



ARDEX A 38™

Rapid Set Screed

**Fast-setting, easy-to-use,
high-performance screed**

Note: The data herein applies to ARDEX A 38 50 lb. (22.7 kg) bag, not pre-mixed with sand. For ARDEX A 38 MIX 40 lb. (18 kg) bag that is premixed with sand, see the appropriate technical data sheet.

Rapid hardening – walkable in 3 hours

Install tile and natural stone after only 4 hours

Exceeds the 28-day strength properties of ordinary screeds after just 1 day

Suitable for bonded, unbonded or floating screeds

Interior and exterior applications

Ideal for swimming pools and other wet areas

Install vinyl and wood floor coverings after just 48 hours

Can be used with in-floor heating systems



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ARDEX A 38™ Rapid Set Screed

Fast-setting, easy-to-use, high-performance screed

Description and Usage

ARDEX A 38™ Rapid Set Screed is a precision-engineered, polymer-modified, cement screed that sets, hardens and dries rapidly. Use for interior or exterior applications including swimming pools and other wet areas.

ARDEX A 38 can be walked on 3 hours after application and can receive tile or stone after just 4 hours, even when used as an unbonded or floating screed. After only 1 day, the compressive strength and tensile strength of ARDEX A 38 exceed those that regular cement screeds achieve after 28 days.

ARDEX A 38 can be used for bonded, unbonded or floating screeds. The screed is mixed and applied in the same way as ordinary cement / sand screeds and can be used with in-floor heating systems.

Substrate Preparation

Substrate and ambient temperatures must be a minimum of 50°F (10°C) for the installation of ARDEX products. For more detailed information on substrate preparation, please refer to the ARDEX Substrate Preparation Brochure at www.ardexamericas.com.

Concrete Preparation - Bonded Screed

All concrete substrates must be solid, structurally sound, thoroughly clean and free of oil, wax, grease, asphalt, gypsum and latex compounds, curing compounds, sealers and any contaminant that might act as a bond breaker. If necessary, mechanically clean the floor down to sound, solid concrete by shot blasting or similar. Over-watered, frozen or otherwise weak concrete surfaces must also be cleaned down to sound, solid concrete by mechanical methods. Sanding equipment is not an effective method to remove curing and sealing compounds. Acid etching, adhesive removers, solvents and sweeping compounds are not acceptable means for cleaning the substrate.

The concrete must be profiled to a minimum ICRI concrete surface profile of 3 (CSP #3). Any additional preparation required to achieve this must likewise be mechanical.

Note on Asbestos-Containing Materials

Please note that when removing existing flooring, any asbestos-containing materials should be handled and disposed of in accordance with applicable federal, state and local regulations.

Preparation for Unbonded and Floating Screeds

Ensure that the substrate surface is reasonably flat prior to proceeding with the installation. Prior to placing a slip sheet or polyethylene cleavage membrane, apply expansion strips around the perimeter of the installation space and any columns within to provide a gap for screed movement.

Recommended Tools

Forced action mixer (such as pan, trough or paddle mixer); for bonded screeds, a mixing container, drill, mixing paddle and stiff bristle brush for mixing and applying the bonding slurry.

Joints and Cracks

Under no circumstances should ARDEX A 38 be installed over any moving joints or moving cracks. All existing expansion joints, isolation joints and construction joints, as well as all moving cracks, must be honored up through the underlayment and flooring.

Bay divisions and expansion joints should be incorporated as with regular cement/sand screeds per TCNA standards.

Dormant control joints and dormant cracks greater than a hairline (1/32" / 0.79 mm) must be pre-filled with a two-part, low viscosity, 100% solids, rigid crack and joint filler, such as ARDEX ARDIFIX™. Once the dormant cracks and dormant saw cuts have been filled properly, broadcast sand to refusal, and allow these areas to cure thoroughly (45 minutes for ARDEX ARDIFIX). Remove all excess sand prior to proceeding with the ARDEX A 38 installation.

Please be advised that while dormant control joints and dormant cracks must be filled prior to installing finish flooring, this filling is not intended to act as a repair method that will eliminate the possibility of joints and cracks telegraphing. ARDEX A 38 is a non-structural material and is, therefore, unable to restrain movement within the substrate. This means that while some dormant joints and dormant cracks may not telegraph up into the finish flooring, cracks will telegraph in any area that exhibits movement, such as an active crack, an expansion or isolation joint, or an area where dissimilar substrates meet. We know of no method to prevent this telegraphing from occurring.

