MATERIAL SAFETY DATA SHEET

MS-440G BASE COMPONENT

SECTION 1: PRODUCT IDENTIFICATION AND USE

MFG'S NAME: **ITW AMERICAN SAFETY TECHNOLOGIES**
565 Eagle Rock Ave.
Roseland, New Jersey 07068
(973) 403-2600

TRADE NAME: **MS-440G BASE COMPONENT**

CHEMICAL FAMILY: EPOXY

DOT SHIPPING CLASSIFICATION (49 CFR 172.101): Paint,3,UN1263,III
TRANSPORTATION EMERGENCY NUMBER (CHEMTREC): 1-800-424-9300
MFG'S DUNN'S NO: 002-171-213

HMIS RATING:
Health = 2
Flammability = 2
Reactivity = 0

COMMER'L & GOV'T ENTITY (CAGE) CODE: 88444

NATIONAL STOCK NO:	**SPEC:** (Type, Grade, or Class)	**CONTRACT OR ORDER NO.**
8010-01-397-3802	MIL-PRF-24667B (Navy) Type I/II Comp G	
8010-01-397-3806		

PREPARED BY: J. Hermele **DATE:** 12/8/00 **REVISION:** 4

SECTION 2: HAZARDOUS INGREDIENTS / IDENTITY INFORMATION

INGREDIENTS	CAS NO.	% WT.	OSHA	ACGIH	OTHER
Epoxy Resin	25068-38-6	10-15%	N.E.	N.E.	LD50RAT>5g/Kg(Oral)
1-Ethoxy-2-Propanol	1569-02-4	4%	N.E.	N.E.	
Methyl Amyl Ketone	110-43-0	<2%	100 ppm	100 ppm	
Alumino-Silicate Mineral	37244-96-5	5-10%	10mg/m3 dust	10mg/m3 dust	
Barium Sulfate	7727-43-7	10-25%	5mg/m3 dust	5mg/m3 dust	
Aluminum Oxide	1344-28-1	40-50%	15mg/m3 dust	10mg/m3 dust	

Crystalline Silica Content Less Than 0.1%.
(N.E. = Not Established)

SECTION 313 SUPPLIER INFORMATION: THIS PRODUCT CONTAINS THE FOLLOWING TOXIC CHEMICALS SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF THE EMERGENCY PLANNING AND COMMUNITY RIGHT-TO-KNOW ACT OF 1986 AND OF 40 CFR 372. THIS INFORMATION MUST BE INCLUDED ON THE MSDS COPIED AND DISTRIBUTED FOR THIS MATERIAL.

CHEMICAL NAME	CAS NUMBER	WEIGHT %
None		

SECTION 3: PHYSICAL DATA

BOILING POINT: >240°F/116°C
SPECIFIC GRAVITY: 2.3
VAPOR PRESSURE: 8mmHg @ 68°F/20°C
MELTING POINT: N.E.
VAPOR DENSITY: 3.1 (AIR = 1)
EVAPORATION RATE: 0.7 (Butyl Acetate = 1)
SOLUBILITY IN WATER: Slight
APPEARANCE AND ODOR: Pigmented Viscous Liquid, Mild Odor.

SECTION 4: FIRE AND EXPLOSION HAZARD

FLASH POINT: 102°F/39°C SETA

FLAMMABLE LIMITS:

LEL	UEL
1.62	11.8

EXTINGUISHING MEDIA: Dry Chemical and Chemical Foam.
SPECIAL FIRE FIGHTING PROCEDURES: Remove all ignition sources. Wear self-contained breathing apparatus and complete personal protective equipment where potential for exposure to vapors or products of combustion exists.
UNUSUAL FIRE AND EXPLOSIVE HAZARDS: Closed containers may rupture (due to build up of pressure) when exposed to extreme heat. Decomposition and combustion products may be toxic.

MS-440G BASE COMPONENT

SECTION 5: HEALTH HAZARD DATA

PRIMARY ROUTES OF ENTRY: Inhalation/Skin/Ingestion

HEALTH HAZARDS (ACUTE AND CHRONIC)

Eyes:	Irritant. Aggregate may cause injury.
Skin:	May cause moderate irritation and sensitization.
Inhalation:	Vapors may cause headaches, nausea, dizziness and respiratory irritation.
Ingestion:	No specific information available. Contains materials that may be slightly toxic.

