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Hastings Plastics
Mold Making Materials

LATEX COATING RUBBER	HAFLEX 1960-1
PRIMER	HAFLEX 1961-1 HARDENER
PRIMER	HAFLEX 1961-1 RESIN
HOTMELT	HAFLEX 1966

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HASTINGS
PLASTICS
COMPANY
1704 Colorado Ave. Santa Monica, CA 90404 310-829-3449 FAX 310-828-6820

MATERIAL SAFETY
DATA SHEET
MSDS 1951-35
*Revised 05/19/92
Issued 09/07/88

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HAFLEX 1951-35

SECTION I - PRODUCT IDENTIFICATION

MANUFACTURER'S NAME - HASTINGS PLASTICS COMPANY
EMERGENCY PHONE NUMBER - (310) 829-3449
CHEMICAL NAME & SYNONYMS - Vinyl Ester
TRADE NAME - Haflex 1951-35

SECTION II - HAZARDOUS INGREDIENTS

COMPONENTS	CAS #	%	OSHA/PEL	ACGIH/TLV
DI(2-ETHYHEXYL) PHTHALATE Identified as a CARCINOGEN by NTP, IARC	117-81-7	60 - 70	5 MG/M3	5 MG/M3
P.V.C. POLYVINYL CHLORIDE	9002-86-2	35 - 45	0.5 ppm	0.5 ppm

HEALTH - 2 FLAMMABILITY - 1 REACTIVITY - 0
HMIS[2]

Health Hazard	0
Flammability	1
Reactivity	0
Max Personal Protection	*

NOTE: OSHA/ACGIH SHORT TERM EXPOSURE LIMIT (STEL) FOR DI-SEC-OCTYL PHTHALATE DI(2-ETHYLHIXYL) PHTHALATE IS 10 MG/CUM. NOISH RECOMMENDS THAT OCCUPATIONAL EXPOSURE BE REDUCED TO THE LOWEST FEASIBLE LEVEL.

Vinyl resin contains a very small amount of residual vinyl chloride monomer (CAS Registry Number: 75-01-4).

SPECIAL NOTE: Polyvinyl chloride resin is not a cancer suspect agent. It is the trace amount of unreacted vinyl chloride monomer that must be controlled, not the vinyl itself.

THIS CHEMICAL IS SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF SATA TITLE III.

SECTION III - PHYSICAL DATA

APPEARANCE, COLOR,
AND ODOR - Clear liquid.

BOILING POINT (^{0}F)	-	600^0F.
VAPOR PRESSURE (mm Hg)	-	1.20 @ 200^0F DEG
VAPOR DENSITY	-	Heavier than air.
SPECIFIC GRAVITY	-	1.14
SOLUBILITY IN WATER	-	Negligible.
PERCENT VOLATILE (By Volume %)	-	UNAVAILABLE
EVAPORATION RATE	-	SLOWER THAN ETHER

SECTION IV - FIRE AND HAZARD EXPLOSION DATA.

FLASH POINT, ^{0}F	-	Above 250^0F.
EXTINGUISHING MEDIA	-	ABC dry powder, protein type air foams.
SPECIAL FIRE FIGHTING PROCEDURES	-	Wear self-contained breathing apparatus to prevent inhalation of combustion gases.
UNUSUAL FIRE AND EXPLOSION HAZARDS	-	Vinyl resin is not considered to be a dust explosion risk.
FLAMMABLE LIMITS	-	N/A.

COMBUSTION PRODUCTS:
When forced to burn, about 97% of the combustion gases from vinyl resin will be a combination of hydrogen chloride, carbon monoxide and carbon dioxide. Other gases will include small amounts of benzene and aromatic and alphatic hydrocarbons.

SECTION V - HEALTH EFFECTS DATA

PERMISSIBLE EXPOSURE LEVEL	-	5 MG/M3
THRESHOLD LIMIT VALUE	-	5 MG/M3

EFFECTS OF OVEREXPOSURE:
EYES - May cause irritation.
SKIN - Can cause slight irritation.
BREATHING - Of mist can cause irritation of nasal and respiratory passages.
SWALLOWING - Can cause gastrointestinal irritation, nausea, vomiting, and diarrhea.

SECTION VI-EMERGENCY AND FIRST AID PROCEDURES
IF ON SKIN: Thoroughly wash exposed area with soap and water. Remove contaminated clothing. Launder contaminated clothing before re-use.

IF IN EYES: Flush with large amounts of water, lifting upper and lower lids occasionally.

IF SWALLOWED: Give two glasses of water, induce vomiting immediately by sticking finger down throat. Call a physician. Never give anything by mouth to an unconscious person.

IF BREATHED: Remove individual to fresh air.

PRIMARY ROUTE(S) OF ENTRY: Inhalation, skin contact.

EFFECTS OF CHRONIC OVEREXPOSURE:
Both NTP and IARC have determined that there is sufficient evidence for the carcinogenicity of DI(2-ETHYLHEXYL) PHTHALATE in experimental animals. DEHP administered in the diet produced an increased incidence of hepatocellular carcinomas in female rats and male and female mice, and an increased incidence of hepatocellular carcinomas or neoplastic nodules in male rats. DEHP also causes fetotoxicity and teratogenicity in pregnant female rodents.