Sand Selection

The sand should be reasonably dry (less than 1 gallon of water per 90 lb. / 40.8 kg of sand) and should not contain lime or other materials that could be detrimental to the workability of the screed mortar during application or to the performance of the set and hardened screed. Do not use other cements or screed additives in the mix. For more information on sand selection, consult the ARDEX Guide for Recommended Sand Screeds at www.ardexamericas.com.

Mixing and Application

Recommended Sand Gradation	
Sand Size	Portion of Mix
.063 - 0.25 mm	20%
0.1 - 0.5 mm	20%
0.5 - 1.2 mm	15%
1 - 2 mm	15%
2 - 3 mm	15%
3 - 6 mm	15%

For one 50 lb. (22.7 kg) bag of ARDEX A 38, use approximately 250 lb. (113.4 kg) of screed sand and approximately 7.5 quarts (7.13 L) of clean water. Place the ARDEX A 38 and sand into the forced action mixer, mix until sand and powder are well blended, and then add the water. **DO NOT OVERWATER!** Additional water will weaken the compound and lower its strength.

Mix to a normal screed mortar consistency. When a sample of mortar is squeezed in the hand the sample should retain its shape and not crumble, the hand being left slightly moist. When a sample is compacted on the base, no film of water should form on the surface.

The selected mixer must be of a pan, trough or other forced action type. Normal 'free-fall' mixers are not suitable for mixing semi-dry screed mortars. Use clean equipment.

The working time of the mixed screed is approximately 60 minutes at 70°F (21°C). Mix an appropriate amount of material so that mixing, placing, compaction and finish troweling can be completed within this working time. The pot life of ARDEX A 38 is approximately 60 minutes at 70°F (21°C).

Bonded Screeds

To install ARDEX A 38 as a bonded screed, an ARDEX A 38 bonding slurry must be applied first. Using equal parts by volume of water, ARDEX E 100™ Screed Improvement and Bonding Slurry Additive, screed sand and ARDEX A 38 powder, prepare and apply the bonding slurry as follows:

1. Pour the water and the ARDEX E 100 into the mixing container first.
2. Add the cement / sand mixture to the mixing container.
3. Using a drill and mixing paddle, mix to a creamy consistency.
4. Scrub the bonding slurry into the prepared concrete using a stiff bristle brush.
5. Immediately apply the ARDEX A 38 lift while the slurry coat is still wet. If the slurry coat is allowed to dry, it must be removed mechanically and reapplied before the ARDEX A 38 lift is applied.

After mixing, apply the ARDEX A 38 to the substrate with the flat side of a steel trowel to obtain a solid mechanical bond before applying the desired thickness.

Bonding Adjacent Sections

Where a new section is placed against a set and hardened screed, it is recommended that the ARDEX A 38 bonding slurry be used to join the adjacent sections.

Unbonded Screeds

Unbonded screeds are not bonded directly to the substrate, but applied to a polyethylene cleavage membrane or slip sheet laid on top of the substrate.

For unbonded screeds, it is good practice to ensure the substrate is reasonably flat prior to applying a proprietary polyethylene cleavage membrane or slip sheet. The membrane or slip sheet should be a nominal thickness of at least 4 mils.

Floating Screeds

For this type of screed, the screed layer is applied on top of insulation to create thermal-insulated flooring. This is mostly used in residential properties and in flooring with underfloor heating systems.

Insulation: Insulation is used to prevent thermal (heat) and acoustic (noise) loss. Approximately 15 – 20% of all household heat loss occurs through the floor. Insulation comes in a wide range of depths, U-values, compressive strengths (for areas of high foot traffic) and waterproofing

capabilities. It is important to ensure that the insulation is laid correctly so that there are no gaps or movement that will affect the performance of the floating screed or floor. For further instructions, follow the insulation manufacturer's guidelines.

Thickness of Application

ARDEX A 38 thickness requirements will depend on the type of application, as shown in the chart below.

Screed Type	Minimum Thickness	Maximum Thickness
Bonded	3/4" (19 mm)	1.5" (40 mm)
Unbonded	1.5" (40 mm)	None
Floating (Residential)	2.5" (63.5 mm)	None
Floating (Commercial)	3" (75 mm)	None

Use as a Pre-Smoothing Compound beneath ARDEX MC™ Moisture Control Systems

If using ARDEX A 38 as a pre-smoothing compound beneath an ARDEX MC Moisture Control System, allow the ARDEX A 38 to cure 24 hours (70°F/21°C) prior to following the instructions for installing the selected ARDEX MC system in the appropriate technical data sheet. Please note that the ARDEX A 38 must be finished to a minimum ICRI Concrete Surface Profile of 3 (CSP #3) to receive an ARDEX MC system. If this profile has not been achieved, it will be necessary to shot blast the ARDEX A 38 after the minimum 24-hour cure.

