHALATION: Irritation of the respiratory tract & acute nervous system depression characterized by the following progressive steps: headache, dizziness, staggering gait, confusion, unconsciousness or coma.
SKIN AND EYE CONTACT: SKIN: Isocyanates react with skin protein and moisture and can cause irritation. Symptoms may be swelling, redness, and rash.
EYES: Liquid, aerosols, or vapors are irritating and may cause tearing, redness, and swelling accompanied by a stinging sensation.
SKIN ABSORPTION: Prolonged or repeated contact can cause moderate irritation, drying, and defatting of the skin which can cause the skin to crack.
INGESTION: Acute: Can result in irritation and possible corrosive action in the mouth, stomach tissue and digestive tract. Vomiting may cause aspiration of the solvent, resulting in chemical pneumonitis.
HEALTH HAZARDS (ACUTE AND CHRONIC)
ACUTE: Vapors are irritating to eyes, nose, and throat. Inhalation may cause headaches, difficult breathing and loss of consciousness.
CHRONIC: As a result of previous repeated overexposure or a single large dose, certain individuals will develop isocyanate sensitization which will cause them to react to a later exposure of isocyanate levels well below the TLV value of isocyanates.
PRIMARY ROUTE(S) OF ENTRY:
TOPICAL (SKIN CONTACT): Yes
INGESTION (GASTRO-INTESTINAL): No
INHALATION (LUNGS): Yes
CARCINOGENICITY:
NTP?: NO, IARC MONOGRAPHS?: NO, OSHA REGULATED?: NO
MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:
Asthma and any other respiratory disorders. Skin allergies, eczema, and dermititis. Isocyanate sensitization.

-FIRST AID:
INHALATION: Move to an area free from risk of further exposure. Restore breathing. Asthmatic type symptoms may develop and may be immediate or delayed by several hours. Obtain medical attention.
SKIN: Remove contaminated clothing. Wash affected areas thoroughly with soap and water. Wash contaminated clothing thoroughly before reuse.
EYES: Flush with clean lukewarm water (low pressure) for at least 15 minutes, occasionally lifting eyelids. Obtain medical attention.
INGESTION: Do not induce vomiting. Do not give anything to an unconscious person. Obtain medical attention.

SECTION VI - REACTIVITY DATA

STABILITY: [ ] Unstable [x] Stable
HAZARDOUS POLYMERIZATION: [ ] May occur [x] Will not occur

-INCOMPATIBILITY
Water, amines, strong bases, alcohols, metal compounds and surface active materials.

-CONDITIONS TO AVOID:
Contact with moisture, material which react with isocyanates and high temperatures.

-HAZARDOUS DECOMPOSITION PRODUCTS:
BY HIGH HEAT/TEMPERATURE: Carbon monoxide, carbon dioxide, and oxides of nitrogen, traces of HCN and NOx.

SECTION VII - SPILL OR LEAK PROCEDURES

-STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED
Evacuate all non-essential personnel. Remove all sources of ignition (flame, spark sources, hot surfaces). Ventilate area. Contain and remove with inert absorbent and non-sparking tools.

-WASTE DISPOSAL METHOD:
Waste must be disposed of in accordance with federal, state, and local environmental control regulations. Empty containers must be handled with care, due to product residue and flammable vapor. DO NOT incinerate closed containers.
ALSO SEE SECTION IV, V, VI, FOR OTHER PRECAUTIONS.
EPA HAZARDOUS WASTE NUMBER/CODE: D001, F003, F005
HAZARDOUS WASTE CHARACTERISTICS:
IGNITABILITY: YES
CORROSIVITY: NO
REACTIVITY: YES

SECTION VIII - SPECIAL PROTECTION INFORMATION

-RESPIRATORY PROTECTION:
A respirator that is recommended or approved for use in an organic vapor environment (air purifying or fresh air supplied)

(continued on next page)

MSDS for Metrex Coating

International Paint (U S A) Inc

P.O. BOX 386, UNION, NEW JERSEY 07083

MATERIAL SAFETY DATA SHEET

May be used to comply with OSHA's Hazard Communication Standard, 29CFR 1910. 1200.
(THIS MSDS SUPERCEDES ANY PREVIOUS ISSUE)
PLEASE DIRECT TO THE APPROPRIATE DEPARTMENT IMMEDIATELY.

TELEPHONE NO. (201) 686-1300
EMERGENCY TELEPHONE NO.: (201) 686-1300
DATE OF PREPARATION: 09/22/88
REFERENCE: S5900441/K0/01 9132305000

C-WORTHY SPECIALITIES
P.O. BOX 131
SAN PEDRO, CA 90733

SECTION ONE: PRODUCT IDENTIFICATION

PROD. NO.: CLC935
PROD. NAME: I'LAC CARIBBEAN BLUE ALKYD ENAMEL
PROD. CLASS: N/A

SECTION TWO: HAZARDOUS INGREDIENTS

		% WT. (OPTIONAL)	OCCUPATIONAL EXPOSURE TLV	OCCUPATIONAL EXPOSURE PEL	VAP. PRESS. (mm Hg) (@20° C)
110-80-5	2-ETHOXYETHANOL ETHANOL, 2-ETHOXY- AROMATIC SOLVENT	0-1	5.00 PPM	200.00 PPM	4.0
64742-95-6	SOLVENT NAPHTHA,(PET.) LT.AR MINERAL SPIRITS, EXEMPT	1-5	100.00 PPM	100.00 PPM	3.0
8032-32-4	LIGROINE AROMATIC SOLVENT	45-50	100.00 PPM	500.00 PPM	7.0
64742-94-5	SOLVENT NAPHTHA,(PET.) HEAVY	1-5	N/A	N/A	0.7
---------	LEAD CPDS (AS LEAD)	0-1	0.05 MG/M3	0.05 MG/M3	N/A

N/A = NOT AVAILABLE

SECTION THREE: PHYSICAL DATA

BOILING RANGE: 308-350 DEG. F
EVAPORATION RATE: FASTER THAN ETHER [ ] SLOWER THAN ETHER [X]
VAPOR DENSITY: HEAVIER THAN AIR [X] LIGHTER THAN AIR [ ]
% VOLATILE WEIGHT (THEORETICAL): 61
LB/GAL: 7.7

SECTION FOUR: FIRE AND EXPLOSION HAZARD DATA

FLAMMABILITY CLASSIFICATION: OSHA: COMBUSTIDLE, CLASS II
FLASH PT: 100 DEG. F (ASTM D3278-78)
DOT: COMBUSTIDLE
LEL: 0.8 PERCENT BY VOLUME

EXTINGUISHING MEDIA: FOAM [X] "ALCOHOL" FOAM [ ] CO_2 [X] DRY CHEMICAL [X] WATERFOG [ ] OTHER [ ]

UNUSUAL FIRE AND EXPLOSION HAZARDS
CONTAINS FLAMMABLE SOLVENT.DO NOT USE IN AREAS WHERE SPARK OR OPEN FLAME ARE PRESENT.

SPECIAL FIRE FIGHTING PROCEDURES
SMOTHER FLAMES WITH ONE OF THE ABOVE EXTINGUISHING MEDIA. WATER MAY BE USED TO COOL UNOPENED CONTAINERS,BUT MUST NOT BE USED AS AN EXTINGUISHING MEDIA.TAKE CARE TO PREVENT SPREAD OF BURNING LIQUID WITH WATER. CLOSED CONTAINERS MAY EXPLODE WHEN EXPOSED TO EXTREME HEAT.

V.O.C
400 gm / liter

(3)

SECTION FIVE: HEALTH HAZARD DATA

CLC935 S5900441/K0/01

EFFECTS OF OVEREXPOSURE

EYES - IRRITATION,REDNESS,TEARING AND BLURRED VISION.
SKIN- IRRITATING. MAY RESULT IN DERMATITIS.
HARMFUL IF ABSORBED THROUGH SKIN.
INHALATION - IRRITATION OF RESPIRATORY TRACT.HEADACHE AND
DIZZINESS AND UNCONSCIOUSNESS.
INGESTION - GASTRO-INTESTINAL IRRITATION,NAUSEA,VOMITING
DIARRHEA.

MEDICAL CONDITIONS PRONE TO AGGRAVATION BY EXPOSURE

SKIN AND RESPIRATORY CONDITIONS.

INGREDIENT LISTED AS CARCINOGEN OR POTENTIAL CARCINOGEN: NTP NO IARC MONOGRAPHS NO OSHA NO

PRIMARY ROUTE(S) OF ENTRY: DERMAL [X] INHALATION [X] INGESTION [ ]

EMERGENCY AND FIRST AID PROCEDURE

EYES - FLUSH IMMEDIATELY WITH COPIOUS QUANTITIES OF WATER
FOR 15 MINUTES.GET MEDICAL ATTENTION IMMEDIATELY.
SKIN - REMOVE CONTAMINATED CLOTHING,WASH SKIN WITH PLENTY OF
SOAP AND WATER. LAUNDER CLOTHES BEFORE REUSE.
INHALATION - REMOVE TO FRESH AIR.GIVE ARTIFICIAL RESPIRATION
IF NEEDED.GET MEDICAL ATTENTION.
INGESTION -CALL A PHYSICIAN IMMEDIATELY TO DETERMINE
WHETHER OR NOT TO INDUCE VOMITING.

SECTION SIX: REACTIVITY DATA

STABILITY: UNSTABLE [ ] STABLE [X] HAZARDOUS POLYMERIZATION: MAY OCCUR [ ] WILL NOT OCCUR [X]

HAZARDOUS DECOMPOSITION PRODUCTS:

CO,CO2,VARIOUS HYDROCARBON FRAGMENTS

CONDITIONS TO AVOID

STORE AWAY FROM DIRECT HEAT,FLAME OR SPARK.

INCOMPATABILITY (MATERIALS TO AVOID)

OXIDIZING AGENTS

SECTION SEVEN: SPILL OR LEAK PROCEDURE

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: REMOVE ALL SOURCES OF IGNITION. AVOID INHALATION OF VAPORS. VENTILATE AREA. CLEAN UP WITH ABSORBANT MATERIALS.

WASTE DISPOSAL METHOD: DISPOSE IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS. DO NOT INCINERATE UNOPENED CONTAINERS.

SECTION EIGHT: SAFE HANDLING AND USE INFORMATION

RESPIRATORY PROTECTION: IN OUTDOOR OR OPEN AREAS, WITH UNRESTRICTED VENTILATION, USE A **NIOSH** APPROVED FILTER RESPIRATOR TO REMOVE SOLID AIR-BORNE PARTICLES OF OVERSPRAY DURING SPRAY APPLICATION. IN RESTRICTED VENTILATION AREAS, USE A NIOSH APPROVED RESPIRATOR IN ACCORDANCE WITH 29 CFR 1910. 134 TO REMOVE A COMBINATION OF PARTICULATES AND VAPORS.

VENTILATION: PROVIDE SUFFICIENT VENTILATION, IN VOLUME AND PATTERN, TO KEEP TLV AND LEL OF HAZARDOUS INGREDIENTS BELOW LIMITS SPECIFIED ON PAGE ONE, AND TO REMOVE DECOMPOSITION PRODUCTS DURING WELDING OR FLAME CUTTING ON SURFACES COATED WITH THIS PRODUCT.

PROTECTIVE GLOVES: WEAR CHEMICAL RESISTANT GLOVES.

EYE PROTECTION: SAFETY GLASSES, CHEMICAL GOGGLES AND/OR FACE SHIELD SHOULD BE WORN TO PREVENT EYE CONTACT.

HYGIENIC PRACTICES: REMOVE AND WASH SOILED CLOTHING BEFORE REUSE. WASH HANDS BEFORE EATING OR SMOKING.

OTHER PROTECTIVE EQUIPMENT WEAR APPROPRIATE IMPERVIOUS PROTECTIVE CLOTHING TO PREVENT SKIN CONTACT.

SECTION NINE: SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

STORE IN BUILDING DESIGNED AND PROTECTED FOR STORAGE OF
LIQUIDS WITH NFPA CLASS GIVEN BY OSHA CLASS IN SECTION 4.
AVOID BREATHING DUST OR CHIPS FROM SANDING OR BLASTING
SURFACES COATED WITH THIS PRODUCT.

RECOMMEND GROUNDING AND BONDING OF CONTAINERS WHEN TRANSFERRING LIQUIDS AND POWDERS TO AVOID STATIC CHARGE BUILD UP.

OTHER PRECAUTIONS

CHRONIC OVEREXPOSURE TO, AND MISUSE OF, SOLVENTS HAS BEEN
LINKED TO PERMANENT BRAIN AND NERVOUS SYSTEM DAMAGE.
CHRONIC OVEREXPOSURE TO ETHYLENE GLYCOL ETHERS/ACETATES
HAS CAUSED ADVERSE REPRODUCTIVE EFFECTS AND LIVER,KIDNEY
BLOOD,SPLEEN AND LUNG ABNORMALITIES IN LABORATORY ANIMALS.
THIS PRODUCT CONTAINS LEAD. REFER TO OSHA LEAD STANDARD
FOR FULL DISCUSSION OF HEALTH EFFECTS.

The information contained herein is based on the data available to us and is believed to be correct. However, International Paint makes no warranty, expressed or implied, regarding the accuracy of these data or the results to be obtained from the use thereof. International Paint assumes no responsibility for injury from the use of the data described herein. Consult International Paint for more information.

MSDS for Oakwood Stain

MATERIAL SAFETY DATA SHEET

7

Alternative Materials Technology, Inc.
311 Otterson Dr., Ste. 60
Chico, CA 95928

Phone (530) 894-3585
Fax (530) 896-0657

9/18/2001 **Date Prepared**

Supersedes: All prior dates

24 HOUR EMERGENCY: 1-800-255-3924

SECTION I - PRODUCT IDENTIFICATION

PRODUCT NAME: LOW VOC BRANDY STAIN

PRODUCT CODE: 08WS08-017 **LF#:** KB58-99B

H.M.I.S. Rating:

FLAMMABILITY	HEALTH	REACTIVITY	PROTECTION
3	1	0	G

SECTION II - HAZARDOUS INGREDIENTS

Ingredient	Cas No.	Percent	OSHA PEL	ACGIH	OTHER	mmHg
ALIPHATIC HYDROCARBONS	8052-41-3	<5				
Acetone	67-64-1	30to40	750 ppm	750 ppm		182
*Aromatic Solvents	64742-94-5	<10	100 ppm	100 ppm		5

* INDICATES CHEMICAL(S) SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF TITLE III AND OF 40 CFR 372

SECTION II-A - VOLATILE ORGANIC CONTENT (VOC)

COMPLIANCE	
VOC Grams/Liter Minus Exempt	154.97
VOC Pounds/Gallon Minus Exempt	1.29
TOTAL VOC CONTENT (EMISSIONS)	
VOC Grams/Liter	88.12
VOC Pounds/Gallon	0.74

VHAP: 0.08 Lb/gal
Solids: 4.07 Lb/gal
Density 7.64 Lb/gal
Pounds VOC/Pounds Solids
0.18

SECTION III - PHYSICAL DATA *KB58-99B*

Property	Reference Measurement
Boiling Point	116 °F
Vapor Pressure (mm Hg.)	15
Vapor Density	(Air=1) Less than 1
Solubility in Water	Not Soluble
Specific Gravity	0.917 (H2O=1)
Evaporation Rate	(Butyl Acetate =1) Less than 1
Appearance and Odor	REDDISH BROWN, SOLVENT ODOR
Density: Pounds / Gallon	7.6 lbs/Gal
Percent Non-Volatile	53.2 %
Pounds Solids / Gallon	4.07
% Wt Emissions	9.6%

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Flash Point (Closed Cup):	-1 °F
Lower Explosive Limit::	1.00%
Upper Explosive Limit::	
Extinguishing Media:	FOAM, DRY CHEMICAL, CARBON DIOXIDE OR ANY CLASS "B" EXTINGUISHING AGENT. WATER MAY BE UNSUITABLE AS AN EXTINGUISHING MEDIUM, BUT HELPFULL IN KEEPING ADJACENT CONTAINERS COOL.
SPECIAL FIREFIGHTING PROCEDURES	FULL PROTECTIVE EQUIPMENT INCLUDING SELF CONTAINED BREATHING APPARATUS. WATER MAY BE USED TO COOL CONTAINERS TO PREVENT PRESSURE BUILDUP, POSSIBLE AUTOIGITION OR EXPLOSION DUE TO EXTREME HEAT.
UNUSUAL FIRE AND EXPLOSION HAZARDS	Vapors may form an explosive mixture in air. Closed containers may rupture when exposed to extreme heat. Handle or discard materials such as rags in accordance with all local, state, and federal regulations. **IF ACETONE IS LISTED IN SECTION II:** **EXTREMELY! VOLATILE AND FLAMMABLE. MUST BE USED IN AN EXTREMELY WELL VENTILATED AREA. RECOMMEND THAT ALL EQUIPMENT LIGHTING, FIXTURES, AND OTHER ELECTRICAL APPARATUS BE EXPLOSION PROOF.** **AMT DOES NOT WARRANTY AND WARNS STRONGLY AGAINST USING THIS PRODUCT IF SPECIFIED CONDITIONS ARE NOT MET. THESE STATEMENTS ARE MADE BECAUSE OF THE EXTREME VOLATILITY OF THE ACETONE AND OTHER FLAMMABLE SOLVENTS CONTAINED IN THIS PRODUCT** VAPORS MAY TRAVEL ALONG GROUND OR BE MOVED BY VENTILATION TO SOURCES OF IGNITION. CLOSED CONTAINERS MAY EXPLODE WHEN EXPOSED TO EXTREME HEAT. KEEP WORK AREA FREE FROM SOURCES OF IGNITION. RESIDUE IN EMPTIED CONTAINERS CAN EXPLODE OR IGNITE EXPLOSIVELY. ALL 5-GALLON PAILS AND LARGER METAL CONTAINERS MUST BE GROUNDED AND/OR BONDED DURING LIQUID TRANSFER.

KB58-99B

SECTION V - HEALTH HAZARD DATA

Health Hazards and Effects of Overexposure:

SKIN: This material may cause defatting and irritation of skin. Prolonged or repeated contact may cause dermatitis.

INHALATION: Excess exposure to vapors or spray mists can result in headache, dizziness, incoordination, nausea and loss of consciousness. Some reports have associated repeated and prolonged occupational exposure to solvents with permanent brain and nervous system damage.

EYES: This material may be an eye irritant.

FIRST AID:

EYES: Immediately flush eyes thoroughly with water and continue washing for 15 minutes. Obtain medical attention.

SKIN: Remove contaminated clothing. Wash with soap and water immediately.

INHALATION: Remove to fresh air immediately. If coughing, difficult breathing or any other respiratory symptoms develop, seek medical attention at once.

INGESTION: If ingested DO NOT induce vomiting, keep person warm, quiet, and get medical attention immediately. Aspiration of material into lungs can cause chemical pneumonitis which can be fatal.

PRIMARY ROUTES OF ENTRY: Inhalation and skin contact.

CARCINOGENICITY: This product does not contain 0.1% or more of any substance which is listed as a carcinogen by IARC, NTP or OSHA.

SECTION VI - REACTIVITY DATA

STABILITY: Stable

INCOMPATIBILITY: Avoid contact with strong oxidizing agents.

CONDITIONS TO AVOID: Warm storage and ignition sources.

HAZARDOUS DECOMPOSITION PRODUCTS: INCOMPLETE COMBUSTION CAN YIELD CARBON MONOXIDE AND TOXIC VAPORS.

SECTION VII- SPILL OR LEAK PROCEDURES

Steps to be Taken in Case Material is Released or Spilled: Remove all sources of ignition. Ventilate area. Absorb spill with an absorbent material such as sawdust, vermiculite or sand and place material into a closed container.

