



MOLYKOTE®

# MOLYKOTE® P-3700 Anti-Seize Paste

High-purity solid lubricant paste for bolted joints

DU PONT™

# Direct response to market needs & trends

**MOLYKOTE®**



*Threaded connections in high-temperature-exposed applications like turbines or turbochargers require health-friendly lubrication to avoid seizing and to provide proper tightening torque.*

## **MOLYKOTE® P-3700 Anti-Seize Paste:**

- Provides controlled friction during assembly
- Makes threaded connections simple to release after long periods of time at elevated temperatures
- Is environmentally friendly and health-friendly – no hazard labeling and precautionary statements
- Is free of intentional chromium ingredients
- Significantly reduces formation of hexavalent chromium when used on alloys with high chromium content at  $T > 300^{\circ}\text{C}$
- Is free of any intentional calcium-based and magnesium-based ingredients

# Performance advantages

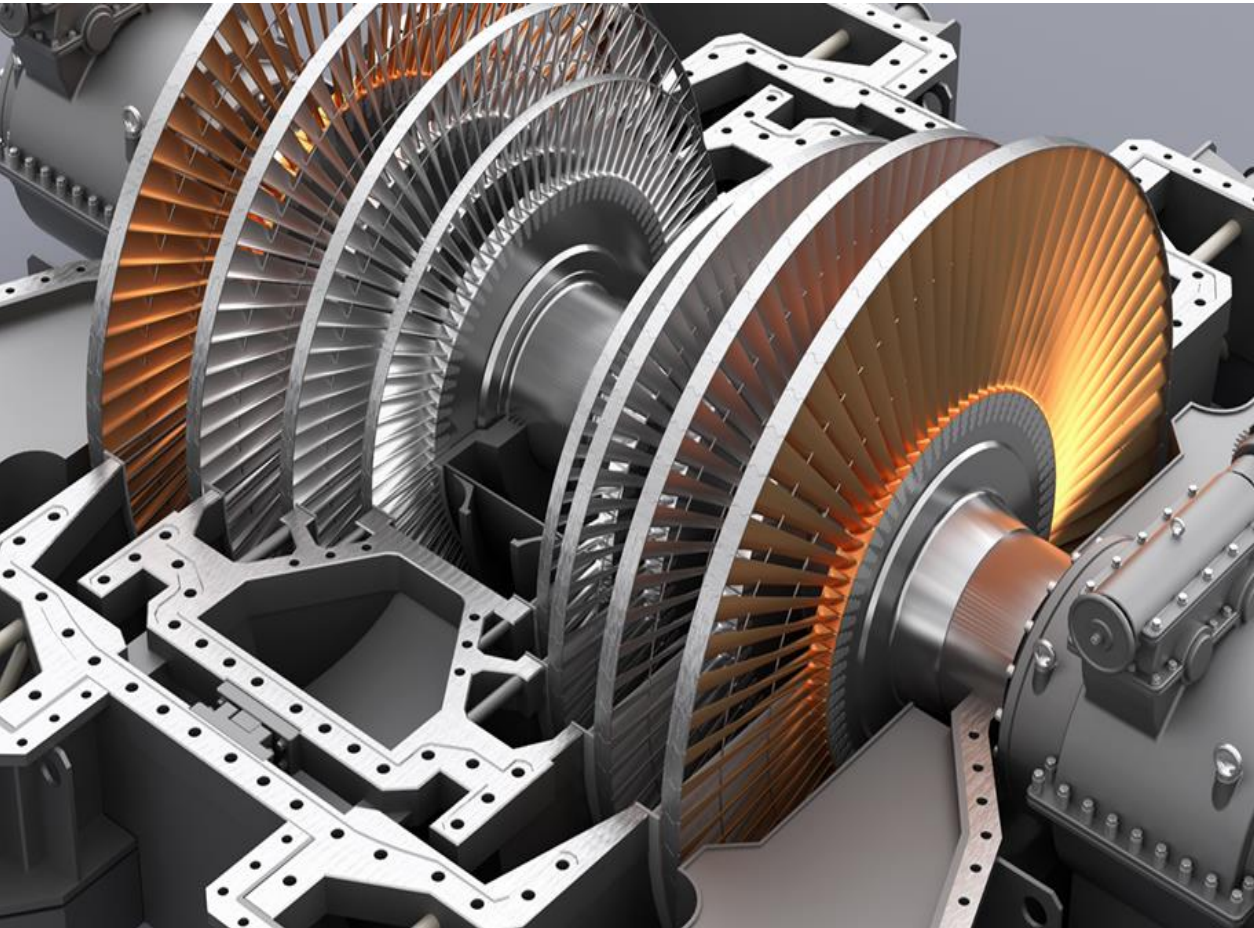


- Significantly reduces formation of hexavalent chromium when used on chromium containing alloys at >300°C
- Wide service-temperature range: -30°C to 900°C
- Excellent heat resistance: Fully functional anti-seizing property up to 900°C; higher temperatures were not tested
- Provides controlled friction during assembly, supporting exact tensioning

