



ARDEX WA™

High-Performance, 100% Solids Epoxy Grout and Adhesive

So easy to apply and clean, you won't believe it's an epoxy!

Grout joints up to 1/2" (12 mm) wide

Use for setting all types of tile

Use where maximum chemical resistance and/or
hygiene and cleanliness are required

Use for applications in food processing, industrial,
institutional and commercial facilities

Ideal for swimming pools, hot tubs and other wet areas, can be
submerged after only 7 days

Very easy to clean with only water

Use for interior and exterior floors and walls

Waterproof and frost resistant

Solvent free, low VOC's

Available in 35 colors



systemONE™
warranty

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ARDEX WA™

High-Performance, 100% Solids Epoxy Grout and Adhesive

Description and Usage

ARDEX WA™ High-performance, 100% Solids Epoxy Grout and Adhesive is a solvent-free, two-component epoxy grout and adhesive. ARDEX WA is suited particularly for tile installations in industrial areas, swimming pools, hot tubs, showers, bathrooms, dairies, meat packing facilities, breweries, hospitals and any installation requiring high standards of hygiene and chemical resistance. Tile installed with ARDEX WA can be grouted in 12 hours. For details on required cure times after grouting, see Cure Times section.

Substrate Preparation (For use as a setting adhesive)

ARDEX WA adheres to all dry, common, interior or exterior building substrates that are structurally sound, solid and free from any contaminant that can act as a bond breaker. Refer to ANSI A 108 .01 AN-2 "General Requirements for Subsurfaces" and the Tile Council of North America's "Handbook for Ceramic Tile Installation" for detailed information on surface preparation and guidelines for substrate construction. Wallboards must be dry, sound and solidly anchored to structural components in the wall. The plane of wall surfaces must be plumb and true. Floor surfaces must have minimal variation in the plane or slope as outlined by the Tile Council of North America.

Should pre-leveling or subfloor repair be required, choose from the products below, as appropriate. Observe the instructions and dry times in the respective ARDEX technical data sheets.

Interior or Exterior: ARDEX AM 100™ Pre-Tile Ramping and Smoothing Mortar, ARDEX A 38 MIX™ Rapid Set, Premixed Screed or ARDEX A 38™ Rapid Set Screed.

Interior only: ARDEX Liquid BackerBoard® Self-Leveling Underlayment for Interior Wood and Concrete Subfloors, ARDEX TL 1000™ Self-Leveling Underlayment, ARDEX TL 1400™ Self-Leveling Underlayment, ARDEX TL 2000™ Fiber Reinforced, Self-Leveling Underlayment or ARDEX SKM™ Skimcoat Patch and Finishing Underlayment. Observe the instructions and dry times in the ARDEX technical data sheets.

Joint Preparation (For use as a grout)

The existing tile must be set firmly. The tile joints must be clean and free of all setting materials, dust, moisture and foreign matter. Clean the tile surface to remove contaminants that may discolor the epoxy.

Expansion joints must be provided over existing moving joints and cracks and where substrate materials change composition or direction per ANSI A108 AN-3.7.

Recommended Tools

Appropriate notched trowel, quality epoxy grout float, ARDEX T-2 Ring Mixing Paddle, low-speed drill, ARDEX sponge (or similar) and a white Scotch-Brite® pad or similar.

Mixing and Application

Each tub of ARDEX WA contains the properly proportioned amounts of the resin, "Part A", and the hardener, "Part B." Extra room is provided in the larger "A" container to accommodate the "B." Smaller batches can be measured carefully by using 3 parts by weight of "A" to 1 part by weight of "B."

As with all epoxies, full mixing of all material is critical to product performance. Add the "B" to the "A," using a spatula or similar scraping tool to ensure all hardener is removed from the hardener container. Mix with a low-speed drill and an ARDEX T-2 Ring Mixing Paddle.

It is recommended that ARDEX WA be spread out immediately after mixing, as self-heating in the container will reduce the working time.

The working time of ARDEX WA is approximately 1 hour at 70°F (21°C). Mix only as much as can be applied within this time. Note that, as is the case with all reactive materials, elevated temperatures will drastically reduce the pot life and working time of the epoxy.

For use as a setting adhesive: Installation should proceed in accordance with ANSI A 108.6. After mixing, apply the epoxy to the substrate with the flat side of a trowel to obtain a solid mechanical bond. Next comb the epoxy on the surface with the notched side of a trowel of sufficient depth to ensure that the tile or stone is covered uniformly over the entire surface. The type and size of the tile or stone will dictate the size of the notched trowel to be used to achieve proper transfer of the epoxy and proper coverage. Follow the recommendations of the Tile Council of North America for proper transfer of ARDEX WA from the substrate to the tile or stone.