CONDITIONS AGGRAVATED BY EXPOSURE: Allergy, eczema and other skin conditions.

CARCINOGENIC DATA: Not on NTP, IARC or OSHA Lists.

OVEREXPOSURE EFFECTS: Irritation, sensitization and dermatitis.

EMERGENCY AND FIRST AID PROCEDURES:

Eyes:	Flush with large quantities of water for at least 15 minutes. Get medical attention.
Skin:	Remove contaminated clothing. Wash contact area with mild soap and water for 15 minutes.
Inhalation:	Remove to fresh air. If breathing has stopped administer artificial respiration and seek medical attention.
Ingestion:	Do not induce vomiting (contains solvent). Get medical attention.

SECTION 6: REACTIVITY DATA

STABILITY: Stable

CONDITIONS TO AVOID: Excessive Heat

INCOMPATIBILITY (Materials to Avoid): Strong Oxidizing Agents.

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon Monoxide, Carbon Dioxide and Aldehydes.

HAZARDOUS POLYMERIZATION: Will not occur.

SECTION 7: SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Eliminate all ignition sources. Dike Spill. Absorb with inert material and collect for disposal. Flush contaminated area with water; prevent washings from entering waterways.

WASTE DISPOSAL METHODS: This product, if disposed as shipped, meets EPA criteria of a hazardous waste as specified in 40 CFR 261 on the basis of its ignitability. Dispose of in a licensed hazardous waste facility in accordance with applicable laws.

SECTION 8: SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION: NIOSH/MSHA approved respirator with organic vapor cartridge if required.

VENTILATION: Explosion-proof mechanical ventilation and local exhaust are recommended. Mechanical exhaust is not recommended as the sole means of controlling employee exposure.

PROTECTIVE GLOVES: Impervious gloves.

EYE PROTECTION: Chemical splash-proof goggles.

OTHER PROTECTIVE EQUIPMENT: In operations where contact may occur, coveralls, apron and impervious foot covering are recommended.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Avoid all personal contact. Do not exceed 110°F/43°C in storage area. Ground and bond metal containers for liquid transfer to avoid static sparks.

SECTION 9: SPECIAL / OTHER INSTRUCTIONS

* A safety shower and eye wash facility should be available to employees.
* Contaminated clothing should be removed immediately and thoroughly laundered before reuse.

MATERIAL SAFETY DATA SHEET

MS-400 / MS-440 HARDENER COMPONENT

SECTION 1: PRODUCT IDENTIFICATION AND USE

MFG'S NAME: ITW AMERICAN SAFETY TECHNOLOGIES
565 Eagle Rock Ave.
Roseland, New Jersey 07068
(973) 403-2600

TRADE NAME:MS-400 / MS-440 HARDENER COMPONENT

CHEMICAL FAMILY: AMINE COMPOUND

DOT SHIPPING CLASSIFICATION (49 CFR 172.101): Paint,8,UN3066,III
TRANSPORTATION EMERGENCY NUMBER (CHEMTREC): 1-800-424-9300
MFG'S DUNN'S NO: 002-171-213

HMIS RATING:
Health =3
Flammability =1
Reactivity =1

COMMER'L & GOV'T ENTITY (CAGE) CODE: 88444

NATIONAL STOCK NO:

SPEC: (Type, Grade, or Class)
MIL-PRF-24667B (Navy) Type I/II Comp G & L

CONTRACT OR ORDER NO.

PREPARED BY: J. Hermele **DATE:** 12/8/00 **REVISION:** 4

SECTION 2: HAZARDOUS INGREDIENTS / IDENTITY INFORMATION

INGREDIENTS	CAS NO.	% VOL	OSHA	ACGIH	OTHER
Fatty Amidoamine Resin	68991-84-4	>50%	N.E.	N.E.	
Amidoamine Resin	68443-08-3	<50%	N.E	N.E.	LD/50RAT>1.23mL/Kg Oral

(N.E. = Not Established)

SECTION 313 SUPPLIER INFORMATION: THIS PRODUCT CONTAINS THE FOLLOWING CHEMICALS SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF THE EMERGENCY PLANNING AND COMMUNITY RIGHT-TO-KNOW ACT OF 1986 AND OF 40 CFR 372. THIS INFORMATION MUST BE INCLUDED ON THE MSDS COPIED AND DISTRIBUTED FOR THIS MATERIAL.

