



## SAFETY DATA SHEET

### SECTION 1 – PRODUCT AND COMPANY IDENTIFICATION

Product Identifier : **Armstrong S-325 New Beginning**  
Product Code : 70010693  
Trade Name/Synonyms : S-325  
Recommended Use : Extra-Strength Floor Cleaner and Wax Remover.  
Uses Advised Against : No information available.  
**Supplier's name and address:**  
Armstrong World Industries, Inc.  
2500 Columbia Ave.  
Lancaster, PA, USA 17603

Information Telephone No. : (800) 233-3823  
Website Address : <http://www.floorexpert.com>  
24 Hr Emergency Telephone # : CHEM-TEL: 1-800255-3924 OR 1-813-248-0585 (call collect)

### SECTION 2 – HAZARDS IDENTIFICATION

#### GHS Classification per 29 CFR 1910.1200 (OSHA HCS 2012) and HPR (WHMIS 2015)

Skin corrosion/irritation, Category 1  
Serious eye damage/eye irritation, Category 1  
Carcinogenicity, Category 2  
Specific target organ toxicant, single exposure, Category 3, Respiratory irritation  
Specific target organ toxicant, repeated exposure, Category 1

#### GHS Pictograms



#### Signal Word

Danger.

#### Hazard Statements

Causes severe skin burns and eye damage.  
May cause respiratory irritation.  
Causes damage to organs (Central Nervous System, Liver, Kidneys, and Blood) through prolonged or repeated exposure.  
Suspected of causing cancer.

#### Precautionary Statements

Do not handle until all safety precautions have been read and understood. Do not breathe gas/mist/vapors/spray. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Wear protective gloves and eye protection. Wash hands and exposed skin thoroughly after handling. Wash contaminated clothing before reuse. Store in a well-ventilated place. Keep container tightly closed. Store locked up. Dispose of contents / container in accordance with federal, state, and local laws.



**Hazards Not Otherwise Classified**

None.

**% with Unknown Acute Toxicity**

4% of this product consists of ingredients with unknown acute toxicity.

**SECTION 3 – COMPOSITION/INFORMATION ON INGREDIENTS**

Ingredients	CAS #	% (by weight)
Sodium metasilicate	6834-92-0	1.00 – 5.00
2-Butoxyethanol	111-76-2	1.00 – 5.00
Cocamide DEA	68603-42-9	1.00 – 5.00
Monoethanolamine	141-43-5	1.00 – 5.00
Diethanolamine	111-42-2	0.10 – 0.50

The exact percentages of the ingredients have been withheld by the manufacturer as trade secrets.

**SECTION 4 – FIRST AID MEASURES**

- General** : Call a Poison Center or doctor if you feel unwell.
- Inhalation** : If inhaled, remove victim to fresh air and keep at rest in a position comfortable for breathing.
- Skin contact** : Remove/Take off immediately all contaminated clothing. Wash with plenty of soap and water. If irritations or symptoms develop, seek medical attention/advice.
- Eye contact** : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/attention.
- Ingestion** : Rinse mouth. Do NOT induce vomiting. Call a POISON CENTER or doctor/physician if you feel unwell.
- Notes for Physician** : Treat symptomatically.

**Signs and symptoms of short-term (acute) exposure**

- Inhalation* : Symptoms may include coughing and shortness of breath.
- Skin* : Symptoms may include redness and itching. Some components may be absorbed through the skin.
- Eyes* : Symptoms may include redness, itching, or pain.
- Ingestion* : Symptoms such as gastric pain, nausea, vomiting, and diarrhea may occur. If large amounts are ingested, symptoms may include pain, headache, nausea, vomiting, dizziness, drowsiness and other central nervous system effects.

**Effects of long-term (chronic) exposure**

- : Prolonged inhalation may cause adverse lung effects with symptoms such as pulmonary edema (fluid accumulation). Repeated absorption may cause damage to central nervous system, liver, kidneys, and blood.

**Indication of need for immediate medical attention or special treatment**

- : Difficulty breathing persists after removing the person to fresh air.
- Any exposure to the eye which causes irritation or damage.
- Exposure to the skin that causes a chemical burn.

**SECTION 5 – FIRE FIGHTING MEASURES**

- Suitable extinguishing media** : Carbon dioxide, dry chemical powder, alcohol foam or water spray.
- Unsuitable extinguishing media** : Water jet. May spread fire.