Apply to an area no greater than that which can be covered with tile while the epoxy remains plastic (approx. 1 hour, depending on jobsite conditions). Do not set tile into epoxy that has started to set. The position of the tile may be adjusted for up to approximately 1 hour after installation.

Tiles can be grouted after 12 hours using ARDEX WA (see below).

For use as a grout: Installation should proceed in accordance with ANSI A108.6. Using a high-quality epoxy grout float, work the epoxy into the joints until they are filled completely.

As the work proceeds, remove all excess epoxy from the face of the tile using the epoxy grout float, working at a 45° angle to the tile to avoid removing the epoxy from the joints.

Initial cleaning (15-20 minutes after installation) - Wet the surface (wall/floor) with a little water using a pump sprayer, and then use a white Scotch Brite pad (without additional water) to re-emulsify the surface and smooth the joints. The dissolved residues are then removed with an ARDEX sponge. Any haze that may be noticed after the epoxy has begun to cure can be removed as above, but only within the first several hours after installation.



IMPORTANT: Dissolved residue must not dry on the surface. The washing water must be changed often.

Final Cleaning - We recommend a final cleaning after the grout has set, especially in areas exposed to direct sunlight and areas that may come in contact with high VOCs, using a high alkaline cleaner (pH 12 - 14).

Cure Times (After Grouting)

Tile installed and grouted with ARDEX WA can be opened to traffic after sufficient curing in accordance with the following schedule (70°F):

- 12 hours:** Light foot traffic
- 2 days:** Full traffic loads
- 7 days:** ARDEX WA can be submerged and is resistant to aqueous salt solutions, chlorine water, swimming pool detergents, standard commercial and domestic cleaning agents, alkalis and a wide range of dilute mineral acids.

Notes

FOR PROFESSIONAL USE ONLY.

When setting paper-faced glass mosaic or porcelain mosaic tiles, apply sufficient mortar such that when the mosaic is pressed into place, the mortar rises up through the joints. Any subsequent grouting that is necessary must also be done with ARDEX WA.

For cases requiring waterproofing, please refer to the ARDEX 8+9™ Rapid Waterproofing and Crack Isolation Compound technical brochure and the ARDEX 8+9 “5 Step Application Guide.”

At 70°F (21°C), the working time of ARDEX WA is approximately 1 hour, and the pot life is approximately 40 minutes. Jobsite conditions and temperature may affect working time and pot life.

ARDEX WA is intended for installation at material and surface temperatures between 50° and 85°F (10° to 29°C). Do not install below 50°F (10°C) surface and air temperatures. For warm weather installation instructions, please contact the ARDEX Technical Service Department.

Some types of tiles may be prone to scratching and surface discoloration when using ARDEX WA as a grout. As always, ARDEX recommends the installation of test areas to confirm the suitability of the product for the intended use.

Never mix with cement or additives. Observe the basic rules of tile work.

Do not reuse container. Dispose of packaging and residue in accordance with federal, state and local waste disposal regulations. Do not flush material down drains.

Tools should be cleaned with water before the epoxy has begun to set. It is not possible to clean them once the epoxy has cured fully.

For setting natural stone, please contact the ARDEX Technical Service Department.

Precautions

Carefully read and follow all precautions and warnings on the product label. For complete safety information, please refer to the Safety Data Sheet (SDS) available at www.ardexamericas.com.

Colors Available

To review 35 available colors, refer to the ARDEX Grout Color Chart, available at your local ARDEX Distributor.

Color Variance

Actual epoxy color may vary when dry, depending on installation conditions, substrate, type of tile installed and other factors.

As with all epoxies, exposure to certain strong solvent finish products, propane heater exhausts and UV light (sunlight) can cause yellowing, especially in lighter shades. Yellowing is an aesthetic effect that does not affect the performance of the epoxy and is not unique to ARDEX WA.

While ultraviolet light exposure is most prevalent in exterior applications, interior applications can also be affected when exposed to sunlight through windows.

Strong solvents of concern include, but are not necessarily limited to, the following materials, especially those with high VOCs: urethane-based wood stains, wood finishes and oil-based paints.

Note that the solvent and propane heater exhaust exposures can affect epoxy even from a distance, as emissions can be transported through the HVAC system. Also note that all the above exposures can affect epoxy even if they are introduced after the epoxy has had sufficient time to cure. For applications where such exposure may occur, please contact the ARDEX Technical Service Department prior to installation of ARDEX WA.

Chemical Resistance

Long-term resistance. No effects noted after 7-day immersion.

