

LOCTITE[®] PC 9435

Known as LOCTITE[®] Fixmaster[®] Marine Chocking
October 2014

PRODUCT DESCRIPTION

LOCTITE[®] PC 9435 provides the following product characteristics:

Technology	Epoxy
Chemical Type	Epoxy
Appearance	Orange or green liquid ^{LMS}
Components	Two component - requires mixing
Mix Ratio, by volume - Resin : Hardener	100 : 11.6
Mix Ratio, by weight - Resin : Hardener	100 : 6.9
Cure	Room temperature cure
Application	Flooring & grout
Specific Benefit	<ul style="list-style-type: none"> Withstands temperatures up to 121 °C Non-shrinking Chemical resistant 100 % solids epoxy system Vibration resistant Self-leveling Allows flow into hard to reach areas Application versatility

LOCTITE[®] PC 9435 is a two-part epoxy chocking system. It is recommended for the installation of main engines and other equipment. Its high compressive strength withstands maximum loads. Typical applications include installation of main engines, drive engines, winches, hoists, and deck mounted equipment.

Lloyd's Register

Creep Test: A measure of high temperature progressive deformation of a material at constant stress.

LOCTITE[®] PC 9435 Orange - Approved for maximum loading of 3.5 MPa for a minimum measured exotherm temperature of 40 °C or maximum loading of 5.0 MPa where the chock is post-cured to a minimum temperature of 80 °C for 16 hours.

LOCTITE[®] PC 9435 Green - Approved for maximum loading of 5.0 MPa where the chock is post-cured to a minimum temperature of 80 °C for 16 hours.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Resin (Orange):

Viscosity, Brookfield - RVDV3, 25 °C, mPa·s (cP):	
Spindle 7., speed 20 rpm,	80,000 to 110,000 ^{LMS}
Weight Per Gallon, lbs/gal	13.3 to 14.0 ^{LMS}

Resin (Green):

Viscosity, Brookfield - RVDV3, 25 °C, mPa·s (cP):	
Spindle 7., speed 20 rpm,	85,000 to 105,000 ^{LMS}
Weight Per Gallon, lbs/gal	13.5 to 14.3 ^{LMS}

Mixed:

Coverage	636 cm ³ per 1 kg (17.6 in ³ per 1 lb)
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TYPICAL CURING PERFORMANCE

Curing Properties

Cure Time @ 25 °C, hours	24
Working Time @ 25 °C, minutes	10 to 15
Gel Time (Orange) @ 25 °C, minutes:	
400 g mass	33 to 47 ^{LMS}
Gel Time (Green) @ 25 °C, minutes:	
400 g mass	38 to 45 ^{LMS}

TYPICAL PROPERTIES OF CURED MATERIAL

Cured for 24 hours @ 25 °C

Physical Properties:

Shore Hardness, ISO 868, Durometer D	90
Tensile Strength, ISO 527-2	N/mm ² 38 (psi) (5,500)
Compressive Strength, ISO 604	N/mm ² 150 (psi) (22,000)
Compressive Modulus, ISO 604	N/mm ² 2,760 (psi) (400,000)

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:**

1. Store kits at 15 °C to 25 °C for at least 24 hours before beginning the chock pour.
2. Bedplates and machinery should be at least @ 15 °C to ensure complete flow.
3. Once the engine is in position, install sides and backs of dams for the chocks in a thickness of 12 to 70 mm. Check dams with a flashlight to assure tightness. When a thicker chock is required, use the multiple pour technique. Allow each pour to set and cool before proceeding. Subsequent pours should be made within 12 hours of previous pour.
4. Apply general-purpose weather stripping to the front edge of bedplates that will be in direct contact with epoxy excess to eliminate cracking.
5. Release agent or grease should be used in the prepared chock area and on exposed anchor bolts to facilitate chock removal for realignment.
6. Position front dams using an angle iron large enough to permit a minimum of a 12.5 mm head above the bedplate surface. Position dams from 16 to 19 mm away from bedplate edges.

Mixing:

1. Check Marine Chocking temperature and bedplate temperature.
2. Add the required amount of hardener (per the reduction chart) to the contents of the resin can and mix with a heavy-duty drill for 1 to 5 minutes or until mixture is homogeneous. Mix at moderate speed, but do not allow a vortex to form. If the mixer vortexes, air will be drawn in which will cause bubbling of the chocking compound. Let the mixed product stand for 3 to 5 minutes to de-aerate.

Application Method:

1. Pour chocks from one corner to maximize the escape of air and assure good surface contact. At 25 °C working time is approximately 10 to 15 minutes.
2. Allow chocks to cure the following minimum times before torquing bolts and checking alignment:
 - 35 hours at 15 °C
 - 24 hours at 21 °C
 - 16 hours at 26 °C
 - 11 hours at 32 °C.

Technical Tips for Working With Epoxies

Working time and cure 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).

Loctite Material Specification^{LMS}

LMS dated July 10, 2001 (Resin - Orange) and LMS dated November 21, 2000 (Resin - Green). Test reports for each batch are available for the indicated properties. LMS test reports include selected QC test parameters considered appropriate to specifications for customer use. Additionally, comprehensive controls are in place to assure product quality and consistency. Special customer specification requirements may be coordinated through Henkel Loctite Quality.

Storage

Store product in the unopened container in a dry location. Material removed from containers may be contaminated during use. Do not return liquid to original container. Storage information may be indicated on the product container labeling.

Optimal Storage: 8 °C to 21 °C. Storage below 8 °C or greater than 28 °C can adversely affect product properties.

Henkel cannot assume responsibility for product which has been contaminated or stored under conditions other than those recommended. If additional information is required, please contact your local Technical Service Center or Customer Service Representative.

Conversions

$(^{\circ}\text{C} \times 1.8) + 32 = ^{\circ}\text{F}$
 $\text{kV/mm} \times 25.4 = \text{V/mil}$
 $\text{mm} / 25.4 = \text{inches}$
 $\mu\text{m} / 25.4 = \text{mil}$
 $\text{N} \times 0.225 = \text{lb}$
 $\text{N/mm} \times 5.71 = \text{lb/in}$
 $\text{N/mm}^2 \times 145 = \text{psi}$
 $\text{MPa} \times 145 = \text{psi}$
 $\text{N}\cdot\text{m} \times 8.851 = \text{lb}\cdot\text{in}$
 $\text{N}\cdot\text{m} \times 0.738 = \text{lb}\cdot\text{ft}$
 $\text{N}\cdot\text{mm} \times 0.142 = \text{oz}\cdot\text{in}$
 $\text{mPa}\cdot\text{s} = \text{cP}$

Note:

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.

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Reference 2.4