If large spill, dike to prevent this material from entering water suysstems or sewers. Wear protective equipment during cleanup.

Waste Disposal Methods: This material has been tested and found to have a flash point below 140 degrees Fahrenheit. If discarded, this material and containers should be treated as hazardous wastes based on the characteristic of ignitability as defined under federal RCRA regulations (40 CFR 261). Disposal of this material or its container requires compliance with applicable labeling, packaging, and record keeping standards.

Extreme care should be taken to ensure that it is disposed of only in a facility permitted for disposal of hazardous waste. For further information, contact your state or local waste agency or the United States Environmental Protection Agency's

RCRA hotline (1-800-424-9346 or 202-382-3000)

SECTION VIII - CONTROL MEASURES

Respiratory Protection: A canister type respirator must be worn to prevent the inhalation of vapors or spray mists when the TLV or PEL is exceeded.

Ventilation: General ventilation is required during normal use. Local ventilation may be required during certain operations to keep exposure level below the limits listed in Section II of this data sheet.

Protective Gloves: Chemical-resistant nitrile, neoprene or rubber gloves required.

Eye Protection: Wear face shield or chemical goggles.

SECTION IX- SPECIAL PRECAUTIONS AND ADDITIONAL INFORMATION

Precautions to be taken in handling and Storing: Avoid prolonged or repeated inhalation of heated vapors or spray mists. Keep away from heat or open flame. Avoid prolonged or repeated skin contact.

Other Precautions: Handle all rags and other materials and/or waste soaked with this product in accordance with the recommendations listed in Section IV of this MSDS.

SARA Title III, Section 313: This product contains chemicals subject to the reporting requirement of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 and 40 CFR 372.
ANY SUCH CHEMICALS ARE SHOWN IN SECTION II OF THIS MSDS AND ARE DESIGNATED WITH AN * * *

SECTION X - DISCLAIMER

Gloss Value: All gloss values listed are approximate. Each product is drawn down on a Leneta card for gloss measurement. Gloss value as sprayed may vary +-10 gloss units.

DISCLAIMER

TO THE BEST OF OUR KNOWLEDGE, THE INFORMATION CONTAINED HEREIN IS ACCURATE, OBTAINED FROM SOURCES BELIEVED BY ALTERNATIVE MATERIALS TECHNOLOGY TO BE ACCURATE. HOWEVER, THE INFORMATION IS PROVIDED WITHOUT REPRESENTATION OR WARRANTY,

EXPRESSED OR IMPLIED REGARDING ITS ACCURACY OR CORRECTNESS.

KB58-99B

MSDSs for Holmes Coatings

AKZO NOBEL

MATERIAL SAFETY DATA SHEET
Primers

Section 1 - Product Information

Manufacturer: Akzo Nobel Coatings Inc.
5555 Spalding Drive
Norcross, GA 30092
USA

Canadian Supplier: Akzo Nobel Coatings Ltd.
110 Woodbine Downs Blvd.
Unit #4 Etobicoke, Ontario
Canada M9W 5S6

Emergency Telephone: For US transportation emergencies call Chemtrec: 800-424-9300

For Canadian transportation emergencies call - Canutec: 613-996-6666

Information: 770-246-8454 (USA 7:00am – 4:00pm Eastern Time) Product Use: primer

Item Numbers (US & Canadian):
Autosurfacer LV Sealer 002012
Basefix 790 006052/006053
Autocoat LV Epoxy 001062/001063/001064
Washprimer CR 001040/001042
Plastoflex Primer 001009
Primer PO 006003/006005
Autosurfacer LV 2.1 002081
Washprimer EM CF 001045/001046

Emergency Overview

Signs of Overexposure: Nausea, cough, dizziness, weakness, headache, chest pain, lack of coordination, shortness o. breath, dermatitis, redness and/or pain in eyes.
Emergency First Aid: Move to fresh, remove contaminated clothing, wash effected skin with soap and water, do not use solvents or thinners; if product gets into eyes, remove contact lenses, flush with water for 15 minutes.
Handling: When handling wear an organic vapor cartridge respirator (NIOSH / OSHA), solvent resistant gloves and safety eye protection designed to guard against liquid splashes. Use approved bonding and grounding procedures when transferring to another container. Close all containers tightly after use. Do not eat, drink or smoke in work areas.
Clean-up: Eliminate sources of ignition. Dike to reduce extent of spill. Remove with inert absorbent (vermiculite, clay, Oil-Dry®, Kitty Litter, etc.) using non-sparking tools. Transfer to a grounded metal container, seal container. Dispose of as hazardous waste.
Material Appearance: White, Green, Gray or Yellow
Material Physical Appearance: Liquid
Other Precautions: Vapors are heavier than air and may travel along floors. Material has an offensive odor. Prolonged exposure may reduce the user's sensitivity to the odor, thus reducing the effectiveness of odor as a warning against exposure.
Fire Fighting: Flammable liquid, refer to Guide 127 of the North American Emergency Guide Book. Forms explosive mixture with air, vapors are heavier than air and may travel to a source of ignition and flash back.
NFPA Flammability: I B and/or IC.
Akzo Nobel Coatings Inc. has no oversight with respect to the guidance practices or policies or manufacturing processes of other companies handling or using this material. The information given in this MSDS is only related to the product as shipped in its original condition as described in Section 2, "Hazardous Ingredients" and Section 9 "Physical and Chemical Properties".

These products are considered hazardous under the Federal OSHA Hazard Communication Standard

Section 2 - Hazardous Ingredients

Hazardous Ingredient	% by weight	CAS No.	Vapor Press.	ACGIH TLV	OSHA PEL	LD_{50} Oral	LD_{50} Derm	LC_{50} Inhal.	LEL

Plastoflex contains:

1,2,4 Trimethylbenzene *(SARA313)*	3.2%	95-63-6	1.7	25ppm	25ppm	5000	n. av.	18000	n.av
Aromatic Solvent	5-10%	000	n. av.	100ppm	n. av.	n. av.	n. av.	n. av.	n. av
Butanol *(SARA313)*	12.8%	71-36-3	5.5	n. av.	100ppm	790	3400	8000	1.7
Ethylbenzene *(SARA313)*	8.8%	100-41-4	7.1	100ppm	100ppm	3500	15486	n. av.	1.0
N-methyl-2-Pyrollidone *(SARA313)*	1-5%	872-50-4	0.29	100ppm	n. av.	4200	8000	n. av.	0.9
Xylene-mixed isomers *(SARA313)*	40.3%	1330-20-7	5.1	100ppm	100ppm	4300	>1700	5000	1.0
Propylene Glycol Methyl Ether	10-20%	107-98-2	12.5	100ppm	n. av.	5660	13000	10000	n.av

Basefix 790 contains:

Aromatic Solvent	1-5%	000	n. av.	100ppm	n. av.	n. av.	n. av.	n. av.	n. av
Butyl Acetate	20-30%	123-86-4	8.0	150ppm	150ppm	10768	17600	2000	1.7
Isopropyl Alcohol	1-5%	67-63-0	32.8	400ppm	400ppm	5045	12800	16000	2.3
Isobutyl Acetate	20-30%	110-19-0	12.5	150ppm	150ppm	13400	17400	3500	1.3
Toluene *(SARA313)(P65)*	5.6%	108-88-3	22.0	50ppm	200ppm	636	12305	8000	1.1
Xylene-mixed isomers *(SARA313)*	4.4%	1330-20-7	5.1	100ppm	100ppm	4300	>1700	5000	1.0
Ethylbenzene *(SARA313)*	1.3%	100-41-4	7.1	100ppm	100ppm	3500	15486	n. av.	1.0
1,2,4 Trimethylbenzene *(SARA313)*	1.4%	95-63-6	1.7	25ppm	25ppm	5000	n. av.	18000	n.av
Nitrocellulose	1-5%	9004-70-0	n. ap.	n. av.	n. av.	n. av.	n. av.	n. av.	n.ap
V M & P Naphtha	10-20%	8032-32-4	38.0	300ppm	300ppm	n. av.	n. av.	1600	0.9

Primer PO contains:

Butyl Acetate	5-10%	123-86-4	8.0	150ppm	150ppm	10768	17600	2000	1.7
Ethylbenzene *(SARA313)*	17.1%	100-41-4	7.1	100ppm	100ppm	3500	15486	n. av.	1.0
Xylene-mixed isomers *(SARA313)*	75.7%	1330-20-7	5.1	100ppm	100ppm	4300	>1700	5000	1.0

Autocoat LV Epoxy contains:

Methyl Ethyl Ketone *(SARA313)*	5.7%	78-93-3	77.5	200ppm	200ppm	2737	6480	23500	1.8
Epoxy Resin	10-20%	25036-25-3	n. ap.	10mg/m^3	15mg/m^3	30000	3000	n. av.	n.ap
Epoxy Resin	1-5%	25068-38-6	n. ap.	n. av.	n. av.	11400	2340	n. av.	n.ap
Butyl Acetate	1-5%	123-86-4	8.0	150ppm	150ppm	10768	17600	2000	1.7
Butyl Glycidyl Ether	1-5%	2426-08-6	n. ap.	25ppm	50ppm	n. av.	n. av.	n. av.	n.ap
C6-C8 Branched Alcohol	1-5%	90438-79-2	22.0	n. av.	n. av.	n. av.	n. av.	n. av.	1.0
Titanium Dioxide	5-10%	13463-67-7	n. ap.	10mg/m^3	10mg/m^3	n. av.	n. av.	n. av.	n.ap
Talc	5-10%	14807-96-6	n. ap.	2mg/m^3	2mg/m^3	n. av.	n. av.	n. av.	n.ap
Ethylbenzene *(SARA313)*	0.5%	100-41-4	7.1	100ppm	100ppm	3500	15486	n. av.	1.0
Toluene *(SARA313)(P65)*	0.002%	108-88-3	22.0	50ppm	100ppm	5000	14000	4000	1.2
Carbon Black *(P65)*	0.2%	1333-86-4	n. ap.	3.5mg/m^3	3.5mg/m^3	n. av.	n. av.	n. av.	n.ap
Xylene-mixed isomers *(SARA313)*	2.3%	1330-20-7	5.1	100ppm	100ppm	4300	>1700	5000	1.0
Barium Sulfate	5-10%	7727-43-7	n. ap.	10mg/m^3	15mg/m^3	n. av.	n. av.	n. av.	n.ap
Amorphous Silica	10-20%	112926-00-8	n. ap.	10mg/m^3	20mg/m^3	n. av.	n. av.	n. av.	n.ap
Calcium Oxide	10-20%	1305-78-8	n. ap.	2mg/m^3	5mg/m^3	n. av.	n. av.	n. av.	n.ap
Bisphenol A Diglycidyl Ether	5-10%	1675-54-3	n. ap.	n. av.	n. av.	11000	20000	n. av.	n.ap
Methyl Isobutyl Ketone *(SARA313)*	2.6%	108-10-1	15.0	50ppm	100ppm	2080	24950	2000	1.2
Quartz Crystalline Silica *(P65)*	0.01%	14808-60-7	n. ap.	.1mg/m^3	.1mg/m^3	n. av.	n. av.	n. av.	n.ap
Zinc Phosphate *(SARA313)*	14.2%	7790-90-0	n. ap.	n. av.	n. av.	n. av.	n. av.	n. av.	n.ap

Autosurfacer LV 2.1 contains:

Talc	5-10%	14807-96-6	n.ap	2mg/m^3	2mg/m^3	n.av.	n.av.	n.av.	n.ap
Butyl Acetate	10-20%	123-86-4	8.0	150ppm	150ppm	10768	17600	2000	1.7
Zinc Phosphate *(SARA 313)*	8.4%	7790-90-0	n.ap	n.av.	n.av.	n.av.	n.av.	n.av.	n.ap
Calcium Carbonate	20-40%	471-34-1	n.ap	10mg/m^3	15mg/m^3	n.av.	n.av.	n.av.	n.ap
Quartz Crystalline Silica *(P65)*	0.39%	14808-60-7	n.ap.	.1mg/m^3	.1mg/m^3	n. av.	n. av.	n. av.	n.ap
Titanium Dioxide	20-40%	13463-67-7	n.ap	10mg/m^3	10mg/m^3	n.av.	n.av.	n.av.	n.ap

Washprimer CR contains:

Butanol *(SARA313)*	10.9%	71-36-3	5.5	n. av.	100ppm	790	3400	8000	1.7
Formaldehyde *(SARA313)(P65)*	0.1%	50-00-0	9.5	0.3mg/m^3	0.75mg/m^3	800	270	590	1.1
Isopropyl Alcohol	40-70%	67-63-0	32.8	400ppm	400ppm	5045	12800	16000	2.3
Talc	1-5%	14807-96-6	n. ap.	2mg/m^3	2mg/m^3	n. av.	n. av.	n. av.	n.ap
Zinc Chromate *(SARA313)(P65)*	8.1%	13530-65-9	n. ap.	.01mg/m^3	.01mg/m^3	n. av.	n. av.	n. av.	n.ap

Autosurfacer LV Sealer contains:

Xylene-mixed isomers *(SARA 313)*	3.1%	1330-20-7	5.1	100ppm	100ppm	4300	>1700	5000	1.0
Ethylbenzene *(SARA 313)*	0.7%	100-41-4	7.1	100ppm	100ppm	3500	15486	n. av.	1.0
Talc	6.1%	14807-96-6	n.ap	2mg/m^3	2mg/m^3	n.av.	n.av.	n.av.	n.ap
Butyl Acetate	6.2%	123-86-4	8.0	150ppm	150ppm	10768	17600	2000	1.7
Zinc Phosphate *(SARA 313)*	7.7%	7790-90-0	n.ap	n.av.	n.av.	n.av.	n.av.	n.av.	n.ap
Calcium Carbonate	14.9%	471-34-1	n.ap	10mg/m^3	15mg/m^3	n.av.	n.av.	n.av.	n.ap
Titanium Dioxide	12.3%	13463-67-7	n.ap	10mg/m^3	10mg/m^3	n.av.	n.av.	n.av.	n.ap
Kaolin	6.1%	1332-58-7	n.ap	2mg/m^3	10mg/m^3	n.av.	n.av.	n.av.	n.ap
Methyl Amyl Ketone	12.3%	110-43-0	2.1	50ppm	100ppm	1670	10286	2000	1.1
Zinc Hydroxide *(SARA313)*	1.9%	20427-58-1	n. ap.	n. av.	n. av.	n. av.	n. av.	n. av.	n.ap

Washprimer EM CF contains:

AKZO NOBEL

MATERIAL SAFETY DATA SHEET

Primers

Section 1 - Product Information

Manufacturer: Akzo Nobel Coatings Inc.
5555 Spalding Drive
Norcross, GA 30092
USA

Canadian Supplier: Akzo Nobel Coatings Ltd.
110 Woodbine Downs Blvd.
Unit #4 Etobicoke, Ontario
Canada M9W 5S6

Emergency Telephone: For US transportation emergencies call - Chemtrec: 800-424-9300

For Canadian transportation emergencies call - Canutec: 613-996-6666

Information: 770-246-8454 (USA 7:00am – 4:00pm Eastern Time) Product Use: primer

Item Numbers (US & Canadian):

Autosurfacer LV Sealer 002012
Basefix 790 006052/006053
Autocoat LV Epoxy 001062/001063/001064
Washprimer CR 001040/001042
Plastoflex Primer 001009
Primer PO 006003/006005
Autosurfacer LV 2.1 002081
Washprimer EM CF 001045/001046

Emergency Overview

Signs of Overexposure: Nausea, cough, dizziness, weakness, headache, chest pain, lack of coordination, shortness of breath, dermatitis, redness and/or pain in eyes.
Emergency First Aid: Move to fresh, remove contaminated clothing, wash effected skin with soap and water, do not use solvents or thinners; if product gets into eyes, remove contact lenses, flush with water for 15 minutes.
Handling: When handling wear an organic vapor cartridge respirator (NIOSH / OSHA), solvent resistant gloves and safety eye protection designed to guard against liquid splashes. Use approved bonding and grounding procedures when transferring to another container. Close all containers tightly after use. Do not eat, drink or smoke in work areas.
Clean-up: Eliminate sources of ignition. Dike to reduce extent of spill. Remove with inert absorbent (vermiculite, clay, Oil-Dry®, Kitty Litter, etc.) using non-sparking tools. Transfer to a grounded metal container, seal container. Dispose of as hazardous waste.
Material Appearance: White, Green, Gray or Yellow
Material Physical Appearance: Liquid
Other Precautions: Vapors are heavier than air and may travel along floors. Material has an offensive odor. Prolonged exposure may reduce the user's sensitivity to the odor, thus reducing the effectiveness of odor as a warning against exposure.
Fire Fighting: Flammable liquid, refer to Guide 127 of the North American Emergency Guide Book. Forms explosive mixture with air, vapors are heavier than air and may travel to a source of ignition and flash back.
NFPA Flammability: I B and/or IC.
Akzo Nobel Coatings Inc. has no oversight with respect to the guidance practices or policies or manufacturing processes of other companies handling or using this material. The information given in this MSDS is only related to the product as shipped in its original condition as described in Section 2, "Hazardous Ingredients" and Section 9 "Physical and Chemical Properties".

