

KOBELCO

KOBELCO BLUE GREEN MULTI GREASE

HIGH PERFORMANCE GREASE
THAT CAN BE USED ANYWHERE



PT DAYA KOBELCO CONSTRUCTION MACHINERY INDONESIA

Kawasan Industri MM2100

Jl. Halmahera Blok DD-10

Desa Danau Indah Cikarang Barat

Kab. Bekasi, Jawa Barat 17530

Telp : 021-2214 3080 Fax : 021-2214 3081

www.dayakobelco.co.id

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HIGH PERFORMANCE GREASE
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KENAPA MEMILIH KOBELCO?

| | | |
|--|--|---|
| <p>MULTI GUNA</p>  | <p>PERFORMA PRIMA</p>  | <p>EFISIENSI BIAYA</p>  |
|--|--|---|

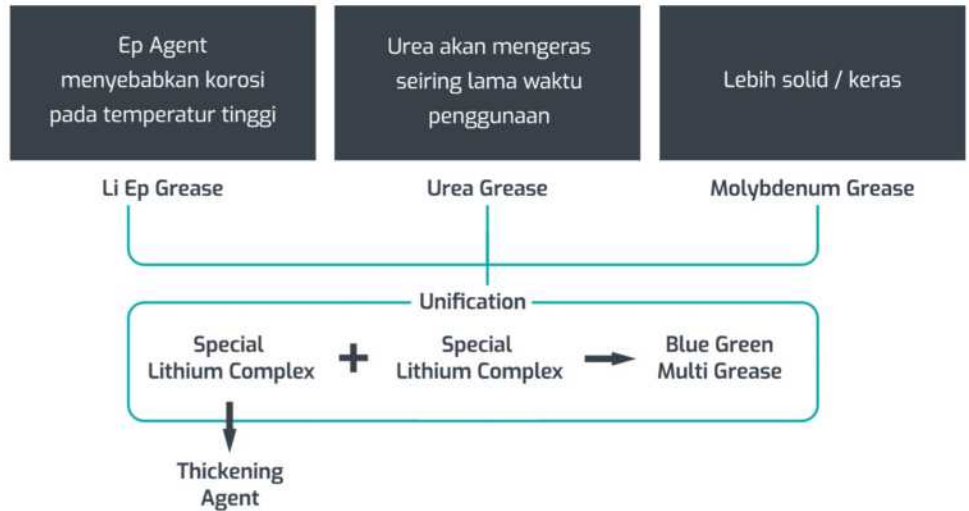


MULTIGUNA

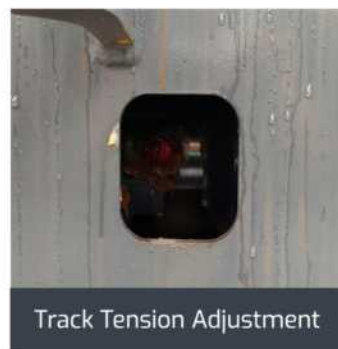
Dikatakan multi-guna karena dapat diaplikasikan pada semua bagian komponen yang membutuhkan pelumasan grease, terutama pada semua bagian komponen pada unit excavator KOBELCO.



Grease Multi Guna didapat dari penyatuan material grease yang berbeda, dengan reaksi berikut :



Dengan satu produk grease, dapat diaplikasikan untuk semua komponen yang membutuhkan pelumasan grease. Beberapa diantaranya :



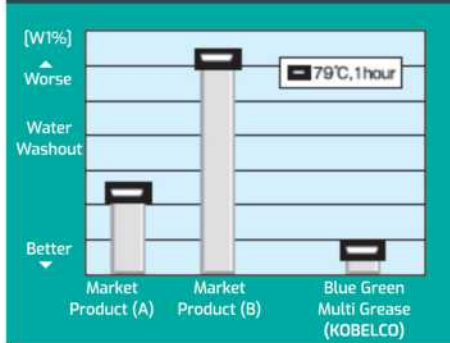


PERFORMA PRIMA

① EXCELLENT HEAT-RESISTANCE



② GOOD WATER WASHOUT PROPERTY



③ EXCELLENT SHEAR STABILITY



①

Dropping point of Blue Green multi Grease

②

Blue Green multi Grease can reduce the quantity of grease taken away by water

③

The amount of change of consistency of Blue Green Multi Grease is less than half of commercial article lithium soap grease

