Technical Data Sheet

LOCTITE® FREKOTE R-180™

Known as Aqualine® R-180™
January 2015

PRODUCT DESCRIPTION

LOCTITE® FREKOTE R-180™ provides the following product characteristics:

Technology	Mold Release
Appearance	White emulsion[LMS]
Chemical Type	Water based emulsion
Odor	Mild
Cure	Heat cure
Cured Thermal Stability	≤315 °C
Application	Release Coatings
Application Temperature	60 to 200 °C
Specific Benefit	• Fast curing • Non-flammable • Freeze/Thaw stable • Excellent slip

LOCTITE® FREKOTE R-180™ offers excellent release and slip properties and is recommended for the most demanding molding applications, especially for highly abrasive compounds. When properly applied to a preheated surface, this water based product chemically bonds to the mold surface to form a thin, inert, thermally stable coating capable of releasing all natural and synthetic rubber compounds as well as thermoplastic urethanes and some solid polyurethane cast elastomers.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Specific Gravity @ 25 °C	0.98 to 1.02
Flash Point - See SDS	
pH	3.8 to 4.2[LMS]

GENERAL INFORMATION

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

Mold Preparation

Cleaning:

Mold surfaces must be thoroughly cleaned and dried. All traces of prior release must be removed. This may be accomplished by using Frekote® PMC or other suitable cleaner. Frekote® 915WB™ or light abrasives can be used for heavy build-up.

NOTE: Optimum results will be achieved when molds are cleaned prior to use of LOCTITE® FREKOTE R-180™

Directions for use:

1. Apply LOCTITE® FREKOTE R-180™ to molds pre-heated to a minimum of 60°C. LOCTITE® FREKOTE R-180™ is suitable for mold temperatures up to 200°C.
2. Apply LOCTITE® FREKOTE R-180™ using a finely atomized fan pattern. Regulate the gun output to 60 - 90 ml/minute for molds heated from 60°C - 150°C. Molds above 150°C regulate gun output to 120 - 150 ml/minute.
3. At 60°C, LOCTITE® FREKOTE R-180™ will dry in a few seconds and be fully cured after 25 minutes. At 93°C, cure time is reduced to 10 minutes, and at 150°C LOCTITE® FREKOTE R-180™ dries instantly and required only 4 minutes to fully cure.
4. For hot 120 to 200°C molds, or porous molds, apply a minimum of 6 coats. For temperatures ranging from 60 to 120°C, a minimum of four coats should be applied with care taken to avoid emulsion accumulation and run marks due to over application. Allow time for the relase agent to cure prior to production.

Mold Touch up

Touch up coats should only be applied to areas where poor release is noticed and should be applied using the same method as base coats. This will reduce the possibility of release agent or polymer build-up. The frequency of touch ups will depend on the polymer type, mold configuration, and abrasion parameters.

Loctite Material Specification[LMS]

LMS dated June 25, 2007. 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

Note:
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