**Hazardous combustion products** : Carbon monoxide, carbon dioxide, ammonia, nitrogen oxides (NO<sub>x</sub>) and other toxic vapors and gases which are common to thermal degradation of organic compounds.

**Special fire-fighting procedures/equipment**

: Firefighters should wear proper protective equipment and self-contained breathing apparatus with full face piece operated in positive pressure mode. Move containers from fire area if safe to do so. Water spray may be useful in cooling equipment exposed to heat and flame. After fires have been extinguished, carefully clean all equipment and surfaces exposed to fumes.

**Environmental precautions** : Do not allow large quantities to enter drains.

**Fire hazards/conditions of flammability**

: Not flammable under normal conditions of use. Closed containers may rupture if exposed to excess heat or flame due to a build-up of internal pressure. Ammonia gas may be liberated at high temperatures.

**Flammability classification (OSHA 29 CFR 1910.1200, WHMIS 2015)**

: Not flammable under normal conditions of handling.

**NFPA Rating**

: 0 - Minimal 1 - Slight 2 - Moderate 3 - Serious 4 - Severe

*Health: 3 Flammability 1 Instability 0 Special Hazards: None*

## SECTION 6 – ACCIDENTAL RELEASE MEASURES

**Personal precautions** : Corrosive! Restrict access to area until completion of clean-up. All persons dealing with clean-up should wear the appropriate chemically protective equipment.

**Protective equipment** : Refer to Section 8 on this Safety Data Sheet, EXPOSURE CONTROLS / PERSONAL PROTECTION, for additional information on acceptable personal protective equipment.

**Emergency Procedures** : If a spill/release in excess of the EPA reportable quantity is made into the environment, immediately notify the national response center in the United States (phone: 1-800-424-8002).

US CERCLA Reportable quantity (RQ): Diethanolamine: 100 lbs (45.4 kg).  
This is equivalent to > 20,000 lbs. (> 9090 kg) of product.

**Methods and materials for containment and cleaning up**

: Ventilate area of release. Eliminate all sources of ignition. Stop spill or leak at source if safely possible. Contain product with inert absorbent material, preventing it from entering sewer lines or waterways. Gather up spilled material and place in suitable container for later disposal (see Section 13). Residual of product, while still wet, can be cleaned up with warm soapy water. Notify the appropriate authorities as required.

**Prohibited materials** : None known.

**Environmental precautions** : Small amounts of this product may be flushed down drains, with dilution. Do not allow large amounts of this product to enter drains or waterways. Do not allow material to contaminate ground water system.

**Reference to other sections** : See Section 14 for disposal information.

## SECTION 7 – HANDLING AND STORAGE

**Safe handling procedures** : Observe good hygiene standards. Use only with adequate ventilation. Do not eat, drink or smoke in the work area. Wash thoroughly after handling. Do not get in eyes, on skin, or on clothing. Avoid repeated or prolonged skin contact. Avoid breathing vapors or mists of this product. Wear protective clothing to prevent skin contact. Promptly remove any clothing that becomes contaminated. Clean contaminated clothing before reuse. Keep container tightly closed.



- Storage requirements** : Store in a cool, dry, well-ventilated area. Store away from heat and open flame. Keep tightly closed when not in use. Thoroughly rinse empty container before disposal.
- Incompatible materials** : See Section 10.
- Special packaging materials** : Always keep in containers made of the same materials as the supply container.

## SECTION 8 – EXPOSURE CONTROLS AND PERSONAL PROTECTION

- Permissible Exposure Limits** : No exposure limits have been established for the product itself. Below are exposure limits for the components in the product.

Ingredients	CAS #	ACGIH TLV		OSHA PEL	
		TWA	STEL	PEL	STEL
Sodium metasilicate	6834-92-0	N/Av	N/Av	N/Av	N/Av
2-Butoxyethanol	111-76-2	20 ppm	N/Av	50 ppm (skin)	N/Av
Cocamide DEA	68603-42-9	N/Av	N/Av	N/Av	N/Av
Diethanolamine	111-42-2	1 mg/m <sup>3</sup> (skin)	N/Av	3 ppm (15 mg/m <sup>3</sup> )	N/Av
Monoethanolamine	141-43-5	3 ppm	6 ppm	3 ppm	6 ppm