PERBANDINGAN

| TYPE OF THICKENING | COST | HEAT STABILITY | WATER RESISTANCE | ANTI WEAR | ANTI FLAKING | OXIDATION STABILITY |
|--------------------|------|----------------|------------------|-----------|--------------|---------------------|
| KOBELCO BGMG | ○ | ◎ | ◎ | ◎ | ◎ | ◎ |
| UREA TYPE | × | ○ | ○ | △ | ○ | × |
| LITHIUM | ○ | ○ | ○ | △ | ○ | ○ |
| CALCIUM | ◎ | × | ○ | × | ○ | △ |
| SODIUM | ○ | ○ | × | ○ | × | △ |



Sangat Baik



Baik



Cukup



Buruk



EFISIENSI BIAYA

Dengan menggunakan grease KOBELCO, maka penggunaan biaya untuk perawatan dan operasional unit akan lebih efisien.

Bayangkan bila anda menggunakan grease non KOBELCO dan mengakibatkan kerusakan komponen seperti gambar disamping, maka harus dilakukan penggantian *swing reduction* sehingga biaya yang dibutuhkan akan meningkat.

DAMPAK PENGGUNAAN GREASE NON KOBELCO

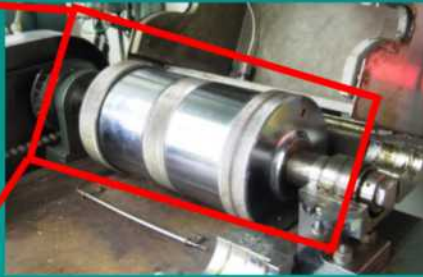
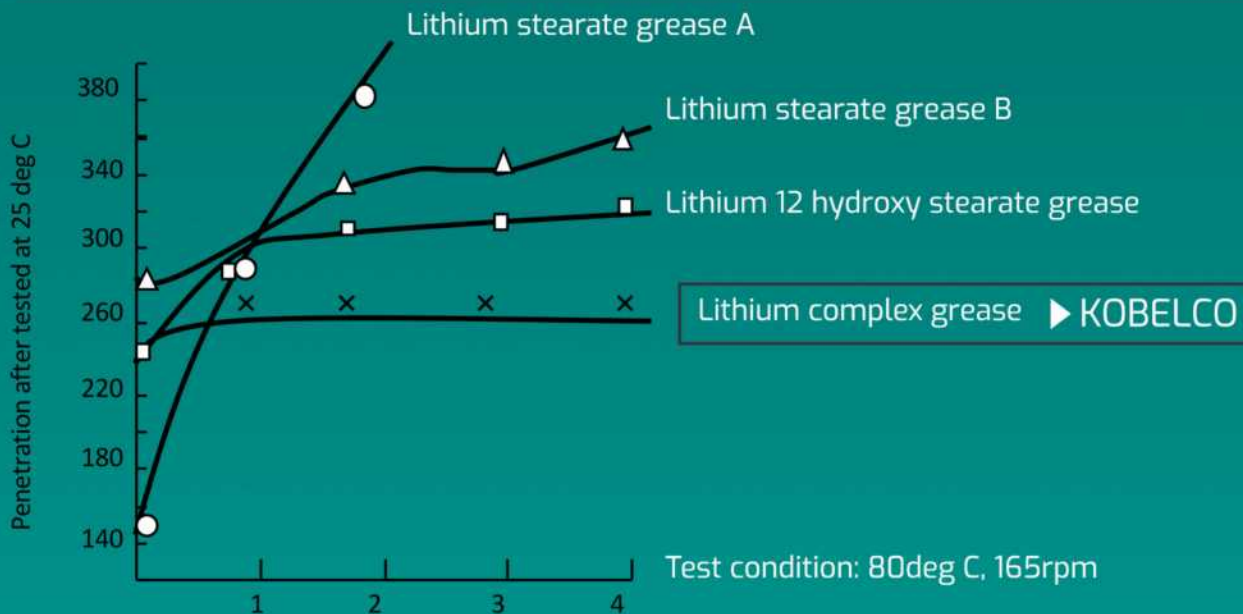


