

KEY #520.1-ESD/CONDUCTIVE EPOXY



Product Information Sheet

DESCRIPTION

KEY #520.1-ESD/Conductive is a 100% solids bis-A epoxy floor coating designed to provide electrostatic control properties to various surfaces including concrete or other non-conductive substrates. **KEY #520.1-ESD/Conductive** has good chemical resistance and is ideal for any areas requiring electrostatic dissipative or conductive surfaces, provides excellent bond to concrete as well as impact and wear resistance. Application over a non-conductive primer or basecoat will transmit ESD readings of 1×10^6 to 1×10^9 ohms through **KEY #520-ESD/Conductive**. Application over a conductive primer or basecoat will transmit conductive readings of 2.5×10^4 to 1×10^6 ohms through **KEY #520-ESD/Conductive**.

KEY ADVANTAGES

- Carbon nanotube technology: Consistent electrical resistance readings regardless of film thickness
- ESD/Conductive properties for life of the coating
- Meets USGBC LEED criteria for low VOC, low odor
- Gloss finish, easy to clean
- Good chemical resistance and abrasion resistance
- May be sealed with Key #467-ESD Urethane for enhanced performance properties
- Tests in the static dissipative range of 1×10^6 to 1×10^9 ohms conforming with ANSI/ESD S20.20 standard when applied over non-conductive primer or basecoat
- Tests in the conductive range of 2.5×10^4 to 1×10^6 ohms conforming with ANSI/ESD S20.20 standard when applied over conductive primer or basecoat
- Body Voltage Generation (BVG) below 100 volts conforming with ANSI/ESD S20.20 standard
- Dissipates a 5000 volt charge to zero in less than 0.1 seconds @ 72° and 12% RH

KEY CONSIDERATIONS

- Substrate temperature must be a minimum of 55-60°F and maximum of 85°F
- Relative Humidity should be 30-85% and substrate temperature must be 5°F above the measured dew point
- Refer to **Key Resin Technical Bulletin #1** regarding substrate requirements and surface preparation
- Apply at minimum 25-35 mils, do not apply <25 mils to avoid creating a variable orange peel finish

COMPOSITION

100% solids bis-A epoxy resin and fillers.

COVERAGE

KEY #520.1-ESD/Conductive will yield approximately 29-32 mils when spread at 50-55 ft² per gallon.

APPLICATION

SURFACE PREPARATION

Surface Preparation is the most critical portion of any successful resinous flooring system application. All substrates must be properly prepared as outlined in **Key Resin Technical Bulletin #1**. Work must be performed by trained or experienced contractors or maintenance personnel. The **Key Resin Technical Service Department** is available to answer any questions.

INSTALLATION

Installation of **KEY #520.1-ESD/Conductive** will vary with application. Typically spread in a single coat at 50-55 ft² per gallon with a squeegee and lightly back-roll with a medium nap roller, followed immediately with cross rolling with a looped roller. **IMPORTANT:** 25 mils is considered the minimum thickness to avoid a prominent variable orange peel texture. Care should be taken to minimize the entrapment of air caused by over rolling. For complete instructions, consult **Key Resin Technical Service**.

CLEAN UP

Clean skin with soap and water. Tools and equipment should be cleaned with xylene or lacquer thinner. Consult Safety Data Sheet (SDS) for safety and health precautions.

COLOR SELECTION

KEY #520.1-ESD/Conductive is available in **Key Resin Standard Colors** only. The colors will vary slightly from **Key Resin Standard Colors** due to the conductive filler content.

CURE/DRY TIME

Working Life	25-35 min. @ 75°F
Recoat	10-12 hrs @ 75°F
Light Foot Traffic	24 hrs @ 75°F
Full Cure & Max. Resistance	7 Days @ 75°F

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TECHNICAL DATA

Mixing Ratio	2 Parts A:1 Part B by Volume
Solids Content	99% Solids by Volume
Volatile Organic Content (VOC) (EPA Method 24)	<50 g/L, compliant to low VOC Rule 1113 in all 50 states
Shelf Life	12 months
Gloss (60°)	80-90
Unit Sizes Available	3 gallons, 15 gallons

AVAILABILITY

Key Resin materials are available throughout the United States and a number of other countries. Contact the **Key Resin Representative** in your area for details.

TECHNICAL SERVICE

Key Resin Company provides services and consultations on material selection, specification, troubleshooting, and other information on the proper repair and protection of concrete surfaces. **Key Resin Sales/Technical Representatives** are available to assist you. Telephone 888.943.4532 or visit www.keyresin.com.

MAINTENANCE

After completing the application of **KEY #520.1-ESD/Conductive**, the installer should provide the owner with maintenance instructions. **KEY #520.1-ESD/Conductive** is easily cleaned with neutral soaps or detergents. Refer to **Key Resin Technical Bulletin #3** and **#3A** for additional recommendations.

PHYSICAL PROPERTIES

Abrasion Resistance	ASTM D4060 CS-17 Wheel, 1000 cycles	75-100 mgs
Adhesion to Concrete	ASTM D7294	300-400+ psi (Concrete Failure, varies by concrete strength)
Flammability	ASTM D635	Self Extinguishing
Hardness, Shore D	ASTM D2240	75-80
Chemical Resistance		Consult Key Resin Technical Service
Conductivity Resistance	ANSI/ESD-S7.1	Conductive: 2.5×10^4 to 1×10^6 ohms ESD: 1×10^6 to 1×10^9 ohms
Static Charge Decay	MIL-B-81705B	Dissipates a 5,000 volt charge to zero in <0.1 seconds

WARRANTY

Key Resin Company ("Key") warrants for a period of one (1) year that its products will be free of manufacturing defects and will be in conformity with published specifications when handled, stored, mixed, and applied in accordance with recommendations of Key. If any product fails to meet this warranty, the liability of Key will be limited to replacement of any non-conforming material if notice of such non-conformity is given to Key within (1) one year of delivery of materials. Key may in its discretion refund the price received by Key in lieu of replacing the material. No customer, distributor, or representative of Key is authorized to change or modify the published specifications of this warranty in any way. No one is authorized to make oral warranties on behalf of Key. In order to obtain replacement or refund the customer must provide written notice containing full details of the non-conformity. Key reserves the right to inspect the non-conforming material prior to replacement. EXCEPT FOR THE EXPRESSED WARRANTY STATED ABOVE, THERE ARE NO OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING WITHOUT LIMITATION, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR PURPOSE. KEY'S OBLIGATION SHALL NOT EXTEND BEYOND THE OBLIGATIONS EXPRESSLY UNDERTAKEN ABOVE AND KEY SHALL HAVE NO LIABILITY OR RESPONSIBILITY TO THE PURCHASER OR ANY THIRD PARTY FOR ANY LOSS, COST, EXPENSE, DAMAGE OR LIABILITY, WHETHER DIRECT OR INDIRECT, OR FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES.

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