

LOCTITE[®] PC 4400

February 2023

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	<ul style="list-style-type: none"> • Extends in-service life of newly painted or highly faded painted surfaces for up to 10 years* • Restores original color, gloss, surface hardness • Extreme scratch, UV, salt and chemical 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.

*Will achieve >98% gloss retention when exposed to 10-year equivalent of Florida, USA sunlight.

- Light exposure per SAE J1960
- Gloss retention testing per ASTM D523

TYPICAL PROPERTIES OF UNCURED MATERIAL

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

TYPICAL CURING PERFORMANCE

Cured @ 23°C, 50% RH	
Tack free, minutes	60
Handling time, hours	4
Drying time, hours	24
Coverage, 3.8 L(1 gal) 50 µm(2 mil) DFT	m ² 31 (ft ²) (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).



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

Disclaimer

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 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 or Henkel Canada, Inc. 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