These products are considered hazardous under the Federal OSHA Hazard Communication Standard

Section 2 - Hazardous Ingredients

Hazardous Ingredient	% by weight	CAS No.	Vapor Press.	ACGIH TLV	OSHA PEL	LD_{50} Oral	LD_{50} Derm	LC_{50} Inhal.	LEL

Date of Preparation: January 7, 2002

Primers

Plastoflex contains:									
1,2,4 Trimethylbenzene *(SARA313)*	3.2%	95-63-6	1.7	25ppm	25ppm	5000	n. av.	18000	n.av
Aromatic Solvent	5-10%	000	n. av.	100ppm	n. av.	n. av	n. av.	n. av.	n. av
Butanol*(SARA313)*	12.8%	71-36-3	5.5	n. av.	100ppm	790	3400	8000	1.7
Ethylbenzene*(SARA313)*	8.8%	100-41-4	7.1	100ppm	100ppm	3500	15486	n. av.	1.0
N-methyl-2-Pyrollidone*(SARA313)*	1-5%	872-50-4	0.29	100ppm	n. av.	4200	8000	n. av.	0.9
Xylene-mixed isomers*(SARA313)*	40.3%	1330-20-7	5.1	100ppm	100ppm	4300	>1700	5000	1.0
Propylene Glycol Methyl Ether	10-20%	107-98-2	12.5	100ppm	n. av.	5660	13000	10000	n.av
Basefix 790 contains:									
Aromatic Solvent	1-5%	000	n. av.	100ppm	n. av.	n. av.	n. av.	n. av.	n. av
Butyl Acetate	20-30%	123-86-4	8.0	150ppm	150ppm	10768	17600	2000	1.7
Isopropyl Alcohol	1-5%	67-63-0	32.8	400ppm	400ppm	5045	12800	16000	2.3
Isobutyl Acetate	20-30%	110-19-0	12.5	150ppm	150ppm	13400	17400	3500	1.3
Toluene*(SARA313)(P65)*	5.6%	108-88-3	22.0	50ppm	200ppm	636	12305	8000	1.1
Xylene-mixed isomers*(SARA313)*	4.4%	1330-20-7	5.1	100ppm	100ppm	4300	>1700	5000	1.0
Ethylbenzene*(SARA313)*	1.3%	100-41-4	7.1	100ppm	100ppm	3500	15486	n. av.	1.0
1,2,4 Trimethylbenzene *(SARA313)*	1.4%	95-63-6	1.7	25ppm	25ppm	5000	n. av.	18000	n.av
Nitrocellulose	1-5%	9004-70-0	n. ap.	n. av.	n. av.	n. av.	n. av.	n. av.	n.ap
V M & P Naphtha	10-20%	8032-32-4	38.0	300ppm	300ppm	n. av.	n. av.	1600	0.9
Primer PO contains:									
Butyl Acetate	5-10%	123-86-4	8.0	150ppm	150ppm	10768	17600	2000	1.7
Ethylbenzene*(SARA313)*	17.1%	100-41-4	7.1	100ppm	100ppm	3500	15486	n. av.	1.0
Xylene-mixed isomers*(SARA313)*	75.7%	1330-20-7	5.1	100ppm	100ppm	4300	>1700	5000	1.0
Autocoat LV Epoxy contains:									
Methyl Ethyl Ketone*(SARA313)*	5.7%	78-93-3	77.5	200ppm	200ppm	2737	6480	23500	1.8
Epoxy Resin	10-20%	25036-25-3	n. ap.	10mg/m^3	15mg/m^3	30000	3000	n. av.	n.ap
Epoxy Resin	1-5%	25068-38-6	n. ap.	n. av.	n. av.	11400	2340	n. av.	n.ap
Butyl Acetate	1-5%	123-86-4	8.0	150ppm	150ppm	10768	17600	2000	1.7
Butyl Glycidyl Ether	1-5%	2426-08-6	n. ap.	25ppm	50ppm	n. av.	n. av.	n. av.	n.ap
C6-C8 Branched Alcohol	1-5%	90438-79-2	22.0	n. av.	n. av.	n. av.	n. av.	n. av.	1.0
Titanium Dioxide	5-10%	13463-67-7	n. ap.	10mg/m^3	10mg/m^3	n. av.	n. av.	n. av.	n.ap
Talc	5-10%	14807-96-6	n. ap.	2mg/m^3	2mg/m^3	n. av.	n. av.	n. av.	n.ap
Ethylbenzene*(SARA313)*	0.5%	100-41-4	7.1	100ppm	100ppm	3500	15486	n. av.	1.0
Toluene*(SARA313)(P65)*	0.002%	108-88-3	22.0	50ppm	100ppm	5000	14000	4000	1.2
Carbon Black *(P65)*	0.2%	1333-86-4	n. ap.	3.5mg/m^3	3.5mg/m^3	n. av.	n. av.	n. av.	n.ap
Xylene-mixed isomers*(SARA313)*	2.3%	1330-20-7	5.1	100ppm	100ppm	4300	>1700	5000	1.0
Barium Sulfate	5-10%	7727-43-7	n. ap.	10mg/m^3	15mg/m^3	n. av.	n. av.	n. av.	n.ap
Amorphous Silica	10-20%	112926-00-8	n. ap.	10mg/m^3	20mg/m^3	n. av.	n. av.	n. av.	n.ap
Calcium Oxide	10-20%	1305-78-8	n. ap.	2mg/m^3	5mg/m^3	n. av.	n. av.	n. av.	n.ap
Bisphenol A Diglycidyl Ether	5-10%	1675-54-3	n. ap.	n. av.	n. av.	11000	20000	n. av.	n.ap
Methyl Isobutyl Ketone*(SARA313)*	2.6%	108-10-1	15.0	50ppm	100ppm	2080	24950	2000	1.2
Quartz Crystalline Silica *(P65)*	0.01%	14808-60-7	n. ap.	.1mg/m^3	.1mg/m^3	n. av.	n. av.	n. av.	n.ap
Zinc Phosphate*(SARA313)*	14.2%	7790-90-0	n. ap.	n. av.	n. av.	n. av.	n. av.	n. av.	n.ap
Autosurfacer LV 2.1 contains:									
Talc	5-10%	14807-96-6	n.ap	2mg/m^3	2mg/m^3	n.av.	n.av.	n.av.	n.ap
Butyl Acetate	10-20%	123-86-4	8.0	150ppm	150ppm	10768	17600	2000	1.7
Zinc Phosphate *(SARA 313)*	8.4%	7790-90-0	n.ap	n.av.	n.av.	n.av.	n.av.	n.av.	n.ap
Calcium Carbonate	20-40%	471-34-1	n.ap	10mg/m^3	15mg/m^3	n.av.	n.av.	n.av.	n.ap
Quartz Crystalline Silica *(P65)*	0.39%	14808-60-7	n.ap.	.1mg/m^3	.1mg/m^3	n. av.	n. av.	n. av.	n.ap
Titanium Dioxide	20-40%	13463-67-7	n.ap	10mg/m^3	10mg/m^3	n.av.	n.av.	n.av.	n.ap
Washprimer CR contains:									
Butanol*(SARA313)*	10.9%	71-36-3	5.5	n. av.	100ppm	790	3400	8000	1.7
Formaldehyde*(SARA313)(P65)*	0.1%	50-00-0	9.5	0.3mg/m^3	0.75mg/m^3	800	270	590	1.1
Isopropyl Alcohol	40-70%	67-63-0	32.8	400ppm	400ppm	5045	12800	16000	2.3
Talc	1-5%	14807-96-6	n. ap.	2mg/m^3	2mg/m^3	n. av.	n. av.	n. av.	n.ap
Zinc Chromate*(SARA313)(P65)*	8.1%	13530-65-9	n. ap.	.01mg/m^3	.01mg/m^3	n. av.	n. av.	n. av.	n.ap
Autosurfacer LV Sealer contains:									
Xylene-mixed isomers *(SARA 313)*	3.1%	1330-20-7	5.1	100ppm	100ppm	4300	>1700	5000	1.0
Ethylbenzene *(SARA 313)*	0.7%	100-41-4	7.1	100ppm	100ppm	3500	15486	n. av.	1.0
Talc	6.1%	14807-96-6	n.ap	2mg/m^3	2mg/m^3	n.av.	n.av.	n.av.	n.ap
Butyl Acetate	6.2%	123-86-4	8.0	150ppm	150ppm	10768	17600	2000	1.7
Zinc Phosphate *(SARA 313)*	7.7%	7790-90-0	n.ap	n.av.	n.av.	n.av.	n.av.	n.av.	n.ap
Calcium Carbonate	14.9%	471-34-1	n.ap	10mg/m^3	15mg/m^3	n.av.	n.av.	n.av.	n.ap
Titanium Dioxide	12.3%	13463-67-7	n.ap	10mg/m^3	10mg/m^3	n.av.	n.av.	n.av.	n.ap
Kaolin	6.1%	1332-58-7	n.ap	2mg/m^3	10mg/m^3	n.av.	n.av.	n.av.	n.ap
Methyl Amyl Ketone	12.3%	110-43-0	2.1	50ppm	100ppm	1670	10286	2000	1.1
Zinc Hydroxide*(SARA313)*	1.9%	20427-58-1	n. ap.	n. av.	n. av.	n. av.	n. av.	n. av.	n.ap
Washprimer EM CF contains:									

AKZO NOBEL

MATERIAL SAFETY DATA SHEET

Colorbuild 2.1/2.8

Section 1 - Product Information

Manufacturer: Akzo Nobel Coatings Inc.
5555 Spalding Drive
Norcross, GA 30092
USA

Canadian Supplier: Akzo Nobel Coatings Ltd.
110 Woodbine Downs Blvd.
Unit #4 Etobicoke, Ontario
Canada M9W 5S6

Emergency Telephone: For US transportation emergencies call - Chemtrec: 800-424-9300

For Canadian transportation emergencies call - Canutec: 613-996-6666

Information: 770-246-8454 (USA 7:00am – 4:00pm Eastern Time) Product Use: primer

Item Numbers (US & Canadian):

White 2.1/2.8 002502
Blue 2.1/2.8 002522
Yellow 2.1/2.8 002542
Black 2.1/2.8 002512
Green 2.1/2.8 002532
Red 2.1/2.8 002552

Emergency Overview

Signs of Overexposure: Nausea, cough, dizziness, weakness, headache, chest pain, lack of coordination, shortness of breath, dermatitis, redness and/or pain in eyes.
Emergency First Aid: Move to fresh, remove contaminated clothing, wash effected skin with soap and water, do not use solvents or thinners; if product gets into eyes, remove contact lenses, flush with water for 15 minutes.
Handling: When handling wear an organic vapor cartridge respirator (NIOSH / OSHA), solvent resistant gloves and safety eye protection designed to guard against liquid splashes. Use approved bonding and grounding procedures when transferring to another container. Close all containers tightly after use. Do not eat, drink or smoke in work areas.
Clean-up: Eliminate sources of ignition. Dike to reduce extent of spill. Remove with inert absorbent (vermiculite, clay, Oil-Dry®, Kitty Litter, etc.) using non-sparking tools. Transfer to a grounded metal container, seal container. Dispose of as hazardous waste.
Material Appearance: White, Blue, Green, Red, Black or Yellow
Material Physical Appearance: Liquid
Other Precautions: Vapors are heavier than air and may travel along floors. Material has an offensive odor. Prolonged exposure may reduce the user's sensitivity to the odor, thus reducing the effectiveness of odor as a warning against exposure.
Fire Fighting: Flammable liquid, refer to Guide 127 of the North American Emergency Guide Book. Forms explosive mixture with air, vapors are heavier than air and may travel to a source of ignition and flash back.
NFPA Flammability: I C
Akzo Nobel Coatings Inc. has no oversight with respect to the guidance practices or policies or manufacturing processes of other companies handling or using this material. The information given in this MSDS is only related to the product as shipped in its original condition as described in Section 2, "Hazardous Ingredients" and Section 9 "Physical and Chemical Properties".

These products are considered hazardous under the Federal OSHA Hazard Communication Standard

Section 2 - Hazardous Ingredients

Hazardous Ingredient	Percent weight	CAS No.	Vapor Press.	ACGIH TLV	OSHA PEL	LD_{50} Oral	LD_{50} Derm	LC_{50} Inhal.	LEL
Colorbuild 2.1/2.8 contains the following:									
Talc	5-10%	14807-96-6	n.ap	2mg/m^3	2mg/m^3	n.av.	n.av.	n.av.	n.ap
Zinc Phosphate *(SARA 313)*	7.8%	7790-90-0	n.ap	n.av.	n.av.	n.av.	n.av.	n.av.	n.ap
Calcium Carbonate	10-20%	471-34-1	n.ap	10mg/m^3	15mg/m^3	n.av.	n.av.	n.av.	n.ap
Ethylbenzene *(SARA 313)*	0.2%	100-41-4	7.1	100ppm	100ppm	3500	15486	n. av.	1.0
Tert-butyl Alcohol*(SARA313)*	3.5%	75-65-0	40.0	100ppm	100ppm	n. av.	n. av.	n. av.	n.ap
Butanol*(SARA313)*	1.5%	71-36-3	5.5	n. av.	100ppm	790	3400	8000	1.7
p-Chlorobenzotrifluoride	30-40%	98-56-6	5.3	n. av.	n. av.	6800	2700	4479	6.2
Quartz Crystalline Silica *(P65)*	0.05%	14808-60-7	n. ap.	.1mg/m^3	.1mg/m^3	n. av.	n. av.	n. av.	n.ap
Yellow 2.1/2.8 also includes:									
Ethyl Acetate	1-5%	141-78-6	76.0	400ppm	400ppm	5620	18031	1600	2.2
Kaolin	1-5%	1332-58-7	n. ap	10mg/m^3	15mg/m^3	n. av.	n. av.	n. av.	n.ap
Red 2.1/2.8 also includes:									
Monoazo Barium Salt *(SARA313)*	3.7%	000	n. ap.	6mg/m^3	n. av.	>5000	none	none	n.ap
Black 2.1/2.8 also includes:									
Carbon Black *(P65)*	0.8%	1333-86-4	n. ap.	3.5mg/m^3	3.5mg/m^3	n. av.	n. av.	n. av.	n.ap
White 2.1/2.8 also includes:									
Titanium Dioxide	10-20%	13463-67-7	n. ap.	10mg/m^3	10mg/m^3	n. av.	n. av.	n. av.	n.ap
Kaolin	1-5%	1332-58-7	n. ap	10mg/m^3	15mg/m^3	n. av.	n. av.	n. av.	n.ap
Green 2.1/2.8 also includes:									
Copper Phthalocyanine Green	1-5%	1328-53-6	n. ap.	1mg/m^3	1mg/m^3	n. av.	n. av.	n. av.	n.ap

LD_{50} Oral - rat mg/m^3, LD_{50} Dermal - rabbit mg/m^3, LC_{50} Inhalation - rat mg/m^3 unless otherwise specified.

Chemicals marked with *(SARA313)* are subject to the requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA); see Section 15 - Regulatory Information. Chemicals marked with *(P65)* are regulated in California by Proposition 65; see Section 15 - Regulatory Information.

Section 3 – Hazards Identification

Primary Routes of Entry: Inhalation, skin contact, ingestion, eyes.
Exposure Effects Acute and Chronic:
Inhalation: Acute: Nasal and respiratory irritation, dizziness, cough, shortness of breath, dehydration, dizziness, weakness, headache, drowsiness, fatigue, nausea, headache, possible unconsciousness, chemical pneumonitis, central nervous system depression and even asphyxiation.
Skin contact: Acute: Extraction of natural oils with resulting dry skin, irritation, redness and dermatitis. Can be absorbed through the skin into the blood.
Eye contact: Acute: Irritation, redness, pain, blurred vision, sensation of seeing halos around lights and reversible damage.
Ingestion: Acute and Chronic: Gastrointestinal irritation, nausea, weakness, fatigue, vomiting and diarrhea; kidney damage, blood system damage.
Chronic: Repeated overexposure to these products may cause central nervous system damage, kidney damage, liver abnormalities, lung damage, cardiac abnormalities, reproductive organ damage, skin sensitization and dermatitis.
Other Health Effects:
Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal. Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage.

Section 4 – First Aid Measures

Emergency and First Aid Procedures: In all cases if symptoms persist, seek medical attention.
Inhalation - move to fresh air, give artificial respiration if necessary.
Skin contact - remove contaminated clothing, wash with soap and water or recognized skin cleaner. Do not use solvents or thinners.
Eye contact - contact lenses must be removed, flush with water for at least 15 minutes, consult a physician immediately.
Ingestion - drink one or two glasses of water to dilute. Do not induce vomiting. Consult a physician or poison control center immediately. Treat symptomatically.
Medical Conditions Prone to Aggravation: pulmonary conditions, liver conditions, kidney conditions, neurological disorders, pregnancy, reproductive system disorders.

AKZO NOBEL

MATERIAL SAFETY DATA SHEET

Autobase Plus Toners

Section 1 - Product Information

Manufacturer: Akzo Nobel Coatings Inc.
5555 Spalding Drive
Norcross, GA 30092
USA

Canadian Supplier: Akzo Nobel Coatings Ltd.
110 Woodbine Downs Blvd.
Unit #4 Etobicoke, Ontario
Canada M9W 5S6

Emergency Telephone: For US transportation emergencies call - Chemtrec: 800-424-9300

For Canadian transportation emergencies call - Canutec: 613-996-6666

Information: 770-246-8454 (USA 7:00am – 3:00pm Eastern Time)

Product Use: color base coat

Item and Color Numbers

Q065 049065	**Q066** 049066	**Q070** 049070	**Q110** 049110	**Q140** 049140	**Q160** 049160
Q190 049190	**Q191** 049191	**Q195** 049195	**Q198** 049198	**Q231** 049231	**Q232** 049232
Q235 049235	**Q239** 049239	**Q271** 049271	**Q279** 049279	**Q325** 046325	**Q326** 049326
Q328 049328	**Q348** 049348	**Q431** 049431	**Q436** 049436	**Q437** 049437	**Q439** 049439
Q452 049452	**Q455** 049455	**Q550** 049550	**Q564** 049564	**Q652** 049652	**Q671** 049671
Q673 049673	**Q678** 049678	**Q724** 049724	**Q725** 049725	**Q726** 049726	**Q766** 049766
Q811B 049811	**Q811E** 049812	**Q811J** 049813	**Q811M** 049814	**Q811P** 049815	**Q811R** 049816
Q811U 049817	**Q843H** 049818	**Q833G** 049819	**Q911M** 049920	**Q914C** 049921	**Q914F** 049922
Q922M 049923	**Q925M** 049924	**Q925N** 049925	**Q933F** 049926	**Q933M** 049927	**Q941F** 049928
Q941M 049929	**Q943M** 049930	**Q951F** 049931	**Q952M** 049932	**Q954H** 049933	**Q954M** 049934
Q954S 049935	**Q964F** 049936	**Q964S** 049937	**Q975S** 049938		

Emergency Overview

Signs of Overexposure: Nausea, cough, dizziness, weakness, headache, chest pain, lack of coordination, shortness of breath, dermatitis, redness and/or pain in eyes.

Emergency First Aid: Move to fresh air, remove contaminated clothing, wash effected skin with soap and water, do not use solvents or thinners; if product gets into eyes, remove contact lenses, flush with water for 15 minutes.

Handling: When handling wear an organic vapor cartridge respirator (NIOSH / OSHA), solvent resistant gloves and safety eye protection designed to guard against liquid splashes. Use approved bonding and grounding procedures when transferring to another container. Close all containers tightly after use. Do not eat, drink or smoke in work areas.

Clean-up: Eliminate sources of ignition. Dike to reduce extent of spill. Remove with inert absorbent (vermiculite, clay, Oil-Dry®, Kitty Litter, etc.) using non-sparking tools. Transfer to a grounded metal container, seal container. Dispose of as hazardous waste.

Material Appearance: Colored

Material Physical Appearance: Liquid

Other Precautions: Vapors are heavier than air and may travel along floors. Material has an offensive odor. Prolonged exposure may reduce the user's sensitivity to the odor, thus reducing the effectiveness of odor as a warning against exposure. **Fire Fighting**: Flammable liquid, refer to Guide 127 of the North American Emergency Guide Book. Forms explosive mixture with air, vapors are heavier than air and may travel to a source of ignition and flash back.