Gear cepat aus



Bearing pinion patah

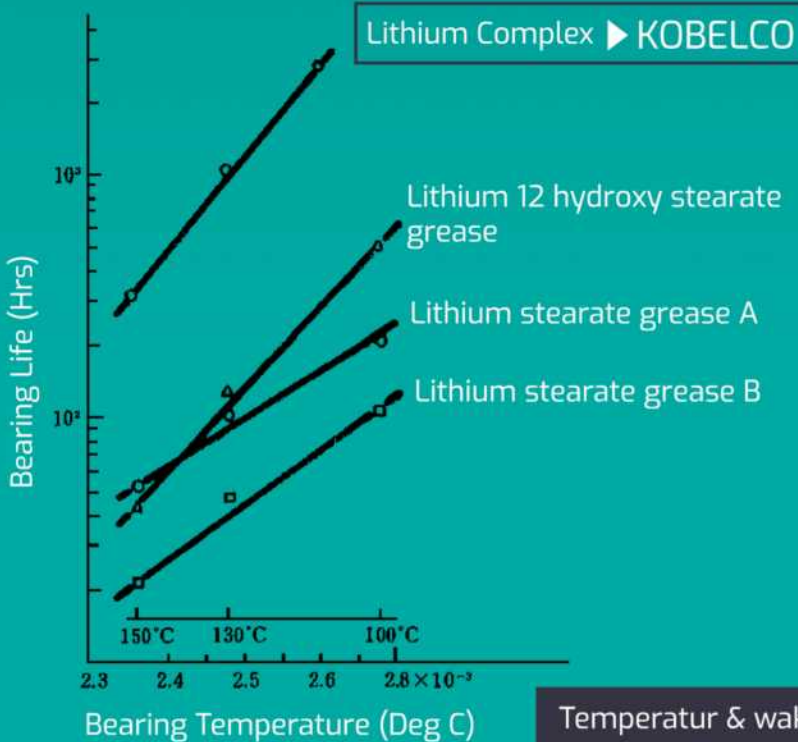
STABILITAS PANAS YANG SANGAT BAIK



Shearing stability bergantung pada kekentalan grease

Perubahan nilai penetration disebabkan karena terjadinya perubahan tingkat kekentalan pada grease

ANTI WEAR YANG SANGAT BAIK



Jika suhu meningkat 10 derajat C, kecepatan degradasi akan menjadi dua kali lipat

- Degradasi oksidasi, dan evaporasi pada Base Oil
- Pergeseran tingkat kekentalan.
- Terbuangnya aditif

Jika hal tersebut terjadi, dan grease akan memadat, Bantalan (Bearing) akan rusak akhirnya.

Temperatur & waktu di bearing bergantung pada type pengental

OUR PRODUCT

| UNIT MODEL | DESKRIPSI | PART NUMBER |
|------------|------------------------------------|--------------|
| ALL MODEL | BLUE GREEN MULTI GREASE PAIL 16 KG | DKLGREASE-PL |
| | BLUE GREEN MULTI GREASE (400GR) | DKLGREASE-SR |
| | GUN, GREASE KH-500 | DKL854669 |

NEW KOBELCO GENUINE GREASE EP2



PT DAYA KOBELCO CONSTRUCTION MACHINERY INDONESIA

HEAD OFFICE

Kawasan Industri MM2100
Jl. Halmahera Blok DD-10,
Desa Danau Indah, Cikarang Barat
Kab. Bekasi, Jawa Barat 17530
Telp : 021-2214 3080
Fax : 021-2214 3081

ASSEMBLING FACTORY

Kawasan Industri MM2100
Jl. Halmahera Blok DD-10,
Desa Danau Indah, Cikarang Barat
Kab. Bekasi, Jawa Barat 17530
Telp : 021-8998 3339

USED EQUIPMENT CENTER

Kawasan Pergudangan Kamal Indah I
Blok F No. 89
Jl. Kamal Benda Raya Jakarta 11810
Telp : 021-55950669
Fax : 021-86376073

BRANCH

1. JAKARTA
Kawasan Industri MM2100
Jl. Halmahera Blok DD-10,
Desa Danau Indah, Cikarang Barat
Kab. Bekasi, Jawa Barat 17530
Telp : 021-2214 3080

2. PANGKALPINANG
Jl. Jend. Sudirman No.48
Selindung Baru PangkalPinang
Bangka Belitung 33117
Telp : 0717-431989
Fax : 0717-431635

3. MEDAN
Komplek Krakatau Multi Centre
Jl. Gunung Krakatau No. R-26
Medan 20241
Telp : 061-6626463, 061-66931609
Fax : 061-6626218

