Technical Data Sheet

LOCTITE® PC 9593

LOCTITE® PC 9593 July 2026

Product description

LOCTITE® PC 9593 provides the following product characteristics:

Technology	Epoxy
Chemical type	Epoxy
Appearance (resin)	Blue paste
Appearance (hardener)	Grey paste
Appearance (mixed)	Blue paste
Components	Two components - resin &hardener
Mix Ratio, (by weight) resin : hardener	2 : 1
Mix Ratio, (by volume) resin : hardener	2 : 1
Cure	Room temperature cure after mixing
Application	Coating
Application temperature	10°C to 40°C (50°F to 104°F)
Service temperature (dry)	-30°C to 120°C (-22°F to 248°F)
Specific benefits	• Alumina bead and Silicon carbide filled for outstanding resistance to impact and wear • Rubber toughened polymer matrix • Fast cure

LOCTITE® PC 9593 is a two component alumina bead andsilicon carbide filled 100% solid epoxy resin system. LOCTITE® PC 9593 is designed to protect, rebuild and repair wear areas of processing equipment quickly, which is also subjected to impact. Typical applications include dredge pump liners, flumes, troughs, vibrating feeders, chutes & hoppers and other processing equipment that is exposed to both abrasion and impact.

Typical properties of uncured material

Resin	
Specific gravity @ 23°C	2.04
Hardener	
Specific gravity @ 23°C	2.05
Mixed	
Specific gravity @ 23°C	2.04

Typical curing performance

Curing @ 23°C

Working time, minutes	15
Cure time, hours	4

Typical performance of cured material

Cured for 24 hours @ 23°C

Physical properties:

Shore hardness ISO 868, Durometer D		85
Compressive strength, ISO 604	N/mm^2 (psi)	46 (6700)

Adhesive properties:

Lap Shear Strength, ISO 4587:

Aluminum (grit blasted)	N/mm^2 (psi)	27 (4000)
Mild steel (grit blasted)	N/mm^2 (psi)	23 (3400)

Cured for 1 week @ 23°C

Physical properties:

Glass transition temperature (Tg),°C TMA, ISO 11359-2	59

Abrasion properties:

Miller test (weight loss), ASTM G 75-01, %	
2 hours	1.00
4 hours	1.00
6 hours	2.00
Dry abrasion test (weight loss), ASTM G 65, %	0.67
Gas Jet Erosion Test (Weight Loss), ASTM G76-04, %	
Angle 45°	0.02
Angle 90°	0.03

Adhesive properties:

Impact test (direct drop impact), ASTM D 2794		
1mm thick mild steel (grit blasted) panel	N·m (lb/in)	18 (160)
5mm thick mild steel (grit blasted) panel	N·m (lb/in)	18 (160)

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
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. Remove dirt, oil, grease etc with a suitable cleaner, e.g. high pressure water cleaning system using LOCTITE®cleaner/degreaser.
2. All skip welds, weld spatter, buckshot, and other surfaceroughness must be ground down; undercuts and pinholes must be ground and filled. All projections, sharp edges,high points and fillets must be ground to a radius of at least 3mm and all corners must be likewise rounded to maximize product performance.
3. Blast all surfaces to be coated with a sharp edged angular grit to a depth of profile of 75 to 100microns, and a degree of cleanliness of Near White Metal (SIS SA 2½ /SSPC-SP10). For immersion service, a degree of cleanliness of White Metal (SIS SA 3/SSPC-SP 5) is required.
4. After blasting, metal surfaces should be cleaned, e.g. with LOCTITE® solvent based, residue free cleaner becoated before any oxidation or contamination takes place.
5. Metal that has been in contact with salt solutions, e.g. seawater, should be grit blasted and high-pressure water blasted, left for 24 hours to allow any salts in the metal to sweat to the surface. A test for chloride contamination should be performed. The procedure should be repeated until chloride concentration on the surface is below 30mg/m³ (3µg/cm³). Then blast and clean the surface as described on point 3 and 4 above.

Mixing
1. Measure 2 parts resin to 1 part hardener by volume or weight.
2. Transfer measured quantities or entire kit onto a clean and dry mixing surface and mix together with a trowel until uniform in color.
3. If mixing larger quantities, a spiral mixing blade attached to a high torque electric or pneumatic drill can be used.
4. If resin and hardener temperatures are 15°C or below, preheat resin only to about 30°C but not to exceed 40°C.

Application
1. Apply fully mixed material to the prepared surface.
2. Initially apply the material in a very thin layer to “wet” out the surface and avoid air entrapment.
3. Build up to desired thickness (minimum 6 mm), avoid air entrapment.
4. At 25°C the working time is 15 minutes, and functionalcure time is 4 hours. Working and cure time depend ontemperature and mass - the higher the temperature andthe larger the mass, the faster the cure.

Inspection
1. Visually inspect for pinholes and voids just after application.
2. Once the coating has cured, repeat visual inspection to confirm absence of pinholes, voids, or damaged areas.
3. Control thickness of the coating, especially in the critical points.
4. Perform a test with a holiday detector to confirm coating continuity.

Coverage
To achieve a 6 millimeter (236 mils) thickness, the coverage rate will be 0.245 m² (2.64 ft²) for 3 kg (6.6 lb), excluding overthickness, repairs, etc.

Repairs
Any voids, pinholes, low thickness areas found in the coating should be repaired by lightly abrading, cleaning and applying further product.

Clean-up
Immediately after use, clean tools with LOCTITE® solvent based cleaner. Once cured, the material can only be removed mechanically.

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. Storage below 21°C or greater than 8°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.

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

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

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/mm² 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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