NFPA Flammability: 1B or 1C

Akzo Nobel Coatings Inc. has no oversight with respect to the guidance practices or policies or manufacturing processes of other companies handling or using this material. The information given in this MSDS is only related to the product as shipped in its original condition as described in Section 2, "Hazardous Ingredients" and Section 9 "Physical and Chemical Properties"

These products are considered hazardous under the Federal OSHA Hazard Communication Standard

Section 2 - Hazardous Ingredients

Hazardous Ingredient	Percent weight	CAS No.	Vapor Press.	ACGIH TLV	OSHA PEL	LD_{50} Oral	LD_{50} Derm	LC_{50} Inhal	LEL
Q065 Connector contains:									
Xylene-mixed isomers *(SARA313)*	13.8%	1330-20-7	5.1	100ppm	100ppm	4300	>1700	5000	1.0
Ethylbenzene *(SARA313)*	3.9%	100-41-4	7.1	100ppm	100ppm	3500	15486	n. av.	1.0
Propylene Glycol Methyl Ether Acetate	1-5%	108-65-6	3.4	100ppm	n. av.	8532	5000	n. av.	1.5
Butanol *(SARA313)*	3.2%	71-36-3	5.5	n. av.	100ppm	790	3400	8000	1.7
Aromatic Solvent	1-5%	000	n. av.	100ppm	n. av.	n. av	n. av.	n. av.	n. av
Isopropanol	1-5%	67-63-0	32.8	400ppm	400ppm	5045	12800	16000	2.3
Cellulose Acetate Butyrate	5-10%	9004-36-8	n. ap.	n. av.	n. av.	n. av.	n. av.	n. av.	n.ap
Propylene Glycol Methyl Ether	1-5%	107-98-2	12.5	100ppm	n. av.	5660	13000	10000	n.av
Butyl Acetate	45-50%	123-86-4	8.0	150ppm	150ppm	10768	17600	2000	1.7
Toluene*(SARA313)(P65)*	0.04%	108-88-3	22.0	50ppm	200ppm	636	12305	8000	1.1
All toners contain the following:									
Butyl Acetate	20-45%	123-86-4	8.0	150ppm	150ppm	10768	17600	2000	1.7
Propylene Glycol Methyl Ether Acetate	1-20%	108-65-6	3.4	100ppm	n. av.	8532	5000	n. av.	1.5
Acrylic Resin	1-15%	000	n. ap.	n. av.	n. av.	n. av.	n. av.	n. av.	n.ap
Propylene Glycol Methyl Ether	1-15%	107-98-2	12.5	100ppm	n. av.	5660	13000	10000	n.av
Xylene-mixed isomers *(SARA313)*	5-15%	1330-20-7	5.1	100ppm	100ppm	4300	>1700	5000	1.0
Butanol *(SARA313)*	1-20%	71-36-3	5.5	n. av.	100ppm	790	3400	8000	1.7
Cellulose Acetate Butyrate	1-10%	9004-36-8	n. ap.	n. av.	n. av.	n. av.	n. av.	n. av.	n.ap
Ethylbenzene *(SARA313)*	1-5%	100-41-4	7.1	100ppm	100ppm	3500	15486	n. av.	1.0
Diacetone Alcohol	1-5%	123-42-2	0.9	50ppm	50ppm	4000	13500	n.av.	1.8
Toluene*(SARA313)(P65)*	<0.75%	108-88-3	22.0	50ppm	200ppm	636	12305	8000	1.1
Q070 also contains:									
Isopropanol	10-15%	67-63-0	32.8	400 ppm	400 ppm	5045	12800	12000	2.3
Q110 and Q195 also contain:									
Aromatic Solvent	1-5%	000	n. av.	100ppm	n. av.	n. av.	n. av.	n. av.	n. av
Amorphous Silica	1-5%	112926-00-8	n.ap	10mg/m^3	20mg/m^3	n. av.	n. av.	n. av.	n.ap
Alumina Trihydrozide	1-5%	21645-51-2	n.ap	2mg/m^3	n. av.	n. av.	n. av.	n. av.	n.ap
Titanium Dioxide	5-25%	13463-67-7	n.ap	10mg/m^3	10mg/m^3	n.av.	n.av.	n.av.	n.ap
Q140 also contains:									
Isopropanol	1-5%	67-63-0	32.8	400 ppm	400 ppm	5045	12800	12000	2.3
2-butoxyethanol *(SARA313)*	2.53%	111-76-2	0.4	20S	50S	470	220	450	1.1
Carbon Black*(P65)*	1-5%	1333-86-4	n.ap	3.5mg/m^3	3.5mg/m^3	n.av.	n.av.	n.av.	n.ap
Q160 also contains:									
Carbon Black*(P65)*	1-5%	1333-86-4	n.ap	3.5mg/m^3	3.5mg/m^3	n.av.	n.av.	n.av.	n.ap
Q190 and Q191 also contain:									
Amorphous Silica	1-10%	112926-00-8	n.ap	10mg/m^3	20mg/m^3	n. av.	n. av.	n. av.	n.ap
Q198 also contains:									
Graphite	5-10%	7782-42-5	n.ap	2mg/m^3	5mg/m^3	>2000	n.av.	n.av.	n.ap
Q231, Q271, Q452 and Q726 also contain:									
2-butoxyethanol *(SARA313)*	1-5%	111-76-2	0.4	20S	50S	470	220	450	1.1
Q239 also contains:									
Iron Oxide	1-5%	1317-61-9	n.ap	10mg/m^3	10mg/m^3	n.av.	n.av.	n.av.	n.ap
Q326 also contains:									
2-butoxyethanol *(SARA313)*	1.26%	111-76-2	0.4	20S	50S	470	220	450	1.1
Azo Pigment	10-15%	000	n.ap	n.av.	n.av.	>2000	n.av.	n.av.	n.ap
Q328, Q833G, Q922M, Q933F, Q933M, Q943M Q952M also contain:									
Iron Oxide	1-15%	1309-37-1	n.ap	5mg/m^3	10mg/m^3	n.av.	n.av.	n.av.	n.ap
Q431 also contains:									
2-butoxyethanol *(SARA313)*	1.15%	111-76-2	0.4	20S	50S	470	220	450	1.1
Melamine	1-5%	108-78-1	n.ap	n.av.	n.av.	3161	>1000	3248	n.ap
Q439 also contains:									
2-butoxyethanol *(SARA313)*	2.30%	111-76-2	0.4	20S	50S	470	220	450	1.1
Q455 also contains:									
Bismuth Vanadate	15-20%	14059-33-7	n.ap	05mg/m^3	5mg/m^3	n.av.	n.av.	n.av.	n.ap
Q550, Q564, Q652, Q671 also contains:									
Cu Phthalocyanine	5-15%	000	n.ap	1mg/m^3	1mg/m^3	n.av.	n.av.	n.av.	n.ap
Q673 also contains:									
2-butoxyethanol *(SARA313)*	1.20%	111-76-2	0.4	20S	50S	470	220	450	1.1

AKZO NOBEL

MATERIAL SAFETY DATA SHEET

Clear Coatings

Section 1 - Product Information

Manufacturer: Akzo Nobel Coatings Inc.
5555 Spalding Drive
Norcross, GA 30092
USA

Canadian Supplier: Akzo Nobel Coatings Ltd.
110 Woodbine Downs Blvd.
Unit #4 Etobicoke, Ontario
Canada M9W 5S6

Emergency Telephone: For US transportation emergencies call - Chemtrec: 800-424-9300

For Canadian transportation emergencies call - Canutec: 613-996-6666

Information: 770-246-8454 (USA 7:00am – 4:00pm Eastern Time)

Product Use: clear coat

Item Numbers (US & Canadian):
Autoclear II LV 001158
Autoclear LV Mat 001356

Autocoat LV Clear High Solids 001192 - NA

Emergency Overview

Signs of Overexposure: Nausea, cough, dizziness, weakness, headache, chest pain, lack of coordination, shortness of breath, dermatitis, redness and/or pain in eyes.
Emergency First Aid: Move to fresh, remove contaminated clothing, wash effected skin with soap and water, do not use solvents or thinners; if product gets into eyes, remove contact lenses, flush with water for 15 minutes.
Handling: When handling wear an organic vapor cartridge respirator (NIOSH / OSHA), solvent resistant gloves and safety eye protection designed to guard against liquid splashes. Use approved bonding and grounding procedures when transferring to another container. Close all containers tightly after use. Do not eat, drink or smoke in work areas.
Clean-up: Eliminate sources of ignition. Dike to reduce extent of spill. Remove with inert absorbent (vermiculite, clay, Oil-Dry®, Kitty Litter, etc.) using non-sparking tools. Transfer to a grounded metal container, seal container. Dispose of as hazardous waste.
Material Appearance: Clear
Material Physical Appearance: Liquid
Other Precautions: Vapors are heavier than air and may travel along floors. Material has an offensive odor. Prolonged exposure may reduce the user's sensitivity to the odor, thus reducing the effectiveness of odor as a warning against exposure.
Fire Fighting: Flammable liquid, refer to Guide 127 of the North American Emergency Guide Book.
NFPA Flammability: IC
Akzo Nobel Coatings Inc. has no oversight with respect to the guidance practices or policies or manufacturing processes of other companies handling or using this material. The information given in this MSDS is only related to the product as shipped in its original condition as described in Section 2, "Hazardous Ingredients" and Section 9 "Physical and Chemical Properties".

These products are considered hazardous under the Federal OSHA Hazard Communication Standard

Section 2 - Hazardous Ingredients

Hazardous Ingredient	% by weight	CAS No.	Vapor Press.	ACGIH TLV	OSHA PEL	LD_{50} Oral	LD_{50} Derm	LC_{50} Inhal.	LEL
Autocoat LV Clear High Solids contains:									
Aromatic Solvent	1-5%	000	n. av.	100ppm	n. av.	n. av.	n. av.	n. av.	n. av
1,2,4 Trimethylbenzene *(SARA313)*	1.0%	95-63-6	1.7	25ppm	25ppm	5000	n. av.	18000	n.av
Benzotriazole Complex	1-5%	25973-55-1	n. ap.	n. av.	n. av.	7750	1100	0.4mg/l	n.ap
Butyl Acetate	20-40%	123-86-4	8.0	150ppm	150ppm	10768	17600	2000	1.7
Ethyl Amyl Ketone	1-5%	541-85-5	2.0	25ppm	25ppm	3500	16000	n. av.	n. av
Methyl Amyl Ketone	5-10%	110-43-0	2.1	50ppm	100ppm	1670	10286	2000	1.1
Propylene Glycol Methyl Ether Acetate	1-5%	108-65-6	3.4	100ppm	n. av.	8532	5000	n. av.	n.av
Toluene*(SARA313)(P65)*	0.3%	108-88-3	22.0	50ppm	200ppm	636	12305	8000	1.1
Ethylbenzene*(SARA313)*	0.5%	100-41-4	7.1	100ppm	100ppm	3500	15486	n. av.	1.0
Xylene-mixed isomers*(SARA313)*	2.1%	1330-20-7	5.1	100ppm	100ppm	4300	>1700	5000	1.0
Autoclear LV Mat contains:									
Aromatic Solvent	5-10%	000	n. av.	100ppm	n. av.	n. av.	n. av.	n. av.	n. av
Amorphous Silica	1-5%	112926-00-8	n. ap.	10mg/m^3	6mg/m^3	3160	n. av.	n. av.	n.ap
Benzotriazole Complex	1-5%	25973-55-1	n. ap.	n. av.	n. av.	7750	1100	0.4mg/l	n.ap
Butyl Acetate	10-20%	123-86-4	8.0	150ppm	150ppm	10768	17600	2000	1.7
Ethyl Amyl Ketone	1-5%	541-85-5	2.0	25ppm	25ppm	3500	16000	n. av.	n. av
Methyl Amyl Ketone	10-20%	110-43-0	2.1	50ppm	100ppm	1670	10286	2000	1.1
Propylene Glycol Methyl Ether Acetate	1-5%	108-65-6	3.4	100ppm	n. av.	8532	5000	n. av.	n.av
Ethylbenzene*(SARA313)*	0.5%	100-41-4	7.1	100ppm	100ppm	3500	15486	n. av.	1.0
Xylene-mixed isomers*(SARA313)*	2.1%	1330-20-7	5.1	100ppm	100ppm	4300	>1700	5000	1.0
Synthetic Amorphous Silica	10-20%	63231-67-4	n. ap.	10mg/m^3	6mg/m^3	31600	2000	n. av.	n.ap
Toluene*(SARA313)(P65)*	1.3%	108-88-3	22.0	50ppm	100ppm	5000	14000	4000	1.2
Autoclear II LV contains:									
Benzotriazole Complex	1-5%	25973-55-1	n. ap.	n. av.	n. av.	7750	1100	0.4mg/l	n.ap
Aromatic Solvent	1-5%	000	n. av.	100ppm	n. av.	n. av.	n. av.	n. av.	n. av
Butyl Acetate	5-10%	123-86-4	8.0	150ppm	150ppm	10768	17600	2000	1.7
1,2,4 Trimethylbenzene *(SARA313)*	1.5%	95-63-6	1.7	25ppm	25ppm	5000	n. av.	18000	n.av
Propylene Glycol Methyl Ether Acetate	1-5%	108-65-6	3.4	100ppm	n. av.	8532	5000	n. av.	n.av
p-Chlorobenzotrifluoride	40-50%	98-56-6	5.3	n. av.	n. av.	n. av.	n. av.	n. av.	n. av.
Xylene-mixed isomers*(SARA313)*	1.7%	1330-20-7	5.1	100ppm	100ppm	4300	>1700	5000	1.0
Ethylbenzene*(SARA313)*	0.4%	100-41-4	7.1	100ppm	100ppm	3500	15486	n. av.	1.0

LD_{50} Oral - rat mg/m^3, LD_{50} Dermal - rabbit mg/m^3, LC_{50} Inhalation - rat mg/m^3 unless otherwise specified.

Chemicals marked with *(SARA313)* are subject to the requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA); see Section 15 - Regulatory Information. Chemicals marked with *(P65)* are regulated in California by Proposition 65; see Section 15 - Regulatory Information.

Section 3 – Hazards Identification

Primary Routes of Entry: Inhalation, skin contact, ingestion, eyes.
Exposure Effects Acute and Chronic:
Inhalation: Acute: Nasal and respiratory irritation, nausea, cough, shortness of breath, dehydration, dizziness, weakness, headache, drowsiness, fatigue, chest pain, vomiting, central nervous system effects, asphyxiation.
Skin contact: Acute: Extraction of natural oils with resulting dry skin, irritation, redness and dermatitis. Can be absorbed through the skin into the blood causing drowsiness.
Eye contact: Acute: Irritation, redness, pain, blurred vision, sensation of seeing halos around lights and reversible damage.
Ingestion: Acute: Gastrointestinal irritation, nausea, vomiting, diarrhea, weakness, drowsiness, fatigue, lack of coordination, central nervous system effects, depression.
Chronic: Repeated overexposure to this product may cause central nervous system damage, kidney damage, liver abnormalities, lung damage, cardiac abnormalities, reproductive organ damage, eye damage.
Other Health Effects:
Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal. Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage.

Section 4 – First Aid Measures

Emergency and First Aid Procedures: In all cases if symptoms persist, seek medical attention.

MSDSs for Murphy Coatings

SECTION I - PRODUCT: CARBOZINC 11 HS BASE (0249A1NL)
Date: 11/08/99 Replaces 09/14/99
(aka CARBO ZINC 11 HS BASE)
CHEMTREC TRANSPORTATION EMERGENCY PHONE NO.: 800-424-9300
PITTSBURGH POISON CONTROL CENTER HEALTH EMERGENCY NO.: 412-681-6669

SECTION II - HAZARDOUS INGREDIENTS EXPOSURE LIMITS

CHEMICAL NAME	(A)	(B)	(C)	(D)	(E)
ALKYL SILICATE	P89-882	40%	NE	NE	NE
ETHYL ALCOHOL	64-17-5	25%	1000 PPM	NE	NE
PM SOLVENT	107-98-2	10%	100 PPM	150 PPM	NE
MICA	12001-26-2	5%	3MG/M3	NE	NE
COLOR PIGMENT	MIXTURE	5%	3.5MG/M3	NE	NE
METHYL SILICATE	681-84-5	1%	1PPM	NE	NE

HAZARDOUS INGREDIENTS ADDITIONAL DATA

CHEMICAL NAME	(F)	(G)
ALKYL SILICATE	NOT AVAILABLE	NO/NO
ETHYL ALCOHOL	7060MG/KG RAT,ORAL 20000PPM/10HRS RAT,INHALATION	NO/NO/1,2,3
PM SOLVENT	>5180 MG/KG, ORAL, RAT 10000 PPM/4HRS RAT,INHALATION	NO/YES/1,2,3
MICA	NOT AVAILABLE	NO/NO
COLOR PIGMENT	NOT AVAILABLE	NO/YES
METHYL SILICATE	NOT AVAILABLE	NO/NO

TABLE (A) CAS NUMBER (B) LESS THAN WT (C) TLV-TWA (D) STEL (E) CEILING (F) TOXICITY DATA (LD50/Route,LC50/Route) (G) SARA 302/SARA 313/ SARA 311-312 CATEGORIES/CERCLA. NE = not established, NR = not required, NO = no. Color Pigment Mixture may contain Iron Oxides, Titanium Dioxide, Carbon Black, and other particulates not otherwise regulated in varying amounts depending on color of product.

WHMIS CLASSIFICATION: B2 -- D2B
HMIS/NFPA CLASSIFICATION: HEALTH 3, FLAMMABILITY 3, REACTIVITY 1, PERSONAL PROTECTION CODE G, NFPA FIRE FIGHTING PHASE 4

SECTION III - PHYSICAL DATA:

BOILING RANGE: 173F(78C)-248F(120C). VAPOR DENSITY: Heavier than air. EVAPORATION RATE: Slower than ether. VOLATILE BY WEIGHT 40 %. VOLATILE BY VOLUME: 66 %. PRODUCT WT/GAL: 10.6 LBS/U.S.GAL. 1.27 sp gr.

SECTION IV - FIRE AND EXPLOSION HAZARD DATA:

FLAMMABILITY CLASSIFICATION: FLASH POINT: 55 F(12C) (Setaflash) LEL 1.8 % UEL 19.0 %.
OSHA-FLAMMABLE LIQUID/OSHA/CLASS/1B, DOT-FLAMMABLE LIQUID NOS*,3,UN1993,PGII,
CANADIAN TDGA: FLAMMABLE LIQUID NOS* 3,UN1993,PGII
EXTINGUISHING MEDIA: Dry Chemical, Foam, Carbon Dioxide, Water Fog.
FIRE AND EXPLOSION HAZARDS: Vapors are heavier than air and will accumulate.

PRODUCT: CARBOZINC 11 HS BASE (0249A1NL)
Date: 11/08/99 Replaces 09/14/99

Vapors will form explosive concentrations with air. Vapors travel long distances and will flashback. Use mechanical ventilation when necessary to keep percent vapor below the "Lower Explosion Level" (LEL). Eliminate all ignition sources. Keep away from sparks, open flames and heat sources. All electric equipment and installations should be made and grounded in accordance with the National Electrical Code. In areas where explosion hazards exist, workers should be required to use nonferrous tools and to wear conductive and non-sparking shoes.
SPECIAL FIRE FIGHTING PROCEDURES: Evacuate hazard area of unprotected personnel. Use a NIOSH approved self-contained breathing unit and complete body protection. Cool surrounding containers with water in case of fire exposure.

SECTION V - HEALTH HAZARD DATA:

INHALATION: Harmful if inhaled, may affect the brain or nervous system, causing dizziness, headache or nausea. May cause nose and throat irritation.
CONTACT: May be harmful if absorbed through the skin. May cause eye irritation. May cause skin irritation.
NOTICE: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage.
MEDICAL CONDITIONS PRONE TO AGGRAVATION BY EXPOSURE: If you have a condition that could be aggravated by exposure to dust or organic vapors see a physician prior to use.
PRIMARY ROUTE(S) OF ENTRY: Inhalation, Dermal, Ingestion.
EMERGENCY FIRST AID PROCEDURES: When exposed always get medical attention.
EYE CONTACT: Flush with water for 15 minutes.
SKIN CONTACT: Wash with soap and water. Remove contaminated clothing and clean before reuse.
INHALATION: Remove to fresh air. Provide oxygen if breathing is difficult. Use artificial respiration if not breathing. Get medical attention.
IF SWALLOWED: DO NOT INDUCE VOMITING!! Always get medical attention.

SECTION VI - REACTIVITY DATA:

STABILITY: This product is stable under normal storage conditions.
HAZARDOUS POLYMERIZATION: Will not occur under normal conditions.
HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, nitrogen oxides, and unidentified organic compounds. Consider all smoke and fumes from burning material as very hazardous. Welding, cutting or abrasive grinding can create smoke and fumes. Do not breathe any fumes or smoke from these operations.
CONDITIONS TO AVOID: Heat, sparks, and open flames.
INCOMPATIBILITY: Avoid contact with strong oxidizing agents.

SECTION VII - SPILL OR LEAK PROCEDURES:

STEPS TO BE TAKEN IN CASE OF SPILL: Eliminate all ignition sources. Handling equipment must be grounded to prevent sparking. Evacuate the area of unprotected personnel. Wear appropriate personal protection clothing and

equipment. Follow safe handling and use guidelines in Section VIII. Contain and soak up residual with an absorbent (clay or sand). Take up absorbent material and seal tightly for proper disposal. Dispose of in accordance with local, state and federal regulations. Refer to Section II for Sara Title III and CERCLA information.

