

## **Infinity Effects Resin-Bound Decorative Drive System (System 1)**

Vehicle-Grade Resin-Bound System for Concrete

**Type:** Polyurethane/Polyaspartic Hybrid Resin-Bound Aggregate System

**Warranty:**  Yes – Warranted when installed by an Infinity Certified Installer

**Purpose:** Engineered for car-traffic areas such as driveways, parking bays, footpaths, patios, and commercial entrance zones. Provides a durable, UV-resistant, anti-slip, decorative aggregate finish designed for long-term performance on properly prepared concrete surfaces.

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### **Materials You'll Need**

- Pressure washer
  - Clean cloths / rags
  - Vacuum (industrial)
  - Moisture meter
  - pH testing strips
  - Mixing drills & paddle
  - Resin-bound forced-action mixer (Cresta/SoRoTo/Baron type)
  - Infinity Effects Rox Primer
  - Infinity Effects Rox Binder (UV-stable)
  - Decorative kiln-dried aggregates (1–3mm / 2–5mm 04 1-4mm / 2-6mm depending on system)
  - Infinity Effects Anti-Slip Glass Beads™ (optional)
  - Infinity Effects Rox Sealer
  - Masking tape
  - Plastic sheeting
  - Resin trowels, floats, steel floats
  - Infinity Effects Safe Solvent or Thinners
  - Expansion joint foam or joint tape
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### **Additional Equipment (Optional)**

- Mixing tent / canopy (for humid or hot climates)
  - Forced-air heater for cold conditions
  - Primer / Binder accelerator
  - Mechanical surface grinder or diamond floor prep machine
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### **Step-by-Step Application Guide**

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### Step 1. Clean & Wash the Concrete

Pressure wash the entire concrete surface thoroughly:

- Remove dirt, moss, algae, oils, tyre marks, and contaminants.
- Allow concrete to dry completely.
- Inspect for signs of moisture rising.

Concrete must be clean, dry, and structurally sound.

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### Step 2. Inspect & Repair Concrete

Check for:

- Cracks
- Spalled or loose material
- Unlevel depressions
- Expansion joint movement
- Weak, powdery concrete

Repair as required:

- Fill cracks using Repair Mortar
- Patch holes and repairs to flush level
- Grind down high spots
- Ensure uniform surface strength (25+ MPa recommended)

Allow repairs to fully cure before proceeding.

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### Step 3. Check Moisture and pH Levels

Proper readings are essential for long-term adhesion.

Concrete must measure:

- **Moisture:** <6% (critical for resin-bound application)
- **pH Level:** <10

If moisture is high:

- Allow extended drying time
- Improve air movement
- Use a moisture-tolerant primer (optional)

Never install resin-bound systems on damp or green concrete.



**Recommended not to install Resin Bound Below 5 degree Celsius.**

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#### **Step 4. Mechanical Surface Preparation**

Mechanically abrade or grind the surface to open pores and enhance bonding.

- Grind entire surface using a diamond floor grinder if required
- Remove laitance, sealers, or weak surface layers
- Vacuum thoroughly to remove dust

The surface must have a **clean, open, textured profile** for primer penetration.

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#### **Step 5. Tape & Protect Surrounding Areas**

Use masking tape and plastic sheeting to protect:

- Walls
- Edging stones
- Drain covers
- Garage doors
- Landscaping

Define edges cleanly to avoid resin staining.

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#### **Step 6. Apply Infinity Effects ROX primer™**

##### **===== CONCRETE PRIMER APPLICATION SETTINGS =====**

- Coverage: 150–250 g/m<sup>2</sup>
  - Roller or squeegee application
  - Additives: Up to 10% ROX Thinner (if required for penetration)
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Purpose:

- Bonds resin-bound system to concrete
- Reduces risk of delamination
- Stabilizes dust and porous areas
- Controls resin absorption into the concrete

Allow primer to become tacky (not fully dry) before application of resin-bound aggregate.

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### Step 7. Install Infinity Effects Movement Mesh (Essential for Vehicle Traffic)

After the primer becomes tacky, apply **Infinity Effects Self-Adhesive Mesh** or **Infinity Effects Standard Mesh** over the entire prepared surface.

#### Purpose:

- Absorbs micro-movements in the concrete
- Reduces tension transfer to the resin-bound system
- Prevents reflective cracking and surface splitting
- Increases system lifespan under vehicle loading
- Stabilizes weak or repaired concrete areas

#### Installation Notes:

- Apply mesh while the primer is still **tacky** for optimal bonding.
- Overlap mesh strips by **50–80 mm**.
- Avoid wrinkles or air pockets.
- Press mesh firmly into the primed surface.
- For expansion joints, cut mesh cleanly and do **not** bridge active joints.
- For ramps, inclines, or high-stress areas, apply **double mesh** for reinforcement.