Overexposure to this material (or its components) has apparently been found to cause the following effects in laboratory animal:, Testis damage.

DUST EXPOSURE:
Vinyl resin has little effect on the lungs and is not known to cause any disease when dust exposure is minimized.

SECTION VII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION - Not required under normal conditions of use.

If workplace limit(s) of product or any component is exceed (see section V), a NIOSH/MSHA approved air supplied respirator is advised in absence of proper environmental control. OSHA regulations also permit other NIOSH/MSHA respirators (negative pressure type) under specified conditions (see your safety equipment supplier). Engineering or administrative controls should be implemented to reduce exposure.

VENTILATION - Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below TLV(S).

PROTECTIVE GLOVES - Wear resistent gloves such as polyethylene or neoprene.

EYE PROTECTION - Chemical splash goggles in compliance with OSHA regulations are advised; however, OSHA regulations also permit other type safety glasses. (Consult your safety equipment supplier)

NORMAL MELT PROCESSING:
Virtually all thermoplastic materials will emit fumes and/or vapors when heated to processing temperatures. The concentration and composition of these vapors will depend upon variables such as the specific compound formulation and processing method and temperature. Always use vinyl compound under well-ventilated conditions and avoid continued or prolonged breathing of process vapors. For personal hygiene, wash thoroughly after handling resin, especially before eating, smoking or using toilet facilities. Do not store or consume food in processing areas. Do not use processing equipment to heat food.

SPECIAL NOTE:
Vinyl compound at or above normal processing temperature must never be allowed to accumulate in thick masses, or it will begin to thermally decompose and to swell due to internal gassing. Gassing may cause a thick mass to explode if its outside surface is hardened. Molten waste should be collected as strands or flattened to 2-inches or less, and quenched in a drum of cold water provided for this purpose. Decomposing material should be removed to a well-ventilated area, preferably outdoors.

SECTION VIII -REACTIVITY DATA

STABILITY	-	Stable.
INCOMPATIBILITY	-	Strong oxidizing agents.
HAZARDOUS DECOMPOSITION PRODUCTS	-	Hydrogen chloride, carbon monoxide, carbon dioxide and small amounts of benzene and aromatic and alphatic hydrocarbons.

HAZARDOUS POLYMERIZATION - Will not occur.

SECTION IX - SPILL OR LEAK PROCEDURES
STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

SMALL SPILL	-	Absorb liquid on paper, vermiculite, floor absorbent, or other absorbent material and transfer to hood.

LARGE SPILLS:
Eliminate all ignition sources (flares, flames, including pilot lights, electrical sparks). Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed. Stop spill at source. Dike area of spill to prevent spreading pump liquid to salvage tank. Remaining liquid may be taken up on sand clay, earth, floor absorbent, or other absorbent material and shovelled into containers.

WASTE DISPOSAL METHOD:

SMALL SPILL	-	Package material in paper and deposit in landfill in accordance with local, state, and federal regulations.
LARGE SPILLS	-	Destroy by liquid incineration.

SECTION X - SPECIAL PRECAUTIONS
PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING:
Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid) all hazard precautions given in this data sheet must be observed.

DISCLAIMER OF LIABILITY

As the conditions or methods of use are beyond our control, we do not assume any responsibility and expressly disclaim liability for any use of this material. Information contained herein is believed to be true and accurate but all statements are made without warranty, express or implied, regarding the accuracy of the information, the hazards connected with the use of the material or the results to be obtained from the use thereof. It is the user's obligation to determine the conditions of safe use and the suitability of the material for the user's purpose.

Prepared By: Joe Morales

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MATERIAL SAFETY
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HAFLEX 1951-65

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EMERGENCY PHONE NUMBER -(310) 829-3449
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TRADE NAME -Haflex 1951-65

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COMPONENTS	CAS #	%	OSHA/PEL	ACGIH/TLV
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HMIS[2]

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SECTION III - PHYSICAL DATA

APPEARANCE, COLOR, AND ODOR	-	Clear liquid.
BOILING POINT (^{0}F)	-	600^{0}F.
VAPOR PRESSURE (mm Hg)	-	1.20 @ 200^{0}F DEG
VAPOR DENSITY	-	Heavier than air.
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SOLUBILITY IN WATER	-	Negligible.
PERCENT VOLATILE (By Volume %)	-	UNAVAILABLE
EVAPORATION RATE	-	SLOWER THAN ETHER

SECTION IV - FIRE AND HAZARD EXPLOSION DATA.

FLASH POINT, ^{0}F	-	Above 250^{0}F.
EXTINGUISHING MEDIA	-	ABC dry powder, protein type air foams.
SPECIAL FIRE FIGHTING PROCEDURES	-	Wear self-contained breathing apparatus to prevent inhalation of combustion gases.
UNUSUAL FIRE AND EXPLOSION HAZARDS	-	Vinyl resin is not considered to be a dust explosion risk.
FLAMMABLE LIMITS	-	N/A.

