



Armstrong S-390 Shinekeeper Long-Lasting Floor Polish

S-390

MSDS Preparation Date (mm/dd/yyyy): 06/01/2012

Page 1 of 7

## MATERIAL SAFETY DATA SHEET

### SECTION 1 - IDENTIFICATION

**Product identifier** : **Armstrong S-390 Shinekeeper Long-Lasting Floor Polish**

**Product Code(s)** : S-390

**Product Use** : High durability, long lasting acrylic floor polish for residential flooring.

**Chemical Family** : Mixture.

**Supplier's name and address:**

Armstrong World Industries, Inc.  
2500 Columbia Ave.  
Lancaster, PA, U.S.A.  
17603

**Information Telephone #** : (877) 276-7876, www.floorexpert.com

**24 Hr. Emergency Tel #** : CHEM TEL: 1 800 255 3924 OR 1 813 248 0585 (call collect)

### SECTION 2 - HAZARDS IDENTIFICATION

**Classification** : WHMIS classification: This product is a WHMIS Controlled Product. It meets one or more of the criteria for a controlled product provided in Part IV of the Canadian Controlled Products Regulations (CPR).

WHMIS classification:

Class D2B (Materials Causing Other Toxic Effects, Toxic Material).

OSHA: This material is classified as hazardous under OSHA regulations (29CFR 1910.1200).

Hazardous classification:

Acute Health Hazard;  
Chronic Health Hazard.

**Emergency Overview** : Watery, milky-white liquid.  
Caution!

May be harmful if swallowed. May cause headache, nausea, dizziness and other symptoms of central nervous system depression. Causes eye irritation. May cause mild skin irritation on prolonged contact. Repeated or prolonged exposure may result in kidney effects.

### POTENTIAL HEALTH EFFECTS:

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

*Inhalation* : May cause irritation to the nose, throat and upper respiratory tract. Exposure to high vapour concentration can cause dizziness, nausea and central nervous system depression.

*Skin* : May cause mild skin irritation on prolonged contact. May be absorbed and cause symptoms similar to those for inhalation.

*Eyes* : May cause moderate eye irritation. Symptoms may include stinging and tearing.

*Ingestion* : May cause irritation of mouth, throat, and stomach. Symptoms may include pain, headache, nausea, vomiting, dizziness, drowsiness and other central nervous system effects.

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

: Repeated or prolonged exposure may result in kidney effects. Could cause cyanosis (bluish discoloration of the skin due to deficient oxygenation of the blood).

**Carcinogenic status** : See TOXICOLOGICAL INFORMATION, Section 11.

**Additional health hazards** : See TOXICOLOGICAL INFORMATION, Section 11.

#### Potential environmental effects

: This product contains marine pollutants. See ECOLOGICAL INFORMATION, Section 12.



**Armstrong S-390 Shinekeeper Long-Lasting Floor Polish**

S-390

MSDS Preparation Date (mm/dd/yyyy): 06/01/2012

Page 2 of 7

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

<u>Ingredients</u>	<u>CAS #</u>	<u>Wt.%</u>
Diethylene glycol monoethyl ether	111-90-0	1.00 - 5.00
Zinc oxide	1314-13-2	0.10 - 0.75

**SECTION 4 - FIRST AID MEASURES**

- Inhalation** : If inhaled, move to fresh air. If breathing has stopped, give artificial respiration. If breathing is difficult, give oxygen by qualified medical personnel only. When symptoms persist or in all cases of doubt seek medical advice.
- Skin contact** : Remove contaminated clothing. Flush contaminated area with lukewarm, gently running water for at least 5 to 10 minutes or until the chemical is removed. If irritation or symptoms develop, seek medical attention. Wash contaminated clothing before re-use.
- Eye contact** : Immediately flush eyes with running water for at least 15 minutes. If irritation persists, seek prompt medical attention.
- Ingestion** : Do not induce vomiting. Get medical attention. Never give anything by mouth to an unconscious person.
- Notes For Physician** : Treat symptomatically.

**SECTION 5 - FIRE FIGHTING MEASURES**

- 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.
- Flammability classification (OSHA 29 CFR 1910.1200)** : Combustible Liquid Class III B.
- Oxidizing properties** : None known.
- Explosion data: Sensitivity to mechanical impact / static discharge** : Not expected to be sensitive to mechanical impact or static discharge.
- Suitable extinguishing media** : Use media suitable to the surrounding fire such as water fog or fine spray, alcohol foams, carbon dioxide and dry chemical.
- 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.
- Hazardous combustion products** : Carbon oxides; phosphorus oxides; Hydrogen fluoride; Other unidentified organic compounds.
- NFPA Rating** : 0 - Minimal    1 - Slight    2 - Moderate    3 - Serious    4 - Severe  
: *Health:* 1    *Flammability:* 1    *Instability:* 0    *Special Hazards:* None.