SECTION VIII - SAFE HANDLING AND USE INFORMATION:

RESPIRATORY PROTECTION: Use only with ventilation to keep levels below exposure guidelines. (Section II). User should test and monitor exposure levels to insure all personnel are below guidelines. If not sure or if not able to monitor use MSHA/NIOSH approved supplied air respirator. Follow all current OSHA requirements for respirator use.
VENTILATION: Use explosion-proof ventilation when required to keep below health exposure guidelines and Lower Explosion Limit (LEL).
SKIN AND EYE PROTECTION: Recommend impervious gloves, clothing and safety glasses with side shields or chemical goggles to avoid skin and eye contact. If material penetrates to skin, change gloves and clothing. Hypersensitive persons should wear gloves or use protective cream.
HYGIENIC PRACTICES: Wash with soap and water before eating, drinking, applying cosmetics, or using toilet facilities. Use of a hand cleaner is recommended. Launder contaminated clothing before reuse. Leather shoes can absorb and pass through hazardous materials. Check shoes carefully after soaking before reuse.
APPLICATION: Use only in accordance with Carboline application instructions, container label and Product Data Sheet.

SECTION IX - SPECIAL PRECAUTIONS:

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Keep away from heat, sparks, open flame, and strong oxidizing agents. Keep containers closed. Store in cool, dry place with adequate ventilation. If pouring or transferring materials, ground all containers and tools.
OTHER PRECAUTIONS: Do not weld, heat, cut or drill on full or empty containers.

The information contained herein is, to the best of our knowledge and belief accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by use of this material. It is the responsibility of the user to comply with all applicable federal, state, and local laws and regulations.

Carboline Company 350 Hanley Ind. Ct. St. Louis, MO 63144
PHONE NO. 314-644-1000 FOR INDUSTRIAL USE ONLY

CARBOLINE CO. MATERIAL SAFETY DATA SHEET
PRODUCT: CARBOZINC 11 HS BASE (0249A1NL)
Date: 11/08/99 Replaces 09/14/99

SPECIFIC STATE REGULATORY INFORMATION

NEW JERSEY
PENNSYLVANIA
Non-Hazardous Materials above 1 Percent:

Name	CAS	Pct
SILICA AMORPHOUS	NE	25%

CALIFORNIA

WARNING: This product contains a chemical(s) known to the State of California to cause cancer, and birth defects or other reproductive harm.

SECTION I - PRODUCT: ZINC FILLER (0231B1NL)
Date: 07/09/99 Replaces 02/24/99

CHEMTREC TRANSPORTATION EMERGENCY PHONE NO.: 800-424-9300
PITTSBURGH POISON CONTROL CENTER HEALTH EMERGENCY NO.: 412-681-6669

SECTION II - HAZARDOUS INGREDIENTS EXPOSURE LIMITS

CHEMICAL NAME	(A)	(B)	(C)	(D)	(E)
ZINC DUST	7440-66-6	100%	10MG/M3	15MG/M3	NE
LEAD	7439-92-1	0.20%	.05MG/M3	.05MG/M3	NE

CHEMICAL NAME	HAZARDOUS INGREDIENTS (F)	ADDITIONAL DATA (G)
ZINC DUST	NOT AVAILABLE	NO/YES/2,5/ 1000#
LEAD	NOT AVAILABLE	NO/YES/2

TABLE (A) CAS NUMBER (B) LESS THAN WT (C) TLV-TWA (D) STEL (E) CEILING (F) TOXICITY DATA (LD50/Route,LC50/Route) (G) SARA 302/SARA 313/ SARA 311-312 CATEGORIES/CERCLA. NE = not established, NR = not required, NO = no. Color Pigment Mixture may contain Iron Oxides, Titanium Dioxide, Carbon Black, and other particulates not otherwise regulated in varying amounts depending on color of product.

WHMIS CLASSIFICATION: D2A -- D2B -- F
HMIS/NFPA CLASSIFICATION: HEALTH 3, FLAMMABILITY 0, REACTIVITY 0, PERSONAL PROTECTION CODE E, NFPA FIRE FIGHTING PHASE 4

SECTION III - PHYSICAL DATA:

BOILING RANGE: N/A. VAPOR DENSITY: N/A EVAPORATION RATE: N/A VOLATILE BY WEIGHT 0 %. VOLATILE BY VOLUME: 0 %. PRODUCT WT/GAL: 58.5 LBS/U.S.GAL. 7.03 sp gr.

SECTION IV - FIRE AND EXPLOSION HAZARD DATA:

FLAMMABILITY CLASSIFICATION: FLASH POINT: No Flash Point. LEL: N/A UEL: N/A
OSHA-, DOT-ZINC FILLER, NOT REGULATED, CANADIAN TDGA: ZINC DUST UN1436 4.3 PGII (DANGEROUS WHEN WET)(DECLASSIFICATION REQUESTED)
NON REGULATED POWDER: The product has been tested and shown to fall well below the level of gas emission when exposed to water (49CFR PART 173 E,4) and is therefore not a regulated product and is not defined as dangerous when wet. Product is packed in steel or plastic water tight containers.
EXTINGUISHING MEDIA: Dry Chemical, Carbon Dioxide, Since material is packed in water tight containers water may be used to cool containers.
UNUSUAL FIRE AND EXPLOSION HAZARDS: Recent testing has shown that this type of zinc powder evolves only a small amount of hydrogen gas when in contact with moisture or water. Also with the material packed in small containers that are water proof only broken or opened containers will have exposed powder. Contact with alkalis, or acids should be avoided because the

reaction will liberate sufficent quanitites of hydrogen gas and may explode on contact with oxidizing agents such as sulfur and oxygen or strong oxidizers.
SPECIAL FIRE FIGHTING PROCEDURES: Evacuate hazard area. Wear protective clothing. Use a NIOSH approved self-contained breathing unit. Cover all open zinc dust containers. Do not spread out material. Water can react with hot zinc dust to form hydrogen gas.

SECTION V - HEALTH HAZARD DATA:

INHALATION: Overexposure will be irritating to mucous membranes.
CONTACT: May cause eye irritation. May cause skin irritation.
NOTICE: Contains LEAD which may cause blood disorders and lead poisoning.
MEDICAL CONDITIONS PRONE TO AGGRAVATION BY EXPOSURE: If you have a condition that could be aggravated by exposure to dust or organic vapors see a physician prior to use.
PRIMARY ROUTE(S) OF ENTRY: Inhalation, Dermal, Ingestion.
EMERGENCY FIRST AID PROCEDURES: When exposed always get medical attention.
EYE CONTACT: Flush with water for 15 minutes.
SKIN CONTACT: Wash with soap and water. Remove contaminated clothing and clean before reuse.
INHALATION: Remove to fresh air. Provide oxygen if breathing is difficult. Use artificial respiration if not breathing. Get medical attention.
IF SWALLOWED: DO NOT INDUCE VOMITING!! Always get medical attention.

SECTION VI - REACTIVITY DATA:

STABILITY: This product is stable under normal storage conditions.
HAZARDOUS POLYMERIZATION: Will not occur under normal conditions.
HAZARDOUS DECOMPOSITION PRODUCT: Under fire conditions hot zinc dust that is exposed to water could generate Hydrogen gas. When welding, heating or torch cutting surfaces coated with a zinc coating Zinc Oxide Fume can be produced and could cause "metal fume fever". Use exhaust systems and proper breathing protection to avoid breathing the fumes resulting from these conditions.
CONDITIONS TO AVOID: Avoid water contact with opened zinc powder containers.
INCOMPATIBILITY: Avoid contact with strong oxidizing agents either acids or bases.

SECTION VII - SPILL OR LEAK PROCEDURES:

STEPS TO BE TAKEN IN CASE OF SPILL: Use dry cleanup methods that do not disperse dust into the air. Avoid breathing the dust. take up the material and seal tightly for proper disposal.

SECTION VIII - SAFE HANDLING AND USE INFORMATION:

RESPIRATORY PROTECTION: Use only with ventilation to keep levels below exposure guidelines. (Section II). User should test and monitor exposure levels to insure all personnel are below guidelines. If not sure or if not

able to monitor use MSHA/NIOSH approved supplied air respirator.
VENTILATION: Use explosion-proof ventilation when required to keep below health exposure guidelines and Lower Explosion Limit (LEL).
SKIN AND EYE PROTECTION: Recommend impervious gloves, clothing and safety glasses with side shields or chemical goggles to avoid skin and eye contact. If material penetrates to skin, change gloves and clothing.
HYGIENIC PRACTICES: Wash with soap and water before eating, drinking, applying cosmetics, or using toilet facilities. Use of a hand cleaner is recommended. Launder contaminated clothing before reuse. Leather shoes can absorb and pass through hazardous materials. Check shoes carefully after soaking before reuse.

SECTION IX - SPECIAL PRECAUTIONS:

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Keep away from heat, sparks, open flame, and strong oxidizing agents. Keep containers closed. Store in cool, dry place with adequate ventilation. If pouring or transferring materials, ground all containers and tools.
OTHER PRECAUTIONS: Do not weld, heat, cut or drill on full or empty containers.

The information contained herein is, to the best of our knowledge and belief accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by use of this material. It is the responsibility of the user to comply with all applicable federal, state, and local laws and regulations.

Carboline Company 350 Hanley Ind. Ct. St. Louis, MO 63144
PHONE NO. 314-644-1000 FOR INDUSTRIAL USE ONLY

SPECIFIC STATE REGULATORY INFORMATION

NEW JERSEY
PENNSYLVANIA
Non-Hazardous Materials above 1 Percent:

Name	CAS	Pct
No materials meet this criteria		

CALIFORNIA

WARNING: This product contains a chemical(s) known to the State of California to cause cancer, and birth defects or other reproductive harm.

SECTION I - PRODUCT: CARBOZINC HS ACTIVATOR (0249C1NL)
Date: 07/17/95 Replaces 03/22/94

CHEMTREC TRANSPORTATION EMERGENCY PHONE NO.: 800-424-9300
PITTSBURGH POISON CONTROL CENTER HEALTH EMERGENCY NO.: 412-681-6669

SECTION II - HAZARDOUS INGREDIENTS EXPOSURE LIMITS

CHEMICAL NAME	(A)	(B)	(C)	(D)	(E)
PM SOLVENT	107-98-2	90%	100 PPM	150 PPM	NE
N-BUTANOL	71-36-3	10%	NE	50PPM/SKIN	NE
ZINC CHLORIDE	7646-85-7	5%	NE	NE	NE
TITANATE	5593-70-4	5%	NE	NE	NE

HAZARDOUS INGREDIENTS CHEMICAL NAME	ADDITIONAL DATA (F)	(G)
PM SOLVENT	15000 PPM/4HRS RAT,INHALATION	NO/NO/1,2,3
N-BUTANOL	2500MG/KG RAT,ORAL	NO/YES/1,2,3/
	>800PPM/4HRS RAT,INHALATION	5000#/U140
ZINC CHLORIDE	NOT AVAILABLE	NO/NO
TITANATE	NOT AVAILABLE	NO/NO

TABLE (A) CAS NUMBER (B) LESS THAN WT (C) TLV-TWA (D) STEL (E) CEILING (F) TOXICITY DATA (LD50/Route,LC50/Route) (G) SARA 302/SARA 313/ SARA 311-312 CATEGORIES/CERCLA. NE = not established, NR = not required, NO = no. Color Pigment Mixture may contain Iron Oxides, Titanium Dioxide, Carbon Black, and other particulates not otherwise regulated in varying amounts depending on color of product.

WHMIS CLASSIFICATION: B2 -- D2B
HMIS/NFPA CLASSIFICATION: HEALTH 3, FLAMMABILITY 3, REACTIVITY 1, PERSONAL PROTECTION CODE G, NFPA FIRE FIGHTING PHASE 4

SECTION III - PHYSICAL DATA:

BOILING RANGE: 243F(117C)-248F(120C). VAPOR DENSITY: Heavier than air. EVAPORATION RATE: Slower than ether. VOLATILE BY WEIGHT 95 %. VOLATILE BY VOLUME: 99 %. PRODUCT WT/GAL: 7.8 LBS/U.S.GAL. 0.94 sp gr.

SECTION IV - FIRE AND EXPLOSION HAZARD DATA:

FLAMMABILITY CLASSIFICATION: FLASH POINT: 91 F(32C) (Setaflash) LEL 1.4 % UEL 13.8 %.
OSHA-PAINT/FLAMMABLE/LIQUID/UN1263/PGIII, DOT-PAINT,3,UN1263,PGIII, CANADIAN TDGA: PAINT,3,UN1263,PGIII
EXTINGUISHING MEDIA: Dry Chemical, Foam, Carbon Dioxide, Water Fog.
UNUSUAL FIRE AND EXPLOSION HAZARDS: Vapors are heavier than air and will accumulate. Vapors will form explosive concentrations with air. Vapors travel long distances and will flashback. Use mechanical ventilation when necessary to keep percent vapor below the "Lower Explosion Level" (LEL).
SPECIAL FIRE FIGHTING PROCEDURES: Evacuate hazard area of unprotected personnel. Use a NIOSH approved self-contained breathing unit and complete

body protection. Cool surrounding containers with water in case of fire exposure.

SECTION V - HEALTH HAZARD DATA:

INHALATION: Harmful if inhaled, may affect the brain or nervous system, causing dizziness, headache or nausea. May cause nose and throat irritation. May cause lung injury.
CONTACT: May be harmful if absorbed through the skin. May cause eye burns. May cause skin irritation.
NOTICE: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage.
MEDICAL CONDITIONS PRONE TO AGGRAVATION BY EXPOSURE: If you have a condition that could be aggravated by exposure to dust or organic vapors see a physician prior to use.
PRIMARY ROUTE(S) OF ENTRY: Inhalation, Dermal, Ingestion.
EMERGENCY FIRST AID PROCEDURES: When exposed always get medical attention.
EYE CONTACT: Flush with water for 15 minutes.
SKIN CONTACT: Wash with soap and water. Remove contaminated clothing and clean before reuse.
INHALATION: Remove to fresh air. Provide oxygen if breathing is difficult. Use artificial respiration if not breathing. Get medical attention.
IF SWALLOWED: DO NOT INDUCE VOMITING!! Always get medical attention.

SECTION VI - REACTIVITY DATA:

STABILITY: This product is stable under normal storage conditions.
HAZARDOUS POLYMERIZATION: Will not occur under normal conditions.
HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, nitrogen oxides, and unidentified organic compounds. Consider all smoke and fumes from burning material as very hazardous. Welding, cutting or abrasive grinding can create smoke and fumes. Do not breathe.
CONDITIONS TO AVOID: Heat, sparks, and open flames.
INCOMPATIBILITY: Avoid contact with strong oxidizing agents.

SECTION VII - SPILL OR LEAK PROCEDURES:

STEPS TO BE TAKEN IN CASE OF SPILL: Eliminate all ignition sources. Handling equipment must be grounded to prevent sparking. Evacuate the area of unprotected personnel. Wear appropriate personal protection clothing and equipment. Follow safe handling and use guidelines in Section VIII. Contain and soak up residual with an absorbent (clay or sand). Take up absorbent material and seal tightly for proper disposal. Dispose of in accordance with local, state and federal regulations. Refer to Section II for Sara Title III and CERCLA information.

SECTION VIII - SAFE HANDLING AND USE INFORMATION:

RESPIRATORY PROTECTION: Use only with ventilation to keep levels below

PRODUCT: CARBOZINC HS ACTIVATOR (0249C1NL)
Date: 07/17/95 Replaces 03/22/94

exposure guidelines. (Section II). User should test and monitor exposure levels to insure all personnel are below guidelines. If not sure or if not able to monitor use MSHA/NIOSH approved air-purifying respirator.
VENTILATION: Use explosion-proof ventilation when required to keep below health exposure guidelines and Lower Explosion Limit (LEL).
SKIN AND EYE PROTECTION: Recommend impervious gloves, clothing and safety glasses with side shields or chemical goggles to avoid skin and eye contact. If material penetrates to skin, change gloves and clothing.
HYGIENIC PRACTICES: Wash with soap and water before eating, drinking, applying cosmetics, or using toilet facilities. Use of a hand cleaner is recommended. Launder contaminated clothing before reuse. Leather shoes can absorb and pass through hazardous materials. Check shoes carefully after soaking before reuse.

SECTION IX - SPECIAL PRECAUTIONS:

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Keep away from heat, sparks, open flame, and strong oxidizing agents. Keep containers closed. Store in cool, dry place with adequate ventilation. If pouring or transferring materials, ground all containers and tools.
OTHER PRECAUTIONS: Do not weld, heat, cut or drill on full or empty containers.

The information contained herein is, to the best of our knowledge and belief accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by use of this material. It is the responsibility of the user to comply with all applicable federal, state, and local laws and regulations.

Carboline Company 350 Hanley Ind. Ct. St. Louis, MO 63144
PHONE NO. 314-644-1000 FOR INDUSTRIAL USE ONLY

SPECIFIC STATE REGULATORY INFORMATION

NEW JERSEY
PENNSYLVANIA
Non-Hazardous Materials above 1 Percent:

Name	CAS	Pct

No materials meet this criteria

CALIFORNIA

WARNING: This product contains a chemical(s) known to the State of California to cause cancer, and birth defects or other reproductive harm.

SECTION I - PRODUCT: CARBOGUARD 890 PART A (0986A1NL)
Date: 11/08/99 Replaces 07/06/99
(aka CARBOLINE 890 PART A)
CHEMTREC TRANSPORTATION EMERGENCY PHONE NO.: 800-424-9300
PITTSBURGH POISON CONTROL CENTER HEALTH EMERGENCY NO.: 412-681-6669

SECTION II - HAZARDOUS INGREDIENTS EXPOSURE LIMITS

CHEMICAL NAME	(A)	(B)	(C)	(D)	(E)
COLOR PIGMENT	MIXTURE	30%	3.5MG/M3	NE	NE
EPOXY RESIN	25068-38-6	15%	NE	NE	NE
SILICA	14808-60-7	10%	0.1MG/M3	NE	NE
XYLENE	1330-20-7	10%	100 PPM	150 PPM	NE
ETHYL BENZENE	100-41-4	5%	100 PPM	125 PPM	NE
AROMATIC SOLVENT	64742-95-6	5%	25PPM	NE	NE

HAZARDOUS INGREDIENTS ADDITIONAL DATA

CHEMICAL NAME	(F)	(G)
COLOR PIGMENT	NOT AVAILABLE	NO/YES
EPOXY RESIN	11.4G/KG RAT,ORAL >20ML/KG SKIN,SENSITIZER	NO/NO/1,2
SILICA	NOT AVAILABLE	NO/NO/NR/NO
XYLENE	4300MG/KG RAT,ORAL 15000 PPM/4HRS RAT,INHALATION	NO/YES/1,2,3/ 1000#/U239
ETHYL BENZENE	NOT AVAILABLE	NO/YES/1,2,3/ 1000#
AROMATIC SOLVENT	4700MG/KG RAT,ORAL 3670PPM/8HRS RAT,INHALATION	NO/YES/1/2/3

TABLE (A) CAS NUMBER (B) LESS THAN WT (C) TLV-TWA (D) STEL (E) CEILING (F) TOXICITY DATA (LD50/Route,LC50/Route) (G) SARA 302/SARA 313/ SARA 311-312 CATEGORIES/CERCLA. NE = not established, NR = not required, NO = no. Color Pigment Mixture may contain Iron Oxides, Titanium Dioxide, Carbon Black, and other particulates not otherwise regulated in varying amounts depending on color of product.

