

MATERIAL SAFETY DATA SHEET

I. PRODUCT IDENTIFICATION

Name: Armstrong S-570 Seam Coater
Description: Solvent-dispersed Polymeric Coating

II. DEPARTMENT OF TRANSPORTATION INFORMATION

Shipping Name: Coating solution (Xylene). Hazard Class: 3 (Flammable Liquid). ID#: UN 1139. PG: II (S-570 Seam Coater). Reportable Quantity (RQ): 2,000 lbs.
EMERGENCY ONLY CONTACT: CHEM-TEL-1-800-255-3924.

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

Health = 3 Flammability = 3 Reactivity = 0

IV. PRODUCT CONTENT

This product contains chemicals subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR Part 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>
Xylene	1330-20-7	50	100 ppm STEL: 150 ppm ceiling:0.01 ppm	100 ppm STEL: 150 ppm 0.005 ppm
Aliphatic Isocyanate	5124-30-1	20	(Skin) N/A	0.005 ppm N/A
Hexamethylene Diisocyanate (Homopolymer)	28182-81-2	6	N/A	N/A
1-6-Hexanediol	629-11-8	10	1 ppm	1 ppm
Phthalic Anhydride	85-44-9	5	150 ppm	150 ppm
Butyl Acetate	123-86-4	4	STEL: 200 ppm	STEL: 200 ppm

VI. PHYSICAL DATA

APPEARANCE AND COLOR: Hazy, colorless liquid. BOILING POINT (degrees F): N/K. VAPOR PRESSURE (mm Hg @ 20 degrees C): N/K. VAPOR DENSITY (Air = 1): N/K. SOLUBILITY IN WATER: Insoluble. SPECIFIC GRAVITY (H₂O = 1): 0.96. PERCENT VOLATILE BY WEIGHT (30 min. @ 275 degrees F): 60.9. EVAPORATION RATE (Butyl Acetate = 1): N/K. pH: N/A.

VII. FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: 79° F (Pensky-Martens closed cup). FLAMMABLE RANGE: LEL = 1.0; UEL = 7.0 based on xylene. EXTINGUISHING MEDIA: Carbon Dioxide, dry chemical, alcohol-type foam. 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, skin, eyes. TARGET ORGANS: Lungs, skin, eyes. EFFECTS OF OVEREXPOSURE: SKIN AND EYES: Contact with skin may result in irritation and dermatitis; sensitization may also occur—once sensitized, an adverse reaction can occur with exposure to even trace amount by either vapor or direct contact: these symptoms may be immediate or delayed several hours. Contact with eyes will cause irritation. INHALATION: Irritation of respiratory tract, coughing, headache, dizziness, drowsiness, nausea, uncoordinated movements; selected individuals may experience allergic reactions with asthmatic symptoms. CARCINOGENICITY: NTP: No; IARC Monographs: No; OSHA Regulated: No. MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: Any condition generally aggravated by solvents, including preexisting upper respiratory and lung disease such as, but not limited to bronchitis, emphysema and asthma. FIRST AID PROCEDURES: SKIN AND EYES: In case of eye contact, flush eyes repeatedly with water for 15 minutes and get immediate medical attention. In case of skin contact, flush with cool water, then wash with warm water and soap; see a physician if symptoms or irritation persists. INHALATION: Remove to fresh air if exposed to excess concentrations of vapor. Seek medical attention if symptoms persist or irritation persists. INGESTION: Do not induce vomiting. Immediately call Poison Control Center or physician for assistance.

IX. REACTIVITY DATA

STABILITY: Stable. INCOMPATIBILITY: Moisture; excessive heat; active hydrogen containing compounds, e.g., alcohols and amines. HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, carbon dioxide, oxides of nitrogen, cyanide, and other toxic vapors and gases that are common to thermal degradation of organic compounds. HAZARDOUS POLYMERIZATION: Will not occur; however, if polymerization occurs in closed container, overpressure failure of the container may result.

S-570

Prepared 5/05 – Replaces 11/98

Armstrong World Industries, Inc.
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X. SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: Remove all sources of ignition. Ventilate area of spill or leak; if using mechanical ventilation, make sure that it is explosion-proof or does not present an ignition source. Wear personal protective equipment to prevent skin, eye and respiratory exposure; wear boots to prevent contact with shoes. Contain spill, preventing it from entering sewer lines or waterways. Use clay absorbents to assist with the pick-up of the material. Place material into containers. WASTE DISPOSAL METHOD: Do not reuse container. Dispose of container and any unused contents in accordance with Federal, State and Local Waste Disposal Regulations. Do not flush unused contents or residue down drains.

