

TECHNICAL DATA SHEET

Armour-Coat

DESCRIPTION

Armour-Coat is a uniquely versatile **3:1** epoxy coating system that balances working and cure time. **Armour-Coat** is a clear two component thermosetting, low odor, 100% solids epoxy designed as a coating system for various conditions and substrates.

FEATURES & BENEFITS

- ◆ Up to 30+ Minute Working Time
- ◆ Hard-Cure - Screened or Sanded Next Day
- ◆ Lower Temperature Cure
- ◆ Primer, Binder, and Grout Coat
- ◆ 3 Hardeners - Standard, Fast Setting, & Long Working Time (LWT)
- ◆ 2 Resins - Standard & Cove
- ◆ Universal Colorants - 6 gal. Resin Pails for in the field disbursement
- ◆ **MicrobeBLOK** Antimicrobial
- ◆ Can be applied to concrete with moisture vapor emission levels up to 6lbs/1,000sqft/24hrs, or 82% internal RH.
- ◆ Meets USDA & FDA Standards
- ◆ OSHA and ADA Compliant
- ◆ Complies with VOC Regulations by the EPA for AIM Coatings

COLORS

See "Color Guide"

TYPICAL USES

- ◆ Laboratories
- ◆ Garages
- ◆ Pharmaceutical Plants
- ◆ Clean Rooms
- ◆ Manufacturing
- ◆ Hospitals
- ◆ Laundries
- ◆ Kennels
- ◆ Schools
- ◆ Commercial/Retail

PACKAGING

- ◆ 6 gallon white pail - Resin
- ◆ 5 gallon black pail - Hardener
- ◆ 1 gallon metal pail - Resin
- ◆ 1 gallon black pail - Hardener
- ◆ 50 gallon drum

STORAGE

Materials should be stored indoors between 60°F (16°C) and 90°F (32°C).

SHELF LIFE

One (1) year from date of manufacture.

LIMITATIONS

This product is best suited for application in temperatures between 45°F and 90°F. Epoxy is light-sensitive to ambering over time, and requires a UV stable topcoat. Some light colors may require multiple coats for adequate hiding power. Certain colors appear white when scratched. Slight batch-to-batch color variations may occur. When ordering to match a previous color, inquire if the same batch number or quality control number is still available.

OPTIONAL

ArmourThickener (aerosol thickener)

ArmourColor Universal Colorants (on-site pigmenting)

ArmourMetallic (iridescent colorant)

MicrobeBLOK (anti-microbial)

Armour-Coat Accelerator (on-site accelerator)

PRODUCTS GUIDE

1. **Armour-Coat S Resin** is a well-rounded and versatile **3:1** epoxy to be used as a primer, body, self-level, or grout/top coat. When used as a self-level system ranging from 30-100 mils, combine with **ArmourFill SL Filler**.
2. **Armour-Coat Cove Resin** is a thickened and versatile **3:1** epoxy to be used as a vertical primer and binder when mixed with silica quartz aggregates. Can also be used as a grout coat over epoxy troweled mortars and to repair non-moving control joints & cracks.
3. **Armour-Coat S-Hardener** is a versatile epoxy hardener that balances longer working time with an 8 hour cure (70°F) when combined with **Armour-Coat Resins**.
4. **Armour-Coat F-Hardener** is an accelerated hardener when combined with either **Armour-Coat** resins. It is designed for quicker turn-around and recoat with 4 hour cure time (70°F).
5. **Armour-Coat LWT-Hardener** is a long working time hardener when combined with **Armour-Coat** resin. It is designed specifically for **Armourflo** systems requiring extended "open" time.

COVERAGE RATE

A gallon of **Armour-Coat** will cover in the following manner, with a ***standard spread rate**: 6-20 mils or 80-267 s.f. per gallon.

*Application of primer, body, and topcoats are variable in thickness depending upon condition of substrate and type of system.

PRELIMINARY FLOOR INSPECTIONS

CHECK THE CONCRETE: Concrete must be structurally sound and free of curing membrane, paint or other sealer. If you suspect that the concrete has been previously sealed, call **Armourflo** technical support for further instructions.

CHECK FOR MOISTURE: Concrete must be dry before application of **Armourflo** floor coating materials. Concrete moisture testing must occur. Calcium chloride testing or in-situ relative humidity testing is recommended. Test methods can be purchased at www.astm.org, see ASTM F1869-11 or F2170-11, respectively or follow manufacturer's instructions. Readings must be below 6lbs/1,000s.f./24hrs (ASTM F1869-11) or 82% internal relative humidity (F2170-11).

***Note:** Although testing is critical, it is not a guarantee against future problems. This is especially true if there is no vapor barrier or the vapor barrier is not functioning properly and/or you suspect you may have concrete contamination from oils, chemical spills or excessive salts.

CHECK THE TEMPERATURE AND HUMIDITY:

Floor temperature and materials should be between 55°F and 85°F. Humidity must be less than 95%. DO NOT coat unless floor temperature is more than five degrees over the dew point.

SURFACE PREPARATION

This product requires preparation in order to perform as expected. Substrate must be mechanically profiled (ASTM 4259-83), clean, sound, and dry.

JOINT GUIDELINES

Depending on preference, joints may or may not be filled. If the joints are filled, non-moving joints, i.e. contraction or control joints can be treated by using **Armour-Coat** with **ArmourThickener**, or by using **ArmourUrea HF**, a hard-and-fast urea filler for **Fast-Track** applications.

Note: Coating applied over filled joints may crack if there is concrete movement.

