Technical Data Sheet

LOCTITE® IS 90C™

Known as LOCTITE® Resinol® 90C™
August 2016

PRODUCT DESCRIPTION

LOCTITE® IS 90C™ provides the following product characteristics:

Specification	Acrylic
Chemical Type	Methacrylate monomers
Appearance (uncured)	Clear liquid[LMS]
Emulsification	Homogeneous milky white dispersion[LMS]
Fluorescence	Positive under UV light[LMS]
Components	One component - requires no mixing
Viscosity	Low
Cure	Heat cure
Application	Sealing

LOCTITE® IS 90C™ is a water washable, heat cure sealant for impregnation of porous materials. It cures to form a durable thermoset plastic by a free radical polymerization reaction, by exposure to elevated temperatures above 80 °C. LOCTITE® IS 90C™ is recommended for low to medium volume production impregnating, and for any impregnation service where simplicity and ease of maintenance are priorities. This product is used in the automotive, OEM supplier, defense/aerospace and other general industries for sealing microporosity in metal castings, powder metal parts, weldments and other porous substrates.

Mil-I-17563

LOCTITE® IS 90C™ has passed all requirements of Military Specification Mil-I-17563 Rev. C - Class 1.

NSF International

Certified to ANSI/NSF Standard 61 for use in commercial and residential potable water systems not exceeding 82° C.
See Directions for use for more details.

UL Classification

Classified by Underwriters Laboratories Inc.® MH15585 as a casting impregnation material for exposure to gasoline, kerosene, fuel oils, naptha and gasoline-ethanol and gasoline-methanol mixtures with a maximum of 15% ethanol or methanol. **Note:** This is a regional approval. Please contact your local Technical Service Center for more information and clarification.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Specific Gravity @ 25 °C	1.0
Surface Tension, ASTM D 1590, dynes/cm	32.6
Flash Point - See SDS	
Viscosity, Cannon Fenske, ISO 3104, mPa·s (cP)	5 to 20[LMS]

TYPICAL PROPERTIES OF CURED MATERIAL

Physical Properties:

Shore Hardness, ISO 868, Durometer D	76

Outgassing Properties:

Volatile Condensable Material (VCM), %	0.07

TYPICAL ENVIRONMENTAL RESISTANCE

Solvent Resistance

LOCTITE® IS 90C™ has passed all requirements of Mil-I-17563 Rev. C and is QPL listed. The following solvent conditions were tested and approved per Mil-I-17563 Rev. C - Class 1.

Solvent	Result
Water	No Leakage
Oil	No Leakage
Hydraulic Fluid	No Leakage
Hydrocarbon Fluid	No Leakage
Carbon Removing Compound	No Leakage
Turbine Fuel	No Leakage
Lubricating Oil	No Leakage
Ethylene Glycol	No Leakage

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

NOTE: When determining adequate heat cure processing times, the heat transfer characteristics of the processed parts must be carefully considered. Effective cure time should be measured from the time the entire part reaches the desired curing temperature.

1. Use any of the following vacuum impregnation methods to

impregnate parts in LOCTITE® IS 90C™: Dry vacuum/pressure, wet vacuum/pressure, wet vacuum, pressure impregnation.

2. After the impregnation procedure, put parts in drip station or centrifuge to remove excess surface resin.
3. Clean parts by washing in plain water.
4. Soak parts in hot water tank. Allow sufficient time for sealant to cure within the parts. A corrosion inhibitor can be added to the hot water tank to provide part protection from rust or corrosion.

   NOTE: At 90 °C sealant will cure in 4 to 10 minutes, but allow sufficient time for interior sections of parts to reach that temperature.
5. Remove parts from the hot water tank, and allow sufficient time to thoroughly cool.
6. For brass parts qualified to NSF Std 61, Brass porosity should be <20% and use a 30-40 minute hot water cure.

Loctite Material Specification[LMS]

LMS dated September 01, 1995. 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: 2°C to 8°C for catalyzed product, 8 °C to 21 °C for un-catalyzed product. Storage below 2 °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.

Waste Disposal

Wastes generated during the impregnation process can, in general, be adequately handled by conventional biological treatment methods. Since both the circumstances of use and local environmental requirements vary, waste disposal recommendations are somewhat application specific. Contact Loctite® Impregnation Technical Service for the details of an effective waste disposal program.

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:
The information provided in this Technical Data Sheet (TDS) including the recommendations for use and application of the product are based on our knowledge and experience of the product as at the date of this TDS. The product can have a variety of different applications as well as differing application and working conditions in your environment that are beyond our control. Henkel is, therefore, not liable for the suitability of our product for the production processes and conditions in respect of which you use them, as well as the intended applications and results. We strongly recommend that you carry out your own prior trials to confirm such suitability of our product.
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