Technical Data Sheet

LOCTITE ABLESTIK 45 W1

March 2015

PRODUCT DESCRIPTION

LOCTITE ABLESTIK 45 W1 provides the following product characteristics:

Technology	Epoxy
Appearance (Resin)	Black
Product Benefits	• Easy mix ratio • Rigid, semi-rigid, and flexible formulations • Excellent shock and peel resistance
Application	General assembly
Operating Temperature - **Semi-rigid**	-55 to 90°C

Its variable mix ratio allows for a rigid, semi-rigid, or flexible cured material. It is designed for use where shock and peel resistance are desired. This material adheres well to a variety of substrates including metals, glass, ceramic and plastics.

LOCTITE ABLESTIK 45 W1 can be used with LOCTITE CAT 15:

CATALYST DESCRIPTION

LOCTITE CAT 15 provides the following product characteristics:

Appearance (Catalyst)	Black
Product Benefits	• General purpose • Good chemical resistance • Good physical strength
Cure	Room Temperature or Heat Cure
Mix Ratio, by weight - Resin : Hardener **Rigid Formula**	100 : 50
Mix Ratio, by weight - Resin : Hardener **Semi-rigid Formula**	100 : 100
Mix Ratio, by weight - Resin : Hardener **Flexible Formula**	100 : 150

TYPICAL UNCURED PROPERTIES

LOCTITE ABLESTIK 45 W1

Viscosity @ 25 °C, mPa·s (cP)	225,000
Density , g/cm³	1.59
Shelf Life (from date of manufacture), @ 18 to 25 °C	365
Flash Point - See SDS	

TYPICAL UNCURED PROPERTIES AS MIXED

LOCTITE ABLESTIK 45 W1 with LOCTITE CAT 15

Viscosity @ 25 °C, mPa·s (cP)	40,000
Density , g/cm³	1.59
Pot Life @ 25ºC, hours	2

TYPICAL CURING PERFORMANCE

Cure Schedule

LOCTITE ABLESTIK 45 W1 with LOCTITE CAT 15

8 hours @ 25°C
30 minutes @ 70°C
15 minutes @ 105°C

Bond strength will increase during the first 24 hours following cure.

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

TYPICAL PROPERTIES OF CURED MATERIAL

Semi-rigid Formulation

LOCTITE ABLESTIK 45 W1 with LOCTITE CAT 15

Physical Properties

Hardness, Shore D		65
Flexural Strength	N/mm² (psi)	34 (4,930)
Young's Modulus, ASTM D638Unit}	N/mm² (psi)	500 (72,500)
Impact Strength, ASTM-D-256, J/cm		22
Volume Shrinkage on Cure, %		3.5
Glass Transition Temperature, °C		37
Coefficient of Linear Thermal Expansion , ppm/°C		50
DMA Modulus :		
@ 35ºC		124
@ 50ºC		21
@ 100°C		13
Water Absorption, %:		
24 hours immersion @ 25 °C		0.98
7 days immersion @ 25 °C		4.1

Electrical Properties

Volume Resistivity @ 25ºC, ohm-cm	3.4×10^{13}
Dielectric Constant / Dissipation Factor:	
@ 0.05 to 1,000	4.0/0.06
Dielectric Strength , ASTM D149, kV/mm	15.6
Surface Resistivity, ohms	3.1×10^{16}

TYPICAL CURED PERFORMANCE AS MIXED

Semi-rigid Formulation

LOCTITE ABLESTIK 45 W1 with LOCTITE CAT 15

Shear Strength :

Tensile Lap Shear Strength	N/mm² (psi)	12 (1,740)

GENERAL INFORMATION

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

DIRECTIONS FOR USE

1. Complete cleaning of the substrates should be performed to remove contamination such as oxide layers, dust, moisture, salt and oils which can cause poor adhesion or corrosion in a bonded part.
2. Mix LOCTITE ABLESTIK 45 W1 in the can in which it is received.
3. Accurately weigh resin and hardener into a clean container in the one of the recommended ratios. Weighing apparatus having an accuracy in proportion to the amounts being weighed should be used.
4. Mix thoroughly.
5. Application is by brush, knife or roller. Apply and squeeze out excess.
6. To prevent adhesion, use MOLD RELEASE 122 S.
7. Clean up solvent is alcohol, acetone, or methyl ethyl ketone (MEK).
8. NOTE: During storage at room temperature for long periods, it is possible that the viscosity of can increase and may exceed its upper specification limit. The viscosity can be brought back to the normal level by moderate mixing.

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

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 Technical Service Center or Customer Service 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 specifications for this product.

Conversions

(°C x 1.8) + 32 = °F
kV/mm x 25.4 = V/mil
mm / 25.4 = inches
N x 0.225 = lb
N/mm x 5.71 = lb/in
N/mm² x 145 = psi
MPa = N/mm²
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

Note:

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Reference 0.0