



U.S. Department of Labor

Occupational Safety and Health Administration
(Non-Mandatory Form)

Material Safety Data Sheet

May be used to comply with
OSHA's Hazard Communication Standard
29 CFR 1910.1200. Standard must be
consulted for specific requirements.

IDENTITY (As Used on Label and List)
ARDEX S-MC, HARDENER (PART A)

Note: Blank spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate that.

Section I

Manufacturer's Name
ARDEX ENGINEERED CEMENTS

Emergency Telephone Number
CHEM-TEL (800) 255-3924

Address (Number, Street, City, State and Zip Code)

Telephone Number for Information
(724) 203-5000

400 Ardex Park Drive
Aliquippa, PA 15001
U.S.A.

Date Prepared
March 25, 2004

Signature of Preparer (Optional)

Section II – Hazardous Ingredients/Identity Information

| | | | | |
|-------------------------------------------------------------------|----------------|--------------------------|-------------|---------------------------|
| Proper Shipping Name: Polyamines, liquid, corrosive. n.o.s. | Hazard Class 8 | U.N.#2735 | Pkg Grp III | Other Limits ACGIH TLV |
| Hazardous Components (Specific Chemical Identity: Common Name(s)) | Recommended | OSHA PEL % (optional) | | |

MIXTURE OF THE SUBSTANCES LISTED BELOW WITH HARMLESS ADDITIONS.

DANGEROUS COMPONENTS:

2855-13-2; 3-AMINOMETHYL-3,5,5-TRIMETHYLCYCLOHEXYLAMINE; 20-50%

1477-55-0; M-PHENYLENEBIS (METHYLAMINE); 10-20%

100-51-6; BENZYL ALCOHOL; 10-20%

694-83-7; CYCLOHEX-1,2-YLENEDIAMONE; 2.5-10%

25620-58-0; TRIMETHYLHEXANE-1, 6-DIAMINE; <=2.5%

25154-52-3; NONYLPHENOL; <=2.5%

Section III – Physical/Chemical Characteristics

| | | | |
|-------------------------|--------------------------------|-----------------------------------------|----------------|
| Boiling Point | 205°C | Specific Gravity (H ₂ O = 1) | |
| Vapor Pressure (mm Hg) | 0.1 hPa at 20°C | Melting Point | Not determined |
| Vapor Density (AIR = 1) | Ca 1 g/cm ³ at 20°C | Evaporation Rate (Butyl Acetate = 1) | |

Solubility in Water

Emulsifiable

Appearance and Odor

FLUID – YELLOW-BROWN – AMINE-LIKE

Section IV – Fire and Explosion Hazard Data

| | | | |
|------------------------------------|--------------------------------------------------|-------------|--------------|
| Flash Point (Method Used) 101°C | Flammable Limits PRODUCT IS NOT SELF-IGNITING | LEL 1.3% | UEL 13.0% |
|------------------------------------|--------------------------------------------------|-------------|--------------|

Extinguishing Media

USE FIRE-FIGHTING MEASURES THAT SUIT THE ENVIRONMENT.

Special Fire Fighting Procedures

NO SPECIAL MEASURES REQUIRED FOR PROTECTIVE EQUIPMENT.

Unusual Fire and Explosion Hazards

NO SPECIAL MEASURES REQUIRED. PRODUCT IS NOT EXPLOSIVE.

ARDEX S-MC, HARDENER (PART A) - Page 2

Section V – Reactivity Data

| | | | |
|-----------|----------|-------------------------------------|---------------------|
| Stability | Unstable | <input type="checkbox"/> | Conditions to Avoid |
| | Stable | <input checked="" type="checkbox"/> | NONE |

Incompatibility (*Materials to Avoid*)

NO DANGEROUS REACTIONS KNOWN.

