Technical Data Sheet

LOCTITE® STYCAST CC 8555

August 2023

PRODUCT DESCRIPTION

LOCTITE® STYCAST CC 8555 provides the following product characteristics:

Technology	Urethane acrylate
Appearance	Clear liquid
Components	One component
Fluorescence	Positive under UV light
Product benefits	• UV curable • Room temperature moisture cure for shadowed areas • One component • VOC/Solvent free • Good moisture resistance • Excellent chemical resistance • Good wettability and void free
Application	Conformal coating
Operating temperature, °C	-40 to 130
Key substrates	• Variety of metal surface • Ceramic • Glass filled epoxy

LOCTITE® STYCAST CC 8555 is a conformal coating designed to provide rugged protection from moisture and harsh chemicals. It is compatible with industry standard solder masks, no-clean fluxes, metallization, components and substrate materials.

LOCTITE® STYCAST CC 8555 conformal coating is specifically formulated to rapidly gel and immobilize when exposed to UV light and then fully cure when exposed to atmospheric moisture, ensuring optimum performance even in shadowed areas.

LOCTITE® STYCAST CC 8555 has a V0 rating per UL 94 and has a Relative Temperature Index (RTI) rating of 130°C per UL 746E. This product conforms to IPC-CC-830 requirements as well.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Viscosity @ 25°C, mPa.s (cP)	60
Specific gravity @ 25°C, g/cc	1.05
Shelf life @ 25°C, days	365
Flash point - see SDS	

TYPICAL CURING PERFORMANCE

Recommended UVA cure condition

Medium pressure mercury vapor lamp:

Wavelength, nm	365
Exposure time, seconds	30
Light intensity, mW/cm²	300 to 600

Moisture cure for shadowed areas

Relative humidity 50%, @ 25°C, hours	72

The above cure profile is a guideline recommendation. Cure rate and ultimate depth of cure depend on light intensity, spectral distribution of light source, exposure time and the light transmittance of the substrate.

Areas hidden or shadowed from the UV light source will moisture cure at ambient temperature and humidity. No further processing is necessary.

TYPICAL PROPERTIES OF CURED MATERIAL

Physical Properties

Hardness, Shore A @ 20s	77

Electrical properties

Volume resistivity @ 25ºC, ohm-cm	1.46×10^{14}
Surface resistivity @ 25ºC, ohm	1.27×10^{14}
Dielectric strength, kV/mm	27.5
Dielectric constant @1 MHz	2.51
Dissipation factor @1 MHz	0.057

Miscellaneous

Tensile strength, N/mm^2 (psi)	10.4 (1,510)
Tensile elongation at break, %	31

GENERAL INFORMATION

For safe handling information on this product, consult the Safety Data Sheet (SDS).

Directions for use

1. Surface preparation of assembled boards prior to applying LOCTITE® STYCAST CC 8555 is not required. However, keeping the board surface clean and dry is recommended. Improved adhesion and reliability performance can be achieved when contaminants such as ionic, dust, salts and oils are cleaned from the assembled board.
2. Final coating thickness is influenced by board size, part geometry and application method.
3. **Spray and flow coating operations:** Solventless conformal coatings usually require modified operating procedures compared to solvent-based systems such as lower flow rate through the gun, increased atomization pressure to create a fine mist and spray gun location approximately 2 to 3 inches above the assembled board.
4. Equipment parameters such as nozzle design, nozzle orientation, path speed and number of passes will impact final coating thickness.

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

Storage between 18-26ºC, out of sunlight and in original unopened containers. Refer to packaging specific quote for shelf-life information. Once opened, containers should be purged with dry nitrogen.

Material removed from containers may be contaminated during use. Do not return product to the original container. Henkel 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.

Not for product specifications
The technical data contained herein are intended as reference only. Please contact your local quality department for assistance and recommendations on the specifications of this product.

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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