CHEMICAL NAME	CAS NUMBER	WEIGHT %
None		

SECTION 3: PHYSICAL DATA

BOILING POINT: N.E
VAPOR PRESSURE: N.E.
VAPOR DENSITY: N.E.
SOLUBILITY IN WATER: Slight
SPECIFIC GRAVITY: 0.90
MELTING POINT: N.E.
EVAPORATION RATE: N.E. (Butyl Acetate = 1)
APPEARANCE AND ODOR: Yellow Paste, Ammoniacal Odor.

SECTION 4: FIRE AND EXPLOSION HAZARD

FLASH POINT: >230°F/110°C SETA

FLAMMABLE LIMITS:

LEL	UEL
N.E.	N.E.

EXTINGUISHING MEDIA: Dry Chemical, Carbon Dioxide, Foam or Water.
SPECIAL FIRE FIGHTING PROCEDURES: Wear self-contained breathing apparatus and complete personal protective equipment where potential for exposure to vapors or products of combustion exists.
UNUSUAL FIRE AND EXPLOSIVE HAZARDS: Decomposition and combustion products may be toxic.

MS-400 / MS-440 HARDENER COMPONENT

SECTION 5: HEALTH HAZARD DATA

PRIMARY ROUTES OF ENTRY: Inhalation/Skin/Ingestion
HEALTH HAZARDS (ACUTE AND CHRONIC)

Eyes:	Causes severe irritation or burns. May cause permanent visual impairment.
Skin:	Causes severe irritation or burns. May be absorbed through skin in harmful amounts.
Inhalation:	May cause nose and throat irritation.
Ingestion:	May cause burns of mouth and throat. Contains material that may be slightly toxic.

CONDITIONS AGGRAVATED BY EXPOSURE: Allergy, eczema and other skin conditions.
CARCINOGENIC DATA: Not on NTP, IARC or OSHA Lists.
OVEREXPOSURE EFFECTS: Irritation, sensitization and dermatitis.
EMERGENCY AND FIRST AID PROCEDURES:

Eyes:	Flush with large quantities of water for at least 15 minutes. Get medical attention.
Skin:	Remove contaminated clothing. Wash contact area with mild soap and water for 15 minutes.
Inhalation:	Remove to fresh air. If symptoms persist consult a physician.
Ingestion:	Do not induce vomiting. If conscious, give large quantities of water to dilute. Get medical attention.

SECTION 6: REACTIVITY DATA

STABILITY: Stable
CONDITIONS TO AVOID: Excessive Heat
INCOMPATIBILITY (Materials to Avoid): Strong Oxidizing Agents.
HAZARDOUS DECOMPOSITION PRODUCTS: Carbon Monoxide, Carbon Dioxide, and Oxides of Nitrogen.
HAZARDOUS POLYMERIZATION: Will not occur.

SECTION 7: SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Dike Spill. Absorb with inert material and collect for disposal. Flush contaminated area with dilute (5%) acetic acid and collect rinsate for disposal.
WASTE DISPOSAL METHODS: This product, if disposed as shipped, is not a hazardous waste as specified in 40 CFR 261. Consult State or local officials for proper disposal method.

SECTION 8: SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION: NIOSH/MSHA approved respirator with organic vapor cartridge if required.
VENTILATION: Local exhaust recommended. Mechanical ventilation is not recommended as the sole means of controlling employee exposure.
PROTECTIVE GLOVES: Impervious rubber or plastic gloves.
EYE PROTECTION: Chemical splash-proof goggles.
OTHER PROTECTIVE EQUIPMENT: In operations where contact may occur, coveralls, apron and impervious foot covering are recommended.
PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Avoid all personal contact. Do not exceed 110°F/43°C in storage area. Ground and bond metal containers for liquid transfer to avoid static sparks.

SECTION 9: SPECIAL / OTHER INSTRUCTIONS

* A safety shower and eye wash facility should be available to employees.
* Immediately remove and thoroughly launder contaminated clothing before reuse.