Hazardous Decomposition or Byproducts

NO DECOMPOSITION IF USED ACCORDING TO SPECIFICATIONS. NO DANGEROUS DECOMPOSITION PRODUCTS KNOWN.

| | | | |
|--------------------------|----------------|-------------------------------------|---------------------|
| Hazardous Polymerization | May Occur | <input type="checkbox"/> | Conditions to Avoid |
| | Will Not Occur | <input checked="" type="checkbox"/> | NONE |

Section VI – Health Hazard Data

| | | | |
|-------------------|-------------|-------|------------|
| Route(s) of Entry | Inhalation? | Skin? | Ingestion? |
| | YES | YES | YES |

Health Hazards (*Acute and Chronic*)

HARMFUL IN CONTACT WITH SKIN AND IF SWALLOWED. CAUSES BURNS. MAY CAUSE SENSITIZATION BY SKIN CONTACT. KEEP AWAY FROM FOODSTUFFS, BEVERAGES AND FOOD. WASH HANDS DURING BREAKS AND AT THE END OF THE WORK. AVOID CONTACT WITH THE EYES AND SKIN.

| | | | |
|------------------|------|------------------|-----------------|
| Carcinogenicity: | NTP? | IARC Monographs? | OSHA Regulated? |
| | N/A | N/A | N/A |

Signs and Symptoms of Exposure

HARMFUL IN CONTACT WITH SKIN AND IF SWALLOWED. CAUSES BURNS. MAY CAUSE SENSITIZATION BY SKIN CONTACT. WHEN USING DO NOT EAT OR DRINK. IN CASE OF CONTACT WITH EYES, RINSE IMMEDIATELY WITH PLENTY OF WATER AND SEEK MEDICAL ADVICE. AFTER CONTACT WITH SKIN, WASH IMMEDIATELY WITH PLENTY OF WATER. WEAR SUITABLE PROTECTIVE CLOTHING, GLOVES AND EYE/FACE PROTECTION. IN CASE OF ACCIDENT OR IF YOU FEEL UNWELL, SEEK MEDICAL ADVICE IMMEDIATELY. CAUSTIC EFFECT ON SKIN AND MUCOUS MEMBRANES. STRONG CAUSTIC EFFECT ON THE EYE. SWALLOWING WILL LEAD TO A STRONG CAUSTIC EFFECT ON MOUTH AND THROAT AND TO THE DANGER OF PERFORATION OF ESOPHAGUS AND STOMACH.

Medical Conditions Generally Aggravated by Exposure

N/A

Emergency First Aid Procedures

INSTANTLY REMOVE ANY SOILED AND IMPREGNATED GARMENTS BY THE PRODUCT. SYMPTOMS OF POISONING MAY EVEN OCCUR AFTER SEVERAL HOURS; THEREFORE, MEDICAL OBSERVATION FOR AT LEAST 48 HOURS AFTER THE ACCIDENT. **AFTER INHALATION**, SUPPLY FRESH AIR AND CALL FOR DOCTOR FOR SAFETY REASONS. IN CASE OF UNCONSCIOUSNESS BRING PATIENT INTO STABLE SIDE POSITION FOR TRANSPORT. **AFTER SKIN CONTACT**, INSTANTLY WASH WITH WATER AND SOAP AND RINSE THOROUGHLY. **AFTER EYE CONTACT**, RINSE OPENED EYE FOR SEVERAL MINUTES UNDER RUNNING WATER. THEN CONSULT DOCTOR. **AFTER SWALLOWING**, INSTANTLY CALL FOR DOCTOR. DRINK COPIOUS AMOUNTS OF WATER AND PROVIDE FRESH AIR.

Section VII – Precautions for Safe Handling and Use

Steps to Be Taken in Case Material is Released or Spilled

WEAR PROTECTIVE EQUIPMENT. KEEP UNPROTECTED PERSONS AWAY. PREVENT MATERIAL FROM REACHING SEWAGE SYSTEM, HOLES AND CELLARS. ABSORB WITH LIQUID ABSORBENT MATERIAL (SAND, DIATOMITE, ABSORBENTS, UNIVERSAL BINDERS, SAWDUCT). USE NEUTRALIZING AGENT.

Waste Disposal Method

MUST NOT BE DISPOSED OF TOGETHER WITH HOUSEHOLD REFUSE. DO NOT ALLOW PRODUCT TO REACH SEWAGE SYSTEM. PRODUCT RESTS, DRIED: EAK-CODE 170701. PRODUCT REST, NOT DRIED: EAK CODE 200112. EMPTY CONTAMINATED PACKAGINGS THOROUGHLY. THEY CAN BE RECYCLED AFTER THOROUGH AND PROPER CLEANING.

