

LOCTITE® NEO 1300/2300

October 2023

PRODUCT DESCRIPTION

LOCTITE® NEO 1300/2300 provides the following product characteristics:

Technology	NEO Thermoset
Chemical Type	Polycondensation, Free of epoxy and Isocyanate
Components	Two components – requires mixing
Component A	LOCTITE® NEO 1300
Component B	LOCTITE® NEO 2300
Appearance (Mixed)	Yellow
Application	Assembly
Mix Ratio, (by volume) Component A:B	100 : 106
Mix Ratio, (by weight) Component A:B	100 : 85
Cure	Room temperature cure after mixing

LOCTITE® NEO 1300/2300 is a two-component fast setting material for use as an adhesive, casting compound or potting material with the mildest labeling of the NEO line. Component A is based on modified polyols, component B is based on amine functional compounds. Once mixed, LOCTITE® NEO 1300/2300 cures at room temperature to form a resilient material. The system does not contain isocyanates, epoxies or other sensitizing agents. The low viscosity offers excellent membrane penetration, high degree of moisture tolerance and fast curing at a low exotherm. Typical applications include bonding materials and the construction of hollow fiber water filters and membrane elements requiring shortened trim times.

Certificates and Approvals

LOCTITE® NEO 1300/2300 has been designed to pass KTW BWGL and NSF 61 in the final application. Further information is available on request.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Component A (Resin)

Specific gravity @ 23°C	1.18
Viscosity, Brookfield - RVT, 25°C , mPa·s (cP): Spindle 7, speed 100 rpm	180

Component B (Hardener)

Specific gravity @ 23°C	0.95
Viscosity, Brookfield - RVT, 25°C , mPa·s (cP): Spindle 7, speed 100 rpm	20

Mixture (Component A + B)

Specific gravity @ 23°C	1.07
Viscosity, Brookfield - RVT, 25°C , mPa·s (cP): Spindle 7, speed 100 rpm	100

TYPICAL CURING PERFORMANCE

Pot life, minutes (Time for mixed viscosity to reach 10 Pa.s)	10.5
Gel time, minutes: (Time for mixed viscosity to reach 100 Pa.s)	20.0

TYPICAL PERFORMANCE OF CURED MATERIAL

Cured for 7 days @ 23°C

Physical Properties

Shore Hardness, Durometer D, ASTM D2240	56
Glass transition temperature, DMA, °C	43

GENERAL INFORMATION

For safe handling information on this product, consult the Safety Data Sheet (SDS). Also, for chemical products exempt from compulsory labeling, the relevant precautions should always be observed. Please also refer to the local safety instructions.

Directions for use

Pretreatment:

The substrate should be clean, dry, free of dust, oil, grease and other contaminants. The usage of suitable primers on metal surfaces can improve the adhesion and / or the long-term bond stability. The surface of plastic materials should be cleaned, so as to remove any kind of release agents present on the substrate surface. An improvement of the adhesion can be achieved by grinding or sandblasting the surface.

Application:

Adhesive components can be mixed manually by using an electrical hand mixer or by using a two-component dispensing system. After mixing no streaks must be visible. The adhesive is only to be used within a limited time (pot life). After this time the mixture gels up and is not suitable for use. Therefore, only the amount that can be applied within the time of pot life should be mixed. The pot life depends on the quantity and temperature of the mixed batch. Lower temperatures extend the pot life. With larger quantities and an increase in temperature, the pot life shortens.

LOCTITE® NEO 1300/2300 contains amines and readily reacts with isocyanates. If the system is used in the same line together with polyurethane (PUR) systems, it is highly recommended to properly clean all parts when switching between adhesive systems.

Differences to PUR based systems. The chemistry behind the LOCTITE® NEO technology is water insensitive and no foam is generated in contact with moisture. Immediately after mixing, an intense yellow color indicates the progression of the polymerization reaction. After some time, the mixture turns turbid and the polymer solidifies. The formed turbidity does not influence the performance of the potting. Clear polymers can be obtained in thin layers by extended storage of the cured polymer at elevated temperatures.

Curing:

LOCTITE® NEO systems can be cured between 20°C and elevated temperatures (up to 80°C). The curing time will be reduced substantially with increasing temperatures. At room temperature, final hardness will be reached after ca. 7 days.

Cleaning:

Fresh, uncured material can be removed with LOCTITE® SF 8040 or with ketone type solvents. Cured material can be removed mechanically.

STORAGE

Store product in the unopened container in a cool dry well ventilated area. Storage information may be indicated on the product container labeling.

Optimal Storage Component A: -20 to 50°C. Close container properly immediately after taking out material.

Optimal Storage Component B: -20 to 50°C. Close container properly immediately after taking out material.

Material removed from containers may be contaminated during use. Do not return product to the original container. Henkel 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 Henkel representative.

Product specification

The technical data contained herein are intended as reference only and are not considered specifications for the product. Product specifications are located on the Certificate of Analysis or please contact Henkel representative.

Data Ranges

The data contained herein may be reported as a typical value. Values are based on actual test data and are verified on a periodic basis.

Temperature/Humidity Ranges: 23°C / 50% RH = 23±2°C / 50±5% RH

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

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