4. PEKANBARU
Jl. Arifin Ahmad No. 111
Pekanbaru Riau 28294
Telp : 0761-65400 (Hunting)

5. PALEMBANG
Jl. Kolonel H. Burlian No. 9 KM. 6
Palembang 30153
Telp : 0711-413273, 0711-413617
Fax : 0711-415850

6. PONTIANAK
Jl. Soekarno Hatta (Arteri Supadio)
KM 17,8 No. 8 Kubu Raya
Pontianak 78391
Telp : 0561-8123159

7. PANGKALAN BUN
Ruko Taman Asri KM 3,5
Jl. Ahmad Yani RT 20 B Kelurahan Baru
Pangkalan Bun
Telp : 0532-25443/25441

8. SAMARINDA
Jl. Jakarta No. 2, Kelurahan Loa Bakung
Kecamatan Sei Kunjung, Samarinda
Telp : 0541-6275597/98
Fax : 0541-272788

9. BANJARMASIN
Jl. Ahmad Yani No. 6 KM. 11, Mekar Raya
Kertak Hanyar - Banjarmasin 70654
Telp : 0511-4221196/97/98,
Fax : 0511-4220197

10. SURABAYA
Jl. Rungkut Industri III No. 3
Surabaya 60291
Telp : 031-8490401, 031-99841041,
031-99842306
Fax : 031-99851561

11. SEMARANG
Komplek Mutiara Marina
Jl. Marina (Arteri Yos Sudarso) no. 21
Semarang 50144
Telp : 024-7613205, 024-7613493

12. MAKASSAR
Jl. Perintis Kemerdekaan KM 17
Makassar 90243
Telp : 0411-557795
Fax : 0411-557793

13. JAMBI
Jl. Lingkar Barat I No. 61
Kenali Asam Bawah (Pal10) Jambi 36128
Telp : 0741-40748, 089507770858
Fax : 0741-43167

SERVICE STATION

1. CILEGON
Komp. Cilegon Green Mega Blok A2 No. 19
RT. 001/001 Kel. Cibeber Kec. Cibeber
Kota Cilegon
Telp : 0254-7814821

2. PADANG
Jl. By Pass KM. 21 Kel. Batipuh Panjang
Kec. Koto Tangah, Padang,
Sumatera Barat 25223
Telp : 0751-484932 (Hunting)
Fax : 0751-484931

3. TANJUNG ENIM
Desa Lingga Dusun Lingga II No. 1881
Tanjung Enim - Sumatera Selatan 31712
Telp : 0734-452597
Fax : 0734-452597

4. SAMPIT
Jl. Jend. Sudirman KM 0,5 Sampit
Telp : 0531-31691

5. BALIKPAPAN
Jl. Syarifuddin Yoes No. 65 RT. 45
Kel. Sepinggah Baru Kec. Balikpapan Selatan
Balikpapan Kalimantan Timur
Telp : 0542-8820290, 0542-770710
Fax : 0542-77067055

6. TARAKAN
Jl. Mulawarman No. 11 RT. 18
Karang Anyar Pantai, Tarakan Barat
Kalimantan Utara 77111
Telp : 0551-23356/57
Fax : 0551-23360

7. YOGYAKARTA
Jl. Ringroad Utara, Nanggulan No. 30 A
RT. 07 RW. 17 Maguwoharjo Depok
Sleman Yogyakarta
Telp : 0274-889022
Fax : 0274-485279
Warehouse Spare Part : 0274-485279

8. KENDARI
Jl. Y. Wayong, Kendari
Sulawesi Tenggara
Telp : 0401-3139237
Fax : 0401-3139238

9. SORONG
Jl. Cendrawasih No. 29 A
Remu Utara. Kec. sorong
Kota Sorong - Papua Barat 9812
Telp : 0951-333996

10. LAMPUNG
Jl. Soekarno Hatta No.8 (By Pass)
Labuhan Dalam, Tanjung Senang
Bandar Lampung
Telp : 0721-788320
Fax : 0721-787703

11. MANADO
Jl. A. A. Maramis KM 12,
Kel. Paniki Dua, Kec. Mapanget,
Manado 95257
Telp : 0431-814233, 0431-814380
Fax : 0431-814486

12. BELITUNG
Jl. Sudirman No.99
Desa Perawas, Kec. Tanjungpandan
Kab. Belitung,
Kepulauan Bangka Belitung 33411
Telp : 0719-9304123