XI. SPECIAL HANDLING AND USE INFORMATION

VENTILATION: Use natural cross-ventilation, local (mechanical) pick-up, and/or general area (mechanical) ventilation to prevent an accumulation of solvent vapors, keeping in mind that the ventilation pattern must remove the heavier-than-air solvent vapors from the lower levels of the work spaces. The ventilation should be sufficient to keep the solvent vapor concentration below the TLV. RESPIRATORY PROTECTION: With adequate ventilation, respiratory equipment should not be needed. If adequate ventilation is not afforded, wear respiratory equipment approved for organic vapors. SKIN AND EYE PROTECTION: During the handling of this material, impervious gloves and safety goggles should be utilized to prevent skin and eye contact.

XII. SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Store in area suitable for flammable mixtures. Recommended storage temperature is between 40–100 degrees F. OTHER PRECAUTIONS: Vapors are flammable and are heavier-than-air. Prohibit smoking and eliminate all other sources of ignition, such as regular electrical tools and appliances, making sure that pilots on gas-fired water heaters are extinguished.

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



S-585

Prepared 5/05 – Replaces 11/98

Armstrong World Industries, Inc.
P.O. Box 3209
Lancaster, PA 17604
(717) 396-2328 or (717) 396-2935

I. PRODUCT IDENTIFICATION

Name: Armstrong S-585 Seam Cleaner
Description: Solvent-dispersed Cleaner

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 = 1 Flammability = 2 Reactivity = 0

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

(Chemical Identity; Common Name)	C.A.S. No.	%	OSHA PEL	ACGIH TLV
Petroleum Solvent	64742-48-9	35-40	300 ppm*	300 ppm*
Calcium Carbonate	471-34-1	45-50	15 mg/m ³	10 mg/m ³
Nepheline Syenite	37244-96-5	15-20	N/A	5 mg/m ³ *

*Recommended by supplier

VI. PHYSICAL DATA

APPEARANCE AND COLOR: White paste. BOILING POINT (degrees F): 335-380 (solvent). VAPOR PRESSURE (mm Hg @ 20 degrees C): Less than 10 mm Hg (solvent). VAPOR DENSITY (Air = 1): Greater than 5 (solvent). SOLUBILITY IN WATER: Less than 0.1%. SPECIFIC GRAVITY (H₂O = 1): 1.37. PERCENT VOLATILE BY WEIGHT (30 min. @ 275 degrees F): 40. EVAPORATION RATE (Butyl Acetate = 1): 0.1 (solvent). pH: N/A.

VII. FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: 120° F Tag cc (based on petroleum solvent). FLAMMABLE RANGE: LEL = 0.7; UEL = 7. EXTINGUISHING MEDIA: Foam, water spray (fog), dry chemical, carbon dioxide. 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: Direct dermal exposure, inhalation. TARGET ORGANS: Skin, eyes, respiratory tract. EFFECTS OF OVEREXPOSURE: SKIN AND EYES: Excessive skin contact may cause drying and cracking of the skin, defatting of tissue, and result in dermatitis. Contact with eyes will cause irritation. INHALATION: Irritation of respiratory tract, coughing, headache, dizziness, drowsiness, nausea, uncoordinated movements. CARCINOGENICITY: NTP: No; IARC Monographs: No; OSHA Regulated: No. MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: Any condition generally aggravated by solvents, including preexisting upper respiratory and lung disease such as, but not limited to bronchitis, emphysema and asthma. Existing skin conditions. FIRST AID PROCEDURES: SKIN AND EYES: For eye contact, flush with water for 15 minutes and get immediate medical attention. 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: Do not induce vomiting. Call a Poison Control Center or physician for assistance. Get immediate medical attention.

IX. REACTIVITY DATA

STABILITY: Stable. INCOMPATIBILITY: Strong oxidizing agents. HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, carbon dioxide, and other toxic vapors and gases that are common to thermal degradation of organic compounds. HAZARDOUS POLYMERIZATION: Will not occur.

X. SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: Remove all sources of ignition. Ventilate area of spill or leak. Minimize breathing vapors. Minimize skin contact. Ventilate confined spaces. Open all windows and doors. WASTE DISPOSAL METHOD: Do not reuse container. Dispose of container and any unused contents in accordance with Federal, State and Local Waste Disposal Regulations. Do not flush unused contents or residue down drains.

