

MATERIAL SAFETY DATA SHEET

ST-100 BASE COMPONENT

Document #3300

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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: ST-100
BASE COMPONENT

CHEMICAL FAMILY: EPOXY

DOT SHIPPING CLASSIFICATION (49 CFR 172.101): (Not Regulated)
TRANSPORTATION EMERGENCY NO. (CHEMTREC): 1-800-424-9300
MFG'S DUNN'S NO: 002-171-213

HMS RATING:
HEALTH =2
FLAMMABILITY=1
REACTIVITY =0

NATIONAL STOCK NO:
5601-01-366-4776

SPEC: (Type, Grade, or Class)
MIL-D-24613 Type III

CONTRACT NO. OR ORDER NO:

PREPARED BY: J. Hermele

DATE: 12/11/00

REVISION: 4

SECTION 2: HAZARDOUS INGREDIENTS / IDENTITY INFORMATION

INGREDIENTS	CAS NO.	WT.	OSHA	ACGIH	OTHER
Bisphenol-A Diglycidyl Ether	25068-38-6	35-50%	N.E.	N.E.	LD50RAT>5g/Kg Oral
Aliphatic Monoglycidyl Ether	68609-97-2	15-25%	N.E.	N.E.	LD50RAT>17g/Kg Oral
Zinc Borate	12447-61-9	10-15%	15mg/m3 dust	10mg/m3 dust	
Dodecachloro Cyclo Octene	13560-89-9	20-35%	N.E.	N.E.	LD50RAT>25g/Kg Oral

(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.

<u>CHEMICAL NAME</u>	<u>CAS NUMBER</u>	<u>WEIGHT %</u>
Zinc Borate	12447-61-9	10-15%

SECTION 3: PHYSICAL DATA

BOILING POINT: >300°F/149°C
VAPOR PRESSURE: <0.1mmHg @ 68°F/20°C
VAPOR DENSITY: N.E. (AIR = 1)
SOLUBILITY IN WATER: Insoluble
APPEARANCE AND ODOR: Clear Liquid, Mild Odor

SPECIFIC GRAVITY: 1.1
MELTING POINT: N.E.
EVAPORATION RATE: <1.0 (Butyl Acetate = 1)

SECTION 4: FIRE AND EXPLOSION HAZARD

FLASH POINT: > 200°F/93°C PMCC

FLAMMABLE LIMITS: LEL UEL
N.E. N.E.

EXTINGUISHING MEDIA: Carbon Dioxide, Chemical Foam, Dry Chemical or Water Spray.

SPECIAL FIRE FIGHTING PROCEDURES: Use 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.

ST-100 BASE COMPONENT

SECTION 5: HEALTH HAZARD DATA

PRIMARY ROUTES OF ENTRY: Inhalation/Skin/Ingestion

HEALTH HAZARDS (ACUTE AND CHRONIC)

Eyes: Irritant.
Skin: Irritant. May cause allergic skin reaction which can be severe in certain individuals.
Inhalation: May cause nose and throat 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 and wash contact area with mild soap and water.
Inhalation: Remove to fresh air. If breathing is difficult, administer oxygen.
Ingestion: Give large quantities of water to dilute, induce vomiting. 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 and Carbon Dioxide.

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 water and collect rinsate for disposal.

WASTE DISPOSAL METHODS: Dispose of in accordance with Federal, State and Local Regulations.

SECTION 8: SPECIAL PROTECTION INFORMATION

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

VENTILATION: 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.

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.

MATERIAL SAFETY DATA SHEET
ST-100 HARDENER COMPONENT

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SECTION 1: PRODUCT IDENTIFICATION AND USE

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

**TRADE NAME: ST-100
HARDENER COMPONENT**

CHEMICAL FAMILY: Amine Compound

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

HMIS RATING:
HEALTH =3
FLAMMABILIT =1
REACTIVITY =1

NATIONAL STOCK NO:
5601-01-366-4776

SPEC: (Type, Grade, or Class)
MIL-D-24613 Type III

CONTRACT NO. OR ORDER NO:

PREPARED BY: J. Hermele

DATE: 08/14/98

REVISION: 3

SECTION 2: HAZARDOUS INGREDIENTS / IDENTITY INFORMATION

INGREDIENTS	CAS NO.	% WT.	OSHA	ACGIH
Polyethylene Polyamine Adduct	68951-85-9	82%	N.E.	N.E.
Diethylene Triamine (DETA)	111-40-0	8%	1ppmTWA	1ppmTWA
Bisphenol-A (N.E. = Not Established)	80-05-7	10%	N.E.	N.E.