COMBUSTION PRODUCTS:
When forced to burn, about 97% of the combustion gases from vinyl resin will be a combination of hydrogen chloride, carbon monoxide and carbon dioxide. Other gases will include small amounts of benzene and aromatic and alphatic hydrocarbons.

SECTION V - HEALTH EFFECTS DATA

PERMISSIBLE EXPOSURE LEVEL	-	5 MG/M3
THRESHOLD LIMIT VALUE	-	5 MG/M3

EFFECTS OF OVEREXPOSURE:
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If workplace limit(s) of product or any component is exceed (see section V), a NIOSH/MSHA approved air supplied respirator is advised in absence of proper environmental control. OSHA regulations also permit other NIOSH/MSHA respirators (negative pressure type) under specified conditions (see your safety equipment supplier). Engineering or administrative controls should be implemented to reduce exposure.

VENTILATION - Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below TLV(S).

PROTECTIVE GLOVES - Wear resistent gloves such as polyethylene or neoprene.

EYE PROTECTION - Chemical splash goggles in compliance with OSHA regulations are advised; however, OSHA regulations also permit other type safety glasses. (Consult your safety equipment supplier)

NORMAL MELT PROCESSING:
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SPECIAL NOTE:
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SECTION VIII -REACTIVITY DATA

STABILITY	-	Stable.
INCOMPATIBILITY	-	Strong oxidizing agents.
HAZARDOUS DECOMPOSITION PRODUCTS	-	Hydrogen chloride, carbon monoxide, carbon dioxide and small amounts of benzene and aromatic and alphatic hydrocarbons.

HAZARDOUS POLYMERIZATION - Will not occur.

SECTION IX - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

SMALL SPILL	-	Absorb liquid on paper, vermiculite, floor absorbent, or other absorbent material and transfer to hood.

LARGE SPILLS:
Eliminate all ignition sources (flares, flames, including pilot lights, electrical sparks). Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed. Stop spill at source. Dike area of spill to prevent spreading pump liquid to salvage tank. Remaining liquid may be taken up on sand clay, earth, floor absorbent, or other absorbent material and shovelled into containers.

WASTE DISPOSAL METHOD:

SMALL SPILL	-	Package material in paper and deposit in landfill in accordance with local, state, and federal regulations.
LARGE SPILLS	-	Destroy by liquid incineration.

SECTION X - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING:
Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid) all hazard precautions given in this data sheet must be observed.

DISCLAIMER OF LIABILITY

As the conditions or methods of use are beyond our control, we do not assume any responsibility and expressly disclaim liability for any use of this material. Information contained herein is believed to be true and accurate but all statements are made without warranty, express or implied, regarding the accuracy of the information, the hazards connected with the use of the material or the results to be obtained from the use thereof. It is the user's obligation to determine the conditions of safe use and the suitability of the material for the user's purpose.

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MATERIAL SAFETY
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MSDS HAFLEX 1960-1
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HAFLEX 1960-1

SECTION I - PRODUCT IDENTIFICATION

MANUFACTURER'S NAME	-	HASTINGS PLASTICS COMPANY
PRODUCT INFO/SALES	-	(310) 829-3449
EMERGENCY PHONE NUMBER	-	24 HOUR (800) 424-9300
PRODUCT NAME	-	Haflex 1960-1
PRODUCT CODE NUMBER	-	1960-1
CHEMICAL NAME	-	Mixture Polyisoprene Compound
SYNONYMS	-	Polyisoprene Compound
T.S.C.A. STATUS	-	N/A

SECTION II - HAZARDOUS INGREDIENTS COMPONENTS

There are no known hazardous components above regulatory threholds in this product.
This product is a water based mixture with an ammonia odor. The mixture has not been evaluated as a whole for health effects. Information provided on health effects of this product is based on the individual components. The product is not combustible, but it will burn if involved in a fire, releasing hydrocarbon products of combustion. Inhalation of the ammonia from this product may cause respiratory irritation, coughing, sore throat, and labored breathing.

SECTION III - PHYSICAL DATA

COLOR AND ODOR	-	Creamy white liquid with slight ammonia odor.
VAPOR PRESSURE	-	Same as water.
VAPOR DENSITY	-	Same as water.
SPECIFIC GRAVITY ($H_20 = 1$)	-	0.96
SOLUBILITY IN WATER	-	Miscible.
BOILING POINT	-	212^0F (water)
FREEZING POINT	-	32^0F (water)
V.O.C. (Gms/Liter)	-	None

SECTION IV - FIRE AND HAZARD EXPLOSION DATA

FLASH POINT ^{0}F	-	Not Determined
FLAMMABLE LIMITS	-	None
AUTOIGNITION TEMPERATURE	-	Not known
EXTINGUISHING MEDIA	-	Water, CO_2, or dry chemical for dried films.

SPECIAL FIRE FIGHTING PROCEDURES	-	Wear self-contained breathing apparatus approved by NIOSH. Use water spray to keep containers cool, to keep spillage away from fire and heat, and to knock down vapors. (0ver)
UNUSUAL FIRE AND EXPLOSION HAZARDS	-	Burning of dried Latex films produces dense, black smoke with the potential for toxic vapors.
HAZARDOUS COMBUSTION	-	Combustion may produce toxic gases such as oxides of carbon.

