

# LOCTITE® EDAG 456

April 2024

## PRODUCT DESCRIPTION

LOCTITE® EDAG 456 provides the following product characteristics:

|                               |                                                                                                                                                                                                                                                       |
|-------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Technology                    | Acrylate                                                                                                                                                                                                                                              |
| Appearance                    | Off-white                                                                                                                                                                                                                                             |
| Product benefits              | <ul style="list-style-type: none"> <li>• Non-conductive</li> <li>• Fast UV cure</li> <li>• Flexible</li> <li>• Excellent adhesion</li> <li>• Excellent printability</li> <li>• Thermoformable</li> <li>• Low odor</li> <li>• Low yellowing</li> </ul> |
| Cure                          | Ultraviolet (UV) light                                                                                                                                                                                                                                |
| Application                   | Non-conductive coating                                                                                                                                                                                                                                |
| Typical assembly applications | Insulating layer; Thermoforming                                                                                                                                                                                                                       |
| Key substrates                | Polyester, Polycarbonate, Polyurethane                                                                                                                                                                                                                |

LOCTITE® EDAG 456 is a flexible, thermoformable, non-conductive coating which can be applied by screen printing techniques.

LOCTITE® EDAG 456 is compatible with thermoformable silver ink LOCTITE® ECI 1501 and stretchable silver ink LOCTITE® ECI 1014.

## TYPICAL PROPERTIES OF UNCURED MATERIAL

|                                        |        |
|----------------------------------------|--------|
| Viscosity, Rheometer, 25°C, mPa.s (cP) |        |
| Shear rate 15s <sup>-1</sup>           | 12,000 |
| Solid content, %                       | 100    |
| Density, g/cm <sup>3</sup>             | 1.35   |
| Shelf life @ 25°C, days                | 365    |

## TYPICAL CURING PERFORMANCE

|                                              |       |
|----------------------------------------------|-------|
| Recommended cure condition                   |       |
| Mercury lamp, Light dose, mJ/cm <sup>2</sup> | 1,000 |

The above cure profiles are guideline recommendations. These conditions (time and temperature) may vary based on customers' experience and specific application requirements, as well as customer curing equipment, oven loading and actual oven temperatures.

## TYPICAL SCREEN PRINTING PROCESS

|                                 |     |
|---------------------------------|-----|
| Recommended screen type         |     |
| Polyester screen, threads/cm    | 120 |
| Typical one layer thickness, µm | 12  |

## TYPICAL PROPERTIES OF CURED MATERIAL

|                                    |        |
|------------------------------------|--------|
| Electrical properties              |        |
| Breakdown voltage @ 25µm, volts AC | >1,000 |
| Adhesion properties                |        |
| Adhesion to PET, ASTM 3359B        | 5B     |

## GENERAL INFORMATION

Please consult the Safety Data Sheet (SDS) for safe handling information of this product.

## Directions for use

### Surface preparation

- Clean surface before use to remove possible contamination.

### Mixing/Dilution

- Stir to ensure homogeneity before use.
- Avoid rapid stirring as this causes air entrapment.

### Other

- When applying LOCTITE® EDAG 456, two layers of approximately 12 to 15 µm each should be applied. Cure both layers according to the recommended cure profile to obtain good inter-coat adhesion between the first and second layer.
- Do not freeze.
- Keep product container tightly closed when not in use.
- Keep away from heat, sparks and open flame.
- Protect material against exposure to UV sources such as daylight and fluorescent lighting.

### Clean up

The equipment can be cleaned with esters (butylacetate, ethylacetate) or ketones (MEK).

### Storage

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

**Optimal Storage: 25°C. Storage below 0°C or greater than 40°C can adversely affect product properties.**

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

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

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