LOCTITE® EA 9023

September 2021

PRODUCT DESCRIPTION

LOCTITE® EA 9023 provides the following product characteristics:

Technology	Epoxy
Chemical Type	Epoxy
Appearance (Resin)	Off-white
Appearance (Hardener)	Translucent paste
Appearance (Mixed)	Off-white
Components	Two components - requires mixing
Viscosity	Thixotropic
Mix Ratio, by volume - Resin : Hardener	2 : 1
Mix Ratio, by weight - Resin : Hardener	100 : 50
Cure	Room temperature cure after mixing
Application	Potting
Specific Benefits	• Low Adhesion to facilitate removal after a part has been trimmed • Withstands autoclave cycle • Non-Sag • Low Transfer to Carbon Fiber

LOCTITE® EA 9023 is a two-component non-sag, fast setting, industrial grade epoxy potting compound designed for low effort removal from Steel and CFRP tooling. The product withstands the temperature cycling of standard autoclave processes used for composite manufacturing. Once mixed, LOCTITE® EA 9023 cures at room temperature to form a rigid surface. Typical applications include filling grooves in the molds that are used to allow trimming the finished molded part to exact dimensions once the composite is fully cured. It has low adhesion to allow the mold to be rapidly cleaned and fresh material applied.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Part A Properties Resin

Specific Gravity @ 23°C	1.11
Viscosity, Cone & Plate @ 25ºC, mPa·s (cP):	
Cone & Plate, Spindle CP25-2 @ Shear rate 10 s^{-1}	32,500

Part B Properties Hardener

Specific Gravity @ 23°C	1.11
Viscosity, Cone & Plate @ 25ºC, mPa·s (cP):	
Cone & Plate, Spindle CP25-2 @ Shear rate 10 s^{-1}	70,000

Mixed Properties

Specific Gravity @ 23°C	1.11

TYPICAL CURING PERFORMANCE

Tested @ 23°C	
Working life @ 23 °C, minutes	3.5
Tack Free Time @ 23°C, minutes	4
Gel Time @ 23 °C, minutes	2 to 10
Sag, 100 x 13 x 6 mm Bead, mm	0

TYPICAL PROPERTIES OF CURED MATERIAL

Cured for 16 hours @ 23 °C, plus 2 hours @ 175°C

Physical Properties

Shore Hardness, ISO 868, Durometer A	55
Removal from CFRP	Low effort
Removal from steel/composite mold	Clean

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).

DIRECTION FOR USE:

1. Remove surface contaminants such as paint, oxide films, oils, dust, mold release agents and all other surface contaminants.
2. Use gloves to minimize skin contact. DO NOT use solvents for cleaning hands.
3. **Dual Cartridges**: To begin using a new cartridge, remove cartridge cap and dispense a small amount of adhesive, making sure both parts A&B are extruding. Attach mix nozzle and dispense approximately 25 to 50 mm, before applying onto part to be bonded. Partially used cartridges can be stored with the mixing nozzle attached. To reuse, remove and discard old nozzle, attach the new nozzle, dispense approximately 25 to 50mm, before applying onto part to be bonded.
   Hand Mixing: Combine Part A & Part B in the correct ratio and mix thoroughly. Be sure to scrape both the sides and bottom of mixing container. Mix for approximately 15 seconds after uniform color is obtained. Heat build-up during or after mixing is normal. Do not mix quantities greater than 0.02 kg as excessive exotherm or heat buildup will develop. Mixing smaller amounts will minimize heat build-up
   Bulk Containers: Normally material is dispensed through volumetric metered mixing equipment, attached to static mix nozzles. It may also be mixed by weight or volume as described above.
4. Application to the substrates should be made within 5 minutes. Larger quantities and/or higher temperatures will reduce this working time.
5. Allow to cure. Higher temperatures will speed up curing.
6. Excessive uncured adhesive can be cleaned up with ketone type solvents.

STORAGE

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

Optimal Storage: 8 to 21°C. Storage below 8°C or above 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 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

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