

Description

It is solvent free low viscosity epoxy resin system. It serves to strengthen and seal cracks and cavities in concrete, masonry or rock by injection under pressure. It has good flow properties and penetrates the very fine cracks and fissures, has excellent adhesion to concrete (include damp concrete), masonry, metal, wood etc... On the other hand, the cured resin exhibits several outstanding properties, such as strong adhesion to a wide range of substrate, even in high humidity environment or damp concrete. Outstanding resistance against water and chemicals, negligible shrinkage etc..

Recommended Application

The material is ideal for repairing cracked concrete with epoxy injection method, consolidate the friable rock and stone, act as new and old concrete bonding, and it also able to be used as mortar flooring or self-leveling flooring.

Base

Resin and polyamine hardener

APPEARANCE

Color

Transparent

Finish

Gloss

APPLICATION DATA

| | |
|---------------------------------------|--|
| Flash Point | >100°C |
| Solid Content | 100% |
| Mixing Ratio, Resin : Hardener | 2 : 1 by weight The recommended mixing ratio should be followed strictly. Improper mixing ratio may result in failure of the performance of the products. |
| Viscosity (at 25°C) | Part A: 400 -- 600cps Part B: 200 -- 300 cps |
| Specific gravity | Part A: 1.14 Part B: 1.03 |
| Lowest Application Temp | 5°C |
| Curing Time | Touch dry : For mortar, 25 mins (25°C - 100g) For injection, Thin film setting time 100 mins x 25°C for 1 - 2mm thickness Hard dry : For mortar, 70 minutes (25°C - 100g) For injection, Thin film setting time 8 hours x 25°C for 1 - 2 mm thickness |

Loyal Enterprise Company

Flats D, E, &H, 16/F Block B, Marvel Ind. Bldg., 17-25 Kwai Fung Crescent, Kwai Chung,

H.K. Tel: (852)24297261,(852)24297269 Fax: (852)24804473

Dongguan Haoli Fine Chemicals Co., Ltd.

Datang Zone Daling Shan Town, DongGuan City, GuanDong Province

Tel: (86) 769-83351634, (86) 769-83351742 Fax: (86) 769-83351614

| | |
|-----------------------------------|---|
| | Full cured : 7 days Curing time may be varied by temperature change. The lower the temperature exists, the longer the curing time needs. |
| Overcoating Time | 12 hours Overcoating time may be varied by temperature change. The lower the temperature exists, the longer the curing time needs. |
| Recommended Film Thickness | Depends on application |

Coverage Rate

For Injection

Depends on cracked volume

For Mortar flooring

| Coat layer | Thickness of layer | Kg/ M ² (Approx.) | M ² / Kg (Approx.) |
|--|--------------------|------------------------------|-------------------------------|
| Primer coat | 0.5 mm | 0.5 kg / M ² | 2 M ² / kg |
| Body coat (with sand, Include 1.25 kg Resin compound + 8.75 kg Quartz sand) | 5 mm | 10 kg / M ² | 0.1 M ² / kg |

For Self-leveling flooring

| Coat layer | Thickness of layer | Kg/ M ² (Approx.) | M ² / Kg (Approx.) |
|--|--------------------|------------------------------|-------------------------------|
| Primer coat | 0.5 mm | 0.5 kg / M ² | 2 M ² / kg |
| Body coat (with sand, Include 0.5 kg Resin compound + 1.5 kg Quartz sand) | 1 mm | 2 kg / M ² | 0.5 M ² / kg |

Packaging

| Unit size | Part A | Part B |
|-------------|--------|--------|
| 3 kg / set | 2 kg | 1 kg |
| 6 kg / set | 4 kg | 2 kg |
| 30 kg / set | 20kg | 10kg |

Thinner/ Cleaning

MIBK

Not recommended for thinning, because it will cause the solvent entrapping, and it effect the chemical resistance and its hardness. It is for cleaning purpose only.

Storage and handling

Approx. 12 months in their original, unopened packages, and store under cover, out of direct sunlight and protect from temperatures at 5-30°C.

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Application Method

For injection used:

1. Drill the holes on the surface of the crack area with equal distance. Please note that the distance should be equal to the wall thickness.
2. Cracks, surfaces adjacent to cracks, or other areas of application shall be clean and sound. Remove dirt, dust, disintegrated material, grease, oil, efflorescence or other foreign matter detrimental to bond of epoxy by sand blasting or other approved mechanical means. Acids and corrosives shall not be permitted for cleaning.
3. Apply the surface seal material Epoxy 209 onto the crack surface and set up the port on the hole by seal material. Allow enough time for the seal material to cure in order to gain adequate strength to hold the ports. Please note that each port is recommended to be set up at equally spacing.
4. Mixed the injected material EGR 21 evenly and use the electric or air powered pump to pump into the crack. Low pressure injection machine is recommended because it may create an additional crack for the high pressure injection machine.
5. On vertical cracks, injection should start at the lowest port and continue upward on the cracked area. For deep penetration it is a good policy to stay on one port and cap the higher ports as clear resin flows through, continue capping ports until the resin flow abates, then move to the last port that resin came through.
6. Delaminate the port and the injection procedure is done.



Figure 21(1)

For mortar flooring/ self-leveling flooring:

1. Surface treatment : The surface of substrate should be clean ,dry, sound, free from grease and oil.
2. Primering : Mix the resin and hardener according the mixing ratio with hand mixer for 3 - 5 minutes at low speed, then apply by spatula on the cleaned surface.
3. Body coat : Mix the resin and hardener according the mixing ratio with hand mixer for 3 - 5 minutes at low speed, pour the quartz sand to the mixed resin and hardener. Then mix by electric stirrer or mortar mixer. Apply them on the primering surface by spatula.
4. Apply Epicoat-50 by roller on the surface if necessary.

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EGR 21

Epoxy Injection Resin (Standard)



Technical Data

| | |
|----------------------|------------------------------|
| Compressive Strength | Approx. 60 N/mm ² |
| Tensile Strength | Approx. 38 N/mm ² |

Health and Safety

The product above contains polyamine hardener and is harmful to eyes and skin. Use protective clothing and rubber gloves.

<http://www.loyalenterprise.com>

The technical information and application advice given in this publication is based on the present state of our best scientific and practical knowledge. As the information herein is of a general nature, no assumption can be made as to the suitability of a product for a particular use or application and no warranty as to its accuracy, reliability or completeness either expressed or implied is given other than those required by commonwealth or State legislation the owner, his representative or the contractor is responsible for checking the suitability of products for their intended use.

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