**SECTION 6 - ACCIDENTAL RELEASE MEASURES**

- Personal precautions** : All persons dealing with the clean-up should wear the appropriate chemically protective equipment. Keep all other personnel upwind and away from the spill/release. Restrict access to area until completion of clean-up. Refer to protective measures listed in sections 7 and 8.
- Environmental precautions** : Ensure spilled product does not enter drains, sewers, waterways, or confined spaces.
- Spill response/cleanup** : Ventilate area of release. Remove all sources of ignition. Contain and absorb spilled liquid with non-combustible, inert absorbent material (e.g. sand), then place absorbent material into a container for later disposal (see Section 13). Notify the appropriate authorities as required.
- Prohibited materials** : None known.



**Armstrong S-390 Shinekeeper Long-Lasting Floor Polish**

S-390

MSDS Preparation Date (mm/dd/yyyy): 06/01/2012

Page 3 of 7

**Special spill response 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): None reported.

**SECTION 7 - HANDLING AND STORAGE**

- Safe Handling procedures** : Use in a well-ventilated area. Wear suitable protective equipment during handling. Avoid breathing vapors or mists. Avoid contact with skin, eyes and clothing. Keep away from extreme heat and flame. Avoid contact with incompatible materials. Wash thoroughly after handling.
- Storage requirements** : Store in a cool, dry, well-ventilated area. Keep away from direct sunlight. Keep away from incompatibles. Inspect periodically for damage or leaks. Storage area should be clearly identified, clear of obstruction and accessible only to trained and authorized personnel.
- Incompatible materials** : Strong oxidizing agents.
- Special packaging materials** : Always keep in containers made of the same materials as the supply container.

**SECTION 8 - EXPOSURE CONTROLS AND PERSONAL PROTECTION**

<u>Exposure Limits</u>				
<u>Ingredients</u>	<u>ACGIH TLV</u>		<u>OSHA PEL</u>	
	<u>TWA</u>	<u>STEL</u>	<u>PEL</u>	<u>STEL</u>
Diethylene glycol monoethyl ether	25 ppm (AIHA WEEL)	N/Av	N/Av	N/Av
Zinc oxide	2 mg/m <sup>3</sup> (respirable)	10 mg/m <sup>3</sup> (respirable)	5 mg/m <sup>3</sup> (fume); 15 mg/m <sup>3</sup> (total dust); 5 mg/m <sup>3</sup> (respirable)	N/Av

**Ventilation and engineering measures**

- : General room ventilation is normally adequate. However, if operating conditions create high airborne concentrations of this material, special ventilation may be needed. Use general or local exhaust ventilation to maintain air concentrations below recommended exposure limits.

**Respiratory protection**

- : None required when used as intended. If airborne concentrations are above the permissible exposure limit or are not known, use NIOSH-approved respirators. Advice should be sought from respiratory protection specialists.

**Skin protection**

- : Gloves impervious to the material are recommended. Advice should be sought from glove suppliers.

**Eye / face protection**

- : Safety goggles or glasses as appropriate for the job.

**Other protective equipment**

- : Depending on conditions of use, an impervious apron should be worn. An eyewash station and safety shower should be made available in the immediate working area.

**General hygiene considerations**

- : Avoid breathing vapors or mists. Avoid contact with skin, eyes and clothing. Do not eat, drink, smoke or use cosmetics while working with this product. Upon completion of work, wash hands before eating, drinking, smoking or use of toilet facilities. Remove soiled clothing and wash it thoroughly before reuse.

**SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES**

- Physical state** : Liquid.
- Appearance** : Watery, milky-white liquid.
- Odour** : Not available.
- Odour threshold** : Not available.
- pH** : 8.6
- Boiling point** : 100°C (212°F)
- Specific gravity** : 1.024
- Melting/Freezing point** : 0°C (32°F)
- Coefficient of water/oil distribution** : Not available.
- Vapour pressure (mmHg @ 20° C / 68° F)** : Not available.
- Solubility in water** : Dispersible



**Armstrong S-390 Shinekeeper Long-Lasting Floor Polish**

S-390

MSDS Preparation Date (mm/dd/yyyy): 06/01/2012

Page 4 of 7

- Vapour density (Air = 1)** : Not available.      **Evaporation rate (n-Butyl acetate = 1)** : Not available.
- Volatile organic Compounds (VOC's)** : Not available.      **Volatiles (% by weight)** : 82.0%
- Flash point** : > 110°C (230°F)
- Flash point Method** : Setaflash Closed Tester      **Auto-ignition temperature** : Not available.
- Lower flammable limit (% by vol.)** : Not available.      **Upper flammable limit (% by vol.)** : Not available.
- Flame Projection Length** : Not applicable.      **Flashback observed** : Not applicable.