WHMIS CLASSIFICATION: B2 -- D2A -- D2B
HMIS/NFPA CLASSIFICATION: HEALTH 2, FLAMMABILITY 3, REACTIVITY 0,
PERSONAL PROTECTION CODE G, NFPA FIRE FIGHTING PHASE 4

SECTION III - PHYSICAL DATA:

BOILING RANGE: 277F(136C)-355F(179C). VAPOR DENSITY: Heavier than air. EVAPORATION RATE: Slower than ether. VOLATILE BY WEIGHT 10 %. VOLATILE BY VOLUME: 17 %. PRODUCT WT/GAL: 11.7 LBS/U.S.GAL. 1.41 sp gr.

SECTION IV - FIRE AND EXPLOSION HAZARD DATA:

FLAMMABILITY CLASSIFICATION: FLASH POINT: 89 F(31C) (Setaflash) LEL 1.0 % UEL 7.0 %.
OSHA-FLAMMABLE LIQUID/OSHA/CLASS/1C, DOT-PAINT,3,UN1263,PGIII, CANADIAN TDGA: PAINT,3,UN1263,PGIII

PRODUCT: CARBOGUARD 890 PART A (0986A1NL)
Date: 11/08/99 Replaces 07/06/99

EXTINGUISHING MEDIA: Dry Chemical, Foam, Carbon Dioxide, Water Fog.
UNUSUAL FIRE AND EXPLOSION HAZARDS: Vapors are heavier than air and will accumulate. Vapors will form explosive concentrations with air. Vapors travel long distances and will flashback. Use mechanical ventilation when necessary to keep percent vapor below the "Lower Explosion Level" (LEL).
SPECIAL FIRE FIGHTING PROCEDURES: Evacuate hazard area of unprotected personnel. Use a NIOSH approved self-contained breathing unit and complete body protection. Cool surrounding containers with water in case of fire exposure.

SECTION V - HEALTH HAZARD DATA:

INHALATION: Harmful if inhaled, may affect the brain or nervous system, causing dizziness, headache or nausea. May cause nose and throat irritation.
CONTACT: May cause eye irritation. May cause skin irritation. May cause allergic skin reaction.
NOTICE: Contains SILICA which can cause cancer. Risk of cancer depends on duration and level of exposure. Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage.
MEDICAL CONDITIONS PRONE TO AGGRAVATION BY EXPOSURE: If sensitized to amines, epoxies or other chemicals do not use. See a physician if a medical condition exists.
PRIMARY ROUTE(S) OF ENTRY: Inhalation, Dermal, Ingestion.
EMERGENCY FIRST AID PROCEDURES: When exposed always get medical attention.
EYE CONTACT: Flush with water for 15 minutes.
SKIN CONTACT: Wash with soap and water. Remove contaminated clothing and clean before reuse.
INHALATION: Remove to fresh air. Provide oxygen if breathing is difficult. Use artificial respiration if not breathing. Get medical attention.
IF SWALLOWED: DO NOT INDUCE VOMITING!! Always get medical attention.

SECTION VI - REACTIVITY DATA:

STABILITY: This product is stable under normal storage conditions.
HAZARDOUS POLYMERIZATION: Will not occur under normal conditions.
HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, nitrogen oxides, and unidentified organic compounds. Consider all smoke and fumes from burning material as very hazardous. Welding, cutting or abrasive grinding can create smoke and fumes. Do not breathe.
CONDITIONS TO AVOID: Heat, sparks, and open flames.
INCOMPATIBILITY: Avoid contact with strong oxidizing agents.

SECTION VII - SPILL OR LEAK PROCEDURES:

STEPS TO BE TAKEN IN CASE OF SPILL: Eliminate all ignition sources. Handling equipment must be grounded to prevent sparking. Evacuate the area of unprotected personnel. Wear appropriate personal protection clothing and equipment. Follow safe handling and use guidelines in Section VIII. Contain

and soak up residual with an absorbent (clay or sand). Take up absorbent material and seal tightly for proper disposal. Dispose of in accordance with local, state and federal regulations. Refer to Section II for Sara Title III and CERCLA information.

SECTION VIII - SAFE HANDLING AND USE INFORMATION:

RESPIRATORY PROTECTION: Use only with ventilation to keep levels below exposure guidelines. (Section II). User should test and monitor exposure levels to insure all personnel are below guidelines. If not sure or if not able to monitor use MSHA/NIOSH approved supplied air respirator.
VENTILATION: Use explosion-proof ventilation when required to keep below health exposure guidelines and Lower Explosion Limit (LEL).
SKIN AND EYE PROTECTION: Recommend impervious gloves, clothing and safety glasses with side shields or chemical goggles to avoid skin and eye contact. If material penetrates to skin, change gloves and clothing.
HYGIENIC PRACTICES: Wash with soap and water before eating, drinking, applying cosmetics, or using toilet facilities. Use of a hand cleaner is recommended. Launder contaminated clothing before reuse. Leather shoes can absorb and pass through hazardous materials. Check shoes carefully after soaking before reuse.

SECTION IX - SPECIAL PRECAUTIONS:

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Keep away from heat, sparks, open flame, and strong oxidizing agents. Keep containers closed. Store in cool, dry place with adequate ventilation. If pouring or transferring materials, ground all containers and tools.
OTHER PRECAUTIONS: Do not weld, heat, cut or drill on full or empty containers.

The information contained herein is, to the best of our knowledge and belief accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by use of this material. It is the responsibility of the user to comply with all applicable federal, state, and local laws and regulations.

Carboline Company 350 Hanley Ind. Ct. St. Louis, MO 63144
PHONE NO. 314-644-1000 FOR INDUSTRIAL USE ONLY

SPECIFIC STATE REGULATORY INFORMATION

NEW JERSEY
PENNSYLVANIA
Non-Hazardous Materials above 1 Percent:

Name	CAS	Pct
EPOXY RESIN	25036-25-3	20%
ALKYL PHTHALATE	68515-42-4	15%
EPOXY RESIN	25036-25-3	15%

CALIFORNIA

WARNING: This product contains a chemical(s) known to the State of California to cause cancer, and birth defects or other reproductive harm.

SECTION I - PRODUCT: CARBOGUARD 890 PART B (0986B1NL)
Date: 11/08/99 Replaces 01/05/99
(aka CARBOLINE 890 PART B)
CHEMTREC TRANSPORTATION EMERGENCY PHONE NO.: 800-424-9300
PITTSBURGH POISON CONTROL CENTER HEALTH EMERGENCY NO.: 412-681-6669

SECTION II - HAZARDOUS INGREDIENTS EXPOSURE LIMITS

CHEMICAL NAME	(A)	(B)	(C)	(D)	(E)
SILICA	14808-60-7	65%	0.1MG/M3	NE	NE
XYLENE	1330-20-7	10%	100 PPM	150 PPM	NE
ETHYL BENZENE	100-41-4	5%	100 PPM	125 PPM	NE
ISOPHORONE DIAMINE	2855-13-2	5%	NE	NE	NE
DIAMINOCYCLOHEXANE	694-83-7	5%	NE	NE	NE
CYCLOALIPHATIC AMINE	TRADE SECRET	5%	NE	NE	NE
CYCLOALIPHATIC AMINE	BLEND	5%	NE	NE	NE
AROMATIC SOLVENT	64742-95-6	5%	25PPM	NE	NE
ISOPROPANOL	67-63-0	5%	400 PPM	500 PPM	NE

HAZARDOUS INGREDIENTS CHEMICAL NAME	ADDITIONAL DATA (F)	(G)
SILICA	NOT AVAILABLE	NO/NO/NR/NO
XYLENE	4300MG/KG RAT,ORAL 15000 PPM/4HRS RAT,INHALATION	NO/YES/1,2,3/ 1000#/U239
ETHYL BENZENE	NOT AVAILABLE	NO/YES/1,2,3/ 1000#
ISOPHORONE DIAMINE	>0.5 G/KG ORAL >2 G/KG DERMAL	NO\NO
DIAMINOCYCLOHEXANE	750 MG/KG ORAL 160 MG/KG DERMAL	NO/NO
CYCLOALIPHATIC AMINE	1230 MG/KG ORAL RAT;2000 MG/KG DERMAL	NO/NO/1,2
CYCLOALIPHATIC AMINE	NOT AVAILABLE	NO/NO/1,2
AROMATIC SOLVENT	4700MG/KG RAT,ORAL 3670PPM/8HRS RAT,INHALATION	NO/YES/1/2/3
ISOPROPANOL	4720MG/KG RAT,ORAL 16000PPM/8HRS RAT,INHALATION	NO/NO/3

TABLE (A) CAS NUMBER (B) LESS THAN WT (C) TLV-TWA (D) STEL (E) CEILING (F) TOXICITY DATA (LD50/Route,LC50/Route) (G) SARA 302/SARA 313/ SARA 311-312 CATEGORIES/CERCLA. NE = not established, NR = not required, NO = no. Color Pigment Mixture may contain Iron Oxides, Titanium Dioxide, Carbon Black, and other particulates not otherwise regulated in varying amounts depending on color of product.

WHMIS CLASSIFICATION: B2 -- D2A -- D2B -- E
HMIS/NFPA CLASSIFICATION: HEALTH 3, FLAMMABILITY 3, REACTIVITY 0,
PERSONAL PROTECTION CODE G, NFPA FIRE FIGHTING PHASE 4

SECTION III - PHYSICAL DATA:

BOILING RANGE: 180F(82C)-355F(179C). VAPOR DENSITY: Heavier than air.
EVAPORATION RATE: Slower than ether. VOLATILE BY WEIGHT 17 %. VOLATILE BY

PRODUCT: CARBOGUARD 890 PART B (0986B1NL)
Date: 11/08/99 Replaces 01/05/99

VOLUME: 33 %. PRODUCT WT/GAL: 13.4 LBS/U.S.GAL. 1.61 sp gr.

SECTION IV - FIRE AND EXPLOSION HAZARD DATA:

FLAMMABILITY CLASSIFICATION: FLASH POINT: 71 F(21C) (Setaflash) LEL 1.0 % UEL 12.7 %.
OSHA-FLAMMABLE LIQUID/OSHA/CLASS/1B, DOT-PAINT,3,UN1263,PGII, CANADIAN TDGA: PAINT,3,UN1263,PGII
EXTINGUISHING MEDIA: Dry Chemical, Foam, Carbon Dioxide, Water Fog.
UNUSUAL FIRE AND EXPLOSION HAZARDS: Vapors are heavier than air and will accumulate. Vapors will form explosive concentrations with air. Vapors travel long distances and will flashback. Use mechanical ventilation when necessary to keep percent vapor below the "Lower Explosion Level" (LEL).
SPECIAL FIRE FIGHTING PROCEDURES: Evacuate hazard area of unprotected personnel. Use a NIOSH approved self-contained breathing unit and complete body protection. Cool surrounding containers with water in case of fire exposure.

SECTION V - HEALTH HAZARD DATA:

INHALATION: May cause allergic respiratory reaction, effects may be permanent. Harmful if inhaled, may affect the brain or nervous system, causing dizziness, headache or nausea. May cause nose and throat irritation. May cause lung irritation.
CONTACT: May be harmful if absorbed through the skin. Can cause eye burns. Can cause skin burns. Can cause allergic skin reaction.
NOTICE: Contains SILICA which can cause cancer. Risk of cancer depends on duration and level of exposure. Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage.
MEDICAL CONDITIONS PRONE TO AGGRAVATION BY EXPOSURE: If you have a condition that could be aggravated by exposure to dust or organic vapors see a physician prior to use.
PRIMARY ROUTE(S) OF ENTRY: Inhalation, Dermal, Ingestion.
EMERGENCY FIRST AID PROCEDURES: When exposed always get medical attention.
EYE CONTACT: Flush with water for 15 minutes.
SKIN CONTACT: Wash with soap and water. Remove contaminated clothing and clean before reuse.
INHALATION: Remove to fresh air. Provide oxygen if breathing is difficult. Use artificial respiration if not breathing. Get medical attention.
IF SWALLOWED: DO NOT INDUCE VOMITING!! Always get medical attention.

SECTION VI - REACTIVITY DATA:

STABILITY: This product is stable under normal storage conditions.
HAZARDOUS POLYMERIZATION: Will not occur under normal conditions.
HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, nitrogen oxides, and unidentified organic compounds. Consider all smoke and fumes from burning material as very hazardous. Welding, cutting or abrasive grinding can create

smoke and fumes. Do not breathe.
CONDITIONS TO AVOID: Heat, sparks, and open flames.
INCOMPATIBILITY: Avoid contact with strong oxidizing agents.

SECTION VII - SPILL OR LEAK PROCEDURES:

STEPS TO BE TAKEN IN CASE OF SPILL: Eliminate all ignition sources. Handling equipment must be grounded to prevent sparking. Evacuate the area of unprotected personnel. Wear appropriate personal protection clothing and equipment. Follow safe handling and use guidelines in Section VIII. Contain and soak up residual with an absorbent (clay or sand). Take up absorbent material and seal tightly for proper disposal. Dispose of in accordance with local, state and federal regulations. Refer to Section II for Sara Title III and CERCLA information.

SECTION VIII - SAFE HANDLING AND USE INFORMATION:

RESPIRATORY PROTECTION: Use only with ventilation to keep levels below exposure guidelines. (Section II). User should test and monitor exposure levels to insure all personnel are below guidelines. If not sure or if not able to monitor use MSHA/NIOSH approved supplied air respirator.
VENTILATION: Use explosion-proof ventilation when required to keep below health exposure guidelines and Lower Explosion Limit (LEL).
SKIN AND EYE PROTECTION: Recommend impervious gloves, clothing and safety glasses with side shields or chemical goggles to avoid skin and eye contact. If material penetrates to skin, change gloves and clothing.
HYGIENIC PRACTICES: Wash with soap and water before eating, drinking, applying cosmetics, or using toilet facilities. Use of a hand cleaner is recommended. Launder contaminated clothing before reuse. Leather shoes can absorb and pass through hazardous materials. Check shoes carefully after soaking before reuse.

SECTION IX - SPECIAL PRECAUTIONS:

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Keep away from heat, sparks, open flame, and strong oxidizing agents. Keep containers closed. Store in cool, dry place with adequate ventilation. If pouring or transferring materials, ground all containers and tools.
OTHER PRECAUTIONS: Do not weld, heat, cut or drill on full or empty containers.

The information contained herein is, to the best of our knowledge and belief accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by use of this material. It is the responsibility of the user to comply with all applicable federal, state, and local laws and regulations.

PRODUCT: CARBOGUARD 890 PART B (0986B1NL)
Date: 11/08/99 Replaces 01/05/99

Carboline Company 350 Hanley Ind. Ct. St. Louis, MO 63144
PHONE NO. 314-644-1000 FOR INDUSTRIAL USE ONLY

SPECIFIC STATE REGULATORY INFORMATION

NEW JERSEY
PENNSYLVANIA
Non-Hazardous Materials above 1 Percent:

Name	CAS	Pct
BENZYL ALCOHOL	100-51-6	10%
POLYMER SOLUTION	MIXTURE	5%

CALIFORNIA

WARNING: This product contains a chemical(s) known to the State of California to cause cancer, and birth defects or other reproductive harm.

SECTION I - PRODUCT: CARBOGUARD 890 LT PART B (0983B1NL)
Date: 11/17/99 Replaces 01/11/99
(aka CARBOLINE 890 LT PART B)
CHEMTREC TRANSPORTATION EMERGENCY PHONE NO.: 800-424-9300
PITTSBURGH POISON CONTROL CENTER HEALTH EMERGENCY NO.: 412-681-6669

SECTION II - HAZARDOUS INGREDIENTS EXPOSURE LIMITS

CHEMICAL NAME	(A)	(B)	(C)	(D)	(E)
SILICA	14808-60-7	60%	0.1MG/M3	NE	NE
XYLENE	1330-20-7	10%	100 PPM	150 PPM	NE
ETHYL BENZENE	100-41-4	5%	100 PPM	125 PPM	NE
TDMAM PHENOL	90-72-2	5%	NE	NE	NE
NONYL PHENOL	25154-52-3	5%	NE	NE	NE
AROMATIC SOLVENT	64742-95-6	5%	25PPM	NE	NE
ISOPROPANOL	67-63-0	5%	400 PPM	500 PPM	NE

HAZARDOUS INGREDIENTS ADDITIONAL DATA

CHEMICAL NAME	(F)	(G)
SILICA	NOT AVAILABLE	NO/NO/NR/NO
XYLENE	4300MG/KG RAT,ORAL 15000 PPM/4HRS RAT,INHALATION	NO/YES/1,2,3/ 1000#/U239
ETHYL BENZENE	NOT AVAILABLE	NO/YES/1,2,3/ 1000#
TDMAM PHENOL	2169 MG/KG ORAL	NO/NO
NONYL PHENOL	1620MG/KG ORAL 2140 MG/KG SKIN	NO/NO
AROMATIC SOLVENT	4700MG/KG RAT,ORAL 3670PPM/8HRS RAT,INHALATION	NO/YES/1/2/3
ISOPROPANOL	4720MG/KG RAT,ORAL 16000PPM/8HRS RAT,INHALATION	NO/NO/3

TABLE (A) CAS NUMBER (B) LESS THAN WT (C) TLV-TWA (D) STEL (E) CEILING (F) TOXICITY DATA (LD50/Route,LC50/Route) (G) SARA 302/SARA 313/ SARA 311-312 CATEGORIES/CERCLA. NE = not established, NR = not required, NO = no. Color Pigment Mixture may contain Iron Oxides, Titanium Dioxide, Carbon Black, and other particulates not otherwise regulated in varying amounts depending on color of product.

WHMIS CLASSIFICATION: B2 -- D2A -- D2B
HMIS/NFPA CLASSIFICATION: HEALTH 3, FLAMMABILITY 3, REACTIVITY 0, PERSONAL PROTECTION CODE G, NFPA FIRE FIGHTING PHASE 4

SECTION III - PHYSICAL DATA:

BOILING RANGE: 180F(82C)-355F(179C). VAPOR DENSITY: Heavier than air. EVAPORATION RATE: Slower than ether. VOLATILE BY WEIGHT 14 %. VOLATILE BY VOLUME: 25 %. PRODUCT WT/GAL: 12.7 LBS/U.S.GAL. 1.53 sp gr.

SECTION IV - FIRE AND EXPLOSION HAZARD DATA:

FLAMMABILITY CLASSIFICATION: FLASH POINT: 71 F(21C) (Setaflash) LEL 1.0 % UEL 12.7 %.

PRODUCT: CARBOGUARD 890 LT PART B (0983B1NL)
Date: 11/17/99 Replaces 01/11/99

OSHA-FLAMMABLE LIQUID/OSHA/CLASS/1B, DOT-PAINT,3,UN1263,PGII, CANADIAN TDGA: PAINT,3,UN1263,PGII
EXTINGUISHING MEDIA: Dry Chemical, Foam, Carbon Dioxide, Water Fog.
FIRE AND EXPLOSION HAZARDS: Product contains less than 1% volatile components. The amount of vapors that could accumulate are minimal. However vapors are heavier than air and could travel long distances ignite and flashback. Eliminate all ignition sources. Keep away from sparks, open flames, and heat sources. All electrical equipment and installations should be made and grounded in accordance with the National Electrical Code. In areas where explosion hazards exist, workers should be required to use nonferrous tools and to wear conductive and non-sparking shoes.
SPECIAL FIRE FIGHTING PROCEDURES: Evacuate hazard area of unprotected personnel. Use a NIOSH approved self-contained breathing unit and complete body protection. Cool surrounding containers with water in case of fire exposure.