- Engineering Controls** : Use general or local exhaust ventilation to maintain air concentrations below recommended exposure limits. Ventilation should effectively remove and prevent buildup of any vapor generated from the handling of this product.
- Personal Protection Equipment**
- Eye / face protection** : Chemical goggles or safety glasses, as appropriate for the job.
  - Skin protection** : Wear gloves which are impervious to the material. Glove materials such as nitrile rubber or Viton (fluorocarbon rubber) are recommended. Consult with glove manufacturers regarding breakthrough time for this material.
  - Body protection** : Where extensive exposure to product is possible, use resistant coveralls, apron and boots to prevent contact.
  - Respiratory protection** : If work process generates excessive quantities of vapor or dust, or exposures in excess of any PEL, wear an appropriate organic vapor respirator.
- Site safety equipment** : An eyewash station and safety shower should be made available in the immediate working area.
- General hygiene considerations** : Avoid contact with eyes, skin and clothing. Avoid breathing vapors. Do not eat, drink or smoke when using this product. Upon completion of work, wash hands thoroughly. Remove soiled clothing and wash it thoroughly before reuse. Clean all equipment and clothing at end of each work shift.

## SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

- |   |                              |   |                 |
|---|------------------------------|---|-----------------|
| <b>Physical state</b>                       | : Liquid                     | <b>Appearance</b>                             | : Green         |
| <b>Odor</b>                                 | : Citrus odor                | <b>Odor threshold</b>                         | : N/Av          |
| <b>pH</b>                                   | : 12.5 – 12.9                | <b>Specific gravity</b>                       | : 1.01          |
| <b>Boiling point</b>                        | : 212°F (100°C)              | <b>Coefficient of water/oil distribution</b>  | : N/Av          |
| <b>Melting/Freezing point</b>               | : N/Av                       | <b>Solubility in water</b>                    | : Soluble       |
| <b>Vapor pressure (mm Hg @ 20°C / 68°F)</b> | : N/Av                       | <b>Evaporation rate (n-Butyl acetate = 1)</b> | : N/Av          |
| <b>Vapor density (Air = 1)</b>              | : N/Av                       | <b>Volatiles (% by weight)</b>                | : 96 %          |
| <b>Volatile organic compounds (VOCs)</b>    | : 3.9%, per CARB regulations |   |                 |
| <b>Particle size</b>                        | : N/Av                       | <b>Flammability classification</b>            | : Not flammable |
| <b>Flash point</b>                          | : >93.3°C (200°F)            | <b>Lower flammable limit (% by vol)</b>       | : Not available |
| <b>Flash point method</b>                   | : Setflash closed            | <b>Upper flammable limit (% by vol)</b>       | : Not available |
| <b>Auto-ignition temperature</b>            | : N/Av                       | <b>Decomposition temperature</b>              | : Not available |
| <b>Viscosity</b>                            | : Not available              | <b>Oxidizing properties</b>                   | : Not available |
- Explosion data: Sensitivity to mechanical impact / static discharge**



: Not expected to be sensitive to mechanical impact or static discharge.

## SECTION 10 – REACTIVITY AND STABILITY INFORMATION

- Reactivity** : Not reactive.
- Stability** : Stable under the recommended storage and handling conditions prescribed.
- Hazardous reactions** : Hazardous polymerization does not occur.
- Conditions to avoid** : High temperatures.
- Materials to avoid and incompatibility** : Strong oxidizing agents; Acids; halogenated compounds; Alkali metals.
- Hazardous decomposition products** : None known, refer to hazardous combustion products in Section 5.

## SECTION 11 – TOXICOLOGICAL INFORMATION

- Routes of exposure** : *Inhalation*: YES    *Skin Absorption*: YES    *Skin and Eyes*: Yes    *Ingestion*: YES
- Symptoms of exposure** : See Section 4.
- Acute Toxicity Estimate** : Acute Toxicity Estimate (ATE) is a calculated estimate of the acute toxicological properties of a mixture, based on the LC50 and LD50s of the ingredients and their respective weight fractions of the mixture. It provides information when test data is not available for the mixture itself. See 29 CFR 1910.1200, Appendix A, paragraph A.1.3.6.2 for a description of the ATE.
- ATE Inhalation, 4 hr, rat : > 50 mg/L
- ATE Oral, rat : > 20000 mg/kg
- ATE Dermal, rabbit : > 40000 mg/kg
- Toxicological data** : See below for individual ingredient acute toxicity data.