**Section 10: Stability And Reactivity**

- Stability and reactivity** : Stable under the recommended storage and handling conditions prescribed.
- Hazardous polymerization** : Hazardous polymerisation does not occur.
- Conditions to avoid** : Avoid heat and open flame. Keep away from direct sunlight. Do not use in areas without adequate ventilation.
- Materials To Avoid And Incompatibility** : Oxidizing agents.
- Hazardous decomposition products** : None known, refer to hazardous combustion products in Section 5.

**SECTION 11 - TOXICOLOGICAL INFORMATION**

- Target organs** : Eyes, skin, respiratory system, digestive system, central nervous system.
- Routes of exposure** : *Inhalation:* YES    *Skin Absorption:* YES    *Skin & Eyes:* YES    *Ingestion:* YES
- Toxicological data** : There is no available data for the product itself, only for the ingredients. See below for individual ingredient acute toxicity data.

<u>Ingredients</u>	<u>LC<sub>50</sub>(4hr)</u> <u>inh, rat</u>	<u>LD<sub>50</sub></u>	
		<u>(Oral, rat)</u>	<u>(Rabbit, dermal)</u>
Diethylene glycol monoethyl ether	> 5240 mg/m <sup>3</sup>	5500 µL/kg	4200 µL/kg
Zinc oxide	N/Av	> 5000 mg/kg	N/Av

- Carcinogenic status** : No components are listed as carcinogens by ACGIH, IARC, OSHA or NTP.
- Reproductive effects** : None known.
- Teratogenicity** : Not expected to be a teratogen.
- Mutagenicity** : None known.
- Epidemiology** : Not available.
- Sensitization to material** : Not expected to be a skin or respiratory sensitizer.
- Synergistic materials** : None known.
- Irritancy** : Mild skin irritant. Moderate eye irritant.
- other important hazards** : None known or reported by the manufacturer.
- Conditions aggravated by overexposure** : Pre-existing skin, eye and respiratory disorders.

**SECTION 12 - ECOLOGICAL INFORMATION**

- Ecotoxicity** : No data is available on the product itself. The product should not be allowed to enter drains or water courses, or be deposited where it can affect ground or surface waters. The product contains the following substances which are hazardous for the environment: Zinc oxide. The acute toxicity of zinc oxide is (WHO 2001, EHC # 221):  
Toxicity to fish - LC50/96h/rainbow trout = 0.136 mg/L  
Toxicity to daphnia - EC50/48h/daphnia = 0.068 mg/L  
Toxicity to algae - EC50/72h/algae = 0.17 mg/L
- Mobility** : No data is available on the product itself.
- Persistence** : No data is available on the product itself.



**Armstrong S-390 Shinekeeper Long-Lasting Floor Polish**

S-390

MSDS Preparation Date (mm/dd/yyyy): 06/01/2012

Page 5 of 7

**Bioaccumulation potential** : No data is available on the product itself.

**Other Adverse Environmental effects**

: No data is available on the product itself.



**SECTION 13 - DISPOSAL CONSIDERATIONS**

**Handling for Disposal** : Handle waste according to recommendations in Section 7. Empty containers retain residue (liquid and/or vapour) and can be dangerous.

**Methods of Disposal** : Dispose of in accordance with federal, provincial and local hazardous waste laws.

**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: TRANSPORT INFORMATION**

Regulatory Information	UN Number	Shipping Name	Class	Packing Group	Label
TDG	None	Not regulated.	Not regulated	none	
<b>TDG Additional information</b>	Not regulated unless shipping internationally by sea. This product meets the criteria for an environmentally hazardous material according to the IMDG Code. This product contains marine pollutants. See ECOLOGICAL INFORMATION, Section 12.				
49CFR/DOT	None	Not regulated.	Not regulated	none	
<b>49CFR/DOT Additional information</b>	Not regulated unless shipping internationally by sea. This product meets the criteria for an environmentally hazardous material according to the IMDG Code. This product contains marine pollutants. See ECOLOGICAL INFORMATION, Section 12.				

**SECTION 15 - REGULATORY INFORMATION**

**US Federal Information:**

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

CERCLA Reportable Quantity (RQ) (40 CFR 117.302): None reported.

SARA TITLE III: Sec. 302, Extremely Hazardous Substances, 40 CFR 355: No Extremely Hazardous Substances are present in this material.

