LOCTITE

Technical Data Sheet

LOCTITE® PC 4400

July 2020

PRODUCT DESCRIPTION

LOCTITE® PC 4400 Paint Protect and Restore coating provides the following product characteristics:

Technology	Coating
Chemical Type	Polyurethane/polyurea hybrid
Appearance	Clear
Components	One component - requires no mixing
Viscosity	Liquid
Cure	Humidity
Application	Protective coating
Application Temperature	4 to 32°C (39 to 90 °F)
In service temperature	-25 to 80°C (-13 to 176 °F)
Short exposure (up to 1h)	100°C (212 °F)
Specific Benefits	• Extends in-service life of newly painted or highly faded painted surfaces. • Restores original color, gloss, surface hardness • Extreme UV resistance

LOCTITE® PC 4400 is a coating to enhance, restore, and extend the service life of freshly painted or faded painted surfaces by years. LOCTITE® PC 4400 penetrates deep into the pores of painted surfaces to enhance color, improve gloss, improve surface hardness and extend UV resistance. LOCTITE® PC 4400 dramatically improves corrosion resistance, scratch, abrasion, chemical and UV resistance. LOCTITE® PC 4400 provides an extremely hard and high gloss, flexible clear coating over freshly painted or highly faded paint surfaces including 1 or 2 component epoxies, 2 part polyurethanes, 2 part top coatings, powder coatings, anodized aluminum and sanded fiberglass.Typical applications include trailers, fleet vehicles, marine vehicles like boats, canoes, jet skis, truck bodies, agricultural and construction vehicles, oil & gas tankers, oil & gas pipelines, exterior pipelines, lifeboats, cargo ships, epoxy floors, bridges, painted building structures, railway tank cars, chemical tanks, heavy duty equipment, anodized aluminum, transformers or any painted asset susceptible to be degraded by chemical, scratch, UV, humidity exposure.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Viscosity 25 °C, mPa.s (cP) Brookfield – RVT Spindle 2, speed 20rpm		20
Solids content, % by weight		35
VOC	g/L (lbs/gal)	156 (1.25)

TYPICAL CURING PERFORMANCE

Cured @ 23°C, 50% RH

Dust free, minutes		20
Tack free, minutes		30
Handling time, hours		4
Drying time, hours		24
Coverage, 3.8 L(1 gal) 50 µm(2 mil) DFT	m^2 (ft^2)	31 (330)

TYPICAL PERFORMANCE OF CURED MATERIAL

Cured for 24 hrs @ 23°C, 50% RH

Physical Properties

Pencil hardness, H ASTM D3363	4

Adhesive Properties

Abrasion resistance, mg loss ASTM D4060	8.4

TYPICAL ENVIRONMENTAL RESISTANCE

Cured for 24 hrs @ 23°C, 50% RH

Chemical/Solvent Resistance

Water Immersion ISO 2812-2	Pass
MEK Resistance, rubs ASTM D4572	1,500
Salt Spray, hours ASTM B-117	4,000
QUV resistance, 1500 hours, % ASTM D4587	99
Xenon WOM, 2000 hour, % ASTM G155	99

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).

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Directions for use

Surface Preparation:

Freshly Painted / Wet-on-Wet Paint Application:

1. Apply directly over two-component epoxies, two-component polyurethanes, top coatings & powder coatings.
2. Allow solvents to fully evaporate from the underlying paint for at least 4 hours prior to the application of LOCTITE® PC 4400.

Mature Paint / Glossy:

1. Degrease and de-wax.
2. Thoroughly clean, water rinse & dry.
3. Sand using 400 grit orbital sander, then solvent clean using TEROSON® VR10 to remove excess debris.

Mature Paint / Faded (oxidized):

1. Degrease and de-wax (if applicable)
2. Repair any structural damage (rust or chipping)
3. Faded and non-waxed paint must be thoroughly cleaned with degreaser, water rinsed and dried.
4. Faded waxed paint must be sanded using 400 grit orbital sander; then cleaned using TEROSON® VR 10 and dried.

Spray Application:

1. Apply using HVLP, Conventional or Airless spray equipment, this is the preferred method for better appearance.
2. Use dedicated spray lines and equipment for the best results.
3. Follow the recommended initial parameters and adjust a needed.

   Air Spray Equipment
   Spray gun: HVLP or LVLP
   Fluid tip: 1.3-1.5 mm (0.05-0.09 in)
   Fan pattern: full
   Fluid control: 2 1/2 turns out
   Spray pattern: 50% overlap
   Pressure at gun: 0.2 MPa (25 – 30 psi)

   Airless Spray Equipment
   Tip Size: 519 or 619 spray tip
   Pump: 30:1 or 40:1
   Pump Pressure: 5.5 MPa (800 psi)

4. Number of spray coats: apply 2-3 wet coats with 5-10 minutes between wet coats to allow for solvent evaporation.
5. Avoid additional coats after 20 minutes as flow and leveling will be negatively affected.
6. Recommended WFT (wet film thickness): 25-50 µm (1-2 mil) per each wet coat.
7. Recommended DFT (dry film thickness): 25-50 µm (1.5 -2.5 mil) depending on surface properties desired.

Wipe on Application:

1. LOCTITE® PC 4400 can be also applied using a "wipe-on" technique using a microfiber cloth or sponge.
2. Pre apply LOCTITE® PC 4400 to the microfiber cloth, make sure there is enough product to self-level, this may take practice to get right.
3. Apply the product starting from the edges, follow same linear pattern to wipe the panel.
4. If streaks appear, apply more product to the microfiber cloth as many times as necessary.
5. Coat the surface completely, if you get a “run” just wipe on and keep going.
6. Apply 1-2 wet coats with 5 minutes between wet coats to allow for solvent evaporation.

Cleaning:

1. Clean spray equipment immediately using paint thinner, MEK or acetone.
2. Never clean spray equipment with water or alcohol.
3. Wipe on - Let the applicator (microfiber cloth) fully cure to the air before disposing it.
4. LOCTITE® PC 4400 is a moisture sensitive system. It is important to close containers immediately after use to avoid moisture contamination.

Avoiding Orange Peel

Orange peel can be avoided by modifying the spray application technique. We recommend applying LOCTITE® PC 4400 using an HVLP gun with a 1.4 mm spray tip. Apply one full wet coat, then allow 2-5 min for solvent evaporation, then apply the next full wet coat, then allow 2-5 min, then apply the final full wet coat. The applicator is able to reduce orange peel by ensuring that enough (not too much) LOCTITE® PC 4400 is applied to provide excellent flow and leveling.Orange peel will occur if is applied too dry or by allowing too much time between wet coats. If orange peel exists after cured, we recommend the following polishing parameters:

1. Equipment: Orbital sander and orbital polishing equipment.
2. Orbital Sand: Use 800 grit paper, then 1000, then 1500, then 2000, then 2500 grit paper.
3. Compound: Use heavy cut compound with wool pad @ 1,200 to 1,400 RPM.
4. Polishing: Use SRC (scratch resistant clears) polishing paste with wool @ 1,200 to 1,400 RPM. Refer to TEROSON® product line.
5. Final High Gloss Polish: Use light to medium cut polishing paste with wool pad @ 1,200 to 1,400 RPM. Refer to TEROSON® product line.

Storage

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

Optimal Storage: 4 to 21°C. Storage below 4°C or greater than 22°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 a 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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