Ingredients	LC50 (4 hr)	LD50	
	Inhalation, rat, mg/L	Oral, rat, mg/kg	Dermal, rabbit, mg/kg
Sodium metasilicate	N/Av	1153	> 4640
2-Butoxyethanol	2.17	1746	N/Av
Cocamide DEA	N/Av	2700	N/Av
Diethanolamine	3.35	710	12200
Monoethanolamine	2.42	1720	1025

- Skin corrosion or irritation** : Corrosive to skin.
- Serious eye damage / eye irritation** : Corrosive to eyes.
- Respiratory or skin sensitization** : Not expected to cause skin or respiratory sensitization reactions.
- Germ cell mutagenicity** : None known.
- Carcinogenic status** : This product contains Diethanolamine and Cocamide DEA. These materials are each classified as *possibly* carcinogenic to humans by IARC (Group 2B). Tests on these chemicals have shown inadequate evidence for carcinogenicity in humans but sufficient evidence of carcinogenicity in animals. In a two-year study of dermal exposure of mice to Diethanolamine, liver tumors were found. See RTECS KL2975000.  
No other components are listed as carcinogens by ACGIH, IARC, OSHA or NTP.
- Reproductive toxicity** : See RTECS KL2975000. Various reproductive effects were observed in rats exposed to Diethanolamine; adverse effects in both offspring and in sexual function/fertility in adults.

**Specific Target Organ Toxicity, Single Exposure**



- : May cause respiratory irritation.
- Overexposure to concentrated 2-Butoxyethanol is known to cause Central Nervous System effects (headache, dizziness, drowsiness, nausea), especially via absorption through the skin. Due to its low concentration in this product, 2-Butoxyethanol is unlikely to cause these symptoms under normal conditions of use.

**Specific Target Organ Toxicity, Repeated Exposure**

- : Repeated exposure to 2-Butoxyethanol can cause liver, kidney, and blood disorders.

**Aspiration hazard**

- : None known.

**Additional information**

- : N/Av

**SECTION 12 – ECOLOGICAL INFORMATION**

**Environmental effects** : The product should not be allowed to enter drains or water courses, or be deposited where it can affect ground or surface waters.

- Ecotoxicity** : No data available.
- Biodegradability** : No data available.
- Bioaccumulative potential** : No data available.
- Mobility in soil** : No data available.
- PBT and vPvB assessment** : No data available.
- Other adverse effects** : No data available.

**SECTION 13 – DISPOSAL CONSIDERATION**

**Handling for disposal** : Handle waste according to recommendations in Section 7.

**Methods of disposal** : You must test your waste using methods described in 40 CFR Part 261 to determine if it meets applicable definitions of hazardous wastes. Dispose in accordance with all applicable federal, state, provincial and local regulations. Contact your local, state, provincial or federal environmental agency for specific rules.

**Packaging** : Handle contaminated packaging in the same manner as the product.

**RCRA** : If this product, as supplied, becomes a waste in the United States, it may meet the criteria of a hazardous waste as defined under RCRA, Title 40 CFR 261. It is the responsibility of the waste generator to determine the proper waste identification and disposal method. For disposal of unused or waste material, check with local, state and federal environmental agencies.

**SECTION 14 – TRANSPORTATION INFORMATION**

Regulatory Information	UN Number	Shipping Name	Class	Packing Group	Label
<b>DOT</b>	None	Consumer Commodity	ORM-D	None	<b>ORM-D</b>
<b>49 CFR/DOT Additional Information</b>	Must be a consumer-type product, in Limited Quantity size, no larger than 5.0 L per container. Package weight must not exceed 30 kg gross.				
<b>TDG For packages &gt; 5.0 Liters</b>	UN1760	CORROSIVE LIQUID, N.O.S. (Sodium metasilicate; Monoethanolamine)	8	III	
<b>TDG Additional Information</b>	May be shipped under Section 1.1.7 when packages are marked "Consumer Commodity". Must be a consumer-type product, in Limited Quantity size, no larger than 5.0 L per container. Package weight must not exceed 30 kg. gross.				