SARA TITLE III: Sec. 311 and 312, MSDS 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 material is not subject to SARA notification requirements, since it does not contain any Toxic Chemical constituents above de minimus concentrations.

**US State Right to Know Laws:**

California Proposition 65: To the best of our knowledge, this product does not contain any chemicals known to the State of California to cause cancer or reproductive harm.

Other U.S. State "Right to Know" Lists: The following chemicals are specifically listed by individual States: Diethylene glycol monoethyl ether (MN); Zinc oxide (CA, MA, MN, NJ, PA, RI).

**International Information:**

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

WHMIS information: Refer to Section 2 for a WHMIS Classification for this product.



**Armstrong S-390 Shinekeeper Long-Lasting Floor Polish**

S-390

MSDS Preparation Date (mm/dd/yyyy): 06/01/2012

Page 6 of 7



**This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR.**

**SECTION 16 - OTHER INFORMATION**

**HMIS Rating** : \* - Chronic hazard 0 - Minimal 1 - Slight 2 - Moderate 3 - Serious 4 - Severe  
*Health:* \*2 *Flammability:* 1 *Reactivity:* 0

**Legend** : ACGIH: American Conference of Governmental Industrial Hygienists  
 AIHA: American Industrial Hygiene Association  
 CA: California  
 CAS: Chemical Abstract Services  
 CNS: Central Nervous System  
 EHC: Environmental Health Criteria  
 HSDB: Hazardous Substances Data Bank  
 IARC: International Agency for Research on Cancer  
 IMDG: International Maritime Dangerous Goods  
 Inh: Inhalation  
 LC: Lethal Concentration  
 LD: Lethal Dose  
 MA: Massachusetts  
 MN: Minnesota  
 N/Ap: Not Applicable  
 N/Av: Not Available  
 NIOSH: National Institute of Occupational Safety and Health  
 NJ: New Jersey  
 NTP: National Toxicology Program  
 OSHA: Occupational Safety and Health Administration  
 PA: Pennsylvania  
 PEL: Permissible exposure limit  
 RI: Rhode Island  
 RTECS: Registry of Toxic Effects of Chemical Substances  
 STEL: Short Term Exposure Limit  
 TDG: Canadian Transportation of Dangerous Goods Act & Regulations  
 TLV: Threshold Limit Values  
 TWA: Time Weighted Average  
 WEEL: Workplace Environmental Exposure Level  
 WHMIS: Workplace Hazardous Materials Identification System  
 WHO: World Health Organization

**References** : 1. ACGIH, Threshold Limit Values and Biological Exposure Indices for 2010.  
 2. International Agency for Research on Cancer Monographs, searched 2010.  
 3. Canadian Centre for Occupational Health and Safety, CCIInfoWeb databases, 2010 (Chempendium, HSDB and RTECs).  
 4. Material Safety Data Sheet from manufacturer.  
 5. US EPA Title III List of Lists - October 2006 version.  
 6. California Proposition 65 List - December 3, 2010 version.

<p><b>Prepared for:</b>          Armstrong World Industries, Inc.          2500 Columbia Ave.          Lancaster, PA, U.S.A., 17603          Telephone: 877 276-7876          Please direct all enquiries to Armstrong World Industries.</p>	
<p><b>Prepared by:</b>          ICC The Compliance Center Inc.  <a href="http://www.thecompliancecenter.com">http://www.thecompliancecenter.com</a></p>	



Armstrong World Industries, Inc.  
2500 Columbia Ave.  
Lancaster, PA, U.S.A., 17603  
Telephone: (877) 276-7876

---

**Armstrong S-390 Shinekeeper Long-Lasting Floor Polish**

S-390

MSDS Preparation Date (mm/dd/yyyy): 06/01/2012

Page 7 of 7

**DISCLAIMER OF LIABILITY**

This Material Safety Data Sheet was prepared by ICC The Compliance Center Inc. using information provided by Armstrong World Industries, Inc. and CCOHS' Web Information Service. The information in the Material Safety Data Sheet is offered for your consideration and guidance when exposed to this product. ICC The Compliance Center Inc and Armstrong World Industries, Inc. expressly disclaim all expressed or implied warranties and assume no responsibilities for the accuracy or completeness of the data contained herein. The data in this MSDS does not apply to use with any other product or in any other process.

This Material Safety Data Sheet may not be changed, or altered in any way without the expressed knowledge and permission of ICC The Compliance Center Inc. and Armstrong World Industries, Inc.

**Preparation Date (mm/dd/yyyy)**

: 06/01/2012

**END OF DOCUMENT**