SECTION V - HEALTH EFFECTS DATA

ANIMAL TOXICITY	-	N/A.
ORAL, LD50 (INGESTION)	-	N/A.
EYE EFFECTS	-	Irritation.
SKIN EFFECTS	-	N/A.
THRESHOLD LIMIT VALUE	-	25 ppm for ammonia.
EFFECTS OF HUMAN OVEREXPOSURE	-	Ammonia causes reversible eye and throat irritation and respiratory distress.

SECTION VI - EMERGENCY AND FIRST AID PROCEDURES

POTENTIAL HEALTH EFFECTS

Acute: The main hazard arises from inhalation of ammonia which can be released on standing in an open container or on agitation. The ammonia arises from normal breakdown of ammonium hydroxide which is used to stabilize natural latex. Inhalation of ammonia may cause irritation to the respiratory tract. Symptoms may include coughing, sore throat, and labored breathing. High concentrations may cause laryngitis, tracheitis, pulmonary edema, chest pains, or pneumonitis. Symptoms are generally reversible.

Due to the caustic content of the mixture eye contact may cause irritation with discomfort, tearing, or blurred vision.

Skin contact may cause temporary irritation and redness.

No information on effects of ingestion could be found, however some gastrointestinal distress would be expected.

This mixture contains materials which in their pure state constitute a dust hazard. In the form present they will not dust.

Chronic: None of the components in this mixture is listed by IARC, NTP, OSHA or ACGIH as a carcinogen.

INHALATION	-	Move to fresh air in case of accidental inhalation of vapors or fumes from overheating or combustion. When symptoms persist or in all cases of doubt seek medical advice.
EYE CONTACT	-	Flush eyes with plenty of water for at least 15 minutes. If eye irritation persist, seek medical attention.
SKIN CONTACT	-	Rinse with plenty of soap and water. If irritation persist, seek medical attention.
INGESTION OF FLUID	-	Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Seek medical attention if necessary.

SECTION VII - EMPLOYEE PROTECTION RECOMMENDATIONS

PROTECTIVE GLOVES	-	Rubber or vinyl.
EYE PROTECTION	-	Chemical safety goggles.
OTHER PROTECTIVE EQUIPMENT	-	Safety shower and eye wash station.
RESPIRATORY PROTECTION	-	When permissible exposure limits (PEL) are exceeded, use a mask supplied with external air or other NIOSH-approved respiratory protection.

SECTION VIII - REACTIVITY DATA

STABILITY	-	Stable.
HAZARDOUS POLYMERIZATION	-	Will not occur.
INCOMPATIBILITY	-	Solvents, acids, metal salts, and other compounds which may coagulate latex.
CONDITIONS TO AVOID	-	Extreme temperatures.
HAZARDOUS DECOMPOSITION PRODUCTS	-	Carbon dioxide, carbon monoxide, oxides of nitrogen, other hazardous materials, and smoke are all possible.

SECTION IX - REGULATORY DATA

OSHA Status: There are no known hazardous components above regulatory threshold in this product.

TSA: All components of this product are listed on or exempt from the TSA Inventory.

SARA: Title III Section 302 Extremely hazardous substance
Not applicable

US. EPA CERCLA Hazardous Substances (40 CFR 302)

Chemical Name	CAS- No	% in Product	RQ for component	RQ for Mixture
Ziram	137-30-4	0.0033	001 lbs	30,303 lbs

NATIONAL POLLUTANT RELEASE INVENTORY

Chemical Name	CAS- No	% By WEIGHT	NPRI ID #
Zinc Oxide	1314-13-2	0.14	241

WHMIS CLASSIFICATION : Not controlled

SECTION IX - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

Confine spill to prevent contamination of sewer system or ground water. Absorb liquid with an appropriate absorbent. Spillage will cause slippery conditions.

WASTE DISPOSAL METHOD:

This material contains hazardous ingredients (See Section II). Local, state, and federal regulations must be consulted to determine correct disposal method.

SECTION X - SPECIAL PRECAUTIONS AND STORAGE DATA

STORAGE TEMPERATURE	-	Avoid temperature extremes. Keep from freezing. Mixing without introduction of air may be necessary before use.
AVERAGE SHELF LIFE	-	N/A.
SPECIAL SENSITIVITY	-	N/A.

