

LOCTITE® PC 9416™

Known as LOCTITE® Fixmaster® Floor Fill™
November 2015

PRODUCT DESCRIPTION

LOCTITE® PC 9416™ provides the following product characteristics:

Technology	Epoxy
Chemical Type	Epoxy
Appearance (uncured)	Grey Liquid
Components	Three components - requires mixing
Mix Ratio, by volume - Resin : Hardener to Filler	4.6 : 1 to 9.8
Mix Ratio, by weight - Resin : Hardener to Filler	16 : 3.2 to 80.8
Cure	Room temperature cure
Application	Flooring & grout
Specific Benefit	<ul style="list-style-type: none"> • 100 % solids • Non-shrinking • Chemical resistant • Outperforms concrete • Self-leveling • Easy to mix and use and has application versatility

LOCTITE® PC 9416™ is a non-shrinking 100% solids epoxy based system for repairing holes in floors, spalled areas, ramps, stairs, cracks in floors and for use in grouting applications. Once cured, it is stronger than concrete and bonds to almost any clean substrate and provides chemical resistance under typical dry service temperatures of -30 to 110 °C (-20 to 225F).

TYPICAL PROPERTIES OF UNCURED MATERIAL

Weight per volume	kg/L	1.09 to 1.18
	(lbs/gal)	(9.1 to 9.8)

Density @ 23 °C, g/cm³	2.38
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Hardener:

Density @ 23 °C, g/cm³	2.396
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Mixed:

Density @ 23 °C, g/cm³	2.38
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Coverage	8.7 liters per 18 kg kit (532 in³ per 40 lb kit)
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Flash Point - See SDS

TYPICAL CURING PERFORMANCE

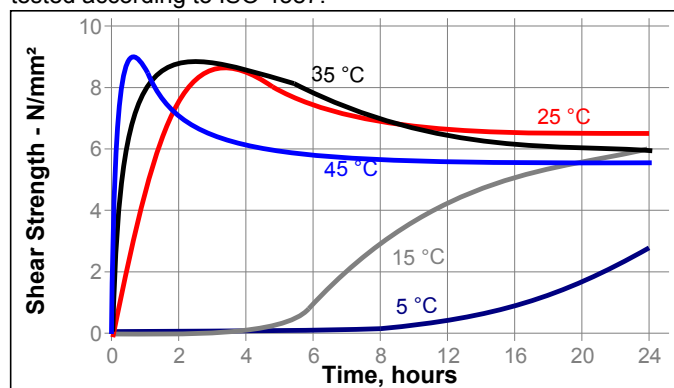
Curing Properties

Gel Time @ 21 °C, minutes

40 to 50

Cure Speed vs. Temperature

The graph below shows the shear strength developed with time on grit blasted steel lap shears at different temperatures and tested according to ISO 4587.



TYPICAL PROPERTIES OF CURED MATERIAL

Physical Properties:

Volume Shrinkage, ISO 1675 %	0.66
Coefficient of Thermal Conductivity ASTM F 433, W/(m·K)	0.21
Glass Transition Temperature ISO 11359-2, °C	63
Coefficient of Thermal Expansion, ISO 11359-2, K⁻¹:	
Below Tg	15×10⁻⁶
Above Tg	40×10⁻⁶

Compressive Strength, ISO 604	N/mm²	90
	(psi)	(13,100)
Compressive Modulus, ISO 604	N/mm²	11,300
	(psi)	(1,633,000)

Flexural strength, ASTM D790	N/mm²	23
	(psi)	(3,370)
Flexural modulus, ASTM D790	N/mm²	6,430
	(psi)	(932,240)

Electrical Properties:

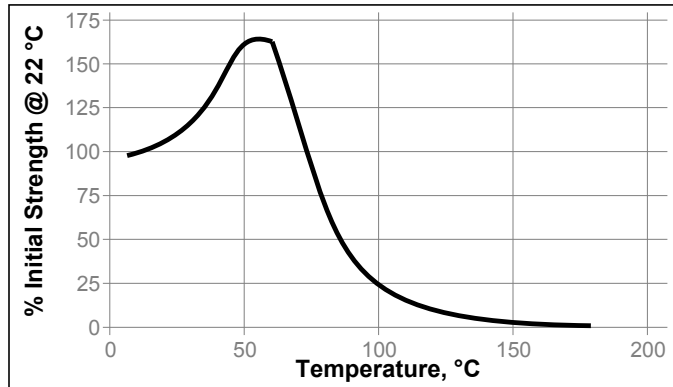
Volume Resistivity, IEC 60093, ohm-cm	780×10¹²
Surface Resistivity, IEC 60093, ohms	4.4×10¹⁵

