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# ARDEX RA 54

## **Fast Setting Semi-Rigid Polyurea Joint Sealant**

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Fill interior control joints or new construction joints

Heavy duty vehicle traffic - Designed for industrial floor applications

Rapid cure - Trafficable in 90 minutes

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**ARDEX Australia Pty Ltd**

20 Powers Road  
Seven Hills NSW 2147  
Phone: 1300 788 780  
Email: [technicalservices@ardexaustralia.com](mailto:technicalservices@ardexaustralia.com)  
Internet: [www.ardexaustralia.com](http://www.ardexaustralia.com)

**ARDEX New Zealand Ltd**

15 Alfred Street,  
Onehunga, Auckland 1061  
Phone: 0800 227 339  
Email: [info@ardexnz.com](mailto:info@ardexnz.com)  
Internet: [ardex.co.nz](http://ardex.co.nz)

# ARDEX RA 54

## Fast Setting Semi-Rigid Polyurea Joint Sealant

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### DESCRIPTION

ARDEX RA 54 is used to fill interior control joints or new construction saw joints on horizontal concrete surfaces. Designed for industrial floor applications receiving heavy duty vehicle traffic. Can be used in exterior applications, when minimal (10% to 12%) joint movement from thermal cycling will occur. With a very rapid cure time, repaired joints can be opened to traffic in 90 minutes.

### 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.

#### For Heavy Duty Traffic areas

The joint width should be a maximum of 19mm. The joint depth should be a minimum of 3 times the width.

#### For Light Foot Traffic

The joint width should be a maximum of 19mm. The depth should be a minimum of 13mm. ARDEX RA 54 is not intended for joints subject to high movement but will provide 10-12% movement of installed joint width when placing backer rod or a small amount of sand to the bottom of the joint to avoid adhesive bonding to the bottom. This will allow for movement of bonding agent from side to side during joint expansion and contraction.

### SURFACE PREPARATION

Old concrete must be clean, completely dry with no presence of moisture and then profiled or textured. New concrete must be a minimum of 28 days old. Before using ARDEX RA 54, 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

While preparing cartridge for dispensing, keep cartridge in an upright position to prevent material from leaking out of cartridge. Do not tilt cartridge until material is to be applied.

1. Shake cartridge vigorously for 60 seconds, then stand cartridge upright for 5 minutes.
2. Insert cartridge into a heavy-duty caulking gun. Remove plastic cap from the top of the cartridge. **IMPORTANT!** Before attaching nozzle, dispense a

small amount of material into a disposable container until both materials flow evenly from cartridge. Place nozzle onto cartridge and secure by threading in a clockwise direction.

3. Point nozzle straight up and slowly apply pressure to dispenser, moving the product up through the nozzle until it reaches the tip, then at a 45 degree angle, dispense 1 stroke of material into a disposable container. After purging air always point cartridge downward when not dispensing to prevent mixed material in the nozzle from flowing back into the cartridge.

Note: Joints may be overfilled and shaved in 45 minutes (at 23°). Cartridge is fully dispensed when plunger reaches halfway.

### REPAIRING CRACKS OR INSTALLING CONTROL JOINTS IN CONCRETE

1. Substrate and environment must be completely dry without any presence of dampness prior to usage.
2. Freshly poured concrete must be fully cured for a minimum of 28 days to release the moisture.
3. Using a saw or grinder with a dry diamond or concrete abrasive blade, cut along the crack. The edges must be a 90° angle to the surface to avoid a feathered edge, which would leave the edges of concrete unprotected.
4. Blow out and remove all dust, dirt, debris, oil and any other contaminate from the control joint or crack.
5. To avoid bonding to bottom of the joint, a backer rod or kiln-dried sand should now be placed prior to application of adhesive. Bonding to the bottom can result in sealant bond failure due to joint expansion or contraction.
6. Place the mixing nozzle directly over the joint or repair area. Dispense material using full smooth trigger pulls (no short choppy strokes) and allow material to gravity feed into the crack or joint. For joints to be shaved, over-fill the crack or joint so that material is slightly higher than the face of the concrete slab you are repairing.
7. Allow the ARDEX RA 54 to cure for approximately 45 minutes at 23°C, then use a sharp floor scraper to shave excess material from top surface.
8. Follow the instructions TOPCOAT APPLICATION when applying any topcoat.

## TOPCOAT APPLICATION

After the application of ARDEX RA 54, wait 24 hours prior to applying any primer. A premium primer MUST be used prior to the application of any topcoat. Follow the primer manufacturer's instruction for primer cure schedule. A small test area of the primer and topcoat must be conducted and observed for 7 days prior to full application.

## CURING

Can be shaved in 45 minutes (at 23°) and can be opened to full traffic after 90 minutes.

### Estimated Shave Time (based on 12mm bead thickness)

Temp in °C	38-49	27-38	21-27	16-21	10-15
Time	20 min	30 min	45 min	1.5 hrs	2 hrs

## APPLICATION TEMPERATURE

Substrate and ambient air temperature should be between -40°C and 50°C.

