Technical Data Sheet

LOCTITE® PC 7234™

December 2013

PRODUCT DESCRIPTION

LOCTITE® PC 7234™ provides the following product characteristics:

Technology	Epoxy
Chemical type	Epoxy
Appearance (resin)	Red
Appearance (hardener)	Amber
Components	Two components - requires mixing
Mix Ratio, by weight -Part A: Part B	4.25 : 1
Mix Ratio, by volume -Part A: Part B	2.6 : 1
Cure	Room temperature cure
Application	Coating
Specific benefits	• Ceramic reinforced • Easy to mix and use. • High temperature resistance • High gloss finish • Superior adhesion

LOCTITE® PC 7234™ is an ultra smooth, ceramic reinforced epoxy that provides a high gloss, low friction coating designed to protect against turbulence and abrasion under typical dry service temperatures of -29 to 288°C. Used by itself, LOCTITE® PC 7234™ is recommended for sealing and protecting equipment from corrosion and wear. It also works as a top coat over Loctite® Nordbak® Wearing Compounds for applications requiring surface rebuilding and lasting protection. Typical applications include providing a smooth, protective abrasion resistant coating, repairing heat exchangers and condensers, lining tanks and chutes, resurfacing and repairing rudders and pintel housings, and repairing cooling pump impellers and butterfly valves.

Typical properties of uncured material

Resin

Viscosity, Brookfield- RV, 25°C, mPa·s (cP) Spindle 7, speed 20 rpm		140,000 to 200,000
Weight per volume	kg/L (lbs/gal)	1.58 to 1.65 (13.2 to 13.75)
Flash point - see SDS		

Hardener

Viscosity, Brookfield- RV, 25°C, mPa·s (cP) Spindle 3, speed 20 rpm		1,300 to 3,000
Weight per volume		0.98 to 1.01 (8.15 to 8.4)
Flash point - see SDS		

Mixed properties

Viscosity @ 25°C, mPa·s (cP): Viscosity, Cone & Plate, Shear rate, 10 s^{-1}		33,000
Density @ 23ºC, g/cm^3		1.38
Coverage	1.1 m^2 @0.5 mm thick/1 kg (12 ft^2 @20 mil thick/2 lb)	
Flash point - see SDS		

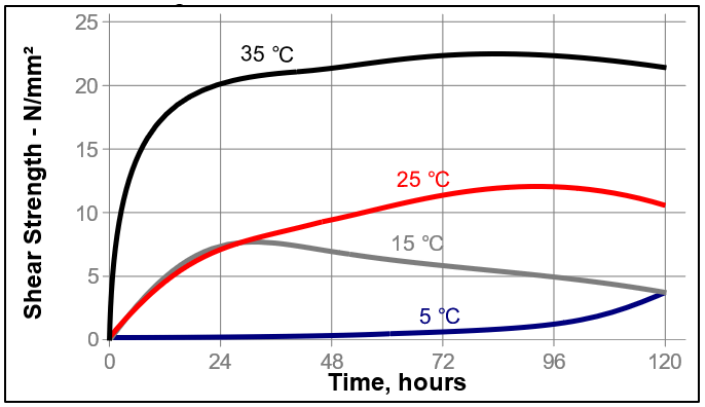
Typical curing performance

Curing properties

Gel time @ 25°C, hours	5 to 6
Recoat time @ 25°C, hours	1 to 6
Wet temperature resistance, °C	>93

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:

Shore hardness ISO 868, Durometer D		88
Abrasion resistance, ASTM D4060, mg 1 kg load, CS-10 wheels, weight of material lost		11.2
Coefficient of thermal conductivity ASTM F 433, W/(m·K)		0.466
Glass Transition Temperature ISO 11359-2, °C		56
Compressive strength, ISO 604	N/mm^2 (psi)	102 (14,800)
Compressive modulus, ISO 604	N/mm^2 (psi)	3,165 (459,000)
Tensile strength, ISO 527-2	N/mm^2 (psi)	37 (5,360)
Tensile modulus, ISO 527-2	N/mm^2 (psi)	5,340 (774,000)
Elongation at break, %		0.8
Coefficient of thermal expansion, ISO 11359-2:		
Below Tg		40
Above Tg		110
Flexural strength, ASTM D790	N/mm^2 (psi)	91 (13,250)
Flexural modulus , ASTM D790	N/mm^2 (psi)	9,180 (1,331,000)

Electrical properties:

Volume resistivity, IEC 60093, Ω·cm	57×10^{12}
Surface resistivity, IEC 60093, Ω	1.1×10^{15}

