SICOMET®

Sicomet® 85

April 2011

PRODUCT DESCRIPTION

Sicomet® 85 provides the following product characteristics:

Technology	Cyanoacrylate
Chemical Type	Methyl cyanoacrylate
Appearance	Transparent, colorless liquid
Components	One part - requires no mixing
Viscosity	Low
Cure	Humidity
Application	Bonding
Key Substrates	Rubbers, Metals and Plastics

Sicomet® 85 is a fast curing instant adhesive based on Methyl-2-cyanoacrylate with a low viscosity. It has been designed for high strength metal bonding especially with small bond gaps. It is also suitable for diverse rubber metal bonding. Due to the extreme low viscosity Sicomet® 85 is suitable for well fitting parts with small or no gaps. This product is typically used in applications with an operating range up to +100 °C.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Density, ISO 12185, g/cm³	1.07 to 1.12
Viscosity, Cone & Plate, mPa·s (cP):	
Temperature: 20 °C, Shear Rate: 3,000 s^{-1}	8 to 14
Viscosity, Brookfield, 20 °C, mPa·s (cP):	
Spindle 3, speed 100 rpm	30 to 40
Flash Point - See MSDS	

TYPICAL CURING PERFORMANCE

Under normal conditions, the atmospheric moisture initiates the curing process. Although full functional strength is developed in a relatively short time, curing continues for at least 24 hours before full chemical/solvent resistance is developed.

Cure Speed vs. Substrate

The rate of cure will depend on the substrate used. The table below shows the fixture time achieved on different materials at 22 °C / 50 % relative humidity. This is defined as the time to develop a shear strength of 0.1 N/mm² .

Fixture Time, seconds:	
Aluminum	20 to 50
EPDM	4 to 10
Polycarbonate	10 to 70

TYPICAL PERFORMANCE OF CURED MATERIAL

After 72 hours @ 22 °C

Lap Shear Strength, ISO 4587:		
Steel (grit blasted)	N/mm²	18 to 30
	(psi)	(2,610 to 4,350)
Aluminum (grit blasted)	N/mm²	15 to 30
	(psi)	(2,170 to 4,350)
Zinc dichromate	N/mm²	4 to 12
	(psi)	(580 to 1,740)
ABS	N/mm²	5 to 8
	(psi)	(720 to 1,160)
Polycarbonate	N/mm²	4 to 15
	(psi)	(580 to 2,170)

Tensile Strength, ISO 6922:		
Nitrile	N/mm²	>5
	(psi)	(720)

After 24 hours @ 22 °C

Tensile Strength, ISO 6922:		
EPDM	N/mm²	2.1 to 2.5
	(psi)	(305 to 360)

After 7days @ 70 °C

Tensile Strength, ISO 6922:		
EPDM	N/mm²	1.5 to 2.0
	(psi)	(220 to 290)

After 10 seconds @ 22 °C

Tensile Strength, ISO 6922:		
Nitrile	N/mm²	≥4
	(psi)	(580)

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 Material Safety Data Sheet (MSDS).

Directions for use:

1. For best performance bond surfaces should be clean and free from grease.
2. This product performs best in thin bond gaps (0.05 mm).
3. Excess adhesive can be wiped away with organic solvent.

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.

Storage

Store product in the unopened container in a dry location. Storage information may be indicated on the product container labeling.
Optimal Storage: 2 °C to 8 °C. Storage below 2 °C or greater than 8 °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 Technical Service Center or Customer Service Representative.

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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

Note
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Reference 0.1