

# Product Specifications

## Laboratory Data:

**Unworked Penetration** 250 - 310 mm/10  
**Worked Penetration** 250 - 310 mm/10  
**NLGI Class** 2  
**Consistency** medium soft

**Color** light brown  
**Dropping Point** 180°C [356°F]  
**Oil Separation (FTMS)**  
 48 hrs/85°C [185°F] 4 %

**Permanent Low Temperature** -20°C  
**Basic Oil (72 hrs fluid)** [-4°F]  
**Application Temperature** -10°C to 80°C  
 [14°F to 176°F]

**Basic Oil** mineral oils, PAOs, esters, stabilized

**Viscosity Basic Oil**  
 20°C [68°F] 140 mm<sup>2</sup>/s

**Thickener** metallic soap

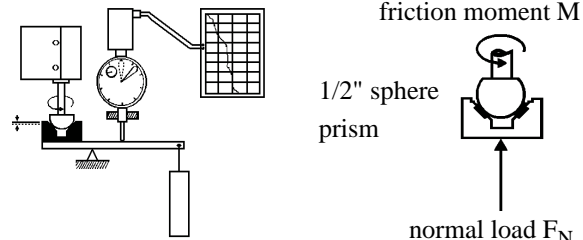
**Durability** good  
**Corrosion Resistance** brass: good  
 steel: very good

## Comments:

Metallic soap thickened grease based on mineral and ester oils with polyalpha-olefines. An aging stabilization according to the most modern chemical procedures guarantees specifications required in the field of horological and instruments technology.

## Tribological Data:

**Test system: sphere on prism (ISO 7148/2)**

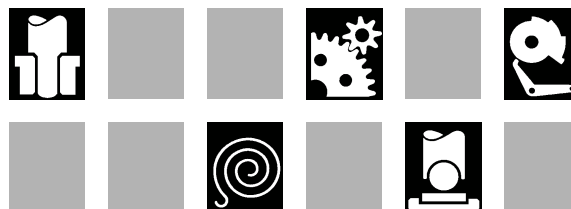


| Friction Behavior          |      |                                   |     |     |     |
|----------------------------|------|-----------------------------------|-----|-----|-----|
| dependent on sliding speed |      |                                   |     |     |     |
| v (mm/s)                   | f    | friction coefficient f            |     |     |     |
|                            |      | 0.1                               | 0.2 | 0.3 | 0.4 |
| 0                          | 0.07 | █                                 |     |     |     |
| 20                         | 0.05 | █                                 |     |     |     |
| 50                         | 0.08 | █                                 |     |     |     |
| 200                        | 0.11 | █                                 |     |     |     |
| materials:                 |      | steel/brass, load 3N, 25°C [77°F] |     |     |     |
| lubricant:                 |      | Precision Grease R 27             |     |     |     |

| Wear Behavior   |     |  |      |     |     |     |
|---|-----|--|------|-----|-----|-----|
| comparison: dry and lubricated with Precision Grease R 27 |     |  |      |     |     |     |
| materials   |     | wear (in mm)   |      |     |     |     |
|   |     | 0.01   | 0.03 | 0.1 | 0.3 | 1.0 |
| St/brass: R 27  |     | █  |      |     |     |     |
|   | dry | █  | █    | █   | █   | █   |
| St/steel: R 27  |     | █  |      |     |     |     |
|   | dry | █  | █    | █   | █   | █   |
| test parameters:  |     | load 30N, distance 10 km, 25°C [77°F], v = 28.1 mm/s |      |     |     |     |

## Application:

For metal/metal precision bearings (steel, non-ferrous metals, aluminum, etc.); e.g. sliding bearings in measuring instruments, clock movements, recording devices, synchronous motors and instruments. For windings, barrel arbors, anchor pivots, teeth of balance wheels, mainsprings and rotor bearings.



**Product**

**Bearing material**  
**METALL**  
**POLYMER**  
**MINERAL**

**Application temperature**  

 °C °F

**Bearing load**

**Sliding speed**

**Durability**

**Viscosity**

**Wetting**

P045a