

EP performance

4-Ball Weld Load

The 4 ball weld load is a measure of the maximum load carrying ability of a grease. At the weld point the maximum load that the grease can support has been exceeded and the grease no longer provides lubrication. Other tests are available to measure this property of a grease such as: Optimol SRV and ASTM D 2509 (Timken OK Load). Results from different test procedures cannot be easily compared.

Greases with a 4 ball weld point of >200 kg (2 000N), or a Timken >35 lbs are generally considered EP products.

4 Ball - Wear Scar

The 4 ball wear scar is a measure of the ability of a grease to prevent wear under severe lubricating conditions. SKF carry out this test at 1400 N load and measure the wear (as an average scar diameter after one minute) to distinguish between greases.

Indication of wear scar values according to DIN 51350/5, 1400 N

- < **1.0 mm**: Extremely good EP performance
- < **1.6 mm**: Good EP performance
- > **2.0 mm**: Poor EP performance

Wear scar values measured under different conditions of load and/or time cannot be compared. Other tests are available to measure this property of a grease such as: Optimol SRV, ASTM D 2509 (Timken OK Load).

Note:

typical anti-wear additives are zincdithiophosphates, graphite, MoS₂ (molybdenum disulphide) etc...