Aluminum sulfate (26.5%, saturated)
Ammonia (concentrated)
Animal fats
Brine
Calcium chloride (saturated)
Calcium hydroxide (saturated)
Carbon disulfide
Caustic soda (saturated)
Chromic Acid (5%)
Citric acid (saturated)
Diesel
Effluent (wastewater, non-industrial)
Ethylene glycol
Formalin solution (3%)
Formic acid (2.5%)
Glycerin
Household detergent
Hydrochloric acid (<36%)
Hydrofluoric acid (1%)
Hydrogen peroxide (25%)
Hypochlorite solution (act. Cl 165 g/L)
Lactic acid (10%)
Methyl alcohol (<5NR%)
Moor water
Nitric acid (<1NR%; not concentrated)
Oleic acid
Olive oil
Oxalic acid (10% in water)
Peanut oil
Petrol
Phosphoric acid (75%)
Photographic developing fluid
Sea water
Sodium bisulfite (23%, saturated)
Sodium chromate (34%, saturated)
Sodium hydroxide (saturated)
Sodium hyposulfite (17%, saturated)
Tannic acid (10% ig)
Tartaric acid (saturated)
Toluene
Treacle
Turpentine
Vegetable fats
Xylene

Long term resistance. No effects other than discoloration noted after 7 day immersion.

Potassium permanganate ($\leq 10\%$)
Sulfuric acid (80%)
Ferrum (III) chloride (47.9%, saturated)

Short-term resistance. No effects noted after 1-day immersion; effects noted after 3-day immersion.

Acetic acid (5%)
Ethyl alcohol (concentrated)
Formic acid (10%)
Lactic acid (20%)
Nitric acid (40%; not concentrated)

Not resistant. Effects noted after 1-day immersion.

Acetic acid (>10%)	Acetone
Butanone (MEK)	Chloroform
Ethyl acetate	Hydrofluoric acid (>5%)
Lactic acid (>20%)	Methylene chloride
Nitric acid (concentrated)	Sulfuric acid (96%)

Technical Data According To ARDEX

Quality Standards

All data based on a mixing ratio of 3 parts by weight of "A" to 1 part by weight of "B" at 70°F (21°C). Physical properties are typical values and not specifications.

Mixing Ratio: Mix all of "B" into "A;" smaller batches can be measured carefully by using 3 parts by weight of "A" to 1 part by weight of "B."

Coverage (When used as a setting adhesive): 1/4" x 1/4" x 1/4" sq. notch trowel.
For tiles larger than 4 sq. in. (25 cm²) 19.5 sq. ft. (1.8 m²) per combined "Part A" Resin and "Part B" Hardener (8.8 lbs. / 4 kg) total

3/16" (D) x 5/32" (W) V-notch trowel.
For tiles 4 sq. in. (25 cm²) or less. 32 sq. ft. (3 m²) per combined "Part A" Resin and "Part B" Hardener (8.8 lbs. / 4 kg) total

Coverage (When used as a grout): See coverage table below.

Pot Life: Approx. 40 minutes

Working Time: Approx. 1 hour

Open Time: Approx. 1 hour

Time to Grout: 12 hours

Open to Traffic: Light foot traffic: 12 hours
Full traffic loads: 2 days

Limited chemical resistance and submerged applications: 7 days; see Cure Time (After Grouting) section for details

VOC: 2.67 g/L per ASTM D2369

Packaging: "Part A" Resin (6.6 lbs./3 kg)
"Part B" Hardener (2.2 lbs./1 kg)

Storage: Store in a cool, dry area. Do not leave package exposed to sun.

Shelf Life: 1 year, if unopened.

Warranty: ARDEX, L.P. Standard Limited Warranty applies. Also eligible for the ARDEX Tile and Stone Installation Systems SystemOne™ Warranty.

ISO 13007 Classification	Test Characteristic (28-Day Cure)	Classification Requirement
RG (reaction resin grout)	Abrasion resistance	Less than or equal to 0.015 cu. in. (250 mm ³)
	Flexural strength	Greater than 4,350 psi (30 MPa/305 kg/cm ²)
	Compressive strength	Greater than 6,525 psi (45 MPa/457 kg/cm ²)
	Shrinkage	Less than 0.06 in./3.28 ft. (1.5 mm/m)
	Water absorption	Less than 0.0002 lb. (0.1 g)
	Shear adhesion strength	≥ 290 psi (2 MPa/20 kg/cm ²)
R2 (reaction resin adhesive, improved)	Shear adhesion strength after water immersion	≥ 290 psi (2 MPa/20 kg/cm ²)
	Open time: tensile adhesion strength	≥ 725 psi (5 MPa/51 kg/cm ²)
	Shear adhesion strength after thermal shock	≥ 290 psi (2 MPa/20 kg/cm ²)
R2T (reaction resin adhesive, improved characteristics, thixotropic, high sag resistance)	Additionally, with low sag	< 0.5 mm

