ROCOL®

Technical Datasheet

Performance you can trust

ANTI-SEIZE Stainless

Anti-seize paste specially formulated for nimonic and stainless steel

Applications

ROCOL® ANTI-SEIZE Stainless is a nickel-free anti-seize paste specifically designed for nimonic, stainless and silver coated fasteners particularly those subjected to high temperatures for long periods in the aerospace and power generation industries.

It is designed for use as an assembly and anti-seize lubricant to prevent pick up and seizure even in extreme environmental conditions.

ROCOL ANTI-SEIZE Stainless does not contain copper and exhibits extremely low sulphur and chlorine levels making it ideal for use on exotic alloys often found in the aerospace and other associated industries.

ANTI-SEIZE Stainless was formerly known as ASC251(T)

Features and Benefits

- Broad functional temperature range
- Provides even torque loads and resists galling and pick-up on assembly.
- Protects against wet conditions and chemical attack even in aggressive environments.
- Excellent anti-seize properties over extended periods at high temperatures.
- Contains extremely low levels of chlorine and sulphur.
- Lubricates, protects and eases dismantling.
- Suitable for use with aluminium and its alloys.

Usage and Storage Guidance

- ANTI-SEIZE Stainless contains calcium. Calcium-containing materials are limited on chromium-containing alloys to operations <300°C, particularly in combined cycle gas turbines (CCGT). If this affects your system, please speak to our technical department. ANTI-SEIZE SA 610 is calcium-free and optimised for high temperature service.
- Apply as a thin film by brushing or wiping onto a clean dry surface.
- Apply to threads and fastener bearing faces
- The storage temperature should be controlled between +1°C and +40°C.
- Shelf life is 5 years from date of manufacture.

Approvals and Certifications

- Rolls Royce MSRR 4008
- Rolls Royce OMAT 4/62
- Rolls Royce OMAT 10123 (spec for V2500)
- Rolls Royce COMAT 10-110
- Naval Cat No.:
  - 0475-179-9539
- NATO Stock No.:
  - 8030-99-179-9539
- BAE Systems approved for high nickel alloys

Pack Sizes

Part Code	Pack Size
14143	500g

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www.rocol.com

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Registered Company No: 00559693
Registered Office: Saxon House, 2-4 Victoria Street, Windsor, England, SL4 1EN

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Parameter	Test Method	Value
Appearance	Visual	Stiff black paste
Carrier	N/A	Synthetic hydrocarbon
Solids	N/A	Graphite, Inorganic compound
Temperature Range	Chromium-Containing Alloys Others	-40˚C to +300˚C -40˚C to +1000˚C
Approximate Coverage	0.1mm film thickness	10m^2/kg
Sulphur Content	XRF	<250ppm
Chlorine Content	XRF	<250ppm

Safety Datasheets

These are available at https://www.rocol.com/datasheets. For further assistance, please contact us via the ROCOL website or using the details below.

Note

The information in this Technical Datasheet is informed by our experience and feedback from industry. There are many variables outside our control or knowledge which affect the use and performance of our products, for which reason it is given without responsibility. Values quoted are typical and do not constitute a specification.

If you'd like to discuss the suitability of any ROCOL solution for your system, please get in touch.

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Torque Setting for Threaded 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 to threads, nut face and washers. Data are for fasteners at 90% rated yield stress:

Fastener Material	Coefficient of Friction (μ)	K-Factor
A2-70 Stainless Steel	0.157	0.20
8.8 Steel Plain Finish	0.162	0.21
8.8 Steel BZP	0.106	0.15
Aluminium 6061	0.149	0.19
Aluminium 7075	0.143	0.19
Ti6Al4V Bolt / Alu 7075 Nut & Washer	0.136	0.18
Waspaloy (55% Yield Stress)	0.169	0.22

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

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.

For further guidance, please speak to your usual ROCOL contact or technical.lubricants@rocol.com.

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