Prepared By: Joe Morales

F#170-21A

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MATERIAL SAFETY DATA SHEET
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Issued 06/18/87

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HAFLEX 1961-1 HARDENER

SECTION I - PRODUCT IDENTIFICATION

MANUFACTURER'S NAME	-HASTINGS PLASTICS COMPANY
EMERGENCY PHONE NUMBER	-(213) 829-3449
SYNONYMS	-Epoxide
PRODUCT NAME	-Haflex 1961-1 Hardener
HAZARD RATING	-Health = Moderate
	Fire = Serious
	Reactivity = Minimal
	Special = None

SECTION II - HAZARDOUS INGREDIENTS

COMPONENTS	%	OSHA/PEL	TLV (units)
METHYL ISOBUTYL KETONE	> 99	70%	50

SECTION III - PHYSICAL DATA

APPEARANCE, COLOR, AND ODOR	-	Clear, colorless liquid, sharp odor.
MELTING POINT	-	119^0F.
BOILING POINT	-	241^0F.
VAPOR PRESSURE MM HG/20 15^0C.	-	
VAPOR DENSITY (Air = 1)	-	3.5
SPECIFIC GRAVITY (H_20=1)	-	.86
SOLUBILITY IN WATER %	-	1.7%.
EVAPORATION RATE (Butyl Acetate = 1)	-	1.6

SECTION IV - FIRE AND HAZARD EXPLOSION DATA

FLASH POINT, ^{0}F (METHOD USED)	-	$^6 1^0$F (TCC).
EXTINGUISHING MEDIA	-	Use water spray, dry chemical, or CO_2.
FLAMMABLE LIMITS IN AIR	-	LOWER: 1.2 UPPER: 8.0.
SPECIAL FIRE FIGHTING PROCEDURES	-	Fire fighters should wear self-contained breathing apparatus. Use water spray to cool

nearby containers and structures exposed to fire.

UNUSUAL FIRE AND EXPLOSION HAZARDS:
Extinguish all nearby sources of ignition because vapor is heavier than air and may travel a considerable distance to an ignition source and flashback.

SECTION V - FIRST AID PROCEDURES

INHALATION	-	Remove to fresh air. Give artificial respiration if not breathing. Get immediate medical attention.
EYE CONTACT	-	Immediately flush eyes with lots of running water for 15 minutes, lifting the upper and lower eyelids occasionally. Get medical attention if irritation persists after washing.
SKIN CONTACT	-	Immediately wash skin with lots of soap and water. Remove contaminated clothing and shoes. Wash before reuse. Get medical attention if irritation persists after washing.
INGESTION	-	Do not induce vomiting. Get immediate medical attention. If vomiting occurs spontaneously, keep victim's head below his hips to prevent his breathing the vomitus into his lungs.

SECTION VI - HEALTH HAZARD DATA
PRIMARY ROUTES OF EXPOSURE:

INHALATION	-	Vapors and mists irritate the nose and throat. Inhalation of higher concentrations may cause headaches, nausea, vomiting, and coma. Inhalation or very high concentrations or prolonged exposure may cause kidney and liver damage.
EYE CONTACT	-	Vapors may irritate the eyes. Liquid and mists may severely irritate or damage the eyes.
SKIN CONTACT	-	Brief contact may dry the skin. Prolonged or repeated contact may irritate the skin, causing dermatitis.
INGESTION	-	Swallowing large quantities causes headaches, nausea, vomiting and perhaps unconsciousness. Liquid is moderately toxic and may be harmful if swallowed.

CHRONIC EFFECTS OF EXPOSURE:
Although the significance to humans is unknown, male rats exposed by inhalation of up to 1000 PPM of vapors for 90 days exhibited slight kidney damage.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:
None known.

SECTION VII - TOXICITY DATA

ORAL	-	Rat LD50 = 2080 mg/kg.
DERMAL	-	Rabbit LD50 = 500 mg/24 hr.
INHALATION	-	Rat LCLO = 4000 ppm/15 min.
CARCINOGENICITY	-	This material is not considered to be a carcinogen by the National Toxicology Program, The International Agency For Research On Cancer or the Occupational Safety and Health Administration (OSHA).
OTHER DATA	-	None.

SECTION VIII - PERSONAL PROTECTION

VENTILATION	-	Local mechanical exhaust ventilation capable of maintaining emissions at the point of use below the PEL.
RESPIRATORY PROTECTION	-	NIOSH-Approved canister respirator in the absence of adequate environmental controls at the point of use.
EYE PROTECTION	-	Chemical goggles.
PROTECTIVE CLOTHING	-	Long-sleeved shirt, trousers, safety shoes, rubber gloves, and rubber aprons.
OTHER PROTECTIVE MEASURES	-	An eyewash and safety shower should be nearby and ready for use.

SECTION IX - HAZARDOUS REACTIVITY

STABILITY	-	Stable.
POLYMERIZATION	-	Will not occur.
CONDITIONS TO AVOID	-	Heat, sparks, and open flames.
MATERIALS TO AVOID	-	Acids, oxidizing materials, alkalis, amines, copper and its alloys, and chlorinated hydrocarbons in the presence of alkalis.
HAZARDOUS DECOMPOSITION PRODUCTS	-	May liberate carbon monoxide, carbon dioxide and unidentified organic compounds in black smoke.

SECTION X - SPILL LEAK AND DISPOSAL PROCEDURES

IN CASE MATERIAL IS SPILLED OR RELEASED:

Wear protective equipment including rubber boots, rubber gloves, rubber apron, chemical goggles, and respiratory protection. Extinguish all ignition sources and ensure that all handling equipment is electrically grounded. For small spills or drips, mop or wipe up and dispose of in DOT-Approved waste containers.