Precautions to Be Taken in Handling and Storing

THE PRODUCT DOES NOT CONTAIN ANY RELEVANT QUANTITIES OF MATERIALS WITH CRITICAL VALUES THAT HAVE TO BE MONITORED AT THE WORKPLACE. HAZARDOUS FOR WATER. DO NOT ALLOW PRODUCT TO REACH GROUNDWATER, LAKES, AND WATER COURSES OR SEWAGE SYSTEM. MUST NOT REACH SEWAGE WATER OR DRAINAGE DITCH UNDILUTED OR UNNEUTRALIZED. DANGER TO DRINKING WATER IF EVEN SMALL QUANTITIES LEAK INTO SOIL. STORAGE IN ONE COMMON FACILITY IS NOT REQUIRED.

Other Precautions

ENSURE ADEQUATE VENTILATION.

Section VIII – Control Measures

Respiratory Protection (*Specify Type*)

NOT REQUIRED

| | | |
|-------------|--------------------------------------|----------------|
| Ventilation | Local Exhaust As REQUIRED | Special N/A |
| | Mechanical (<i>General</i>) N/A | Other N/A |

| | |
|--------------------------|-------------------------------------------------|
| Protective Gloves YES | Eye Protection TIGHTLY SEALED SAFETY GLASSES |
|--------------------------|-------------------------------------------------|

Other Protective Clothing or Equipment

WEAR SUITABLE PROTECTIVE CLOTHING, GLOVES, AND EYE/FACE PROTECTION.

Work/Hygienic Practices

WHEN USING DO NOT EAT OR DRINK. AFTER CONTACT WITH SKIN, WASH IMMEDIATELY WITH PLENTY OF WATER.



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consulted for specific requirements.

| | |
|--------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| IDENTITY (As Used on Label and List) ARDEX S-MC, RESIN (PART B) | Note: Blank spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate that. |
|--------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|

Section I

| | |
|-----------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|
| Manufacturer's Name ARDEX ENGINEERED CEMENTS | Emergency Telephone Number CHEM-TEL (800) 255-3924 |
| Address (Number, Street, City, State and Zip Code) 400 Ardex Park Drive Aliquippa, PA 15001 U.S.A. | Telephone Number for Information (724) 203-5000 Date Prepared March 25, 2004 Signature of Preparer (Optional) |

Section II – Hazardous Ingredients/Identity Information

| | | | | |
|----------------------------------------------------------------------------------------------------------------------------------------------|----------|-----------|-------------|--------------|
| PROPER SHIPPING NAME: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID N.O.S. HAZ CLS 9 U.N.#3082 Pkg Grp III Other Limits | | | | |
| Hazardous Components (Specific Chemical Identity: Common Name(s)) | OSHA PEL | ACGIH TLV | Recommended | % (optional) |
| CAS NO. DESIGNATION: 25068-38-6 BISPHENOL A-(EPICHLORHYDRIN); EPOXY RESIN (NUMBER AVERAGE MOLECULAR WEIGHT <700); EC NUMBER: 603-074-00-8 | | | | |

Section III – Physical/Chemical Characteristics

| | | | |
|-------------------------|----------------------------------|-----------------------------------------|----------------|
| Boiling Point | Not determined | Specific Gravity (H ₂ O = 1) | |
| Vapor Pressure (mm Hg) | | Melting Point | Not determined |
| Vapor Density (AIR = 1) | Not determined | Evaporation Rate (Butyl Acetate = 1) | |
| Solubility in Water | NOT MISCIBLE OR DIFFICULT TO MIX | | |
| Appearance and Odor | Viscous – Green - Liquid | | |

Section IV – Fire and Explosion Hazard Data

| | | | |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|------------|------------|
| Flash Point (Method Used) N/A | Flammable Limits N/A | LEL N/A | UEL N/A |
| Extinguishing Media SUITABLE EXTINGUISHING AGENTS. | | | |
| Special Fire Fighting Procedures FIGHT LARGER FIRES WITH WATER JET OR ALCOHOL-RESISTANT FOAM. NO SPECIAL MEASURES REQUIRED FOR PROTECTIVE EQUIPMENT. NO SPECIAL MEASURES REQUIRED FOR PROTECTION AGAINST EXPLOSIONS AND FIRES. | | | |
| Unusual Fire and Explosion Hazards PRODUCT IS NOT EXPLOSIVE. | | | |