Once mesh is installed and fully bonded, you may proceed to aggregate mixing.

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### Step 7. Prepare Resin-Bound Aggregate Mix

Use a forced-action mixer only — **NOT a cement mixer**.

#### Mixing ratio (standard):

- 100 kg decorative dried aggregate
- 6.5–7.5 kg Infinity Effects ROX Binder
- Optional: 0.1–0.3 kg Anti-Slip Glass Beads

#### Mixing procedure:

1. Add all aggregates to mixer.
2. Pour binder evenly over the aggregate.
3. Mix for 90–120 seconds until coated uniformly.
4. Do not overmix — prevents aggregate breakdown.
5. Immediately empty mix (binder begins curing instantly).



Work quickly — resin-bound binder has a limited pot life of around 30-45 minutes.

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### **Step 8. Apply Resin-Bound Aggregate to Surface**

Immediately spread mixed resin-bound material onto the tacky-primed concrete.

Recommended thickness for vehicle traffic:

- **18–24 mm** depending on aggregate size
- Edges should be compacted and crisp
- Use steel trowels or resin floats
- Maintain continuous wet edges

Work methodically in teams:

1. **One person mixing**
2. **One person transporting**
3. **Two people trowelling**

Avoid cold joints — always overlap into wet material.

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### **Step 9. Trowel & Smooth the Surface**

Use a clean steel trowel with Infinity Safe Solvent or compatible light solvent misting.

- Avoid excessive solvent — causes surface defects
- Compact firmly for strength
- Ensure flatness and consistent texture
- Add anti-slip glass beads if applying on sloped driveways by broadcast in the air above surface

Edges must be neat and straight.

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### **Step 10. Allow Proper Curing**

Curing times depend on temperature:

- **Light foot traffic:** 6–8 hours
- **Vehicle traffic:** 24–48 hours
- **Full chemical cure:** 5–7 days

Prevent:



- Water exposure
- Rain
- Debris
- Vehicle movement
- Pets walking across surface

Cover with canopy if rain is possible within 24 hours.

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### **Step 11. Apply Infinity Effects ROX Sealer (Optional but Recommended)**

Applied after resin-bound surface has cured (usually 24 hours).

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#### **TOP SEAL APPLICATION SETTINGS**

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- Roller application
  - Coverage: 150–200 g/m<sup>2</sup>
  - Additives: Up to 10% ROX Thinner (if required for penetration)
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Benefits:

- Enhances UV resistance
- Protects from oil & fuel staining
- Increases slip resistance
- Improves long-term durability

Allow to dry before vehicle use.

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### **Step 12. Final Inspection**

Inspect the cured surface for:

- Even texture
- No pinholes
- No dry patches
- Full compaction
- No lifting or separation at edges
- Proper curing hardness

System is now ready for use.

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### **Important Tips**



- Do not install when rain is forecast.
- Keep resin and aggregates at stable room temperature before mixing.
- Always use kiln-dried aggregates only — moisture ruins the mix.
- Never install on damp or green concrete.
- Resin-bound must be mixed in a forced-action mixer, no exceptions.
- Avoid over-trowelling — causes resin pooling.
- Maintain wet edges to avoid visible seams.

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### Problems & How to Avoid Them

**Problem:** Resin dark patches

**Cause:** Over-trowelling or binder pooling

**Avoid:** Use light solvent mist and minimal pressure.

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**Problem:** Loose stones or weak surface

**Cause:** Insufficient binder or under-mixing

**Avoid:** Follow binder weight ratios exactly.

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**Problem:** White patches / whitening

**Cause:** Moisture contamination

**Avoid:** Ensure concrete moisture <6% before priming.

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**Problem:** Cracking at joints

**Cause:** Movement from existing concrete

**Avoid:** Respect all joints — install expansion joint foam or trims.

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**Problem:** Surface delamination

**Cause:** No primer or improper grinding

**Avoid:** Always prime & mechanically prepare.

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**Problem:** Cracking in surface

**Cause:** Movement from existing concrete

**Avoid:** Use a crack reduction membrane across the surface such as Infinity Effects Self-Adhesive Mesh or Infinity Effects Standard Mesh.

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**DISCLAIMER**

Customers must read and follow all instructions to ensure optimal performance. Information is based on field experience and testing but cannot account for every condition. Infinity Effects is not liable for incorrect installation, misuse, surface contamination, or substrate movement.

Always test substrate compatibility before full application.

Temperature, humidity, and substrate conditions greatly affect curing and performance.

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## INFINITY ROX BINDER FLOOR SYSTEM'S