For large spills, contain by diking with soil or other absorbent material and then pump into DOT-approved waste containers or absorb with absorbent material and place the residue in DOT-approved waste containers. Keep out of sewers, storm drains, surface waters, and soil. Comply with all applicable governmental regulations on spill reporting, and
handling and disposal of waste.

WASTE DISPOSAL METHODS:
Dispose of contaminated product and materials used in cleaning up spills or leaks in a manner approved for this material. Consult appropriate federal, state, and local regulatory agencies to ascertain proper disposal procedures.

NOTE! EMPTY CONTAINERS CAN HAVE RESIDUES, GASES AND MISTS AND ARE SUBJECT TO PROPER WASTE DISPOSAL, AS ABOVE.

SECTION XI - SPECIAL HANDLING AND STORAGE PRECAUTIONS

Keep away from heat, sparks, and flames. Store in a cool, dry place. Vent container frequently, and more often in warm weather, to relieve pressure. Electrically ground all equipment when handling this product and use only non-sparking tools. Keep container tightly closed when not in use. Do not use pressure to empty container. Wash thoroughly after handling. Do not get in eyes, on skin, or on clothing.

REPAIR AND MAINTENANCE PRECAUTIONS	-	Do not cut, grind, weld or drill on or near this container.
OTHER PRECAUTIONS	-	Containers, even those that have been emptied, will retain product residue and vapors. Always obey hazard warnings and handle empty containers as if they were full.

SECTION XII - SHIPPING INFORMATION

D.O.T. HAZARD CLASS	-	Flammable liquid.
PROPER SHIPPING NAME	-	Resin solution-Flammable liquid.
D.O.T. LABEL REQUIRED	-	Flammable liquid.
D.O.T. I.D. NUMBER	-	UN 1866.

DISCLAIMER OF LIABILITY

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Prepared By: Joe Morales

F#170-21A

HASTINGS PLASTICS COMPANY
1704 Colorado Ave. Santa Monica, CA 90404 310-829-3449 FAX 310-828-6820

MATERIAL SAFETY DATA SHEET
MSDS 1961-1 RESIN
Revised 09/27/94
Replaces 09/12/90

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HAPLEX 1961-1 RESIN

SECTION I - PRODUCT IDENTIFICATION

MANUFACTURER'S NAME - HASTINGS PLASTICS COMPANY
PRODUCT INFO/SALES - (310) 829-3449
EMERGENCY PHONE NUMBER -
24 HR (800) 424-9300
TRADE NAME - HAFLEX 1961-1 PRIMER RESIN
CHEMICAL FAMILY - EPOXIDE
CHEMICAL NAME - 4-METHYL-2-PENTANONE

SECTION II - HAZARDOUS INGREDIENTS

COMPONENTS	CAS #	%	TLV (units)
4-METHYL-2-PENTANONE	108-10-1	40-43%	50 PPM; STEL 75 PPM OSHA PEL 50 PPM; STEL 75 PPM ACGIH TLV
DIMETHYLBENZENE	1330-20-7	7-9%	OSHA PEL: 100 PPM; STEL 150 ACGIH TLV: 100 PPM; STEL 150

CARCINOGENICITY: These chemicals are not considered to be carcinogenic by NTP, IARC, or OSHA.

SECTION III - PHYSICAL DATA

APPEARANCE AND COLOR - CLEAR LIQUID
ODOR - AROMATIC AND KETONE
VAPOR DENSITY - GREATER THAN AIR
SPECIFIC GRAVITY (H_20=1) - CA. 1.1 AT 25C
SOLUBILITY IN WATER - VERY SLIGHT
PERCENT VOLATILE
(By Volume) - 48%

SECTION IV - FIRE AND HAZARD EXPLOSION DATA

FLASH POINT - 72°F CLOSED CUP
EXTINGUISHING MEDIA - Carbon Dioxide, foam, dry chemical, water spray
SPECIAL FIRE
FIGHTING PROCEDURES - Use self contained breathing apparatus.
UNUSUAL FIRE AND

EXPLOSION HAZARDS - Decomposition and combustion products may be toxic. Dangerous fire hazard and moderate explosion hazard when exposed to heat and flame.

SECTION V - HEALTH EFFECTS DATA

THRESHOLD LIMIT VALUE - ACGIH TLV 100PPM; STEL 150
EFFECTS OF OVEREXPOSURE:
Overexposure to this material can cause skin, eye and respiratory irritation. Can cause central nervous system depression, weakness, nausea, lightheadedness, vomiting, dizziness and incoordination. In animal studies, components in this product have caused liver and kidney damage and reproductive effects.

Medical conditions aggravated by exposure: allergy, eczema or skin conditions.

EYES IRRITATION: Moderate irritant
SENSITIZATION: Potential sensitizer
SKIN IRRITATION: Moderate irritant
INHALATION: Respiratory irritant

EMERGENCY & FIRST AID PROCEDURES:
EYE CONTACT: Immediately flush eyes for at least 15 minutes with running water. Hold eyelids apart to ensure rinsing of the entire eye surface and lids with water. Get immediate medical attention.

