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# ARDEX RA 56

## Low-Viscosity Rigid Hybrid Polyurethane Crack & Spall Repair

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Cures stronger than concrete

Ultra Low Viscosity - Offers deep penetration into cracks

Rapid cure - Trafficable in less than 20 minutes

Ideal for spall repair when mixed with aggregate

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# ARDEX RA 56

## Low-Viscosity Rigid Hybrid Polyurethane Crack & Spall Repair

### DESCRIPTION

ARDEX RA 56 is an ultra-low viscosity, 2-component hybrid polyurethane adhesive. It is a rapid curing concrete repair material used when minimal down time is crucial. Its low viscosity offers deep penetration into hairline cracks for a structural repair. The addition of dry, bagged aggregate makes a quality spall repair product that is ready for grinding and open to traffic in less than 1 hour.

### INSTRUCTIONS

Always be sure the bonding surfaces are prepared in advance before starting a new cartridge or mixing product. If possible, schedule dispensing to consume an entire cartridge at one time with no interruption of the flow.

### SURFACE PREPARATION

Old concrete must be clean, completely dry with no presence of moisture and profiled or textured. New concrete must be a minimum of 28 days old. Before using ARDEX RA 56, make sure that the surfaces to be bonded are sound and clean so there is no dust, dirt, grease, wax, oil, or any other contaminant present. Smooth surfaces should be mechanically roughened with a wire brush or sand paper before application.

### CARTRIDGE SET-UP

Whilst preparing cartridge, keep in an upright position to prevent material from leaking from cartridge.

1. Shake cartridge vigorously for 10 seconds, then stand cartridge upright for 1 minute.
2. Insert cartridge into caulking gun. Hold cartridge at a slightly upward angle and slowly dispense a small amount of material into a disposable container until both materials flow evenly from the cartridge. (Caution: material may suddenly squirt out). Follow instructions on mixing nozzle tape and install flow control and mixing nozzle onto cartridge and secure by threading in a clockwise direction.
3. Air bubbles must be purged prior to use. Point mixing nozzle straight up and slowly apply pressure to the trigger moving the product up through the mixing nozzle until it reaches the tip. Next, point upward at 45 degrees and dispense one full stroke into a disposable container. The product is now ready to use. Use the product by dispensing with slow, steady strokes. A dry bagged aggregate may be added for larger repairs. Mix up to 3 parts aggregate to 1 part of mixed ARDEX RA 56. The

use of an aggregate may extend curing times.

Cartridge is fully dispensed when plunger reaches halfway.

### BULK KIT SET-UP

ARDEX RA 56 can be mixed with clean, dry, medium-grade sand.

1. For best results have all equipment and materials ready to go. The ratio of sand to product should be approximately 2:1 by volume. Pre-measure the sand needed.
2. When using the ARDEX RA 56 bulk kit, quickly but thoroughly mix only the amount required for the repair (50% of Part A with 50% of Part B) with a small drill mixer at low speed for a maximum of 20 seconds. While one person is still mixing Part A & B, have a second person swiftly add the pre-measured dry sand until a homogenous, lump-free mortar mix is achieved. Rapidly scrape the bottom and sides of the pail to assure good mix.
3. After mixing, product must be placed within 5 minutes at 24°C. Cure time will vary depending on ambient and substrate temperature. Pour and finish trowel immediately (do not over trowel due to fast cure of the product). Only mix the quantity that can be mixed and placed within 5 minutes; maximum of half the kit at a time.

### CRACK REPAIR

#### Preparation

Prepare crack or spall prior to starting a cartridge or mixing bulk product.

Substrate and environment must be completely dry without any presence of moisture.

It is not necessary to open or widen a crack unless you suspect it is very deep and want to insert backer rods to control loss of product deep into the crack.

The crack should be dry and clean from any grease, wax, oil or other contaminants. Use a wire brush to remove any loose concrete or dirt and then blow away or vacuum dust.

#### Application

In horizontal concrete slabs, inject directly into cracks by placing the mixing nozzle tip directly over the crack.

Allow adhesive to penetrate into the crack and top-off as needed. Clean, dry, medium-grade sand can be broadcast on top of the repair to add texture or more closely match that of the existing concrete.

For larger, deeper cracks, insert backer rods or a layer of sand to eliminate excessive loss of adhesive. The layer of product must still be at least 12mm deep on top.

It is important to keep adhesive flowing through the nozzle to prevent material from hardening. If material does harden in the nozzle, simply remove the hardened nozzle from the cartridge and replace with a new nozzle and repeat the cartridge balancing process (see Cartridge Set-up).

The repair will be tack-free in 12 – 20 minutes at 24°C. Excess material may be removed shortly after application by scraping or levelling with a blade. The crack surface may be ground smooth one hour after application.

