

# FLEXGEL 221

## INTRODUCTION

FLEXGEL 221 is a non-urethane, re-enterable encapsulant based on advanced polymer technology. FLEXGEL 221 forms a moisture proof encapsulation for buried cable splices that is easily re-enterable. Complete removal of encapsulant from a splice is not necessary upon re-entry, since new material will completely bond to existing cured encapsulant.

FLEXGEL 221 offers superior adhesive properties when bonding to conductor insulation.

Its ability to absorb cable filling compounds helps provide a strong moisture impermeable barrier.

FLEXGEL 221 can also be used in cushion applications where a gel-like feel is required. Its superior filling abilities make this the perfect product for padding applications.

## FEATURES

- Easily re-enterable
- Excellent adhesive properties
- Does NOT contain isocyanates
- Bonds to itself and other encapsulants
- Excellent electrical properties

## MATERIAL PROPERTIES (25°C)

Property	Value	Test Method
Colour : mixed	Transparent amber	Visual
Corrosion of copper	Non corrosive	MS 17000, section 1139
Hydrolytic stability weight change	-7.3%	Telcordia 354
Peak exotherm	28°C	ASTM D2471
Water absorption	0.36 %	ASTM D570
Dry heat aging weight loss	0.32 %	Telcordia 354
Gel time 100g	50 minutes	Telcordia 354
Volumetric expansion	0 %	Telcordia 354
Viscosity – mixed	1000 cps	ASTM D2393
Water sensitivity	0 %	Telcordia 354
Compatibility: self	Good Bond, No Separation	Telcordia 354
urethane encapsulant	Good Bond, No Separation	
Shelf life	Gel Time Change < 15 min	Telcordia 354
Odour	Essentially odourless	Telcordia 354
Phase stability	Pass	Telcordia 354
Filling compound compatibility	+10.64% @ 25°C	Telcordia 354
Insulation resistance @ 500 volts DC	$1.2 \times 10^{12}$ ohms	ASTM D257
Volume resistivity @ 500 volts DC	$0.6 \times 10^{13}$ ohm.cm	ASTM D257
Dielectric strength	268 volts/mil	ASTM D 149-97

## STRESS CRACK TESTING

Plastic	Results	Test Method
Polyethylene	No stress cracking activity PASS	ASTM D1693
Polycarbonate	No stress cracking activity PASS	In-house

**NOTE:** The performance data identified above are typical for the material, but are not intended for use as specifications due to variations in testing conditions.

## **STORAGE**

Shelf life is 24 months from date of manufacture. Recommended storage temperature is below 30 °C.

## **PACKAGING**

FLEXGEL 221 is provided in kits containing Part A and Part B.

Packaging: Components A and B supplied in 200 litre non-returnable drums at 192 kg nett each.

## **MIXING INSTRUCTIONS:**

The Part A and Part B should be mixed at room temperature (20°C) using either a wide stirrer to avoid air entrapment or metering – mixing equipment.

## **MIX RATIO:**

40 Part A : 100 Part B by weight

39 A :100 B by volume

Increasing the A component will reduce the reactivity and increase the hardness.

## **DISPOSAL:**

Replace the lids tightly and then dispose according to local regulations.

## **MIXING INSTRUCTIONS for pre-weighed kits**

1. Put on disposable plastic gloves. Wear suitable protective clothing and eye protection.
2. Remove lid from **Part B Component** and stir well with a flat stirring spatula making sure any settled out material is stirred back into solution.
3. Pour entire contents of the **Part A Component** into the pre-stirred resin and mix well for two to four minutes, scraping the sides and bottom of the container to ensure thorough mixing.
4. Pour the mixed system into item to be encapsulated.

## **HEALTH and SAFETY:**

Component A is classified as hazardous (but is not a dangerous good) according to criteria in the Hazardous Substances (Minimum Degrees of Hazard) Regulations 2001.

Caution: Component A causes eye irritation - wear eye protection. Wash hands thoroughly after handling.

Component B is classified as non-hazardous according to criteria in the Hazardous Substances (Minimum Degrees of Hazard) Regulations 2001.

Read Safety Data Sheets before use.

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