LOCTITE® C5-A® Copper Based Anti-Seize

September 2009

PRODUCT DESCRIPTION

LOCTITE® C5-A® Copper Based Anti-Seize provides the following product characteristics:

Technology	Anti-Seize
Appearance	Copper colored LMS
Appearance (Condition)	No lumps, coarse particles or separation LMS
Appearance (Material)	Colloidal copper and petroleum grease present LMS
Cure	Non-curing
Application	Lubrication

LOCTITE® C5-A® Copper Based Anti-Seize provides a shield against high temperature seizing and galling. All mated parts, studs, bolts, flanges and gaskets, remove more easily and in cleaner and better condition. This product can be used on copper, brass, cast iron, steel, all alloys including stainless steel, all plastics and all non-metallic gasketing materials. Typical applications include original equipment and maintenance, and equipment associated with petroleum chemicals, steel mills, power plants, marine and foundries. This product is typically used in applications with an operating range of -29 °C to +982 °C.

TYPICAL PROPERTIES

Specific Gravity @ 25 °C	1.2 to 1.4 LMS
Density @ 25 °C, g/ml	1.27
Flash Point - See MSDS	
Solids/Non-Volatile Content, %	40
Penetration, ISO 2137, 1/10 mm	325 to 375 LMS

TYPICAL PERFORMANCE

An anti-seize lubricant used on a bolt helps to develop greater clamp load for the same torque compared to an unlubricated bolt. An additional benefit is greater uniformity in clamp load among a series of bolts. The relationship between torque and clamp load is expressed in the following equation:

T = K x F x D

T = Torque (N·m, lb.in, lb.ft)
K = Torque coefficient or nut factor, determine experimentally
F = Clamp load (N, lb.)
D = Nominal diameter of bolt (mm, in.)

Torque coefficient, k:

12.7 mm steel bolts (grade 8) and nuts (grade 5)	0.16
12.7 mm steel bolts (grade 8) and nuts (grade 5), solvent cleaned, not lubricated	0.27

(In critical applications, it is necessary to determine the K values independently. Henkel corporation makes no warranty of specific performance on any individual fastener)

GENERAL INFORMATION

This product is not recommended for use in pure oxygen and/or oxygen rich systems and should not be selected as a lubricant 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 the mating surface should be clean and free of grease.
2. **Note**: **When grinding or wire brushing, use a dust mask**. Dust from cleaning threads may contain metal compounds. Inhalation may cause lung injury or other harm.
3. Apply thin coating to threads and flats of nuts and bolts, assemble.

Loctite Material Specification LMS

LMS dated September 26, 2005. 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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Reference 1.4