Allow material to fully cure before subjecting repaired area to any type of traffic (approximately 1 hour).

## **SPALL REPAIR**

### **Preparation**

A dry diamond blade or tuck point blade may be used to prepare the spall and create a clean surface for bonding. A wire brush or twisted wire wheel may be used to remove any loose concrete or dirt.

The edges must be a 90° angle to the surface to avoid a feathered edge, which would leave the edges of concrete unprotected.

Using compressed air or a vacuum, blow out or remove all dust, dirt, debris, oil and any other contaminate from the crack. Minimum spall depth should be 12mm.

### **Application**

ARDEX RA 56 can be mixed with clean, dry, medium-grade sand.

For best results have all equipment and materials ready to go. The ratio of sand to product should be approximately 2:1 by volume. Pre-measure the sand needed.

After mixing, product must be placed within 5 minutes at 24°C, sooner in warmer temperatures. Pour and finish trowel immediately (do not over trowel due to fast cure of product).

- Only mix the quantity that can be mixed and placed within 5 minutes.
- Repairs from a minimum of 12mm to a maximum of 75mm.

### **CURING**

ARDEX RA 56 is ready for grinding and open to traffic in 1 hour.

## **APPLICATION TEMPERATURE**

Substrate and ambient air temperature should be between -18°C and 46°C. When the work environment or substrate falls below 21°C, condition the product to 21°C – 24°C prior to use. Cold product will react (cure) slower.

## **CLEAN UP**

Clean tools and equipment with solvent such as white spirits, mineral turps or aerosol dewatering agent or lubricant. Do not allow epoxy to harden on equipment.

## **COVERAGE**

Coverage varies with depth of fill area.

## **PACKAGING**

ARDEX RA 56 is sold in a 254 mL cartridge and a 7.5 L Bulk Kit.

## **SHELF LIFE**

12 months. If recapped and stored properly, product may be reused.

## **PLEASE PAY ATTENTION TO THE FOLLOWING**

ARDEX RA 56 is a moisture sensitive product (can be exposed to moisture once cured). Substrate must be DRY prior to use. Do not reuse mixing nozzles when working with multiple cartridges. Do not attempt to force adhesive out of a hardened mixing nozzle. Use a new mixing nozzle to avoid rupturing the set or causing improper mixing. If a leak should develop, discontinue use immediately and continue to work with a new cartridge and nozzle. Colour changes during cure from black to light grey. In exterior applications, product may develop a greenish tint after cure due to UV exposure. Aesthetic results may be obtained by painting or coating. Before coating, the cured surface must be roughened and dust wiped away. Coating with a solvent based stain, paint or industrial grade primer is an option for aesthetics. Always run a test area prior to full application of any coating to check for compatibility. If a levelling compound is to be laid over the repaired surface, clean, dry sand must be broadcast into the wet surface of ARDEX RA 56 or mixed into the product before installation into the crack.

Do not thin with solvents, as this will prevent cure.

## **SAFETY PRECAUTION**

This product is considered hazardous. Harmful by inhalation. Irritating to eyes, respiratory system and skin. May cause SENSITISATION by inhalation and skin contact.

Do not breathe fumes. Avoid contact with skin and eyes. Wear suitable gloves. Wear eye and face protection. Use only in well ventilated areas.

Keep container tightly closed. Keep away from food, drink and animal feeding stuffs. In case of contact with eyes, rinse with plenty of water and seek medical attention. In case of accident by inhalation, remove casualty to fresh air and keep at rest.

For further technical or material safety data, consult the latest Technical or Material Safety Data Sheet.

#### FIRST AID

If swallowed, drink plenty of water in small portions, do not induce vomiting and seek medical advice. In case of eye contact, rinse with plenty of clean water for at least 15 minutes and seek medical advice. If skin contact occurs, wipe off and wash skin with running water and soap. In case of inhalation, supply fresh air. In case of any symptoms, see a doctor.

#### DISCLAIMER

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#### TECHNICAL DATA

<b>Colour:</b>	Grey
<b>Viscosity Mixed:</b>	60 centipoise
<b>Gel Time (+24°C):</b>	2 - 3 minutes
<b>Cure Time (+24°C):</b>	60 minutes (reopen to traffic)
<b>Tack-free Time (+24°C):</b>	12 minutes
<b>Compressive Strength 1 hour (neat):</b>	33.8 MPa
<b>Compressive Strength 24 hour (neat):</b>	36.5 MPa
<b>Tensile Strength:</b>	28.7 MPa
<b>Elongation:</b>	5%
<b>Bond Strength:</b>	13.1 MPa
<b>Shore D Hardness:</b>	70
<b>Adhesion to Concrete:</b>	1.9 MPa
<b>Volatile Organic Compounds (VOC):</b>	0 g/L

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