TYPICAL ENVIRONMENTAL RESISTANCE

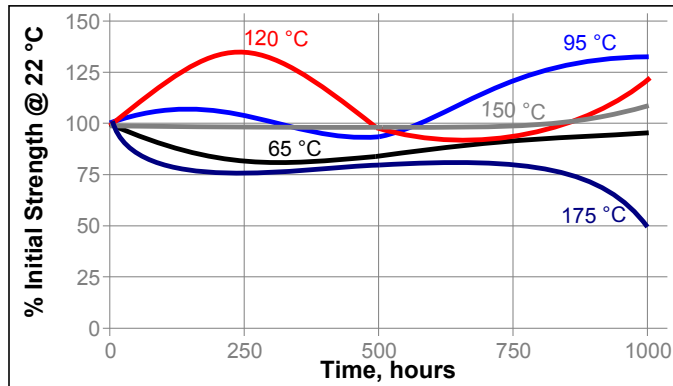
Lap Shear Strength, ISO 4587:
Grit Blasted Mild Steel (GBMS)

Hot Strength

Tested at temperature

**Heat Aging**

Aged at temperature indicated and tested @ 22 °C

**GENERAL INFORMATION**

This product is not recommended for use in pure oxygen and/or oxygen rich systems and should not be selected as a sealant for chlorine or other strong oxidizing materials.

For safe handling information on this product, consult the Safety Data Sheet (SDS).

Directions for use:**Surface Preparation:**

1. Clean all dust, grease, latent concrete, or other foreign matter from the surface to be coated.

Mixing:

1. Remove all materials from the outer pail.
2. Pour resin contents into empty pail.
3. Add hardener contents to resin. Mix with electric drill and mixing paddle.
4. Add silica filler to the resin and hardener mixture and continue mixing until thoroughly mixed. Be sure to mix along sides and across bottom of pail.
5. At 25 °C, the working time is 40 to 60 minutes and functional cure time is 24 hours.

NOTE: To obtain a pourable consistency do not use all of the filler. However, when leaving out part of the filler the working time and cure time will be shorter

Technical Tips for Working With Epoxies

Working time and cure depends on temperature and mass:

- The higher the temperature, the faster the cure.
- The larger the mass of material, the faster the cure.

To speed the cure of epoxies at low temperatures:

- Store epoxy at room temperature.
- Pre-heat repair surface until warm to the touch.

To slow the cure of epoxies at high temperatures:

- Mix epoxy in small masses to prevent rapid curing.
- Cool resin/hardener component(s).

Not for product specifications

The technical data contained herein are intended as reference only. Please contact your local quality department for assistance and recommendations on specifications for this product.

Storage

Store product in the unopened container in a dry location. Material removed from containers may be contaminated during use. Do not return liquid to original container. Storage information may be indicated on the product container labeling.

Optimal Storage: 8 °C to 21 °C. Storage below 8 °C or greater than 28 °C can adversely affect product properties.

Henkel cannot assume responsibility for product which has been contaminated or stored under conditions other than those recommended. If additional information is required, please contact your local Technical Service Center or Customer Service Representative.

Conversions

$$(^{\circ}\text{C} \times 1.8) + 32 = ^{\circ}\text{F}$$

$$\text{kV/mm} \times 25.4 = \text{V/mil}$$

$$\text{mm} / 25.4 = \text{inches}$$

$$\mu\text{m} / 25.4 = \text{mil}$$

$$\text{N} \times 0.225 = \text{lb}$$

$$\text{N/mm} \times 5.71 = \text{lb/in}$$

$$\text{N/mm}^2 \times 145 = \text{psi}$$

$$\text{MPa} \times 145 = \text{psi}$$

$$\text{N}\cdot\text{m} \times 8.851 = \text{lb}\cdot\text{in}$$

$$\text{N}\cdot\text{m} \times 0.738 = \text{lb}\cdot\text{ft}$$

$$\text{N}\cdot\text{mm} \times 0.142 = \text{oz}\cdot\text{in}$$

$$\text{mPa}\cdot\text{s} = \text{cP}$$

Note:

The information provided in this Technical Data Sheet (TDS) including the recommendations for use and application of the product are based on our knowledge and experience of the product as at the date of this TDS. The product can have a variety of different applications as well as differing application and working conditions in your environment that are beyond our control. Henkel is, therefore, not liable for the suitability of our product for the production processes and conditions in respect of which you use them, as well as the intended applications and results. We strongly recommend that you carry out your own prior trials to confirm such suitability of our product.

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Reference 0.2