XI. SPECIAL HANDLING AND USE INFORMATION

VENTILATION: Use natural cross-ventilation, local (mechanical) pick-up, and/or general area (mechanical) ventilation to prevent an accumulation of solvent vapors, keeping in mind that the ventilation pattern must remove the heavier-than-air solvent vapors from the lower levels of the work spaces. RESPIRATORY PROTECTION: With adequate ventilation, respiratory equipment should not be needed. If adequate ventilation is not afforded, wear respiratory equipment approved for organic vapors. SKIN AND EYE PROTECTION: During normal end-product use, gloves and spectacle-type safety glasses are recommended to prevent contact with this product.

XII. SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Store in an area suitable for combustible mixtures. Recommended storage temperature is above 35 degrees F and below 100 degrees F. OTHER PRECAUTIONS: Vapors are heavier-than-air. Use precautions that are common with the safe handling of combustible products.

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



S-591

Prepared 5/05 – Replaces 11/98

Armstrong World Industries, Inc.
P.O. Box 3209
Lancaster, PA 17604
(717) 396-2328 or (717) 396-2935

I. PRODUCT IDENTIFICATION

Name: Armstrong S-591 Accelerator for S-570
Description: Ester

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 = 2 Reactivity = 1

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>
N-Heptane	142-82-5	3	400 ppm STEL: 500 ppm	400 ppm STEL: 500 ppm

VI. PHYSICAL DATA

APPEARANCE AND COLOR: Hazy yellow to amber liquid. BOILING POINT (degrees F): 374. VAPOR PRESSURE (mm Hg @ 20 degrees C): 10–15. VAPOR DENSITY (Air = 1): Greater than 1. SOLUBILITY IN WATER: N/A. SPECIFIC GRAVITY (H₂O = 1): 1.05. PERCENT VOLATILE BY WEIGHT (30 min. @ 275 degrees F): 3. EVAPORATION RATE (Butyl Acetate = 1): Greater than 1. pH: N/A.

VII. FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: 162° F (Pensky-Martens closed cup). FLAMMABLE RANGE: LEL = 1.05; UEL = 6.7. EXTINGUISHING MEDIA: Foam, water spray (fog), dry chemical, carbon dioxide. 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: Eye contact, inhalation. TARGET ORGANS: Eyes, respiratory tract. EFFECTS OF OVEREXPOSURE: SKIN AND EYES: Prolonged or repeated skin contact can cause slight skin irritation. Contact with eyes can cause moderate irritation. INHALATION: Inhalation of vapor or mist can cause headache, dizziness, drowsiness, nausea, irritation of nose, throat, and lungs. INGESTION: Material is possibly harmful if swallowed. CARCINOGENICITY: NTP: No; IARC Monographs: No; OSHA Regulated: No. MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: Any condition generally aggravated by solvents, including pre-existing upper respiratory and lung disease such as, but not limited to bronchitis, emphysema, and asthma. FIRST AID PROCEDURES: SKIN AND EYES: For eye contact, flush with water for 15 minutes and get immediate medical attention. 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: Do not induce vomiting. Call a Poison Control Center or physician for assistance. Get immediate medical attention.

IX. REACTIVITY DATA

STABILITY: Stable; however, avoid temperatures above 150C/302F for prolonged periods to prevent slow decomposition. INCOMPATIBILITY: Strong oxidizing agents. Contact with water may cause a reaction generating heat or decomposition. HAZARDOUS DECOMPOSITION PRODUCTS: Thermal decomposition may yield aldehydes and amines. HAZARDOUS POLYMERIZATION: Will not occur.

X. SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: Product sold in small containers—spill or leak procedures not necessary. WASTE DISPOSAL METHOD: Do not reuse container. Dispose of container and any unused contents in accordance with Federal, State and Local Waste Disposal Regulations. Do not flush unused contents or residue down drains.

XI. SPECIAL HANDLING AND USE INFORMATION

VENTILATION: Use natural cross-ventilation, local (mechanical) pick-up, and/or general area (mechanical) ventilation to prevent an accumulation of solvent vapors, keeping in mind that the ventilation pattern must remove the heavier-than-air solvent vapors from the lower levels of the work spaces. RESPIRATORY PROTECTION: With adequate ventilation, respiratory equipment should not be needed. If adequate ventilation is not afforded, wear respiratory equipment approved for organic vapors. SKIN AND EYE PROTECTION: During normal end-product use, gloves and spectacle-type safety glasses are recommended to prevent contact with this product.

XII. SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Store in an area suitable for combustible mixtures. Recommended storage temperature is above 35 degrees F and below 100 degrees F. OTHER PRECAUTIONS: Vapors are heavier-than-air. Use precautions that are common with the safe handling of combustible products.

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