ROCOL®

Performance you can trust

Technical Data

ANTI-SEIZE COMPOUND

Copper Based Anti-Seize

Description

ROCOL® ANTI-SEIZE Compound is a copper based anti-seize paste reinforced with graphite and molybdenum disulphide to further enhance its performance particularly in applications where conventional copper based anti-seize products may fail to perform.

ROCOL ANTI-SEIZE Compound is designed for use on all static fasteners and mechanisms prone to seizure. This high performance compound is ideal as an assembly and anti-seize lubricant in extreme adverse conditions where pick up and seizure issues may be experienced.

ROCOL ANTI-SEIZE Compound is particularly suited to extreme wet conditions even when submerged in sea water environments.

Applications / Industries

- Furnaces
- Docks / ports
- Offshore
- Engines
- Automotive

Approvals

- NATO Stock numbers:
  - 8030-99-301-6210 (85g)
  - 8030-99-224-6794 (500g)
  - 8030-99-541-8659 (6kg)
- RAF Ref No:
  - 34D/301-6210 (85kg)
  - 34D/224-6794 (500g)
- Naval Cat No: 0475-541-8659
- British Rail – Cat No: 27004578

Features & Benefits

- Outstanding temperature range -50°C to +1100°C
- Non melting compound
- Prevents pick up and seizure of static threaded fasteners
- Lubricates, protects and eases dismantling
- effective even in the most aggressive environments and is completely insoluble in water.
- Excellent corrosion protection
- Improves co-efficient of friction, see page 3 for details.

Directions For Use

ANTI-SEIZE Compound should be stored in its unopened original container.
For best practice, storage temperature of should be controlled to between +1°C and +40°C.
Shelf life is 5 years from date of manufacture
Apply a thin film by brushing or wiping on to a clean surface
Also available as an aerosol – see Anti-Seize Spray

Further Information

For pack sizes, part codes and safety data sheets please visit www.rocol.com or get in touch with our customer service team who will be happy to help: customer.service@rocol.com

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bsi. ISO 9001 Quality Management FM 12448 | AS/EN 9100 Series Aerospace FM 667905 | ISO 14001 Environmental Management EMS 67596 | OHSAS 18001 Occupational Health and Safety Management OHS 78173

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Property	Test Method	Result
Appearance	N/A	Dark coppery coloured paste
NLGI No.	IP 50 – ASTM D217	1/2
Base Type	N/A	Mineral oil
Thickener	N/A	Organically modified clay
Solids	N/A	Copper, Graphite, MoS_2
Solids Content	N/A	Approximately 37%
Temperature Range	N/A	-50°C to +1100°C
Water Solubility	N/A	Insoluble
Coefficient of Friction	1.25" carbon steel bolts	0.15
Approximate Coverage	0.1mm film thickness	$10m^2/kg$

Values quoted above are typical and do not constitute a specification.

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Torque Settings of Fasteners

When a thread compound is applied to a fastener that will be torque tightened, the torque setting will require adjustment to achieve the correct tension in the fastener. Correct torque settings can be calculated using the methods below.

The following parameters were derived from the tension-torsion relationship measured on M12 x 50mm setscrews with 1.75mm thread pitch, full nut and Form A washers. Fasteners were degreased and a thin layer of thread compound applied in line with instructions on Page 1. Data are for fasteners at 90% of the yield stress:

Fastener Material	Coefficient of Friction (μ)	K-Factor
8.8 Steel Plain Finish	0.114	0.15
8.8 Steel BZP	0.077	0.11
8.8 Steel Hot Dip Galvanised	0.101	0.14
304 Stainless Steel	0.108	0.15
Aluminium 6061	0.085	0.13
Aluminium 7075	0.085	0.12
Ti6Al4V Bolt / Alu 7075 Nut & Washer	0.079	0.11

$$T = F \times \left[(0.159 \times P) + (0.577 \times d \times \mu) + (D_f \times \frac{\mu}{2})\right]$$

T = *Torque Applied (Nm)*
F = *Tension Generated in Fastener (N)*
P = *Thread Pitch (m)*
d = *Pitch Diameter (m)*
D_f = *Nut Friction Diameter (m)*
μ = *Coefficient of Friction*

$$T = K \times F \times D$$

T = *Torque Applied (Nm)*
F = *Tension Generated in Fastener (N)*
D = *Nut Nominal Bolt Diameter (m)*
K = *K-Factor*

Many parameters affect the tension-torsion relationship of fasteners, including: Bolt geometry, surface finish, lubricant application method, joint material, torque application method, variation in fastener manufacture etc. Therefore, these parameters above are for guidance only, especially if a different material is used or if geometry is significantly different to M12. Any calculated values are a predictive tool and the final tension should be verified, especially in critical applications. These values do not constitute a specification.

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