M12 x 1.75 mm, 8.8, blackened surface		M12 x 1.75 mm, A2-70, 1.4301, blank	
μ thread (avg.)	0.10	μ thread (avg.)	0.11
μ head (avg.)	0.10	μ head (avg.)	0.09
K-factor (avg.)	0.14	K-factor (avg.)	0.14

- Very good load-carrying capacity: 4-ball weld load of ~3,000 N

# Reliable, safe operation of gas & steam turbines, turbochargers



## Sustainability features

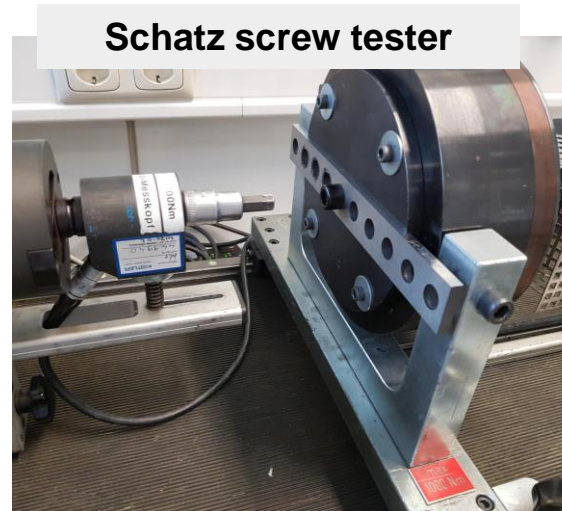
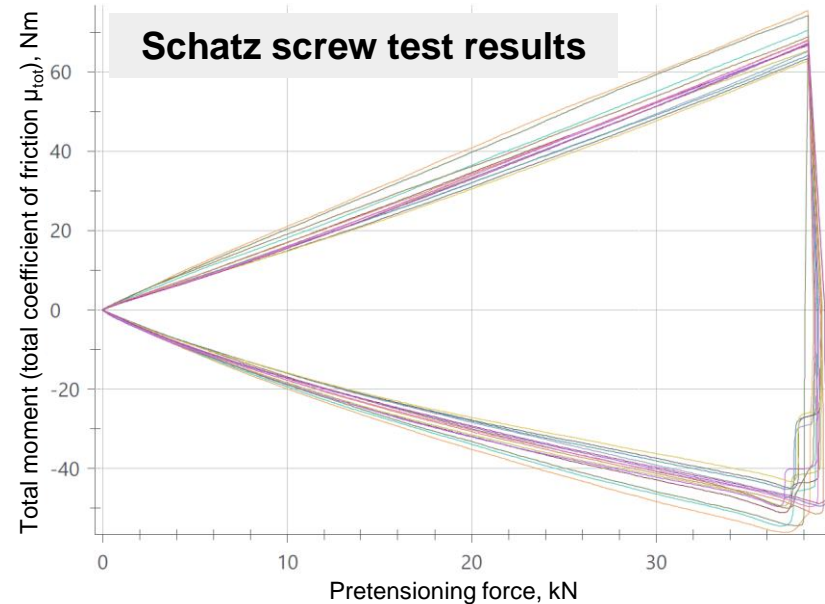
- Provides durable, decades-long performance, **enabling maintenance** after long periods of time at elevated temperatures to **minimize material usage and waste**
- Equipped with a **friendly EHS profile (hazardous label-free)** while still providing **high performance under stress**
- **Prevents formation of hazardous substances**, even in high-temperature applications

# Technical information



# Screw testing

MOLYKOTE® P-3700 Anti-Seize Paste provides repeatable constant forces over multiple tightenings (5), independent of screw type.



Lubricated stainless steel bolts after exposure to >500°C



**Existing products**  
Yellow Cr(VI) formation



**MOLYKOTE® P-3700 Paste**  
Cr(VI) issue solved

New MOLYKOTE® P-3700 Anti-Seize Paste successfully suppresses yellowish hexavalent chromium formation at high temperatures while still offering fully functional anti-seizing property.

