Technical Data Sheet

LOCTITE® UR 3310™ Gray

Known as LOCTITE® 3310™ Gray
January 2015

PRODUCT DESCRIPTION

LOCTITE® UR 3310™ Gray provides the following product characteristics:

Technology	Polyurethane
Chemical Type	Polyurethane
Appearance (uncured)	Creamy, gray paste
Components	One part - requires no mixing
Cure	Atmospheric moisture
Application	Sealing

LOCTITE® UR 3310™ Gray is a multipurpose, one component polyurethane adhesive sealant. LOCTITE® UR 3310™ Gray is a sag resistant sealant with fast tack free performance. Upon curing, it maintains permanent flexibility and high bond strength. LOCTITE® UR 3310™ Gray provides a flexible, durable and resistant elastomeric seam with good adhesion to most industry materials. The skin formation and curing time depend on humidity, temperature, and joint depth. LOCTITE® UR 3310™ Gray has high initial tack and excellent tear, vibration and weathering resistance. LOCTITE® UR 3310™ Gray is easy to apply and it adheres without using a primer to most common substrates such as glass, aluminum, metal, wood and concrete.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Density, ISO 2811-1 @ 22 °C, g/ml	1.19 to 1.22
Extrusion Rate, g/min	≥330
Slump test, ASTM D2202, mm	≤6.4 LMS
Flash Point - See SDS	

TYPICAL CURING PERFORMANCE

Under normal conditions, the atmospheric moisture initiates the curing process. The product develops functional strength in 24 hours and fully cures in 7 days.

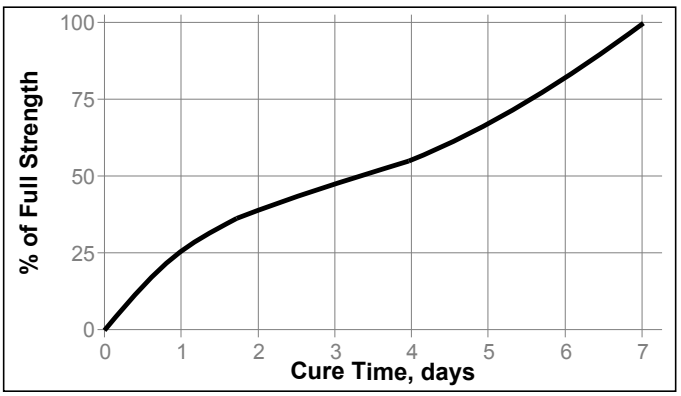
Skin Over Time

Skin over time is the time the surface of the adhesive forms a skin upon exposure to atmospheric moisture at 25 ± 2 °C, 50 ± 5% RH.

Skin Over Time, minutes	70

Cure Speed vs. Time

The graph below shows the shear strength developed over time at 22 °C / 50 % RH on Steel and tested according to ISO 4587.



TYPICAL PROPERTIES OF CURED MATERIAL

Cured for 7 days @ 22 °C / 50±5 % RH

Physical Properties:

Elongation, at break, ISO 527-3, %		666
Tensile Strength, ISO 527-3	N/mm²	0.9
	(psi)	(135)
Shore Hardness, ISO 868, Durometer A		32

TYPICAL PERFORMANCE OF CURED MATERIAL

Adhesive Properties

Cured for 7 days @ 22 °C

Lap Shear Strength, ISO 4587:

Steel	N/mm²	1.0
	(psi)	(140)
Aluminum	N/mm²	0.6
	(psi)	(90)
Wood (Pine)	N/mm²	1.8
	(psi)	(260)
Glass	N/mm²	1.1
	(psi)	(160)

Block Shear Strength, ISO 13445:

Polycarbonate	N/mm²	0.6
	(psi)	(85)
ABS	N/mm²	0.5
	(psi)	(70)

"T" Peel Strength, ISO 11339:		
Aluminum	N/mm	0.16
	(lb/in)	(0.93)

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 Safety Data Sheet (SDS).

Directions for use:

1. For best performance bond surfaces should be clean and free from grease.
2. Moisture curing begins immediately after the product is exposed to the atmosphere, therefore parts to be assembled should be mated within a few minutes after the product is dispensed.
3. The bond should be allowed to cure (e.g. seven days), before subjecting to heavy service loads.
4. Excess material can be easily wiped away with non-polar solvents, e.g. mineral spirits or naptha based cleaners.

Loctite Material Specification[LMS]

LMS dated May 3, 2011. Test reports for each batch are available for the indicated properties. LMS test reports include selected QC test parameters considered appropriate to specifications for customer use. Additionally, comprehensive controls are in place to assure product quality and consistency. Special customer specification requirements may be coordinated through Henkel Quality.

Storage

Store product in the unopened container in a dry location. Storage information may be indicated on the product container labeling.
Optimal Storage: 8 °C to 21 °C. Storage below 8 °C or greater than 28 °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

Reference 0.3