Section V – Reactivity Data

| | | | |
|-------------------------------------------------------------------------------------------------------------------------------------------|----------------|-------------------------------------|---------------------|
| Stability | Unstable | <input type="checkbox"/> | Conditions to Avoid |
| | Stable | <input checked="" type="checkbox"/> | NONE |
| Incompatibility (Materials to Avoid) NO DANGEROUS REACTIONS KNOWN. | | | |
| Hazardous Decomposition or Byproducts NO DECOMPOSITION IF USED ACCORDING TO SPECIFICATIONS. NO DANGEROUS DECOMPOSITION PRODUCTS KNOWN. | | | |
| Hazardous Polymerization | May Occur | <input type="checkbox"/> | Conditions to Avoid |
| | Will Not Occur | <input checked="" type="checkbox"/> | NONE |

Section VI – Health Hazard Data

| | | | |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|-------------------------|------------------------|
| Route(s) of Entry | Inhalation? YES | Skin? YES | Ingestion? YES |
| Health Hazards (<i>Acute and Chronic</i>) N/A | | | |
| Carcinogenicity: | NTP? N/A | IARC Monographs? N/A | OSHA Regulated? N/A |
| Signs and Symptoms of Exposure SENSITIZATION POSSIBLY BY SKIN CONTACT. CONTAINS EPOXY CONSTITUENTS. IRRITANT FOR SKIN AND MUCOUS MEMBRANES. EYE IRRITANT EFFECT. | | | |
| Medical Conditions Generally Aggravated by Exposure N/A | | | |
| Emergency First Aid Procedures AFTER INHALATION: SUPPLY FRESH AIR AND CALL FOR DOCTOR FOR SAFETY REASONS. IN CASE OF UNCONSCIOUSNESS, BRING PATIENT INTO STABLE SIDE POSITION FOR TRANSPORT. AFTER SKIN CONTACT: INSTANTLY WASH WITH WATER AND SOAP AND RINSE THOROUGHLY. AFTER EYE CONTACT: RINSE OPENED EYE FOR SEVERAL MINUTES UNDER RUNNING WATER. IF SYMPTOMS PERSIST, CONSULT DOCTOR. AFTER SWALLOWING, INSTANTLY CALL FOR DOCTOR. | | | |

Section VII – Precautions for Safe Handling and Use

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| Steps to Be Taken in Case Material is Released or Spilled HAZARDOUS FOR WATER. PREVENT MATERIAL FROM REACHING SEWAGE SYSTEM, HOLES, AND CELLARS. DO NOT ALLOW PRODUCT TO REACH GROUNDWATER, LAKES, AND WATER COURSES. DANGER TO DRINKING WATER IF EVEN SMALL QUANTITIES LEAK INTO SOIL. ABSORB WITH LIQUID ABSORBENT MATERIAL (SAND, DIATOMITE, ABSORBENTS, UNIVERSAL BINDERS, SAWDUST). PERSONAL SAFETY PRECAUTIONS NOT REQUIRED. | |
| Waste Disposal Method MUST NOT BE DISPOSED OF TOGETHER WITH HOUSEHOLD REFUSE. DO NOT ALLOW PRODUCT TO REACH SEWAGE SYSTEM. UNCLEANED PACKAGINGS – RECOMMENDATION: EMPTY CONTAMINATED PACKAGINGS THOROUGHLY. THEY CAN BE RECYCLED AFTER THOROUGH AND PROPER CLEANING. | |
| Precautions to Be Taken in Handling and Storing ENSURE GOOD VENTILATION/EXHAUSTION AT THE WORKPLACE. COMMON STORAGE FACILITY NOT REQUIRED. | |
| Other Precautions PROTECT FROM FROST. KEEP CONTAINER TIGHTLY SEALED. | |

Section VIII – Control Measures

| | | |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------|----------------|
| Respiratory Protection (<i>Specify Type</i>) NOT REQUIRED | | |
| Ventilation | Local Exhaust INSURE GOOD VENTILATION/EXHAUSTION | Special N/A |
| | Mechanical (<i>General</i>) N/A | Other N/A |
| Protective Gloves YES | Eye Protection TIGHTLY SEALED SAFETY GLASSES | |
| Other Protective Clothing or Equipment N/A | | |
| Work/Hygienic Practices AVOID CONTACT WITH THE EYES AND SKIN. WASH HANDS DURING BREAKS AND AT THE END OF WORK. INSTANTLY REMOVE ANY SOILED AND IMPREGNATED GARMETS. KEEP AWAY FROM FOODSTUFFS, BEVERAGES, AND FOOD. | | |