Evaluation per ANSI A118.3

Property (Test Number)	Value	
	Evaluation	Requirement
Water Cleanability (E 5.1)	Pass	80 minutes
Initial Setting Time (E 5.2)	Pass	>2 hours
Service Strength Setting Time (E 5.2)	Pass	<7 days
Shrinkage 7-day (E 5.3)	0.1	<0.25%
Sag (E 5.4)	Pass	No Evident Change
Bond Strength to Quarry Tile (E 5.5)	Pass*	>1000 psi
Compressive Strength 7-day (E 5.6)	9050 psi	>3500 psi
Tensile Strength 7-day (E 5.7)	2610 psi	>1000 psi
Thermal Shock (E 5.8)	1569 psi	>500 psi

*Tile failed during test TCNA-557-13

ARDEX WA coverage in sq. ft. (when used as a grout)

Coverage based on a 8.8 lb. (4 kg) tub "Part A" plus "Part B". Actual coverage may vary based on jobsite conditions, tile textures and installation methods.

Tile Size (inches)			Grout Joint Width (inches)							
Width	Length	Thickness	1/16	1/8	3/16	1/4	5/16	3/8	7/16	1/2
1	1	1/4	35.2	18.2	12.5	9.7	8.1	7	6.2	5.7
2	2	1/4	69.3	35.2	23.8	18.2	14.8	12.5	10.9	9.7
2	2	3/8	46.2	23.5	15.9	12.1	9.9	8.4	7.3	6.5
4 1/4	4 1/4	5/16	116.7	58.8	39.4	29.8	24	20.2	17.4	15.4
4	8	1/2	91.4	46	30.7	23.2	18.6	15.6	13.5	11.9
6	6	1/2	102.9	51.7	34.6	26.1	21	17.6	15.2	13.3
8	8	3/8	182.6	91.7	61.2	46.2	37.1	31	26.7	23.5
12	12	3/8	273.6	137.2	91.4	68.9	55.2	46.2	39.7	34.8
12	24	3/8	366.1	184.1	123.5	93.2	75	62.9	54.2	47.7
13	13	3/8	296.3	148.5	99	74.6	59.8	50	42.9	37.7
16	16	3/8	364.6	182.6	121.7	91.7	73.4	61.4	52.6	46.2
18	18	3/8	410	205.4	136.8	103	82.5	68.9	59.1	51.9
24	24	3/8	546.5	273.6	182.2	137.2	109.7	91.7	78.6	68.9

ARDEX WA coverage in m² (when used as a grout)

Coverage based on a 8.8 lb. (4 kg) tub "Part A" plus "Part B". Actual coverage may vary based on jobsite conditions, tile textures and installation methods.

Tile Size (mm)			Grout Joint Size (mm)							
Width	Length	Thickness	1.6	3.2	4.8	6.4	8	9.5	11.1	12.7
25	25	6	3.3	1.7	1.2	0.9	0.8	0.7	0.6	0.5
51	51	6	6.4	3.3	2.2	1.7	1.4	1.2	1	0.9
51	51	10	4.3	2.2	1.5	1.1	0.9	0.8	0.7	0.6
108	108	8	10.8	5.5	3.7	2.8	2.2	1.9	1.6	1.4
102	203	13	8.5	4.3	2.9	2.2	1.7	1.5	1.3	1.1
152	152	13	9.6	4.8	3.2	2.4	1.9	1.6	1.4	1.2
203	203	10	17	8.5	5.7	4.3	3.4	2.9	2.5	2.2
305	305	10	25.4	12.7	8.5	6.4	5.1	4.3	3.7	3.2
305	610	10	34	17.1	11.5	8.7	7	5.8	5	4.4
330	330	10	27.5	13.8	9.2	6.9	5.6	4.6	4	3.5
406	406	10	33.9	17	11.3	8.5	6.8	5.7	4.9	4.3
457	457	10	38.1	19.1	12.7	9.6	7.7	6.4	5.5	4.8
610	610	10	50.8	25.4	16.9	12.7	10.2	8.5	7.3	6.4

Notes: Calculated coverage indicated is approximate, based on "nominal" tile size and is provided for purposes of estimation only. Actual coverage will vary depending on jobsite conditions, actual tile size and installed grout joint size. Use of sufficient thin-set reduces grout requirement. Add 10% for waste, spillage and clean-up with Ceramic Tile and 10%-15% when grouting unglazed quarry tile. Calculations are based on the lowest water ratio.

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Supercedes all previous versions. Check www.ardexamericas.com for updates.

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For easy-to-use ARDEX Product Calculators and Product Information On the Go, download the ARDEX App at the iTunes Store or Google Play.



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