Typical performance of cured material

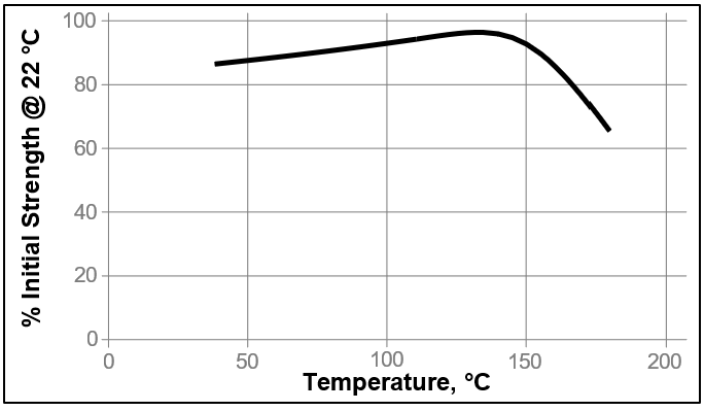
Lap Shear Strength, ISO 4587:

Grit blasted mild steel (GBMS)	N/mm^2 (psi)	16.7 (2,425)

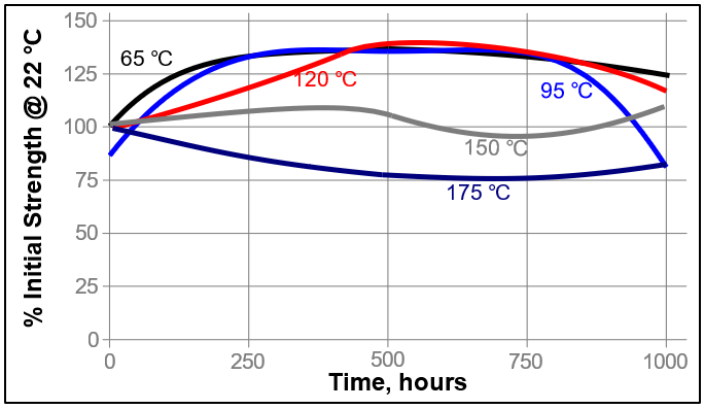
Typical environmental resistance

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 Material Safety Data Sheet.

Directions for use

Surface preparation
Proper surface preparation is critical to the long-term performance of this product. The exact requirements vary with the severity of the application, expected service life, and initial substrate conditions.

1. Clean, dry and abrade application surface. The more thorough the degree of surface preparation the better the performance of the application. If possible, it is recommended that the surface be grit blasted to a Near White Metal (SSPC-SP10/NACE No. 2) Standard. For less severe applications roughening the surface with hand tools is suitable.
2. Solvent cleaning with a residue-free solvent is recommended as the final step to aid in adhesion.

Mixing:
1. Material temperature should be between 20 to 30°C.
2. Add hardener contents to resin. Mix material vigorously until uniform in color. Be sure to mix along the bottom and sides of mixing container. Mix three to five minutes.

Application method:
1. Apply fully mixed material to the prepared surface.
2. Cure time is 8 hours followed by a 3 hour post-cure at 150°C.

Caution:
Use approved, positive-pressure, supplied-air respirator when welding or torch cutting near cured compound. Use approved self-contained breathing apparatus when burning, welding, or torch cutting indoors near cured compound. Use approved respirator for dusts and mists when grinding or machining cured compound. **DO NOT** use open flame on compound. See other cautions on Material Safety Data Sheet.

Technical tips for working with epoxies
Working time and cure speed 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).

Storage
Store product in the unopened container in a dry location. Storage information may be indicated on the product package 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 Henkel representative.

Product specification
The technical data contained herein are intended as reference only and are not considered specifications for the product. Product specifications are located on the Certificate of Analysis or please contact Henkel representative.

Data ranges
The data contained herein may be reported as a typical value. Values are based on actual test data and are verified on a periodic basis.

Temperature/Humidity Ranges: 23°C / 50% RH = 23±2°C / 50±5% RH

Approval and certificate
Please contact Henkel representative for related approval or certificate of this product.

Conversions
(°C x 1.8) + 32 = °F
kV/mm x 25.4 = V/mil
mm / 25.4 = inches
µm / 25.4 = mil
N x 0.225 = lb
N/mm x 5.71 = lb/in
N/mm^2 x 145 = psi
MPa x 145 = psi
N·m x 8.851 = lb·in
N·m x 0.738 = lb·ft
N·mm x 0.142 = oz·in
mPa·s = cP

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