Installation of Flooring and Waterproofing

ARDEX A 38 is not to be used as a permanent wear surface, even if coated or sealed.

Self-Leveling or Patching over ARDEX A 38 with ARDEX Underlayments

If self-leveling or patching is required over the ARDEX A 38, first allow the ARDEX A 38 to cure 48 hours (70°F / 21°C). For self-leveling applications, prime with ARDEX P 51 diluted 1:1 with water, and allow the ARDEX P 51 to dry a minimum of 3 hours (max. 24 hours). Follow the instructions in the appropriate ARDEX underlayment technical data sheet for installation and cure of the selected ARDEX underlayment.

Flooring/Waterproofing

Allow the ARDEX A 38 to cure 4 hours (70°F / 21°C) prior to installing tile and natural stone or waterproofing with ARDEX 8+9™ Rapid Waterproofing and Crack Isolation Compound. Allow the ARDEX A 38 to cure 48 hours (70°F / 21°C) prior to installing vinyl or wood flooring.

In-Floor Heating

Where ARDEX A 38 has been installed over an in-floor heating system, proceed as follows:

1. Allow the ARDEX A 38 to cure 3 days prior to turning the heating system temperature to 77°F (25°C).
2. Maintain this temperature for 3 days prior to turning the heating system temperature to its maximum operating temperature. ARDEX recommends that this temperature not exceed 85°F (29.4°C).
3. Maintain this temperature for 4 days prior to turning the heating system off and allowing the floor to cool to room temperature.
4. Proceed with the installation of tile or natural stone.

Notes

FOR PROFESSIONAL USE ONLY.

This product is not a vapor barrier, and will allow free passage of moisture. **Follow the directives of the floor covering manufacturer regarding the maximum allowable substrate moisture content and test the substrate prior to installing ARDEX A 38.**

Where substrate moisture exceeds the maximum allowed, see the instruction sections above for using ARDEX A 38 as a pre-smoothing compound beneath ARDEX MC Moisture Control Systems. Alternatively, ARDEX A 38 could be installed in an unbonded application if moisture is excessive.

Always install an adequate number of properly located test areas, including the finish flooring, to determine the suitability of the products for the intended use. As floor coverings vary, always contact and rely upon the floor covering manufacturer for specific directives, such as maximum allowable moisture content, adhesive selection and intended end use of the product.

Never mix with cement or additives other than ARDEX-approved products. Observe the basic rules of concrete work. Do not install below 50°F (10°C) surface and air temperatures. Install quickly if the substrate is warm, and follow warm weather instructions available from 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.

Technical Data According To ARDEX Quality Standards

All data based on a mixing ratio of (1) 50 lb. (22.7 kg) bag ARDEX A 38, 250 lb. screed sand and 7.5 quarts (7.13 L) water at 70°F (21°C). Physical properties are typical values and not specifications.

Mixing Ratio:	Approximately 250 lb. (113.4 kg) of screed sand and approximately 7.5 quarts (7.13 L) of water per 50 lb. (22.7 kg) bag
Coverage:	56 - 57 sq. ft. per bag at 3/4" (5 - 6 sq. m at 18 mm) Coverage will vary depending on the texture of the surface being smoothed.
Compressive Strength (ASTM C109/mod – Air cure only):	6,300 psi (441.0 kg/cm ²) at 28 days
Flexural Strength (ASTM C348):	775 psi (54.25 kg/cm ²) at 28 days
Working time:	60 minutes
Walkable:	3 hours
Install Tile / Waterproofing:	4 hours
VOC:	0
Packaging:	50 lb. (22.7 kg) bag
Storage:	Store in a cool, dry area. Do not leave bags exposed to sun. Protect unused material by removing air from bag and sealing tightly.
Shelf Life:	1 year, if unopened
Warranty:	ARDEX Engineered Cements Standard Limited Warranty applies. Also eligible for the ARDEX SystemOne™ Warranty when used in conjunction with select ARDEX tile and stone setting materials.

Made in the USA.

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Updated 11-20-2015. Supersedes all previous versions.
Check www.ardexamericas.com for most recent version
and for technical updates, which may supersede the
information herein.

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Visit www.youtube.com/ARDEX101 to watch ARDEX Americas product videos.

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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