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<u>CHEMICAL NAME</u>	<u>CAS NUMBER</u>	<u>WEIGHT %</u>
Bisphenol-A	80-05-7	10%

SECTION 3: PHYSICAL DATA

BOILING POINT: N.E.	SPECIFIC GRAVITY: 0.98
VAPOR PRESSURE: <1.0mmHg @ 68°F/20°C	MELTING POINT: N.E.
VAPOR DENSITY: N.A. (AIR = 1)	EVAPORATIONRATE: N.A. (Butyl Acetate = 1)
SOLUBILITY IN WATER: Partially Soluble	
APPEARANCE AND ODOR: Clear Amber Liquid, Amine Odor (N.A. = Not Applicable)	

SECTION 4: FIRE AND EXPLOSION HAZARD

FLASH POINT: > 200°F/93°C SETA

FLAMMABLE LIMITS: LEL UEL
N.E. N.E.

EXTINGUISHING MEDIA: Carbon Dioxide or Dry Chemical for small fires; Aqueous Foam or Water for large fires.
SPECIAL FIRE FIGHTING PROCEDURES: Wear self-contained breathing apparatus and complete personal protective equipment where potential for exposure to vapors of products of combustion exists.

UNUSUAL FIRE AND EXPLOSIVE HAZARDS: Closed containers may rupture (due to build up of pressure) when exposed to extreme heat.

SECTION 5: HEALTH HAZARD DATA

PRIMARY ROUTES OF ENTRY: Inhalation/Skin/Ingestion

HEALTH HAZARDS (ACUTE AND CHRONIC)

- Eyes: May cause burns; irreversible damage.
Skin: May cause burns and sensitization. May cause allergic skin reaction, which may be severe in certain individuals. May be absorbed in harmful amounts.
Inhalation: May cause headache, nausea, dizziness and respiratory tract irritation. Sensitizer; May cause allergic respiratory reaction.
Ingestion: No specific information available. 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 and wash contact area with mild soap and water.
Inhalation: Remove to fresh air. If breathing has stopped administer artificial respiration and seek medical attention.
Ingestion: Get immediate 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 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 corrosivity. 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: Local exhaust recommended. Mechanical ventilation 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.

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.

MATERIAL SAFETY DATA SHEET

T-10/T-100/ST-100 AGGREGATE COMPONENT

Document # 3310

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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: T-10/T-100/ST-100
AGGREGATE COMPONENT**

CHEMICAL FAMILY: N.A.

DOT SHIPPING CLASSIFICATION (49 CFR 172.101): (Not Regulated)
TRANSPORTATION EMERGENCY NO. (CHEMTREC): 1-800-424-9300
MFG'S DUNN'S NO: 002-171-213

HMIS RATING:

Health =1
Flammability =0
Reactivity =0

NATIONAL STOCK NO:

5601-01-366-4776

SPEC: (Type, Grade, or Class)

MIL-D-3135 Type I/II Class 2
MIL-D-3134 Type I Class 2

CONTRACT OR ORDER NO

PREPARED BY: J. Hermele

DATE: 12/11/00

REVISION: 5

SECTION 2: HAZARDOUS INGREDIENTS / IDENTITY INFORMATION

INGREDIENTS	CAS NO.	% WT.	OSHA	ACGIH	OTHER
Silicon Dioxide (Resin Coated)	14808-60-7	<35%	8HrTWA 0.1mg/m3	8HrTWA 0.1mg/m3	(For Respirable Dust)
Marble (Limestone)	1317-65-3	<35%	N.E.	N.E.	N.E.
Calcium Magnesium Carbonate	16389-88-1	<35%	5mg/m3N.E.		

May contain Varied percentages

Contains <1% Silica-Quartz CAS #14808-60-7 as respirable dust.

