

LOCTITE[®] PC 9422

Known as LOCTITE[®] Fixmaster[®] Super Grout
October 2015

PRODUCT DESCRIPTION

LOCTITE[®] PC 9422 provides the following product characteristics:

Technology	Epoxy
Chemical Type	Epoxy
Appearance (Resin)	Red ^{LMS}
Appearance (Hardener)	Light brown to amber liquid ^{LMS}
Appearance (Mixed)	Thick red liquid
Components	Two components - requires mixing
Mix Ratio, by weight - Resin : Hardener to Filler	10 : 5 to 85
Cure	Room temperature cure
Application	Grouting
Specific Benefit	<ul style="list-style-type: none"> • 100 % solids epoxy system • Non-shrinking • Chemical resistant • Corrosion resistant • Self-leveling • Fast and easy to use • Stronger than concrete

LOCTITE[®] PC 9422 is an aggregate-filled epoxy system designed for grouting up to 460 mm (18 in) deep, including self-levelling applications under rails and sole plates at typical dry service temperatures of -30 to 105°C (-20 to 225 F). Withstands high torque loading. Typical applications include diesel or gas engines and generators, cone crushers, compressors, mine hoists, outboard bearings, and gantry cranes.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Resin:

Weight per volume	kg/L	1.19 to 1.26
	(lbs/gal)	(9.9 to 10.5 ^{LMS})
Viscosity, Brookfield - RV, 25 °C, mPa·s (cP):		
Spindle 4, speed 20 rpm		3,800 to 4,800 ^{LMS}
Flash Point - See SDS		

Hardener:

Weight per volume	kg/L	0.94 to 0.98
	(lbs/gal)	(7.85 to 8.15 ^{LMS})
Viscosity, Brookfield - RV, 25 °C, mPa·s (cP):		
Spindle 2, speed 20 rpm		600 to 1,000 ^{LMS}
Flash Point - See SDS		

Mixed:

Coverage	10.2 liters per kit (620 in ³ per kit)
----------	--

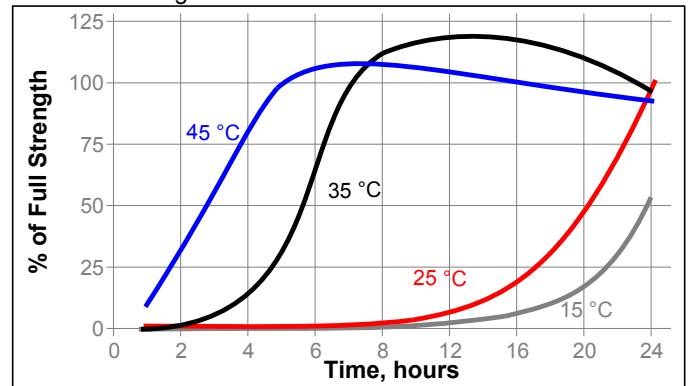
TYPICAL CURING PERFORMANCE

Curing Properties

Cure Time @ 25 °C, hours	24
Working life, minutes	285

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

Cured @ 25 °C except where noted

Physical Properties:

Shore Hardness, ISO 868, Shore D	79
Volume Shrinkage, %	0.48
Flexural strength, ASTM D790	N/mm ² 28 (psi) (4,010)
Flexural modulus	N/mm ² 8,720 (psi) (1,263,960)
Compressive Strength, ISO 604	N/mm ² 95 (psi) (13,780)
Compressive Modulus, ISO 604	N/mm ² 11,130 (psi) (1,613,400)
Tensile Strength, ISO 527-2	N/mm ² 9.7 (psi) (1,400)
Tensile Modulus, ASTM D638	N/mm ² 44,080 (psi) (6,391,180)
Elongation, ISO 527-2, %	0.04

Coefficient of Thermal Conductivity ASTM F 433, W/(m·K)	1.22
Glass Transition Temperature, ASTM E 1640, °C	65
Coefficient of Thermal Expansion, ISO 11359-2 K ⁻¹ :	
Below Tg	22×10 ⁻⁰⁶
Above Tg	55×10 ⁻⁰⁶

Electrical Properties:

Volume Resistivity, IEC 60093, ohm-cm	60×10 ¹²
Surface Resistivity, IEC 60093, ohms	34.8×10 ¹²

TYPICAL PERFORMANCE OF CURED MATERIAL**Shear Strength**

Lap Shear Strength, ISO 4587:

Grit Blasted Mild Steel (GBMS)	N/mm ²	3.4
	(psi)	(500)

TYPICAL ENVIRONMENTAL RESISTANCE

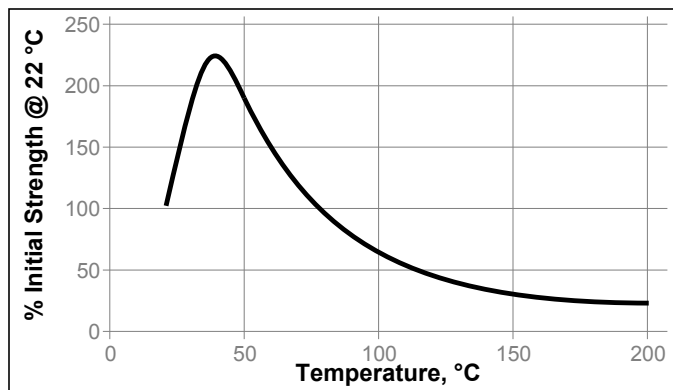
Cured for 72 hours @ 21 °C

Lap Shear Strength, ISO 4587:

