Technisches Datenblatt

Produkt:	50
Hersteller:	HENKEL KGAA
Warengruppe:	KLEBSTOFF
Artikelgruppe:	CYANACRYLAT
Download:	28.03.2024

SICOMET 50

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Technical Data Sheet

Sicomet® 50

March 2009

PRODUCT DESCRIPTION

Sicomet® 50 provides the following product characteristics:

Technology	Cyanoacrylate
Chemical Type	Ethyl cyanoacrylate
Appearance (uncured)	Clear, Colorless
Components	One part - requires no mixing
Viscosity	Low
Cure	Humidity
Application	Bonding
Key Substrates	Plastics, Rubbers and Metals

Sicomet® 50 is a fast curing instant adhesive based on Ethyl-2-cyanoacrylate with a low viscosity. The product is designed for fast and high-strength bonding of plastics and elastomers. Due to the low viscosity Sicomet® 50 is suitable for well fitting parts with very small or no gaps. The product can be used up to +80 °C operation temperature and at short-term load up to +100 °C.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Density, ISO 12185, g/cm³	1.05 to 1.1
Viscosity @ 25°C, mPa·s (cP)	
Cone & Plate Rheometer	12 to 25
Viscosity, Brookfield, 25 °C, mPa·s (cP):	
Spindle 3, speed 100 rpm	40 to 60
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	30 to 40
EPDM	<5
Rubber, nitrile	5 to 20
ABS	2 to 10
Polycarbonate	5 to 20

TYPICAL PERFORMANCE OF CURED MATERIAL

After 72 hours @ 22 °C

Lap Shear Strength, ISO 4587:		
Steel (grit blasted)	N/mm²	16 to 26
	(psi)	(2,320 to 3,770)
Aluminum (grit blasted)	N/mm²	10 to 20
	(psi)	(1,450 to 2,900)
Zinc dichromate	N/mm²	3 to 8
	(psi)	(430 to 1,160)
ABS	N/mm²	4.5 to 7
	(psi)	(650 to 1,010)
Polycarbonate	N/mm²	8 to 15
	(psi)	(1,160 to 2,170)
Polyamide (6.6)	N/mm²	4 to 7
	(psi)	(580 to 1,010)
Tensile Strength, ISO 6922:		
Nitrile	N/mm²	≥5
	(psi)	(720)

After 24 hours @ 22 °C

Tensile Strength, ISO 6922:		
EPDM	N/mm²	2 to 2.5
	(psi)	(290 to 360)

After 7 days @ 70 °C

Tensile Strength, ISO 6922:		
EPDM	N/mm²	2 to 2.4
	(psi)	(290 to 350)

After 10 seconds @ 22 °C

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

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.

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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