



STAR CONCRETE ARMOUR
CONCRETE, BRICK AND WOOD PROTECTOR



SOURCE BOOK
CUSTOMER INFORMATION SHEET
PRODUCT BULLETIN
M.S.D.S.



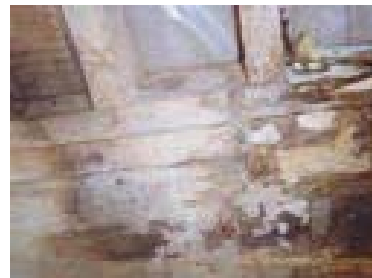
STAR CONCRETE ARMOUR CONCRETE, BRICK AND WOOD PROTECTOR

STAR CONCRETE ARMOUR is a specialty product that was especially designed to protect common building materials like, concrete, brick, masonry, and wood. Being based on 100% Acrylic polymers and specialty chemicals, STAR CONCRETE ARMOUR is highly stable and resistant to water, salts, ultraviolet and weathering.

It quickly penetrates concrete, masonry and wood substrates and forms a rubber network in the interstices that stops water, chloride de-icing chemicals, salt, and other damaging elements from entering and destroying the substrates.

What destroys concrete:

Water, de-icing salts, and other elements commonly damage concrete. De-icing salts cause severe spalling, map cracking, crumbling and moderate fracturing of concrete structures.



How can concrete be protected?

Concrete can be effectively protected by using STAR CONCRETE ARMOUR which stops or greatly reduces the damage caused by salt and water penetration into concrete.



What are the major advantages?

- Shields and protects against the irreversible effects of salt and chemical damage to concrete.
- Improves flexural and tensile strength of the concrete.
- Easy to apply, fluid, water- like consistency.
- Water based product is safe to handle and easy to store.
- Non-flammable.

RECOMMENDED USES

All types of concrete, brick, masonry and exterior wood surfaces.

- Concrete driveways, sidewalks.
- Basement foundation walls and floors.
- Specially suited for protecting and beautifying paving stones, terrazzo tiles, rocks, etc.
- Wood fencing, railings, decks, etc.



PROPERTIES & SPECIFICATIONS

Resistant to:	De-icing salts, water, ultraviolet radiation, oils, kerosene, transmission fluid, fat, lubricating oils, grease, etc.
Polymer type:	100% Acrylic polymer latex.
Dilution rate:	STAR CONCRETE ARMOUR is supplied ready to use for most applications. For special applications, it shall be diluted with clean potable water. The amount of water added will vary according to the porosity, age, and profile of the structure.
Application Methods:	Low pressure sprayer, roller, or brush.

Coverage Rates: Recommended coverage rate is approx. 200 sq. ft per gallon, which may vary depending upon dilution rate and porosity of the surface.

Application temperature: The surface and air temperature shall be minimum 50 ° F.

Drying Time: Approx. 30 minutes. Will vary according to ambient temperature and drying conditions. The rain shall not be imminent within 8 hrs. after application.

Package and availability: 5-gal pails, 55-gal. drums, 275 gallon reusable container. This product is available at all STAR locations nationwide.

August 11, 2003



STAR CONCRETE ARMOUR

**Specialty Penetrant and Sealer for
Concrete, masonry, brick and wood substrates.**

GENERAL DESCRIPTION

STAR CONCRETE ARMOUR protects concrete, masonry, brick and wood against the damages from water, de-icing salts and chemicals. STAR CONCRETE ARMOUR quickly penetrates the substrates and forms a rubber network in the interstices that stops or greatly reduces the penetration of the damaging elements.

OUTSTANDING FEATURES

- Inhibits chloride de-icing chemicals, salt and damage from chemicals to concrete.
- Maintains flexural and tensile strength of the concrete.
- Very easy to apply. Very fluid, water-like consistency.
- Water- based, safe to handle and easy to store.
- Non-flammable.

RECOMMENDED USES

All types of concrete, brick, masonry and exterior wood surfaces.

- Concrete driveways, sidewalks.
- Basement foundation walls and floors.
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PROPERTIES & SPECIFICATIONS

Chemical Properties

Polymer type	100% Acrylic
Resistant to	Rating
Water/salt	Excellent
Chloride de-icing chemicals	Excellent
Petroleum (Hydraulic) oils	Excellent
Kerosene	Excellent
Transmission Fluid	Excellent
Fat, grease, lubricating oils	Excellent
Resistance to many hydrocarbons, and other petrochemicals.	
DURABILITY:	Estimated 2-3 years.

Physical Properties

Solids, % by weight	19-21
Weight/gallon	8.5-8.6
Viscosity, cps.	60-70
Color-	Clear or light tint
Dry film	Transparent

APPLICATION NOTES

a. Concrete Preparation:

Concrete must be clean, free of dust, grease, grime, mold, mildew and debris. Additionally, the surface must have a profile and a certain degree of porosity for STAR CONCRETE ARMOUR to penetrate swiftly and effectively.

Smooth surfaces (including trowel finish) – Etch with muriatic acid, wash thoroughly, let dry prior to the application of STAR CONCRETE ARMOUR.

Oil, Grease, etc. Remove by degreasing and washing with a detergent.

Mold, Mildew- Remove with a bleach wash or any other suitable method.

