

MATERIAL SAFETY DATA SHEET



S-230

PART A

Prepared 6/06

Armstrong World Industries, Inc.
P. O. Box 3001
Lancaster, PA 17604
www.armstrong.com
MSDS: www.floorexpert.com
Technical Services:
1-877-276-7876, Option 2,3,3

I. PRODUCT IDENTIFICATION

Name: Armstrong S-230 Epoxy Adhesive Part A
Description: Epoxy Resin

II. DEPARTMENT OF TRANSPORTATION INFORMATION

Shipping name: Not classified. Hazard Class: N/A. ID #: N/A.
EMERGENCY ONLY CONTACT: CHEM-TEL 1-800-255-3924

III. HMIS (0=minimal hazard; 4 = severe hazard)

Health = 2 Flammability = 1 Reactivity = 2

IV. PRODUCT CONTENT

This product does not contain chemicals subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR 372. All components are on TSCA inventory. This product does NOT contain asbestos.

V. HAZARDOUS INGREDIENTS

<u>(Chemical Identity; Common Name)</u>	<u>C.A.S. No.</u>	<u>%</u>	<u>OSHA PEL</u>	<u>ACGIH TLV</u>
Epoxy Resin	25068-38-6	40-50	N/A	N/A

VI. PHYSICAL DATA

APPEARANCE: Grayish-brown mastic. ODOR: Mild epoxy resin odor. BOILING POINT (degrees F): N/K. VAPOR PRESSURE (mm Hg @ 20°C): N/K. VAPOR DENSITY (air = 1): N/K. % VOLATILE BY WEIGHT (30 min. @ 275°F): 3%. EVAPORATION RATE (butyl acetate = 1): N/K. WT/GAL (water = 8.3): 12.04 lb. SOLUBILITY IN WATER: None. SPECIFIC GRAVITY (H₂O = 1): 1.45. pH: N/A.

VII. FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (METHOD): 480° F (Pensky-Martens closed cup). FLAMMABLE RANGE: LEL: N/A; UEL: N/A. EXTINGUISHING MEDIA: Foam, CO₂, dry chemical. SPECIAL FIRE FIGHTING PROCEDURES: Protect fire fighters from toxic products of combustion by wearing self-contained breathing apparatus. UNUSUAL FIRE AND EXPLOSION HAZARDS: Closed containers in a fire may rupture due to pressure build-up; use water to cool containers to prevent this.

VIII. HEALTH HAZARD DATA

PRIMARY ROUTE(S) OF ENTRY: Inhalation, and direct dermal exposure. TARGET ORGANS: Upper respiratory tract, skin and eyes. EFFECTS OF OVEREXPOSURE: SKIN AND EYES: Prolonged skin and eye contact may cause burns. Repeated or prolonged exposure may cause sensitization and allergic reaction. Can cause eye irritation, redness and tearing. INHALATION: May cause irritation of respiratory tract. CARCINOGENICITY: NTP: No; IARC Monographs: No; OSHA Regulated: No. MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: Any medical condition that may be aggravated by a pulmonary irritant. Existing skin conditions. FIRST AID PROCEDURES: SKIN AND EYES: Flush any eye contact with plenty of water. Additionally with skin contact, wash with soap and water. Refer to physician if irritation or symptoms persist. INHALATION: Remove to fresh air if exposed to excess concentrations of vapor. Seek medical attention if symptoms persist. INGESTION: Call a Poison Control Center or physician for guidance.

IX. REACTIVITY DATA

STABILITY: Stable. INCOMPATIBILITY: N/K. HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, carbon dioxide, aldehydes and acids from incomplete combustion. HAZARDOUS POLYMERIZATION: Mixing of component Parts A and B generates heat. To minimize this effect, mix thoroughly in the container then immediately dump onto the substrate where the floor is to be installed.

X. SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: Contain spill, preventing it from entering sewer lines or waterways. Use absorbent to assist with the pick-up of material. Scrape up product and place into container. Residual of product, while still wet, can be cleaned up with warm soapy water. WASTE DISPOSAL METHOD: Dispose of container and any unused contents in accordance with Federal, State, and Local Waste Disposal Regulations. Can be incinerated in approved facility if not in closed containers. If mixed with Part B, dispose of as an alkaline, combustible material. Do not flush unused contents or residue down drains. Do not reuse container.

XI. SPECIAL HANDLING AND USE INFORMATION

VENTILATION: Normal ambient ventilation should be sufficient. RESPIRATORY PROTECTION: With adequate ventilation, respiratory equipment should not be needed. SKIN AND EYE PROTECTION: For skin, protective gloves should be worn if skin contact is likely to occur. Wear chemical goggles if eye contact with this product is possible.

XII. SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Keep out of reach of children. OTHER PRECAUTIONS: Keep container tightly closed. Store in a cool, dry place. Wash with soap and water before, eating, drinking, smoking or using toilet facilities. Launder contaminated clothing before reuse. WORK SITE ENVIRONMENT: Initially there may be a potential adverse impact on indoor air quality within the general work area during the installation process. Therefore you should advise the building manager or other appropriate person that: • It will be necessary to establish and maintain adequate ventilation of the work area, without causing the entry of contaminants to other parts of building; and • Persons who are sensitive to odors and/or chemicals should be advised to avoid the work area during this process.

