NanoLub

GH-X
Anti-Friction & Anti-Wear Paste Additive for Grease

PRODUCT DATA SHEET

NanoLub

UNIQUE NANO-TECHNOLOGY

EXTENDED MACHINERY LIFE

LESS INTERNAL WEAR

24/7 REDUCE DOWNTIME

IMPROVE POWER & TORQUE PERFORMANCE

EXTENDS MAINTENANCE INTERVALS
NanoLub® GH-X 
Product Data Sheet

Anti-Friction & Anti-Wear Paste Additive for Grease

Dual-Effect Active Material

Anti-friction Effect

Refurbishing Effect

Description
NanoLub® GH Series is a new generation surface-reconditioning nano lubricant additive for grease.
Featuring a unique “dual action” effect: multi-layer WS₂ nanospheres lower friction and heat, thereby reducing mechanical wear.
At the same time, friction causes nanospheres to release tribofilms that attach to surface crevices and re-smoothen them, thereby extending mechanical efficiency and apparatus life.
NanoLub® GH-X is specially formulated to perform in extreme pressure conditions.

Applications
- General applications where grease is the most suitable lubricant.
- For use in automotive, industrial, mining and heavy equipment. Applicable in bearings, gears (open gears, closed gears) slideways and various other machine components.
- Suitable for a wide variety of greases, including lithium, lithium complex, aluminium and calcium types.

Key Features
- Special additive for extreme pressure performance.
  In house test show 620-800 kg Weld Load on 4-Ball (ASTM D-2596); stronger performance than conventional greases.
- Significant friction reducer including anti-wear and load carrying properties.
- Extends maintenance intervals and reduces downtime.
- Easily applicable to grease production processes.

How NanoLub® “Dual Action” Works

Multi-layered nanosphere particles reduce friction

Under stress, nanoparticles exfoliate tribofilm lamellas

Tribofilm lamellas fill and re-smoothen damaged surfaces

IF-WS₂
2 nm
Technical Specs

<table>
<thead>
<tr>
<th>Field</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color</td>
<td>Dark grey</td>
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<tr>
<td>Treat rate</td>
<td>3% - 5% v/v in host grease</td>
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<tr>
<td>Carrier</td>
<td>Thickened with lithium grease</td>
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<tr>
<td>Penetration, P60</td>
<td>350 1/10 mm</td>
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<tr>
<td>Density, NLGI Grade</td>
<td>1.4 g/cm³, NLGI 0-1</td>
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<td>PSD</td>
<td>D-50 5micron</td>
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<tr>
<td>Health</td>
<td>Non-toxic nanoparticles as per OECD protocols</td>
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<tr>
<td>Safety</td>
<td>EU REACH Compliant</td>
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</tbody>
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Format & Packaging
- Paste form.
- Ready to use additive containers: from 20kg pails to 200kg drums.

Mixing recommendations:
High shear mixer, 1000 rpm

Performance Tests: Grease
NanoLub® enhanced WS2 - based grease produces better welding point than MoS2 based grease.

NanoLub vs. MoS2 in Li Grease 4 Ball Weld Point (ASTM 2596)

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