

# LOCTITE<sup>®</sup> PC 4401

July 2020

## PRODUCT DESCRIPTION

LOCTITE<sup>®</sup> PC 4401 Matte Additive provides the following product characteristics:

<b>Technology</b>	Functional Additive
Chemical Type	Multifunctional Polymers
Appearance	Clear
Viscosity	Liquid
<b>Cure</b>	Humidity
<b>Application</b>	Matte Additive
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"> <li>Reduces the gloss level of LOCTITE<sup>®</sup> PC 4400</li> <li>Increases the pencil hardness of LOCTITE<sup>®</sup> PC 4400 from a 4 to 7H</li> <li>Provides chemical, atmospheric, weather, environmental, and UV resistance</li> <li>Provides scratch, chip, abrasion, and corrosion resistance</li> </ul>

LOCTITE<sup>®</sup> PC 4401 is a proprietary nanostructured transparent additive to be used in conjunction with coating LOCTITE<sup>®</sup> PC 4400. The mixing of the proprietary Matting Additive LOCTITE<sup>®</sup> PC 4401 into LOCTITE<sup>®</sup> PC 4400 reduces gloss level to a desired "flatness" with no negative effect to its multifunctional properties.

## TYPICAL PROPERTIES OF UNCURED MATERIAL

Solids content, % by weight 20

## TYPICAL PERFORMANCE OF CURED MATERIAL

Cured for 24 hrs @ 23°C, 50% RH

### Physical Properties

Pencil hardness, H 7  
ASTM D3363

Mix by weight  
Appearance  
Mate 30 %  
Eggshell 20 %  
Semi-gloss 10 %

## 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

### Mixing Procedure:

- Shake Matting Additive LOCTITE<sup>®</sup> PC 4401 well prior to mixing.
- Using an appropriately sized painter's cup, weight LOCTITE<sup>®</sup> PC 4400 on an electronic scale. DO NOT remove cup from scale once weight is established.
- Record the weight figure for the LOCTITE<sup>®</sup> PC 4400.
- Next refer to the Mix % by Weight Table to determine the desired Finish for your project.
- Calculate and use this weight figure for Matting Additive LOCTITE<sup>®</sup> PC 4401.
- Use LOCTITE<sup>®</sup> PC 4401 weight figure and add to LOCTITE<sup>®</sup> PC 4400.
- Recap the container immediately after dispensing to avoid solvent evaporation.
- Stir mixture for ~60 seconds.
- The mixture is now ready for application.

### Surface Preparation:

Freshly Painted / Wet-on-Wet Paint Application:

- Apply directly over two-component epoxies, two-component polyurethanes, top coatings & powder coatings.
- Allow solvents to fully evaporate-out from the underlying paint prior to the application of LOCTITE<sup>®</sup> PC 4400 / LOCTITE<sup>®</sup> PC 4401.

Mature Paint / Glossy:

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

Mature Paint / Faded (oxidized):

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

### Spray Application:

- Apply using HVLP, Conventional or Airless spray equipment, this is the preferred method for better appearance.
- Use dedicated spray lines and equipment for the best results.



- Follow the recommended initial parameters and adjust as 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)

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

#### Wipe on Application:

- The mixture of LOCTITE® PC 4401 / LOCTITE® PC 4400 can be also applied using a "wipe-on" technique using a microfiber cloth or sponge.
- Pre apply LOCTITE® PC 4401 / LOCTITE® PC 4400 to the microfiber cloth, make sure there is enough product to self-level, this may take practice to get right.
- Apply the product starting from the edges, follow same linear pattern to wipe the panel.
- If streaks appear, apply more product to the microfiber cloth as many times as necessary.
- Coat the surface completely, if you get a "run" just wipe on and keep going.
- Apply 1-2 wet coats with 5 minutes between wet coats to allow for solvent evaporation.

#### Cleaning:

- Clean spray equipment immediately using paint thinner, MEK or acetone.
- Never clean spray equipment with water or alcohol.
- Wipe on - Let the applicator (microfiber cloth) fully cure to the air before disposing it.
- The mixture of LOCTITE® PC 4401 / 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 4401 / 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 4401 / 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:

- Equipment: Orbital sander and orbital polishing equipment.
- Orbital Sand: Use 800 grit paper, then 1000, then 1500, then 2000, then 2500 grit paper.
- Compound: Use heavy cut compound with wool pad @ 1,200 to 1,400 RPM.
- Polishing: Use SRC (scratch resistant clears) polishing paste with wool @ 1,200 to 1,400 RPM. Refer to TEROSON® product line.
- 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: below 8 to 21 °C. Storage 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.

#### 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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