The information presented herein is supplied as a guide to those who handle or use this product. Safe work practices must be employed when working with any materials. It is important that the end user makes a determination regarding the adequacy of the safety procedures employed during the use of this product.

N/A - not applicable or not available
N/K - none known or not known

MATERIAL SAFETY DATA SHEET

I. PRODUCT IDENTIFICATION

Name: Armstrong S-230 Epoxy Adhesive Part B
Description: Polyamide Resin

II. DEPARTMENT OF TRANSPORTATION INFORMATION

Shipping Name: Caustic Alkali Liquids, N.O.S. (Triethylenetetramine).
Hazard Class: 8 (Corrosive). ID#: UN1719. PG: II (S-230 Epoxy Adhesive Part B).
EMERGENCY ONLY CONTACT: CHEM-TEL 1-800-255-3924

III. HMIS (0=minimal hazard; 4 = severe hazard)

Health = 3 Flammability = 1 Reactivity = 2

IV. PRODUCT CONTENT

This product contains chemicals subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR 372. All components are on TSCA inventory. This product does NOT contain asbestos.

V. HAZARDOUS INGREDIENTS

<u>(Chemical Identity; Common Name)</u>	<u>C.A.S. No.</u>	<u>%</u>	<u>OSHA PEL</u>	<u>ACGIH TLV</u>
Tall Oil Fatty Acid Products with Triethylenetetramine	68919-79-9		N/A	N/A
Bisphenol A Epoxy Resin Products with Diethylenetriamine	68610-56-0	*55 -65	N/A	N/A
4,4'-(1-Methylethylidene) Bisphenol	80-05-7		N/A	N/A

*Proprietary Information - Three listed ingredients equal percentage shown.

VI. PHYSICAL DATA

APPEARANCE: Light amber liquid. ODOR: Amine odor. BOILING POINT (degrees F): greater than 392°. VAPOR PRESSURE (mm Hg @ 20°C): N/K. VAPOR DENSITY (air = 1): N/K. % VOLATILE BY WEIGHT (30 min. @ 275°F): 0. EVAPORATION RATE (butyl acetate = 1): N/K. WT/GAL (water = 8.3): 8.05 lb. SOLUBILITY IN WATER: Slight. SPECIFIC GRAVITY (H₂O =1): 0.97. pH: Approximately 11.

VII. FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (METHOD): 233° F (Pensky-Martens closed cup). FLAMMABLE RANGE: LEL: N/A; UEL: N/A. EXTINGUISHING MEDIA: Foam, CO₂, dry chemical. SPECIAL FIRE FIGHTING PROCEDURES: Protect fire fighters from toxic products of combustion by wearing self-contained breathing apparatus. UNUSUAL FIRE AND EXPLOSION HAZARDS: Closed containers in a fire may rupture due to pressure build-up; use water to cool containers to prevent this.

VIII. HEALTH HAZARD DATA

PRIMARY ROUTE(S) OF ENTRY: Inhalation, and direct dermal exposure. TARGET ORGANS: Upper respiratory tract, skin and eyes. EFFECTS OF OVEREXPOSURE: SKIN AND EYES: Prolonged skin and eye contact may cause burns. Repeated or prolonged exposure may cause sensitization and allergic reaction. Can cause eye irritation, redness and tearing. INHALATION: May cause irritation of respiratory tract. INGESTION: May cause gastrointestinal distress or irritation. CARCINOGENICITY: NTP: No; IARC Monographs: No; OSHA Regulated: No. MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: Any medical condition that may be aggravated by a pulmonary irritant. Existing skin conditions. FIRST AID PROCEDURES: SKIN AND EYES: Flush any eye contact with plenty of water. Additionally with skin contact, wash with soap and water. Remove contaminated clothing and shoes; do not reuse until cleaned. Refer to physician if irritation or symptoms persist. INHALATION: Remove to fresh air if exposed to excess concentrations of vapor. Seek medical attention if symptoms persist. INGESTION: Call a Poison Control Center or physician for guidance.

IX. REACTIVITY DATA

STABILITY: Stable. INCOMPATIBILITY: N/K. HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, carbon dioxide, nitrogen oxides and unidentified compounds may be formed during combustion. HAZARDOUS POLYMERIZATION: Mixing of component Parts A and B



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PART B

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generates heat. To minimize this effect, mix thoroughly in the container then immediately dump onto the substrate where the floor is to be installed.

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XI. SPECIAL HANDLING AND USE INFORMATION

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XII. SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Keep out of reach of children. OTHER PRECAUTIONS: Keep container tightly closed. Store in a cool, dry place. Wash with soap and water before, eating, drinking, smoking or using toilet facilities. Launder contaminated clothing before reuse. WORK SITE ENVIRONMENT: Initially there may be a potential adverse impact on indoor air quality within the general work area during the installation process. Therefore you should advise the building manager or other appropriate person that: • It will be necessary to establish and maintain adequate ventilation of the work area, without causing the entry of contaminants to other parts of building; and • Persons who are sensitive to odors and/or chemicals should be advised to avoid the work area during this process.

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N/K - none known or not known