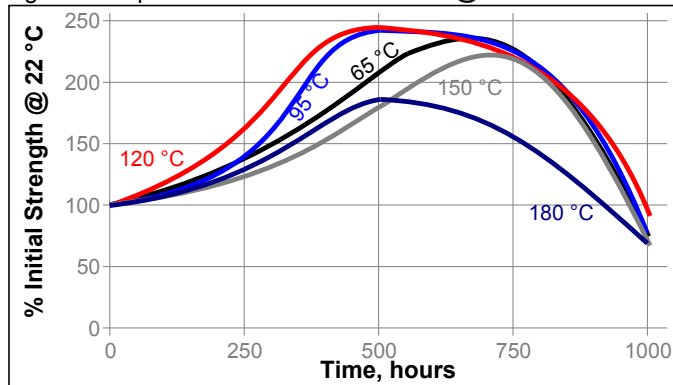
Grit Blasted Mild Steel (GBMS)

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:

1. Prepare area to be grouted. Make sure foundation is above 10 °C (50F). The grout is not recommended for use below 10 °C (50F).

2. Remove the two cans and filler from the 5 gallon pail.

3. Mixing:

- This material is very thick once all the filler has been added. Best results are achieved using a pneumatic drill attached to a mixing blade.
- If an electric drill is used, it must be either very heavy duty for geared to provide adequate torque.

4. Pour all contents of the resin into the pail. Shake the hardener can to premix then add all of the hardener to the resin. Mix the resin and hardener together for 3 minutes.

5. The resin and the hardener are very low viscosity and should be mixed at low speed to avoid splashing.

6. Gradually add the filler to the pail and mix until there is no dry powder present.

7. Pour into area to be grouted immediately after mixing to give maximum flow before set up. At 25 °C, working time is 285 minutes and material will be functionally cured in 24 hours

8. For grouting applications greater than 460 mm (18 inches), pour in 400 mm (16 inch) increments. Allow previous grout to become tack-free and cool before making subsequent pours. Before making additional pours, be sure previous poured surface is clean and dry - free from dust, oil and moisture.

9. Allow epoxy grout to harden before starting machinery.

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 mixed, 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).

Loctite Material Specification^{LMS}

LMS dated June 26, 2001 (Resin) and LMS dated January 23, 2004 (Hardener). Test reports for each batch are available for the indicated properties. LMS test reports include selected QC test parameters considered appropriate to specifications for customer use. Additionally, comprehensive controls are in place to assure product quality and consistency. Special customer specification requirements may be coordinated through Henkel Loctite Quality.

Storage

Store product in the unopened container in a dry location. 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.

Material removed from containers may be contaminated during use. Do not return product to the original container. Henkel Corporation cannot assume responsibility for product which has been contaminated or stored under conditions other than those previously indicated. 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.

Any liability in respect of the information in the Technical Data Sheet or any other written or oral recommendation(s) regarding the concerned product is excluded, except if otherwise explicitly agreed and except in relation to death or personal injury caused by our negligence and any liability under any applicable mandatory product liability law.

In case products are delivered by Henkel Belgium NV, Henkel Electronic Materials NV, Henkel Nederland BV, Henkel Technologies France SAS and Henkel France SA please additionally note the following:

In case Henkel would be nevertheless held liable, on whatever legal ground, Henkel's liability will in no event exceed the amount of the concerned delivery.

In case products are delivered by Henkel Colombiana, S.A.S. the following disclaimer is applicable:

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. 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.

Any liability in respect of the information in the Technical Data Sheet or any other written or oral recommendation(s) regarding the concerned product is excluded, except if otherwise explicitly agreed and except in relation to death or personal

injury caused by our negligence and any liability under any applicable mandatory product liability law.

In case products are delivered by Henkel Corporation, Resin Technology Group, Inc., or Henkel Canada Corporation, the following disclaimer is applicable:

The data contained herein are furnished for information only and are believed to be reliable. We cannot assume responsibility for the results obtained by others over whose methods we have no control. It is the user's responsibility to determine suitability for the user's purpose of any production methods mentioned herein and to adopt such precautions as may be advisable for the protection of property and of persons against any hazards that may be involved in the handling and use thereof. In light of the foregoing, **Henkel Corporation specifically disclaims all warranties expressed or implied, including warranties of merchantability or fitness for a particular purpose, arising from sale or use of Henkel Corporation's products. Henkel Corporation specifically disclaims any liability for consequential or incidental damages of any kind, including lost profits.** The discussion herein of various processes or compositions is not to be interpreted as representation that they are free from domination of patents owned by others or as a license under any Henkel Corporation patents that may cover such processes or compositions. We recommend that each prospective user test his proposed application before repetitive use, using this data as a guide. This product may be covered by one or more United States or foreign patents or patent applications.

Trademark usage

Except as otherwise noted, all trademarks in this document are trademarks of Henkel Corporation in the U.S. and elsewhere. ® denotes a trademark registered in the U.S. Patent and Trademark Office.

Reference 0.1