M12 x 1.75 mm, 8.8, blackened surface	M12 x 1.75 mm, A2-70, 1.4301, blank
$\mu$ thread (avg.) 0.10	$\mu$ thread (avg.) 0.11
$\mu$ head (avg.) 0.10	$\mu$ head (avg.) 0.09
K-factor (avg.) 0.14	K-factor (avg.) 0.14

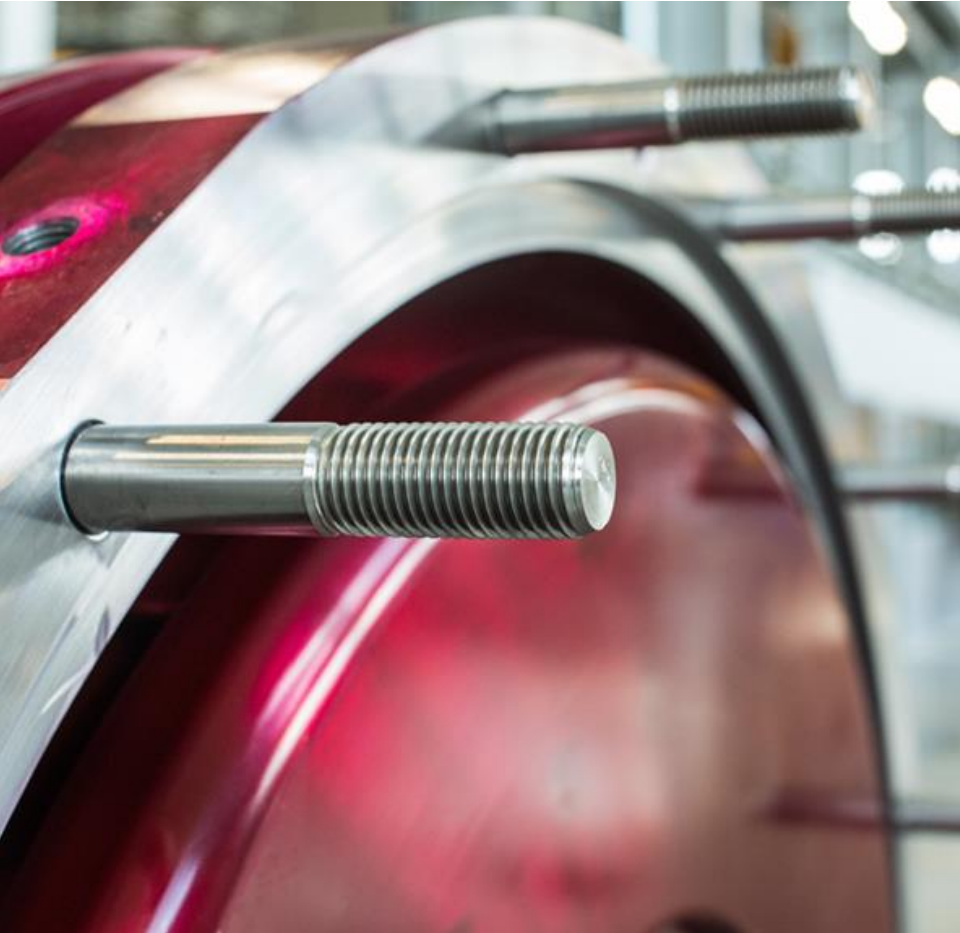
# Preliminary technical data

Test <sup>(1)</sup>	Property	Result
	Appearance	Dark gray
	Service temperature range <sup>(2)</sup>	-30 to +900°C
<b>Consistency, density</b>		
ISO 2137	Unworked penetration	280 to 320 mm/10
ISO 2811	Density at 20°C (68°F)	1.23 g/cm <sup>3</sup>
<b>Loading capacity, protection against wear, service life</b>		
DIN 51350 T.4	4-ball weld load	3,000 N
DIN 51350 T.5	4-ball wear scar under 400 N load	1.1 mm
<b>Coefficient of friction &amp; threaded connections</b>		
Screw test: Schatz tester	M12 x 1.75 mm, 8.8, blackened surface	μ thread (avg.) = 0.10 μ head (avg.) = 0.10 K-factor (avg.) = 0.14
Screw test: Schatz tester	M12 x 1.75 mm, A2-70, 1.4301, blank	μ thread (avg.) = 0.11 μ head (avg.) = 0.09 K-factor (avg.) = 0.14
Internal	Initial breakaway torque after 540°C/21 hr on 1.7709, M12, blackened (start torque = 56 Nm)	~120 Nm

<sup>(1)</sup>ISO: International Standardization Organization. DIN: Deutsche Industrie Norm. | <sup>(2)</sup>Temperature resistance of solid lubricants.

Specification writers: These values are not intended for use in preparing specifications. Please contact your local MOLYKOTE® sales representative prior to writing specifications on this product.

# Product summary



## Key features

- Excellent anti-seize property, even after exposure up to 900°C
- Controlled friction during assembly, supporting exact tensioning
- High-purity paste

## Benefits to customers

- Significantly reduces Cr(VI) formation when used on alloys with high chromium content at  $T > 300^{\circ}\text{C}$
- Threaded connections are simple to release after long periods of time at elevated temperatures
- Environmentally friendly and health-friendly – currently free of hazards
- Global availability



# Thank you

[molykote.com](http://molykote.com)



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