SKIN CONTACT: Wash with large amounts of running water, and soap, if available, for 15 minutes. Remove contaminated clothing and shoes. Get immediate medical attention. Discard of decontaminate clothing before re-use and destroy contaminated shoes.

INHALATION: If inhaled, remove from area to fresh air. If not breathing, give artificial respiration. Get immediate medical attention. If breathing is difficult, transport to medical care and, if available give supplemental oxygen.

INGESTION: If swallowed, give at least 3-4 glasses of water but do not induce vomiting. If vomiting occurs, give water again. Do not give anything my mouth to an unconscious or convulsing person. Get medical attention. Have physician determine whether vomiting or stomach evacuation is necessary.

EMERGENCY FIRST AID PROCEDURES-OTHER: Immediately remove wet contaminated clothing to avoid flammability hazard. Wash before reuse.

SECTION VI - REACTIVITY DATA

STABILITY - Stable
HAZARDOUS POLYMERIZATION
- Will not occur.
INCOMPATIBILITY - Strong oxidizing agents.

HAZARDOUS DECOMPOSITION
PRODUCTS - Carbon monoxide, carbon dioxide, aldehydes.

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:
Remove all sources of ignition. Provide explosion proof ventilation. Take up on absorbent material. Shovel with non-sparking tools into closable container for disposal. Wear protective equipment specified below. Thoroughly flush contaminated area with water.

WASTE DISPOSAL METHOD:
Dispose in accordance with Federal, State and local regulations.

SECTION VIII - SPECIAL PROTECTION INFORMATION

VENTILATION: Explosion-proof general mechanical ventilation. Local exhaust if needed.
RESPIRATORY PROTECTION: Organic chemical cartridge respirator, if needed.
PROTECTIVE GLOVES: Wear impervious gloves.
EYE PROTECTION: Wear splash-proof chemical goggles.
OTHER PROTECTIVE EQUIPMENT: Wear protective equipment to avoid personal contact.

SECTION IX - REGULATORY INFORMATION

TRANSPORTATION:
PROPER SHIPPING NAME: Resin Solution
HAZARD CLASS: DOT/IATA/ICAO: 3 IMDG/IMO: 3.3
ID #: UN 0866 PACKING GROUP: III, F.P. 29C
IATA HAZARD LABEL: FLAMMABLE LIQUID RCRA STATUS: D 001 IGNITABLE
CERCLA STATUS: 11,500 LBS. (U 239)
SARA/TITLE III - TOXIC CHEMICALS LIST:
THIS PRODUCT IS (OR CONTAINS) A TOXIC CHEMICAL FOR ROUTINE ANNUAL "TOXIC CHEMICAL RELEASE REPORTING" UNDER SEC. 313 (40 CRF 372).
16.0000% 108-10-1; METHYL ISOBUTYL KETONE
9.0000% 1330-20-7; BENZENE, DIMETHYL-ARALDITE GZ 571 KX-75

TSCA INVENTORY STATUS:
CHEMICAL COMPONENTS LISTED ON TSCA INVENTORY

NEW JERSEY RIGHT-TO-KNOW LABELING INFORMATION:
THIS PRODUCT CONTAINS THE FOLLOWING:

CHEMICAL NAME: PHENOL, 4-(1,1-DIMETHYLETHYL)-, POLYMER WITH (CHLOROMETHYL) OXIRAN AND 4,4'-(1-METHYLETHYLIDENE)BIS(PHENOL) **CAS #**: 67924-34-9

***

CHEMICAL NAME: 2-PENTANONE, 4-METHYL **CAS #**: 108-10-1

***

CHEMICAL NAME: XYLENES **CAS #**: 1330-20-7

***

PENNSYLVANIA RIGHT-TO-KNOW ACT:
THE FOLLOWING IS REQUIRED COMPOSITION INFORMATION.

CHEMICAL NAME: 2-PENTANONE, 4-METHYL **CAS #**: 108-10-1
COMMON NAME: METHYL ISOBUTYL KETONE **COMMENTS**: HAZARDOUS SUBSTANCE

***
CHEMICAL NAME: BENZENE, DIMETHYL **CAS #**: 1330-20-7
COMMON NAME: XYLENE **COMMENTS**: ENVIRONMENTAL HAZARD

***

CHEMICAL NAME: PHENOL, 4,4'-(1-METHYLETHYLIDENE) BIS-, POLYMERWITH (CHLOROMETHYL) OXIRANE AND P-TERT BUTYLPHENOL
CAS #: 67924-34-9 **COMMON NAME**: BISPHENOL A EPOXY RESIN
COMMENTS: NOT ON PENNSYLVANIA HAZARDOUS SUBSTANCE LIST.

SECTION X - SPECIAL PRECAUTIONS & STORAGE DATA

HMIS CODE: HEALTH: 3 FIRE: 3 REACTIVITY: 0
HANDLING, SHIPPING AND STORING PRECAUTIONS:
WARNING! FLAMMABLE LIQUID.
CAN CAUSE IRRITATION AND DERMATITIS.
MAY CAUSE CENTRAL NERVOUS SYSTEM DEPRESSION.