Brick, Masonry and wood:

Must be clean, free of dust, grease, grime, mold, mildew and debris. Additionally, the surface must have a profile and a certain degree of porosity for STAR CONCRETE ARMOUR to penetrate swiftly and effectively.

- b. Dilution rate:** STAR CONCRETE ARMOUR is supplied ready to use. For special applications it may be diluted with clean potable water. The amount of water added will vary according to the porosity, age and profile.

Always ***add water into STAR ARMOUR***, not vise-versa.

- c. Application Methods:** Low pressure Spray, roller or brush.

- d. Application temperature:** The surface and air temperature shall be minimum 50 ° F.

- e. Coverage Rates:** Will vary according to dilution, approx. 200 Square ft./ gallon.

- f. Drying Time:** **30 minutes.** Will vary according to ambient conditions.

PRECAUTIONS

Keep from freezing
Observe all safety precautions
Consult Material Safety Data Sheet for details

PACKAGING

5- gal. plastic pails
55 gal. drums
275 gal. plastic totes.

KEEP OUT OF REACH OF CHILDREN

SHIPPING POINT

STAR PLANTS

Issued-9.30.03

Combustion Products

CO, CO2, Residual Monomer vapor.

Extinguishing Media

Foam, Dry Chemical, CO2

Unusual Fire and Explosion Hazards: Containers may rupture due to steam pressure build up when exposed to intense heat. Product may splatter if the temperature exceeds the boiling point of water.**Special Fire Fighting Procedures:** Water may be used to cool exposed containers to prevent pressure build up and possible rupture. Wear self-contained breathing equipment and protective clothing. Water may be ineffective to control fires. If water is used, fog nozzles are preferred.Explosive Power

N/AP

Burning Rate

N/AP

SECTION V- HEALTH HAZARD DATA**Threshold Limit Value** - N/A**Routes Of Entry**

- Skin, eyes, inhalation, ingestion.

Effects Of Overexposure

- Acute: NO Chronic: NO

ACUTE**Eyes** - May cause eye irritation.**Skin** - May cause irritation, material is slightly alkaline.**Inhalation** - May cause nausea and headache.**Ingestion** - May cause nausea, cramps, vomiting, diarrhea or acute effects.**CHRONIC**

No Chronic Toxicity has been established.

Medical conditions prone to aggravation by exposure: None Known.**Carcinogenic:**

IARC- NO

NTP- NO

OSHA- NO

ACGIH- NO

Emergency and First Aid Procedures**Eyes-** Immediately flush with plenty of water for 15 minutes, call a physician, if condition persists.**Skin-** Wash thoroughly with plenty of water and soap. Remove and wash contaminated clothing. Consult a physician if irritation persists.**Inhalation-** move to fresh air, Restore breathing if required. Treat symptomatically. Consult a physician.**Ingestion-** Induce vomiting only if the patient is conscious. Consult a physician or Poison Control Center immediately treat symptomatically. Show Material Safety Data Sheet (M.S.D.S.) or label.**SECTION VI- REACTIVITY DATA****Stability**

Stable

Conditions to Avoid

Keep from freezing.

Incompatibility

(Materials to Avoid)

None reasonably

foreseeable.

Hazardous Decomposition Products - May produce fumes when heated to decomposition, as in welding or fire. Fumes may contain CO, CO2, Hydrocarbons and other products of combustion.**Hazardous Polymerization** - Will not occur.

SECTION VII- SPILL OR LEAK PROCEDURES

SARA Title III

302 - No

304 CERLA - No

313 - No.

Steps to be Taken in Case Material is Released or Spilled

Limit spread of leak or spill. Ventilate the area.
Avoid falls as the floors may become slippery when the product is spilled.
Wear approved respiratory protection. Wear suitable protective clothing, gloves and eye / face protection. Soak up with an inert absorbent material like sand or earth and pick up waste material. Put in a sealed approved container.
Keep material out of sewers, drains and bodies of water.

The product is not considered a hazardous waste under current federal RCRA requirements.

Reportable Quantity - N/A

TPQ (Lb.) - N/A

Regulations - N/A

Hazardous Waste - N/A

SECTION VIII- SAFE HANDLING AND PROTECTION INFORMATION

Ventilation: Use local exhaust ventilation to control mists or vapors generated when using this product. Ventilation must be adequate to keep exposure below regulated limits as noted in section II.

Respiratory Protection: Appropriate respiratory protection should be selected by a qualified person if exposure is expected to be excessive.

Protective Gloves: Rubber Gloves, chemically resistant.

Eye Protection: Wear safety glasses, goggles or face shield.

Other Protective Equipment: Wear suitable protective clothing. Remove and wash contaminated clothing before re-use. A source of clean water shall be available for washing eyes and skin.

Hygienic Practices: Wash hands before eating , smoking or using washrooms. Smoke only in designated areas.

SECTION IX- SPECIAL PRECAUTIONS

1. Keep out of reach of children.
2. For professional and industrial use only.
3. Do not handle until manufacturer's safety precautions have been read and understood.
4. Use only with adequate ventilation.
5. Do not take internally.
6. Avoid contact with eyes and skin. Liquid penetrates leather and shoes causing delayed burns.
7. Wash thoroughly after using. Practice safe hygiene principles.
8. Additional Technical Data Sheets and/or M.S.D.S.'s are available upon request.
9. Store between 50-100 °F. Keep the containers tightly closed after each use.

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