SECTION V - HEALTH HAZARD DATA:

INHALATION: May cause allergic respiratory reaction, effects may be permanent. Harmful if inhaled, may affect the brain or nervous system, causing dizziness, headache or nausea. May cause nose and throat irritation. May cause lung irritation.
CONTACT: May be harmful if absorbed through the skin. May cause eye burns. May cause skin burns.
NOTICE: Contains SILICA which can cause cancer. Risk of cancer depends on duration and level of exposure. Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage.
MEDICAL CONDITIONS PRONE TO AGGRAVATION BY EXPOSURE: If you have a condition that could be aggravated by exposure to dust or organic vapors see a physician prior to use.
PRIMARY ROUTE(S) OF ENTRY: Inhalation, Dermal, Ingestion.
EMERGENCY FIRST AID PROCEDURES: When exposed always get medical attention.
EYE CONTACT: Flush with water for 15 minutes.
SKIN CONTACT: Wash with soap and water. Remove contaminated clothing and clean before reuse.
INHALATION: Remove to fresh air. Provide oxygen if breathing is difficult. Use artificial respiration if not breathing. Get medical attention.
IF SWALLOWED: DO NOT INDUCE VOMITING!! Always get medical attention.

SECTION VI - REACTIVITY DATA:

STABILITY: This product is stable under normal storage conditions.
HAZARDOUS POLYMERIZATION: Will not occur under normal conditions.
HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, nitrogen oxides, and unidentified organic compounds. Consider all smoke and fumes from burning material as very hazardous. Welding, cutting or abrasive grinding can create smoke and fumes. Do not breathe any fumes or smoke from these operations.
CONDITIONS TO AVOID: Heat, sparks, and open flames.

PRODUCT: CARBOGUARD 890 LT PART B (0983B1NL)
Date: 11/17/99 Replaces 01/11/99

INCOMPATIBILITY: Avoid contact with strong oxidizing agents.

SECTION VII - SPILL OR LEAK PROCEDURES:

STEPS TO BE TAKEN IN CASE OF SPILL: Eliminate all ignition sources. Handling equipment must be grounded to prevent sparking. Evacuate the area of unprotected personnel. Wear appropriate personal protection clothing and equipment. Follow safe handling and use guidelines in Section VIII. Contain and soak up residual with an absorbent (clay or sand). Take up absorbent material and seal tightly for proper disposal. Dispose of in accordance with local, state and federal regulations. Refer to Section II for Sara Title III and CERCLA information.

SECTION VIII - SAFE HANDLING AND USE INFORMATION:

RESPIRATORY PROTECTION: Use only with ventilation to keep levels below exposure guidelines. (Section II). User should test and monitor exposure levels to insure all personnel are below guidelines. If not sure or if not able to monitor use MSHA/NIOSH approved supplied air respirator. Follow all current OSHA requirements for respirator use.
VENTILATION: Use explosion-proof ventilation when required to keep below health exposure guidelines and Lower Explosion Limit (LEL).
SKIN AND EYE PROTECTION: Recommend impervious gloves, clothing and safety glasses with side shields or chemical goggles to avoid skin and eye contact. If material penetrates to skin, change gloves and clothing. Hypersensitive persons should wear gloves or use protective cream.
HYGIENIC PRACTICES: Wash with soap and water before eating, drinking, applying cosmetics, or using toilet facilities. Use of a hand cleaner is recommended. Launder contaminated clothing before reuse. Leather shoes can absorb and pass through hazardous materials. Check shoes carefully after soaking before reuse.
APPLICATION: Use only in accordance with Carboline application instructions, container label and Product Data Sheet.

SECTION IX - SPECIAL PRECAUTIONS:

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Keep away from heat, sparks, open flame, and strong oxidizing agents. Keep containers closed. Store in cool, dry place with adequate ventilation. If pouring or transferring materials, ground all containers and tools.
OTHER PRECAUTIONS: Do not weld, heat, cut or drill on full or empty containers.

The information contained herein is, to the best of our knowledge and belief accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by use of this material. It is the responsibility of the user to comply with all applicable federal, state, and local laws and regulations.

PRODUCT: CARBOGUARD 890 LT PART B (0983B1NL)
Date: 11/17/99 Replaces 01/11/99

Carboline Company 350 Hanley Ind. Ct. St. Louis, MO 63144
PHONE NO. 314-644-1000 FOR INDUSTRIAL USE ONLY

CARBOLINE CO. MATERIAL SAFETY DATA SHEET
PRODUCT: CARBOGUARD 890 LT PART B (0983B1NL)
Date: 11/17/99 Replaces 01/11/99

SPECIFIC STATE REGULATORY INFORMATION

NEW JERSEY
PENNSYLVANIA
Non-Hazardous Materials above 1 Percent:

Name	CAS	Pct
POLYAMIDE	MIXTURE	15%
BENZYL ALCOHOL	100-51-6	5%
BENZYL ALCOHOL	100-51-6	5%
POLYMER SOLUTION	MIXTURE	5%

CALIFORNIA

WARNING: This product contains a chemical(s) known to the State of California to cause cancer, and birth defects or other reproductive harm.

SECTION I - PRODUCT: CARBOTHANE 134HG PART A (0859A1NL)
Date: 08/24/00 Replaces 03/31/00

CHEMTREC TRANSPORTATION EMERGENCY PHONE NO.: 800-424-9300
PITTSBURGH POISON CONTROL CENTER HEALTH EMERGENCY NO.: 412-681-6669

SECTION II - HAZARDOUS INGREDIENTS EXPOSURE LIMITS

CHEMICAL NAME	(A)	(B)	(C)	(D)	(E)
SILICA	14808-60-7	25%	0.1MG/M3	NE	NE
COLOR PIGMENT	MIXTURE	15%	3.5MG/M3	NE	NE
TOLUENE	108-88-3	10%	50 PPM	150 PPM	NE
BUTYL ACETATE	123-86-4	10%	150 PPM	200 PPM	NE
ETHYL BENZENE	100-41-4	5%	100 PPM	125 PPM	NE
DISPERSING AGENT	MIXTURE	5%	NE	NE	NE
XYLENE	1330-20-7	5%	100 PPM	150 PPM	NE
ALIPHATIC DIOL	TS	5%	25 PPM	25 PPM	25 PPM

HAZARDOUS INGREDIENTS ADDITIONAL DATA

CHEMICAL NAME	(F)	(G)
SILICA	NOT AVAILABLE	NO/NO/NR/NO
COLOR PIGMENT	NOT AVAILABLE	NO/YES
TOLUENE	5.0 G/KG RAT ORAL, 14G/KG RABBIT DERMAL 8000 PPM/4HRS, RAT, INHALATION	NO/YES/1,2,3/ 1000#/U220
BUTYL ACETATE	7.4 G/KG RABBIT ORAL >1800 PPM/6H INHALATION	NO/NO/1,2,3
ETHYL BENZENE	NOT AVAILABLE	NO/YES/1,2,3/ 1000#
DISPERSING AGENT	NE NE	NO/NO
XYLENE	4300MG/KG RAT,ORAL 15000 PPM/4HRS RAT,INHALATION	NO/YES/1,2,3/ 1000#/U239
ALIPHATIC DIOL	NE NE	NO/NO/1/4/

TABLE (A) CAS NUMBER (B) LESS THAN WT (C) TLV-TWA (D) STEL (E) CEILING (F) TOXICITY DATA (LD50/Route,LC50/Route) (G) SARA 302/SARA 313/ SARA 311-312 CATEGORIES/CERCLA. NE = not established, NR = not required, NO = no. Color Pigment Mixture may contain Iron Oxides, Titanium Dioxide, Carbon Black, and other particulates not otherwise regulated in varying amounts depending on color of product.

WHMIS CLASSIFICATION: B2 -- D2A -- D2B
HMIS/NFPA CLASSIFICATION: HEALTH 3, FLAMMABILITY 3, REACTIVITY 1, PERSONAL PROTECTION CODE G, NFPA FIRE FIGHTING PHASE 4

SECTION III - PHYSICAL DATA:

BOILING RANGE: 232F(111C)-284F(140C). VAPOR DENSITY: Heavier than air. EVAPORATION RATE: Slower than ether. VOLATILE BY WEIGHT 23 %. VOLATILE BY VOLUME: 34 %. PRODUCT WT/GAL: 10.6 LBS/U.S.GAL. 1.28 sp gr.

PRODUCT: CARBOTHANE 134HG PART A (0859A1NL)
Date: 08/24/00 Replaces 03/31/00

SECTION IV - FIRE AND EXPLOSION HAZARD DATA:

FLAMMABILITY CLASSIFICATION: FLASH POINT: 50 F(10C) (Setaflash) LEL 1.0 % UEL 7.6 %.
OSHA-FLAMMABLE LIQUID/OSHA/CLASS/1B, DOT-PAINT,3,UN1263,PGII, CANADIAN TDGA: PAINT,3,UN1263,PGII
EXTINGUISHING MEDIA: Dry Chemical, Foam, Carbon Dioxide, Water Fog.
FIRE AND EXPLOSION HAZARDS: Vapors are heavier than air and will accumulate. Vapors will form explosive concentrations with air. Vapors travel long distances and will flashback. Use mechanical ventilation when necessary to keep percent vapor below the "Lower Explosion Level" (LEL). Eliminate all ignition sources. Keep away from sparks, open flames and heat sources. All electric equipment and installations should be made and grounded in accordance with the National Electrical Code. In areas where explosion hazards exist, workers should be required to use nonferrous tools and to wear conductive and non-sparking shoes.
SPECIAL FIRE FIGHTING PROCEDURES: Evacuate hazard area of unprotected personnel. Use a NIOSH approved self-contained breathing unit and complete body protection. Cool surrounding containers with water in case of fire exposure.

SECTION V - HEALTH HAZARD DATA:

INHALATION: Harmful if inhaled, may affect the brain or nervous system, causing dizziness, headache or nausea. May cause nose and throat irritation.
CONTACT: Can cause eye irritation. May cause skin irritation. May cause allergic skin reaction.
NOTICE: Contains SILICA which can cause cancer. Risk of cancer depends on duration and level of exposure. Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage.
MEDICAL CONDITIONS PRONE TO AGGRAVATION BY EXPOSURE: If you have a condition that could be aggravated by exposure to dust or organic vapors see a physician prior to use.
PRIMARY ROUTE(S) OF ENTRY: Inhalation, Dermal, Ingestion.
EMERGENCY FIRST AID PROCEDURES: When exposed always get medical attention.
EYE CONTACT: Flush with water for 15 minutes.
SKIN CONTACT: Wash with soap and water. Remove contaminated clothing and clean before reuse.
INHALATION: Remove to fresh air. Provide oxygen if breathing is difficult. Use artificial respiration if not breathing. Get medical attention.
IF SWALLOWED: DO NOT INDUCE VOMITING!! Always get medical attention.

SECTION VI - REACTIVITY DATA:

STABILITY: This product is stable under normal storage conditions.
HAZARDOUS POLYMERIZATION: Will not occur under normal conditions.
HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, nitrogen oxides, and

unidentified organic compounds. Consider all smoke and fumes from burning material as very hazardous. Welding, cutting or abrasive grinding can create smoke and fumes. Do not breathe any fumes or smoke from these operations.
CONDITIONS TO AVOID: Heat, sparks, and open flames.
INCOMPATIBILITY: Avoid contact with strong oxidizing agents.

SECTION VII - SPILL OR LEAK PROCEDURES:

STEPS TO BE TAKEN IN CASE OF SPILL: Eliminate all ignition sources. Handling equipment must be grounded to prevent sparking. Evacuate the area of unprotected personnel. Wear appropriate personal protection clothing and equipment. Follow safe handling and use guidelines in Section VIII. Contain and soak up residual with an absorbent (clay or sand). Take up absorbent material and seal tightly for proper disposal. Dispose of in accordance with local, state and federal regulations. Refer to Section II for Sara Title III and CERCLA information.

SECTION VIII - SAFE HANDLING AND USE INFORMATION:

RESPIRATORY PROTECTION: Use only with ventilation to keep levels below exposure guidelines. (Section II). User should test and monitor exposure levels to ensure all personnel are below guidelines. If not sure, or not able to monitor, use MSHA/NIOSH approved supplied air respirator. Follow all current OSHA requirements for respirator use.
VENTILATION: Use explosion-proof ventilation when required to keep below health exposure guidelines and Lower Explosion Limit (LEL).
SKIN AND EYE PROTECTION: Recommend impervious gloves, clothing and safety glasses with side shields or chemical goggles to avoid skin and eye contact. If material penetrates to skin, change gloves and clothing. Hypersensitive persons should wear gloves or use protective cream.
HYGIENIC PRACTICES: Wash with soap and water before eating, drinking, applying cosmetics, or using toilet facilities. Use of a hand cleaner is recommended. Launder contaminated clothing before reuse. Leather shoes can absorb and pass through hazardous materials. Check shoes carefully after soaking before reuse.
APPLICATION: Use only in accordance with Carboline application instructions, container label and Product Data Sheet.

SECTION IX - SPECIAL PRECAUTIONS:

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Keep away from heat, sparks, open flame, and strong oxidizing agents. Keep containers closed. Store in cool, dry place with adequate ventilation. If pouring or transferring materials, ground all containers and tools.
OTHER PRECAUTIONS: Do not weld, heat, cut or drill on full or empty containers.

PRODUCT: CARBOTHANE 134HG PART A (0859A1NL)
Date: 08/24/00 Replaces 03/31/00

The information contained herein is, to the best of our knowledge and belief accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by use of this material. It is the responsibility of the user to comply with all applicable federal, state, and local laws and regulations.

Carboline Company 350 Hanley Ind. Ct. St. Louis, MO 63144
PHONE NO. 314-644-1000 FOR INDUSTRIAL USE ONLY

CARBOLINE CO. MATERIAL SAFETY DATA SHEET
PRODUCT: CARBOTHANE 134HG PART A (0859A1NL)
Date: 08/24/00 Replaces 03/31/00

SPECIFIC STATE REGULATORY INFORMATION

NEW JERSEY
PENNSYLVANIA
Non-Hazardous Materials above 1 Percent:

Name	CAS	Pct
ACRYLIC COPOLYMER		35%
ACRYLIC COPOLYMER	MIXTURE	10%

CALIFORNIA

WARNING: This product contains a chemical(s) known to the State of California to cause cancer, and birth defects or other reproductive harm.

SECTION I - PRODUCT: URETHANE CONVERTER 811 (0856B1NL)
Date: 04/10/00 Replaces 11/13/97

CHEMTREC TRANSPORTATION EMERGENCY PHONE NO.: 800-424-9300
PITTSBURGH POISON CONTROL CENTER HEALTH EMERGENCY NO.: 412-681-6669

SECTION II - HAZARDOUS INGREDIENTS EXPOSURE LIMITS

CHEMICAL NAME	(A)	(B)	(C)	(D)	(E)
POLYMERIC HDI	MIXTURE	90%	0.005PPM	0.02PPM	NE
AROMATIC SOLVENT	64742-95-6	5%	25PPM	NE	NE
BUTYL ACETATE	123-86-4	5%	150 PPM	200 PPM	NE
HDI ISOCYANATE	822-06-0	2%	0.005PPM	0.02PPM	NE

CHEMICAL NAME	HAZARDOUS INGREDIENTS ADDITIONAL DATA (F)	(G)
POLYMERIC HDI	>10000 MG/KG RAT ORAL 137-1150 MG/M3 4 HOURS; RAT	NO/NO/1,2,3,5
AROMATIC SOLVENT	4700MG/KG RAT,ORAL 3670PPM/8HRS RAT,INHALATION	NO/YES/1/2/3
BUTYL ACETATE	7.4 G/KG RABBIT ORAL >1800 PPM/6H INHALATION	NO/NO/1,2,3
HDI ISOCYANATE	710MG/KG ORAL 570MG/KG DERMAL 23PPM 4 HRS	NO/NO

TABLE (A) CAS NUMBER (B) LESS THAN WT (C) TLV-TWA (D) STEL (E) CEILING (F) TOXICITY DATA (LD50/Route,LC50/Route) (G) SARA 302/SARA 313/ SARA 311-312 CATEGORIES/CERCLA. NE = not established, NR = not required, NO = no. Color Pigment Mixture may contain Iron Oxides, Titanium Dioxide, Carbon Black, and other particulates not otherwise regulated in varying amounts depending on color of product.

WHMIS CLASSIFICATION: B3 -- D2A -- D2B
HMIS/NFPA CLASSIFICATION: HEALTH 3, FLAMMABILITY 2, REACTIVITY 1,
PERSONAL PROTECTION CODE G, NFPA FIRE FIGHTING PHASE 4

SECTION III - PHYSICAL DATA:

BOILING RANGE: 259F(126C)-355F(179C). VAPOR DENSITY: Heavier than air. EVAPORATION RATE: Slower than ether. VOLATILE BY WEIGHT 10 %. VOLATILE BY VOLUME: 13 %. PRODUCT WT/GAL: 9.3 LBS/U.S.GAL. 1.12 sp gr.

SECTION IV - FIRE AND EXPLOSION HAZARD DATA:

FLAMMABILITY CLASSIFICATION: FLASH POINT: 106 F(41C) (Setaflash) LEL 1.0 % UEL 7.6 %.
OSHA-COMBUSTIBLE/LIQUID/OSHA/CLASS/II, DOT-PAINT,3,UN1263,PGIII, CANADIAN TDGA: PAINT,3,UN1263,PGIII
EXTINGUISHING MEDIA: Dry Chemical, Foam, Carbon Dioxide, Water Fog.
FIRE AND EXPLOSION HAZARDS: Vapors are heavier than air and will accumulate. Vapors will form explosive concentrations with air. Vapors travel long distances and will flashback. Use mechanical ventilation when necessary to

keep percent vapor below the "Lower Explosion Level" (LEL). Eliminate all ignition sources. Keep away from sparks, open flames and heat sources. All electric equipment and installations should be made and grounded in accordance with the National Electrical Code. In areas where explosion hazards exist, workers should be required to use nonferrous tools and to wear conductive and non-sparking shoes.
SPECIAL FIRE FIGHTING PROCEDURES: Evacuate hazard area of unprotected personnel. Use a NIOSH approved self-contained breathing unit and complete body protection. Cool surrounding containers with water in case of fire exposure.

SECTION V - HEALTH HAZARD DATA:

INHALATION: Harmful if inhaled, may affect the brain or nervous system, causing dizziness, headache or nausea. May cause nose and throat irritation. May cause lung irritation. Contains HEXAMETHYLENE DIISOCYANATE which may cause allergic respiratory reaction, effects may be permanent.
CONTACT: May cause eye irritation. May cause skin irritation. May cause allergic skin reaction.
NOTICE: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage.
MEDICAL CONDITIONS PRONE TO AGGRAVATION BY EXPOSURE: If sensitized to isocyanates or other chemicals do not use. See a physician if a medical condition exists.
PRIMARY ROUTE(S) OF ENTRY: Inhalation, Dermal, Ingestion.
EMERGENCY FIRST AID PROCEDURES: When exposed always get medical attention.
EYE CONTACT: Flush with water for 15 minutes.
SKIN CONTACT: Wash with soap and water. Remove contaminated clothing and clean before reuse.
INHALATION: Remove to fresh air. Provide oxygen if breathing is difficult. Use artificial respiration if not breathing. Get medical attention.
IF SWALLOWED: DO NOT INDUCE VOMITING!! Always get medical attention.

SECTION VI - REACTIVITY DATA:

STABILITY: This product is stable under normal storage conditions.
HAZARDOUS POLYMERIZATION: Will not occur under normal conditions.
HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, nitrogen oxides, and unidentified organic compounds. Consider all smoke and fumes from burning material as very hazardous. Welding, cutting or abrasive grinding can create smoke and fumes. Do not breathe any fumes or smoke from these operations.
CONDITIONS TO AVOID: Heat, sparks, and open flames.
INCOMPATIBILITY: Avoid contact with strong oxidizing agents.