**IATA**

**UN No** : UN1760  
**Proper Shipping Name** : CORROSIVE LIQUID, N.O.S. (Sodium metasilicate; Monoethanolamine)  
**Hazard Class** : Class 8  
**Packing Group** : PG III

**IMDG**

**UN No** : UN1760  
**Proper Shipping Name** : CORROSIVE LIQUID, N.O.S. (Sodium metasilicate; Monoethanolamine)  
**Hazard Class** : Class 8  
**Packing Group** : PG III

**SECTION 15 – REGULATORY INFORMATION**

**Canadian Information:**

This product has been classified according to the hazard criteria of the Hazardous Products Regulations (HPR). This SDS contains all of the information required by the HPR.

Canadian Environmental Protection Act (CEPA) information: All ingredients listed appear on either the Domestic Substances List (DSL) or the Non- Domestic Substances List (NDSL).

**US Federal Information:**

TSCA: All listed ingredients appear on the Toxic Substances Control Act (TSCA) inventory.

CERCLA Reportable Quantity (RQ) (40 CFR 117.302): Diethanolamine: 100 lbs (45.4 kg).

SARA TITLE III: Sec. 302, Extremely Hazardous Substances, 40 CFR 355: This product does not contain an Extremely Hazardous Substance under SARA Section 302.

SARA TITLE III: Sec. 311 and 312, SDS Requirements, 40 CFR 370 Hazard Classes: Immediate (Acute) health hazard; Chronic Health Hazard. Under SARA Sections 311 and 312, the EPA has established threshold quantities for the reporting of hazardous chemicals. The current thresholds are 500 pounds for the threshold planning quantity (TPQ), whichever is lower, for extremely hazardous substances and 10,000 pounds for all other hazardous chemicals.

SARA TITLE III: Sec. 313, Toxic Chemicals Notification, 40 CFR 372: This product may be subject to SARA notification requirements, since it contains Toxic Chemical constituents above their *de minimus* concentrations. This product contains: diethanolamine.

**U.S. State Right To Know Laws**

California Proposition 65: Warning! This product contains a chemical known to the State of California to cause cancer and/or reproductive/developmental effects.

**Other State Right to Know Laws:**

Ingredient	CAS NO.	CA	MA	MN	NJ	NY	PA	RI
2-Butoxyethanol	111-76-2	YES	YES	YES	YES	No	YES	YES
Cocamide DEA	68603-42-9	No	No	YES	No	No	No	No
Monoethanolamine	141-43-5	YES	YES	No	YES	No	YES	YES
Diethanolamine	111-42-2	YES	YES	No	YES	YES	YES	YES

**SECTION 16 – OTHER INFORMATION**

HMIS Rating : \* - Chronic Hazard 0 - Minimal 1 – Slight 2 – Moderate 3 – Serious 4 – Severe  
Health: \*3 Flammability 1 Reactivity 0 PPE: Gloves, safety glasses

**Legend** : ACGIH: American Conference of Governmental Industrial Hygienists  
CAS: Chemical Abstract Services  
CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act of 1980



CFR: Code of Federal Regulations  
DOT: Department of Transportation  
DSL: Domestic Substances List  
EPA: Environmental Protection Agency  
GHS: Globally Harmonized System  
HPR: Hazardous Products Regulations  
IARC: International Agency for Research on Cancer  
Inh: Inhalation  
N/Av: Not Available  
N/Ap: Not Applicable  
NIOSH: National Institute of Occupational Safety and Health  
NTP: National Toxicology Program  
OSHA: Occupational Safety and Health Administration  
PEL: Permissible exposure limit  
RCRA: Resource Conservation and Recovery Act  
SARA: Superfund Amendments and Reauthorization Act  
STEL: Short Term Exposure Limit  
TDG: Canadian Transportation of Dangerous Goods Act & Regulations  
TLV: Threshold Limit Values  
TSCA: Toxic Substance Control Act  
TWA: Time Weighted Average  
WHMIS: Workplace Hazardous Materials Identification System

#### **Disclaimer of Liability**

The Information presented herein is supplied as a guide to those who handle or use this product and has been prepared in good faith by technically knowledgeable personnel. It is not intended to be all-inclusive. The manner and conditions of use and handling may involve other and additional considerations. 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.

No warranty of any kind is given or implied. Armstrong World Industries, Inc. will not be liable for any damages, losses, injuries or consequential damages which may result from the use or reliance on any information contained herein.

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