

LOCTITE[®] PC 7364

October 2015

PRODUCT DESCRIPTION

LOCTITE[®] PC 7364 provides the following product characteristics:

Technology	Epoxy
Chemical Type	Epoxy
Appearance (Resin)	White
Appearance (Hardener)	Tan
Appearance (Mixture)	Off-white paste
Components	Two component - requires mixing
Mix Ratio, by volume - Resin : Hardener	1 : 1
Mix Ratio, by weight - Resin : Hardener	1 : 1.25
Cure	Room temperature cure
Application	Bonding
Specific Application	<ul style="list-style-type: none"> Bonding ceramic tiles Pact holes in pressure systems Secure vertical anchor bolts General purpose bonding
Specific Benefit	<ul style="list-style-type: none"> Non-sag paste - allows application versatility for overhead and vertical surfaces Easy to mix and use Will not break or chip - withstands shock and impact Adheres to most clean surfaces - versatile

LOCTITE[®] PC 7364 is a toughened high strength epoxy for installing ceramic tiles. This two component material is suitable for horizontal applications and has superior sag resistance for vertical applications. The product has improved toughness to resist shock and impact forces and is used in dry service temperatures from -30°C to 95°C.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Resin:

Specific Gravity, g/cm ³	1.45
Viscosity, Plate to Plate, 25 °C, mPa·s (cP):	
Shear rate 10 s ⁻¹	812,100

Hardener:

Specific Gravity, g/cm ³	1.74
Viscosity, Plate to Plate, 25 °C, mPa·s (cP):	
Shear rate 10 s ⁻¹	201,300

Mixed:

Specific Gravity, g/cm ³	1.55
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TYPICAL CURING PERFORMANCE

Gel Time @ 25 °C, minutes:

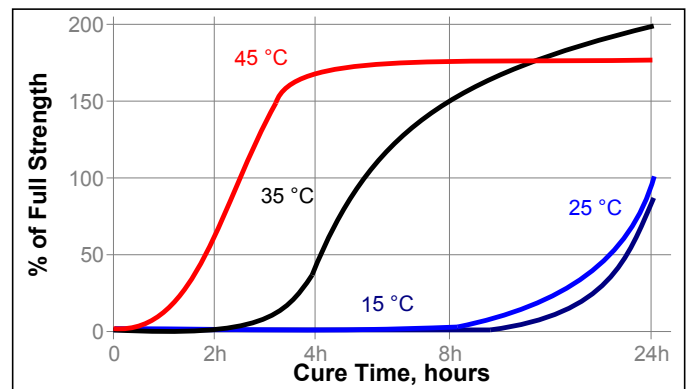
200 g mass 105 to 140

Pot life @ 25 °C, 200 grams, minutes

60 to 70

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

Physical Properties:

Shore Hardness, ISO 868, Durometer D	87
Volume Shrinkage, ISO 1675, %	4.8
Glass Transition Temperature ISO 11359-2, °C	37
Coefficient of Thermal Expansion, ISO 11359-2, K ⁻¹ :	
Below Tg	67×10 ⁻⁰⁶
Above Tg	127×10 ⁻⁰⁶
Elongation, ISO 527-2, %	4
Tensile Strength, ISO 527-2	N/mm ² 26 (psi) (3,800)
Tensile Modulus, ISO 527-2	N/mm ² 2,525 (psi) (362,165)
Compressive Strength, ISO 604	N/mm ² 77 (psi) (11,140)
Compressive Modulus, ISO 604	N/mm ² 1,270 (psi) (183,750)
Flexural strength , at yield, ASTM D790	N/mm ² 58 (psi) (8,375)
Flexural modulus , ASTM D790	N/mm ² 3,545 (psi) (514,360)

TYPICAL PERFORMANCE OF CURED MATERIAL**Adhesive Properties**

After 24 hours @ 25 °C

Shear Strength

Lap Shear Strength, ISO 4587:

Grit Blasted Mild Steel (GBMS)	N/mm ² 12
	(psi) (1,775)

After 7 days @ 25 °C

Shear Strength

Lap Shear Strength, ISO 4587:

Grit Blasted Mild Steel (GBMS)	N/mm ² 24
	(psi) (3,410)

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. Ceramic tiles have the required surface roughness for high adhesion. Remove any dust or dirt with dry, oil free compressed air.
2. Mating metal surfaces need to be roughened by clean grit blasting or grinding. This is also recommended as a primary preparation step to remove oils, paint, coatings and corrosion. If possible, it is recommended that the metal surface be grit blasted to a near white metal ((SSPC-SP10/NACE No. 2) standard.
3. Once blasted or ground, flush the metal surface with an organic solvent or alternatively wipe surface with an organic solvent soaked lint-free wipe to remove particulates.
4. To avoid flash rust on metal, ensure the surface is at least 5°C above the dew point temperature.

Mixing:

1. **NOTE:** LOCTITE® PC 7364 is thick to prevent slumping on application. As a result, it is difficult to mix below room temperature. For easier mixing, resin and hardener can be preheated to roughly 32°C (90F) but not exceeding 38°C (100F) to lower the viscosity of the of the adhesive to facilitate mixing. To heat the containers, the best practice is to place the unopened or sealed containers in a warm water bath.

NOTE: Higher temperatures decrease the working time and will accelerate cure..

2. Mix 1 part resin to 1 part hardener by volume (1 to 1.25 by weight) .
3. If the entire contents of the kit is to be used, ensure all resin and hardener is scraped from the containers using a square edged hand trowel to obtain an accurate resin to hardener ratio.

NOTE: Larger masses generate heat, reducing working time and accelerating cure.

4. Manual Mixing:

1. Transfer measured quantities of resin and hardener to

a clean and dry mixing surface, ideally a rigid plastic sheet or, if not possible, cardboard.

2. Use a trowel to continuously fold, shear and scrape material on the mix surface until a uniform color without any streaks is achieved.

5. Power Mixing:

1. A high torque electric or pneumatic drill can be used with a spiral mixing paddle for high viscosity materials.

2. Transfer measured quantities into an empty, clean 5 gallon bucket.

3. Secure the bucket to prevent it from spinning during mixing.

4. Mix the material until it is uniform in color without any streaks.

NOTE: do not wear loose fitting clothing while using a power mixer.

Application:

1. Apply adhesive to both surfaces. Use a trowel to press material into surfaces to ensure good wetting..
2. Immediately press parts together, slide back and forth slightly to ensure they are well seated and to push out any trapped air or excess adhesive.
3. The high green strength of this product keeps parts in position and resists sliding without requiring clamps or waiting for the adhesive to cure before moving to the next work area.
4. Material cures best at room temperature, but will cure as long as the temperature is kept above 10°C, (50 F), though it will take longer to set.

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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