## CLEAN UP

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

## COVERAGE

A 627mL cartridge will cover approximately 7½ linear metres with a joint size of 3 x 25mm.

### Coverage Chart

Joint Size in mm	Linear metre per cartridge
3 x 25	7.6
3 x 50	3.9
5 x 25	5.2
5 x 50	2.4
6.5 x 25	3.9
6.5 x 50	2
13 x 25	2
13 x 50	1

## PACKAGING

ARDEX RA 54 is sold in a 627mL cartridge.

## SHELF LIFE

ARDEX RA 54 has a shelf life of 18 months when stored in the original unopened packaging, in a dry place at 23°C and 50% relative humidity.

## PLEASE PAY ATTENTION TO THE FOLLOWING

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. Never transfer a used nozzle to a new cartridge. Instead use a new nozzle with each new cartridge.

In exterior applications, product will initially change colour from grey to grey-green and then return to grey after 90 days.

This product is highly sensitive to moisture during application and cure and cannot be used if any dampness is present. Once cured, ARDEX RA 54 is moisture insensitive.

Not for use in expansion joints.

Before any substrate preparation, installation or finishing methods relating to ARDEX product are undertaken, please be aware of any potential risks and use appropriate PPE (personal protective equipment). This may involve contacting substrate manufacturers for Safety Data Sheets.

## SAFETY DATA

This product is toxic if inhaled. It may cause skin irritation and serious eye irritation. May cause an allergic skin reaction. Harmful if inhaled. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause respiratory irritation. Suspected of causing cancer. May cause damage to organs through prolonged or repeated exposure. Harmful to aquatic life with long lasting effects. Wear protective gloves, clothing, eye and face protection. Avoid inhaling dust/fumes/gas/mist/vapours/spray. Ensure adequate ventilation during mixing and application. In case of contact with the eyes rinse with running water until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes. Store locked up. Check with your local Council regarding the disposal of contents and packaging. Keep out of the reach of children. Call the Poisons Information Centre on 131 126 (AUS) and 0800 764 766 (NZ) or call a doctor if you feel unwell. Additional information is in the Safety Data Sheet (SDS) at [www.ardexaustralia.com](http://www.ardexaustralia.com).

**ARDEX RA 54 Chemical Resistance Chart**

Chemical Reagents	Recommended for Continuous Service	Limited Recommendation (Occasional Spills)
Acetic Acid (10%)	✓	
Acetone		✓
Bleach		✓
Bleach (10%)	✓	
Citric Acid (5%)	✓	
Crude Oil	✓	
Motor Oil		✓
Petrol		✓
Diesel Fuel	✓	
Hydraulic Fluid (Skydrol)		✓
Hydraulic Oil	✓	
Ethylene Glycol		✓
Fatty Acids	✓	
Water (Room Temp.)	✓	
NaCl (10%)	✓	
Hydrochloric Acid (10%)	✓	
Lactic Acid (5%)	✓	
Methyl Ethyl Ketone		✓
Nitric Acid (1%)	✓	
Phosphoric Acid (10%)	✓	
Sodium Hydroxide (20%)	✓	
Sulfuric Acid (20%)	✓	
Toluene		✓
Urea (50%)	✓	
Vinegar	✓	
Xylene		✓

**TECHNICAL DATA**

<b>Colour:</b>	Grey
<b>Viscosity Mixed:</b>	500 centipoise
<b>Gel Time (+23°C):</b>	3 minutes
<b>Cure Time (+23°C):</b>	90 minutes (reopen to traffic)
<b>Tensile Strength:</b>	8 MPa
<b>Elongation:</b>	82%
<b>Bond Strength:</b>	3 MPa
<b>Shore A Hardness:</b>	75 - 80
<b>Adhesion to Concrete:</b>	2 MPa
<b>Volatile Organic Compounds (VOC):</b>	0 g/L

**GUARANTEE**

ARDEX Australia Pty Ltd ("we" or "us") guarantees this product ("our goods") is free from manufacturing defects and will perform to any applicable specification published by us for 10 years from the date of purchase. Our liability under this guarantee is limited at our option to replacement of the product, repair of any damage to the immediate surface or area of application of the product, or compensation, in each case if we are satisfied loss or damage was due to a breach of this guarantee. This guarantee does not apply if damage or loss is due to failure to follow published instructions or any act or circumstance beyond our control, including shade variations and efflorescence. If you wish to make a claim under this guarantee you must notify us (ARDEX Australia Pty Ltd, 20 Powers Road Seven Hills NSW 2147; Toll Free: 1800 224 070; Email: [technicalservices@ardexaustralia.com](mailto:technicalservices@ardexaustralia.com)) and provide evidence of your purchase of the product within 30 days of any alleged loss or damage occurring. We reserve the right to ask you for satisfactory evidence of any alleged loss or damage. Any claim under this guarantee is at your cost. This guarantee is in addition to any rights or remedies you may have as a "consumer" under the Australian Consumer Law and to that extent you need to be aware that: "Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure".

**DISCLAIMER**

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