SECTION VII - SPILL OR LEAK PROCEDURES:

STEPS TO BE TAKEN IN CASE OF SPILL: Eliminate all ignition sources. Handling equipment must be grounded to prevent sparking. Evacuate the area of unprotected personnel. Wear appropriate personal protection clothing and

equipment. Follow safe handling and use guidelines in Section VIII. Contain and soak up residual with an absorbent (clay or sand). Take up absorbent material and seal tightly for proper disposal. Dispose of in accordance with local, state and federal regulations. Refer to Section II for Sara Title III and CERCLA information.

SECTION VIII - SAFE HANDLING AND USE INFORMATION:

RESPIRATORY PROTECTION: Use only with ventilation to keep levels below exposure guidelines. (Section II). User should test and monitor exposure levels to insure all personnel are below guidelines. If not sure or if not able to monitor, use MSHA/NIOSH approved supplied air respirator. Follow all current OSHA requirements for respirator use.
VENTILATION: Use explosion-proof ventilation when required to keep below health exposure guidelines and Lower Explosion Limit (LEL) .
SKIN AND EYE PROTECTION: Recommend impervious gloves, clothing and safety glasses with side shields or chemical goggles to avoid skin and eye contact. If material penetrates the skin, change gloves and clothing. Hypersensitive persons should wear gloves or use protective cream.
HYGIENIC PRACTICES: Wash with soap and water before eating, drinking, applying cosmetics, or using toilet facilities. Use of a hand cleaner is recommended. Launder contaminated clothing before reuse. Leather shoes can absorb and pass through hazardous materials. Check shoes carefully after soaking before reuse.
APPLICATION: Use only in accordance with Carboline application instructions, container label and Product Data Sheet.

SECTION IX - SPECIAL PRECAUTIONS:

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Keep away from heat, sparks, open flame, and strong oxidizing agents. Keep containers closed. Store in cool, dry place with adequate ventilation. If pouring or transferring materials, ground all containers and tools.
OTHER PRECAUTIONS: Do not weld, heat, cut or drill on full or empty containers.

The information contained herein is, to the best of our knowledge and belief accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by use of this material. It is the responsibility of the user to comply with all applicable federal, state, and local laws and regulations.

Carboline Company 350 Hanley Ind. Ct. St. Louis, MO 63144
PHONE NO. 314-644-1000 FOR INDUSTRIAL USE ONLY

SPECIFIC STATE REGULATORY INFORMATION

NEW JERSEY
PENNSYLVANIA
Non-Hazardous Materials above 1 Percent:

Name	CAS	Pct
No materials meet this criteria		

CALIFORNIA

WARNING: This product contains a chemical(s) known to the State of California to cause cancer, and birth defects or other reproductive harm.

MSDS for Nelson Nameplate Ink

Unleaded 11-22-99 SJ

MATERIAL SAFETY DATA SHEET

DATE OF LAST CHANGE: 07/01/98

DATE PRINTED.....: 11/04/99

MANUFACTURER'S NAME:

VR CHICAGO
1100 N. NORTH BRANCH ST.
CHICAGO
IL 60622 4292 USA

EMERGENCY TELEPHONE #: (800)424-9300
(U.S. and Canada)
EMERGENCY TELEPHONE #: (703)527-3887
(Outside U.S. and Canada, collect calls are accepted)
INFORMATION TELEPHONE #: (800)736-7636

SECTION 1 -- CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

CODE: GVNL

TRADE NAME...: GV SERIES GLOSS VINYL SCREEN INK

MSDS# 261-069

PRODUCT CLASS: SCREEN INK unleaded

INK SERIES...: GV

- HMIS CODES -
HEALTH - 2*
FLAMMABILITY - 2
REACTIVITY - 0
PPE - X

-------Item Description-------	WT lb/gal	VOC g/L	VOC lb/gal	‡ VOC volume
GV107 PERMANENT MAROON	8.6	646	5.4	70
GV111 BLACK	8.6	672	5.6	73
GV122 OPAQUE WHITE	11.2	577	4.8	63
GV149 PERMANENT GREEN	8.7	676	5.6	74
GV157 ROYAL BLUE	8.7	667	5.6	73
GV162 PURPLE	8.8	672	5.6	73
GV170 CLEAR GLOSS	8.4	694	5.8	76
GV185 BRILLIANT PALE GOLD	10.1	674	5.6	73

-------Item Description- ------	WT lb/gal	VOC g/L	VOC lb/gal	‡ VOC volume
GV110 TRANSPARENT RED	8.6	665	5.5	72
GV112 WHITE	10.2	640	5.3	70
GV139 MAJESTIC YELLOW	8.4	686	5.7	75
GV152 LIGHT BLUE	8.9	662	5.5	72
GV159 PERMANENT BLUE	8.6	671	5.6	73
GV164 CERISE	9.1	649	5.4	71
GV173 CLEAR GLOSS EXTERIOR	8.4	698	5.8	76
GV187 SILVER	8.9	671	5.6	73

SECTION 2 -- COMPOSITION, INFORMATION ON INGREDIENTS

CHEMICAL NAME; COMMON NAME; CAS NUMBER	PERCENT BY WEIGHT	OCCUPATIONAL EXPOSURE LIMITS -------ACGIH------- TLV	-------OSHA-------- PEL	VAPOR PRESSURE IN mmHg	NOTES
ISOPHORONE; CAS #: 78-59-1	28-46	NOT ESTABLISHED Ceiling 5 ppm	4 PPM	< 1.0 @ 20C	(1)
RESIN MIXTURES; CAS #: Not Available	21-28	NOT ESTABLISHED	NOT ESTABLISHED	< 1 @ 20C	
ETHYL 3-ETHOXYPROPIONATE; ESTER SOLVENT EEP; CAS #: 763-69-9	5-22	NOT ESTABLISHED	NOT ESTABLISHED	1.11 @ 25C	(2)
PETROLEUM DISTILLATE; AROMATIC HYDROCARBON; CAS #: 64742-94-5	7-14	NOT ESTABLISHED	NOT ESTABLISHED	<1 @ 20C	(3)
* NAPHTHALENE; PETROLEUM DISTILLATE; CAS #: 91-20-3	2	10 ppm STEL: 15 ppm	10 ppm STEL: 15 ppm	<1 @ 20C	(4)
PETROLEUM DISTILLATE; AROMATIC HYDROCARBON; CAS #: 64742-95-6	2	NOT ESTABLISHED	NOT ESTABLISHED	3.0 @ 20C	
TITANIUM DIOXIDE; CAS #: 13463-67-7	0-33	10 mg/m3	10 mg/m3	N/A	
* COPPER COMPOUNDS; CAS #: 7440-50-8;	0-18	1 mg/m3	1 mg/m3	N/A	(5)
DIACETONE ALCOHOL; 4-HYDROXY-4-METHYL-2-PENTANONE CAS #: 123-42-2	0-11	50 ppm	50 ppm	1.0 @ 20C	
PIGMENTS; MIXTURE; ‡: NOT AVAILABLE	0-9	10 mg/m3 Total dust	15 mg/m3 Total dust	N/A	(6)
* ALUMINUM COMPOUNDS; CAS #: 7429-90-5;	0-9	10 mg/m3	15 mg/m3 Total Dusts	N/A	(7)

CARBON BLACK; PIGMENT BLACK; #: 1333-86-4	0-5	3.500 mg/m3	35.00 mg/m3	N/A	
* ZINC COMPOUNDS; CAS #: 7440-66-6;	0-2	10 mg/m3 Total dust	15 mg/m3 Total dust	N/A	(8)

* SUBJECT TO REPORTING REQUIREMENT OF SECTION 313 OF TITLE III OF SARA (40 CFR PART 372).

1) This chemical is included on the list of Hazardous Air Pollutants (HAPs) from Title III of the Clean Air Act Amendments of 1990.
2) Supplier recommended exposure limit of 50 ppm.
3) Industry recommended exposure limit of 100 ppm.
4) This chemical is included on the list of Hazardous Air Pollutants (HAPs) from Title III of the Clean Air Act Amendments of 1990.
5) CAS # and exposure limits are for copper dusts and mists.
6) See Section 8 Exposure Controls, Personal Protection- Exposure Guidelines for more information on exposure limits.
7) CAS # and TLV are for metal dusts.
8) See Section 8 Exposure Controls, Personal Protection for more information on above exposure limits.

The recommended permissible exposure limits (PEL) indicated above reflect the levels adopted by OSHA in 1989. Although, some of the 1989 levels have since been vacated, the Nazdar Company recommends that the lower exposure levels be observed as reasonable worker protection.
NOTE: Due to the broad spectrum of colors each MSDS may represent, ranges of some ingredients listed in Section 2 may exceed those specified in the Canadian Controlled Product Regulations. If specific concentration information is needed to comply with this regulation contact Nazdar.

SECTION 3 -- HAZARDS IDENTIFICATION

GENERAL HEALTH EFFECTS
THE FOLLOWING INFORMATION HAS BEEN DEVELOPED BASED UPON USING THE PRODUCT AS INTENDED BY THE MANUFACTURER. The potential health effects of this product are based on the hazards of its components. The use of this product in combination with other products may produce synergistic (additive) health effects. Cautionary labeling and material safety data sheets of all materials used with this product should be reviewed before use.

EYES
Eye contact with liquid, vapors or mists may cause moderate to severe irritation, including burning, tearing, redness or swelling and reversible eye damage.

SKIN
Repeated or prolonged overexposure may cause skin irritation or dermatitis. Symptoms may include dryness, chapping and redness. Toxic and may be harmful if absorbed through the skin.

INHALATION
Inhalation may cause respiratory tract irritation. Symptoms may include headaches, nausea, dizziness and intoxication.

INGESTION
Ingestion may cause gastrointestinal tract irritation. Symptoms may include abdominal pain, nausea, vomiting and diarrhea.

CHRONIC EFFECTS/TARGET ORGANS
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.

ANIMAL STUDIES
Isophorone is a suspect carcinogen in lab animals. Ethyl 3-ethoxypropionate (EEP) has been suggested, after overexposure, as a cause of the following effects in laboratory animals, and may aggravate pre-existing disorders of these organs in humans: mild, reversible liver effects. EEP has been shown to cause harm to the fetus in laboratory animal studies. Harm to the fetus occurs only at exposure levels that harm the pregnant animal. The relevance of these findings to humans is uncertain. Diacetone alcohol has been found to cause kidney and liver injury and blood disorders in lab animals. For animal studies, reference TSCA Section 4 Test Rule Results or contact the manufacturer for further details.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE
Pregnant women and persons with pre-existing health disorders should consult their physician before using this product. Repeated and prolonged overexposure and/or individual sensitivity may increase the potential for and degree of adverse health effects. See Section 3 "Hazards Identification" for effects of certain hazardous ingredients.

ROUTES OF EXPOSURE
Primary exposure routes: Inhalation-Dermal (Contact/Absorption)-Ingestion

SECTION 4 -- FIRST AID MEASURES

EYES
After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. If irritation persists have eyes examined and tested by medical personnel.

SKIN
In case of contact, immediately wash skin with soap and plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention if irritation persists. Thoroughly wash (or discard) clothing and shoes before reuse.

INHALATION
Remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Seek immediate medical attention if breathing difficulty is experienced.

INGESTION
If swallowed, do NOT induce vomiting. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.

OTHER COMMENTS
Not Applicable

SECTION 5 -- FIRE FIGHTING MEASURES

FLASH POINT
150 Degrees - 160 Degrees Fahrenheit (SETA Flash)

OSHA FLAMMABILITY CLASSIFICATION (NFPA)
Class IIIA Combustible Liquid

FLAMMABLE LIMITS (LEL-LOWER EXPLOSIVE LIMIT)
0.8% volume in air

EXTINGUISHING MEDIA
Foam-CO2-Dry Chemical-Water Spray

FIRE AND EXPLOSION HAZARDS
Isolate from heat, electrical equipment, sparks, and open flame. Keep containers tightly closed. Vapors may be heavier than air and can travel to a source of ignition then flash back. Closed containers may explode when exposed to extreme heat.

FIRE FIGHTING EQUIPMENT
Full protective equipment including self-contained breathing apparatus (SCBA) is recommended to protect firefighters.

SPECIAL FIRE FIGHTING PROCEDURES
Water may be ineffective but may be used to cool containers. Fumes released on burning may be toxic and dangerous.

SECTION 6 -- ACCIDENTAL RELEASE MEASURES

RELEASE MANAGEMENT MEASURES
Remove all sources of ignition (flames, hot surfaces and electrical, static or frictional sparks). Avoid contact or breathing vapors. Ventilate area. Contain release and remove with inert absorbent. Use non-sparking tools to place material in appropriate container for disposal. The National Response Center (800-424-8802) and local authorities should be contacted for any reportable spill/release.

SECTION 7 -- HANDLING AND STORAGE

HANDLING AND STORAGE METHODS
Use in a well ventilated area. Follow all MSDS/label precautions even after container is emptied; container may retain product residues. Store in closed containers in cool, dry, well ventilated area away from sources of ignition. Keep containers closed when not in use. Smoke in designated areas only. Avoid prolonged or repeated overexposure to this product. Keep out of reach of children. Follow label directions carefully. Do not take internally. Harmful or fatal if swallowed.

SECTION 8 -- EXPOSURE CONTROLS, PERSONAL PROTECTION

RESPIRATORY PROTECTION
If concentrations of hazardous ingredients exceed exposure limits listed in Section 2 an appropriate NIOSH (National Institute for Occupational Safety and Health) approved respirator with an organic vapor cartridge should be used. If material is handled under mist, spray or dust forming conditions, a P100 (99.97% efficiency) filter should be used in addition to the organic vapor cartridge. If no exposure limits are listed in Section 2, follow general safety guidelines in 29 CFR 1910.134 Respiratory Protection or other applicable respiratory standard.

SKIN PROTECTION
Use neoprene, nitrile or other gloves resistant to chemicals listed in Section 2. Contact a reputable safety supply company

for appropriate gloves. Solvent resistant aprons are recommended. Prevent prolonged skin contact with contaminated clothing.

EYE PROTECTION
Use ANSI (American National Standards Institute) approved safety glasses, faceshield or splash proof goggles to prevent eye contact. Contact a reputable safety supply company for appropriate eye protection. The availability of an eye wash is highly recommended.

EXPOSURE GUIDELINES
See Section 2 "Composition, Information on Ingredients" for occupational exposure limits. Excessive concentrations of nuisance dusts or particulates not otherwise classified (PNOC) or regulated (PNOR) may reduce visibility and cause unpleasant deposits in the eyes, ears, and nasal passages. The TLV and PEL has been established for all non-toxic "nuisance dusts" that are not otherwise classified and refers to both organic and inorganic dusts. Exposure or generation of these dusts is not anticipated during normal printing operations. The use of dry pigments and powders, grinding or sanding of printed products may generate quantities of these particulates. Refer to Section 2 Composition, Information on Ingredients for exposure limits.

HYGIENIC PRACTICES
Wash with soap and water before eating, smoking or using toilet facilities. Separately wash or discard clothing and footwear before reuse. NEVER try to remove ink from the skin by using solvent or thinner. Such action is likely to increase the possibility of undesirable effects. Remove contaminated clothing to prevent prolonged skin contact.

ENGINEERING CONTROLS
Use applicable engineering controls, work practices and personal protective equipment to ensure all concentrations are kept below the exposure limits listed in Section 2.

OTHER PROTECTION
Not Applicable

SECTION 9 -- PHYSICAL AND CHEMICAL PROPERTIES

**

APPEARANCE:
Viscous liquid

ODOR:
Characteristic

PHYSICAL STATE:
Liquid

pH
Not applicable

VAPOR PRESSURE
See Section 2 for individual ingredients.

VAPOR DENSITY
Heavier than air

BOILING POINT
Greater than 300 degrees Fahrenheit

FREEZING POINT
Not available

SOLUBILITY IN WATER
Not tested

EVAPORATION RATE
Slower than ether

VISCOSITY
Greater than water

PERCENT VOLATILE BY VOLUME: SEE SECTION ONE

WEIGHT PER GALLON: SEE SECTION ONE

VOC: SEE SECTION ONE

PHOTOCHEMICALLY REACTIVE
Yes

Percent volatile = Percent VOC

SECTION 10 -- STABILITY AND REACTIVITY

CHEMICAL STABILITY
Stable

CONDITIONS TO AVOID
Avoid excessive heat, ignition sources, sparks and open flame.

INCOMPATIBILITY WITH OTHER MATERIALS
Strong acids/bases, oxidizing/reducing agents and reactive chemicals.

HAZARDOUS DECOMPOSITION PRODUCTS
May produce hazardous fumes when heated to decomposition e.g. carbon monoxide, carbon dioxide and other noxious gases.

HAZARDOUS POLYMERIZATION
Not anticipated during normal printing and storage conditions.

SECTION 11 -- TOXICOLOGICAL INFORMATION

EXPERIMENTAL TOXICITY DATA
Experimental toxicity data on diacetone alcohol has given the following results: Intraperitoneal LD50 Mouse: 933 mg/kg. Oral LD50 Rat: 4 g/kg: Dermal LD50 Rabbit: 13.6 g/kg.

SECTION 12 -- ECOLOGICAL INFORMATION

ECOTOXICITY
No Data Available

ENVIRONMENTAL FATE
No Data Available

SECTION 13 -- DISPOSAL CONSIDERATIONS

DISPOSAL METHODS
Dispose of in accordance with applicable local, county, state, provincial and federal regulations. Emptied containers may retain hazardous properties. Empty containers should be disposed of in an environmentally safe manner in accordance with applicable regulations.

SECTION 14 -- TRANSPORT INFORMATION

TRANSPORT INFORMATION
Not regulated. The product(s) described by this Material Safety Data Sheet do not meet the definition of nor are they classified as a hazardous material/dangerous good as defined by the United States Department of Transportation (DOT), the International Civil Aviation Organization (ICAO), the International Maritime Organization (IMO) or the Canadian Transportation of Dangerous Goods Act (TDG).

SECTION 15 -- REGULATORY INFORMATION

SARA TITLE III 313 INFORMATION
See Section 2 "Composition, Information on Ingredients" for applicable chemicals.

TOXIC SUBSTANCES CONTROL ACT STATUS
All ingredients in Section 2 are listed on the U.S. Environmental Protection Agency's Toxic Substances Control Act (TSCA) Inventory and the Canadian Domestic Substance List.

OTHER REGULATORY INFORMATION
Not Applicable

SECTION 16 -- OTHER INFORMATION

DISCLOSURE
The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind express or implied is made with respect to the information contained herein. The data in this MSDS relates only to the specific material designated herein and does not apply to use in combination with any other material or process.

DEFINITIONS

ACGIH: American Conference of Governmental Industrial Hygienists

AIHA: American Industrial Hygiene Association

CEILING: (TLV-Ceiling and PEL Ceiling Limit) The ceiling exposure limit or concentration not to be exceeded for even brief times.

DOT: Department of Transportation

HMIS: The Hazardous Materials Identification System (HMIS) developed by the National Paint and Coatings Association (NPCA) to provide information on the acute health hazards, reactivity and flammability encountered in the workplace at room temperatures.

IARC: International Agency for Research on Cancer

NFPA: National Fire Protection Association

NTP: National Toxicology Program

STEL: Short-Term Exposure Limit: ACGIH terminology for the short-term exposure limit or maximum concentration for a continuous exposure period of 15 minutes.

TLV: Threshold Limit Value. A term ACGIH uses to express the airborne concentration of a material to which most workers can be exposed during a normal daily and weekly work schedule without adverse effects.

TWA: Time-Weighted Average

VOC: Volatile Organic Compound