(N.E.= Not Established)

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CHEMICAL NAME

None

CAS NUMBERWEIGHT %

SECTION 3: PHYSICAL DATA

BOILING POINT: N.A. **SPECIFIC GRAVITY:** 2.7
VAPOR PRESSURE: N.A. **MELTING POINT:** N.A.
VAPOR DENSITY: N.A. (AIR = 1) **EVAPORATION RATE:** N.A. (Butyl Acetate = 1)
SOLUBILITY IN WATER: Insoluble
APPEARANCE AND ODOR: Variously colored crushed stone, No Odor.
(N.A. = Not Applicable)

SECTION 4: FIRE AND EXPLOSION HAZARD

FLASH POINT: N.A. **FLAMMABLE LIMITS:** LEL UEL
N.A. N.A.

EXTINGUISHING MEDIA: N.A. (Can be used to smother fires).

SPECIAL FIRE FIGHTING PROCEDURES: None.

UNUSUAL FIRE AND EXPLOSIVE HAZARDS: None. Material is non-combustible.

SECTION 5: HEALTH HAZARD DATA

PRIMARY ROUTES OF ENTRY: Inhalation/Skin/Ingestion

HEALTH HAZARDS (ACUTE AND CHRONIC)

Eyes: Aggregate may cause injury..
Skin: Aggregate abrasiveness may cause irritation or injury.

T-10/T-100/ST-100 AGGREGATE COMPONENT

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SECTION 5: HEALTH HAZARD DATA (Cont'd).

HEALTH HAZARDS (ACUTE AND CHRONIC)

Inhalation: A nuisance particulate with a long history of little adverse effect on lungs, and no production of significant organic disease or toxic effect when exposures are kept under reasonable control.

Ingestion: No specific information available. Should not cause any significant health problems.

CONDITIONS AGGRAVATED BY EXPOSURE: Respiratory Diseases.

CARCINOGENIC DATA: This product contains silicon dioxide/silica. The International agency for Research on Cancer (IARC), concluded that there was "sufficient evidence in humans for the carcinogenicity of crystalline silica in the forms of quartz or cristobalite from occupational sources." The overall IARC evaluation was that "crystalline silica inhaled in the form of quartz or cristobalite from occupational sources is carcinogenic to humans (Group 1). NTP, in its Ninth Annual Report on Carcinogens has classified, "silica, crystalline (respirable)" to be a carcinogen." Crystalline silica is not regulated by OSHA as a carcinogen. Since all silicon dioxide/silica is of non-respirable size and encapsulated in the coating, no over exposure to airborne dusts is to be expected. However, during removal by mechanical abrasion, appropriate safety practices should be followed to prevent inhalation of airborne dusts.

OVEREXPOSURE EFFECTS: Chronic lung scarring leads to a progressive massive fibrosis that is often accompanied by susceptibility to pulmonary tuberculosis and other respiratory infections.

EMERGENCY AND FIRST AID PROCEDURES:

Eyes: Flush with large quantities of water to remove particles.

Skin: Wash with mild soap and water.

Inhalation: Remove from exposure.

Ingestion: If large amount is ingested and conscious, give large quantities of water and induce vomiting. Get medical attention.

SECTION 6: REACTIVITY DATA

STABILITY: Stable

CONDITIONS TO AVOID: None

INCOMPATIBILITY (Materials to Avoid): Acids

HAZARDOUS DECOMPOSITION PRODUCTS: None.

HAZARDOUS POLYMERIZATION: Will not occur.

SECTION 7: SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Use respiratory protection for airborne dust. Vacuum or scoop for recovery or disposal. Wetting spill with a water spray will help to keep dust levels down; use good ventilation if possible.

WASTE DISPOSAL METHODS: Not considered a hazardous waste; can be used as a soil sweetener.

SECTION 8: SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION: NIOSH/MSHA approved disposable half-mask for dust/mist if required.

VENTILATION: Local exhaust as appropriate. Mechanical ventilation is recommended.

PROTECTIVE GLOVES: Leather or Rubber gloves.

EYE PROTECTION: Safety glasses or dust-tight goggles.

OTHER PROTECTIVE EQUIPMENT: An eye wash facility should be available in material handling area.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Use dustless system of storage and handling. Keep well-ventilated.

SECTION 9: SPECIAL / OTHER INSTRUCTIONS

CALIFORNIA PROPOSITION 65 INFORMATION: WARNING! This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm. (Silicon Dioxide: Respirable Particles)

* An eye wash facility should be available in area of material handling.