KEEP AWAY FROM HEAT, SPARKS AND OPEN FLAME.
AVOID BREATHING VAPOR, MIST OR SPRAY.
USE ONLY WITH GOOD VENTILATION.
INDIVIDUALS SHOULD WASH THOROUGHLY AFTER HANDLING.
STORE IN CLOSED CONTAINERS IN COOL, WELL-VENTILATED AREA.
GROUND AND BOND METAL CONTAINERS FOR LIQUID TRANSFER TO AVOID STATIC SPARKS.

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Prepared By: Joe Morales

F#170-21A Revised 09/03/94

HASTINGS PLASTICS COMPANY
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MATERIAL SAFETY DATA SHEET
HAFLEX 1966
Revised 09/12/88
Issued 02/03/87

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HAFLEX 1966

SECTION I - PRODUCT IDENTIFICATION

MANUFACTURER'S NAME - HASTINGS PLASTICS COMPANY
EMERGENCY PHONE NUMBER - (213) 829-3449
CHEMICAL FAMILY - Plasticized PVC
TRADE NAME - Haflex 1962 B

SECTION II - HAZARDOUS INGREDIENTS

COMPONENTS	CAS # OSHA/PEL	%
DIBASIC LEAD PHTHLATE	7439921 0.05 mg/m^3	< 5
DIVASIC LEAD STEARATE	7439921 0.05 mg/m^3	< 5

Although Haflex 1966 mix contains the above lead compounds, they are present in an inert form that poses no handling or health problems unless the Haflex mix is ingested. As noted in Section IV, toxic fumes may be evolved from Haflex molding mix that is subjected to temperatures above 450^{0}F. However, the use of the recommended self breathing apparatus and protective gear will protect firefighting personnel from these fumes.

SECTION III - PHYSICAL DATA

APPEARANCE AND ODOR - Solid crumb, slight odor.
MELT POINT-FREEZE POINT - N/A.

BOILING POINT - N/A.
VAPOR PRESSURE (mm HG at 20^{0}C) - N/A.
VAPOR DENSITY (Air = 1) - N/A.
SPECIFIC GRAVITY - 1.1
SOLUBILITY IN WATER - None.
EVAPORATION RATE (Butyl Acetate = 1) - >>1

SECTION IV - FIRE AND HAZARD EXPLOSION DATA

FLASH POINT, ^{0}F (Method Used) - N/A.
AUTOIGNITION TEMPERATURE - N/A.

FLAMMABLE LIMITS IN AIR
VOLUME % - LOWER: N/A UPPER: N/A.

FIRE EXTINGUISHING MATERIALS	-	Water spray, foam, carbon dioxide, dry chemical.
SPECIAL FIRE FIGHTING PROCEDURES	-	Will decompose to form hydrochloric acid at temperatures above 450^0F. Wear appropriate self breathing apparatus and protective gear.

SECTION V - HEALTH HAZARD DATA

SYMPTOMS OF OVEREXPOSURE FOR EACH POTENTIAL ROUTE OF EXPOSURE:

INHALED	-	None.
CONTACT WITH SKIN/EYES	-	None.
ABSORBED THROUGH SKIN	-	None.
SWALLOWED	-	None.

HEALTH EFFECTS OR RISKS FROM EXPOSURE:

ACUTE	-	None.
CHRONIC	-	None.

EMERGENCY AND FIRST AID PROCEDURES:

INHALATION		Is inert but does contain lead compounds. Chronic ingestion can lead to lead poisoning.
EYE CONTACT	-	None.
SKIN CONTACT	-	None.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:
None.

RECOMMENDATIONS TO PHYSICIAN:
N/A.

NOTE:
This product's ingredients are not found in the lists of suspected cancer agents for OSHA, NTP, IARC, and CAL/OSHA.

SECTION VI - REACTIVITY DATA

STABILITY	-	Stable.
CONDITIONS TO AVOID	-	High temperature in excess of 450^0F.
HAZARDOUS POLYMERIZATION	-	Will not occur.
INCOMPATIBILITY (Material To Avoid)	-	None.

HAZARDOUS DECOMPOSITION

PRODUCTS - Hydrochloric acid and lead compounds.

SECTION VII - SPILL, LEAK, AND DISPOSAL PROCEDURES

SPILL RESPONSE PROCEDURES:
None.

PREPARING WASTES FOR DISPOSAL:
Solid waste disposal, land fill. Dispose of wastes in accordance with federal, state, and local regulations.

SECTION VIII - SPECIAL HANDLING INFORMATION

VENTILATION AND ENGINEERING CONTROLS - None.
RESPIRATORY PROTECTION - None.
EYE PROTECTION - Not required.
GLOVES - Not required.
OTHER CLOTHING AND EQUIPMENT - Not required.

PROTECTIVE MEASURES DURING MAINTENANCE OF CONTAMINATED EQUIPMENT:
Not required.

SECTION IX - SHIPPING INFORMATION

D.O.T. LABEL - N/A.

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