MIXING INSTRUCTIONS

Application Equipment:

- ◆ Personal Protective Equipment (PPE) & clothing per SDS (Safety Data Sheet)
- ◆ Jiffy® Mixer Blade (ES Model)
- ◆ Clean Mixing Container
- ◆ Low Speed /High Torque Power Drill
- ◆ Shed-Resistant Roller Cover- 3/8" Nap
- ◆ Application Squeegee

Mix ratio for **Armour-Coat** is **3 parts Resin to 1 part Hardener** by volume. **8-16 oz.** of **ArmourColor Universal Colorant** is recommended **per gallon** of material. (See product label.) When field pigmenting, it should be added and mixed in homogenously to the resin prior to adding the hardener. When combining, be sure to add the hardener into the clean mixing container first. Then add the resin (clear or pigmented) scraping out the container. Always pour into the **center** of the mixing container. Mix the components thoroughly for **1-2 minutes** with a Jiffler ES style mix blade. Mix only enough material at one time that can be applied without exceeding the pot life.

CLEANING GUIDELINES & MAINTENANCE

Allow floor coating to cure at least 3 days before cleaning by mechanical means (e.g., sweeper, scrubber, disc machine).

CARE

Proper maintenance will increase the service life and help maintain the appearance of your new **Armourflo** floor coating system. This product is considered to be a low maintenance coating system, however, certain textures and service environments require specific procedures. SEE "CLEANING GUIDELINES" for more information.

CAUTION

Avoid scratching or gouging the surface. All floor coatings will scratch if heavy or sharp objects are dragged across the surface.

Do not drop heavy or pointed items on the floor as this may cause chipping or concrete pop-outs in the case of a weak substrate cap.

Rubber tires can permanently stain the floor coating from plasticizer migration. In warehouse & industrial settings, the use of non-marking tires is highly recommended to prevent discoloration. Rubber burns from quick stops and starts can heat the coating to its softening temperature, causing permanent marking.

REPAIRS

Repair gouges or scratches or chip outs as soon as possible to prevent moisture or chemical contamination.

Warranties: Seller warrants that its goods, as described on the face hereof, are free from any defects in material or workmanship. Seller makes no other warranty, express or implied, and all implied warranties of merchantability and fitness for a particular purpose are hereby disclaimed. Seller shall not be liable for prospective profits or special indirect or consequential damages. Seller's sole liability and buyer's exclusive remedy for breach of any warranty as expressly limited, at seller's option, to replacement at the original F.O.B. point or refund of purchase price. Seller shall not be responsible for any claim resulting from failure to utilize product in the manner in which it was intended and in accordance with instruction provided for use of product. Any claim for breach of warranty shall be deemed waived unless buyer shall give seller written notice of such claim within sixty (60) days after delivery and shall allow seller reasonable opportunity to investigate claim and inspect product.

DISPOSAL

Dispose in accordance with federal, state and local regulations.

TECHNICAL SUPPORT

For any application questions, please call **Armourflo** technical support at **502.208.4067**.

SDS

PLEASE SEE SAFETY DATA SHEET (SDS) FOR SAFETY AND PRECAUTIONS. USE PRODUCT AS DIRECTED. **KEEP OUT OF THE REACH OF CHILDREN.**

PHYSICAL CHARACTERISTICS	
Percentage solids by weight	100%
Mix Ratio (by volume)	3 parts Resin & 1 part Hardener
Viscosity at 70°F	500 cps
Pot Life at 70°F	30 mins (LWT-Hardener), 20 mins (S-Hardener), 10 mins (F-Hardener)
Cure Time, Tack-Free at 70°F	Armour-Coat LWT-Hardener: 18 hrs foot traffic Armour-Coat S-Hardener: 8-10 hrs foot traffic Armour-Coat F-Hardener: 4-5 hrs foot traffic, 12-18 hrs for normal operation
Working Time at 70°F	45 mins (LWT-Hardener), 25 mins (S-Hardener), 15 mins (F-Hardener)
Recoat Window	Maximum of 72 hrs
Coverage Rate	10 mils, 160 sq ft/US gallon. Can be applied to 6 mils, 267 sq ft/US gallon
Volatile Organic Compound	(VOC) nil

PHYSICAL PROPERTY	TEST METHOD	RESULT
Hardness (Shore D)	ASTM D-2240	70-80 D
Compressive Strength	ASTM D-695	13,100 psi
Tensile Strength	ASTM D-638	5,780 psi
Tensile Elongation	ASTM D-638	7.50%
Adhesion to Concrete	ASTM D-7234	>400 psi, substrate fails
Impact Resistance	ASTM D-2794	>160 in/lb
Water Absorption	ASTM D-570	<0.1%
Flame Spread/NFPA 101 (3 mils over cement board)	ASTM E-684	Class 1
Abrasion Resistance CS17 Wheel 1000 GM Load 1000 Cycles	ASTM D-4060	30 mg loss
Coefficient of Friction (James Friction Tester) Wet Dry	ASTM D-2047	0.7 (smooth) 0.8 (smooth)
Heat Resistance Limitation Thermal Cycling (5 min interval) (10 min interval) Continuous Heat	Hot Oil (200°F) to Ice Water (25°F) Hot Oil (200°F) to Ice Water (25°F) 1 hr 160°F Hot Oil submersion	20 cycles – no effect 20 cycles – no effect No effects
Other Tests: Mortar Mix		
Compressive Strength	ASTM C-579	15,000 psi
Tensile Strength	ASTM C-307	2,400 psi
Flexural Strength	ASTM C-580	4,000 psi
Flexural Modulus of Elasticity	ASTM C-580	1.0 × 10 ⁶
Thermal Coefficient of Linear Expansion	ASTM C-531	1.1 × 10 ⁻⁵ in./in.°C
Water Absorption	ASTM C-413	<0.1%