13. BALI (Tahun 2021)

14. KETAPANG (Tahun 2021)

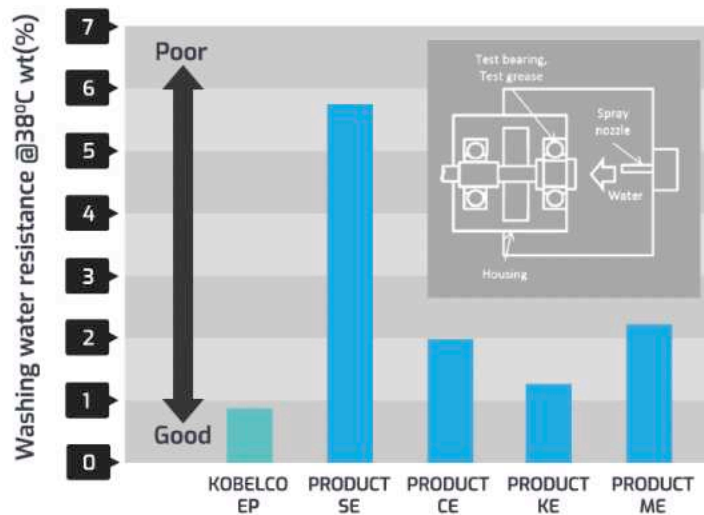
NEW KOBELCO GENUINE GREASE EP2

Standard JCMAS
(Japan Construction Machinery
and construction Association Standard)

Balanced Performance

| Test Topics | Test Conditions | KOBELCO Genuine Grease EP No. 2 | Product SE | Product KE | Product ME | JCMAS GK2 | Test Method |
|--|-------------------------|---------------------------------------|------------|---------------------|------------|------------|---------------|
| Thickener type | - | Lithium | Lithium | Lithium | Lithium | Lithium | - |
| Base oil type | - | Mineral | Mineral | Mineral | Mineral | Mineral | - |
| Kinematic viscosity [mm ² /s] | 40 C | 143 | 186 | 144 | 154 | - | JIS K2283 |
| Colour | Room temperature | Pale brown | Brown | Brown | Brown | - | Visually |
| Worked penetration | 25 C, 60 W | 283 | 281 | 294 | 275 | 265 / 295 | JIS K2220 7. |
| Dropping point [C] | - | 210 | 184 | 220 | 186 | Above 170 | JIS K2220 8. |
| Evaporation loss [wt%] | 99 C, 22 hours | 0.4 | 0.6 | 0.4 | 0.5 | Below 2 | JIS K2220 10. |
| Oil separation [wt%] | 100 C, 24 hours | 1.7 | 4.3 | 2.2 | 1.9 | Below 5 | JIS K2220 11. |
| Oxidation stability [kPa] | 99 C, 100 hours | 20 | 40 | 30 | 35 | Below 80 | JIS K2220 12. |
| Water washout [wt%] | 38 C, 1 hours | 0.9 | 5.8 | 1.2 | 2.1 | Below 10 | JIS K2220 16. |
| Roll stability | 165rpm, 80 C, 20h | 299 (+16) | 330 (+49) | 357 (+63) | 354 (+79) | - | ASTM D1831 |
| Copper corrosion | 100 C, 24 h | Pass | Pass | Green discoloration | Pass | Pass | JIS K2220 9. |
| Corrosion preventive | 52 C, 48 hours | Pass | Pass | Pass | Pass | Pass | ASTM D1743 |
| Four ball wear [mm] | 1200rpm, 392N, 75 C, 1h | 0.50 | 0.50 | 0.48 | 0.49 | Below 0.7 | ASTM D2266 |
| Four ball (EP) [N] | WL | 2452 | 1961 | 1569 | 2452 | Above 1961 | ASTM D2596 |

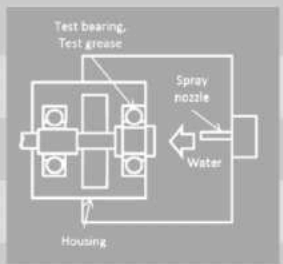
Excellent Performance of Water Resistance



WATER WASHOUT TEST (ASTM D1264, JIS K2220 16)

<Test Condition>

- Temperature 38°C
- Speed 600 rpm
- Duration 1h
- 4.00g filled with test grease to deep groove ball bearing (6204)
- Spraying 38°C and 5mL/sec of the water to bearing, and rotating bearing at 600rpm for 1 hour
- Evaluate the water resistance property according to the amount of decreased grease



Superior Water Resistance

Grease Consumption is Reduced

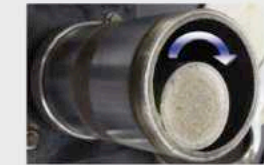
Excellent Performance of Keep Condition



ROLL STABILITY TEST (ASTM D1831)

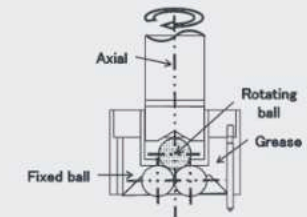
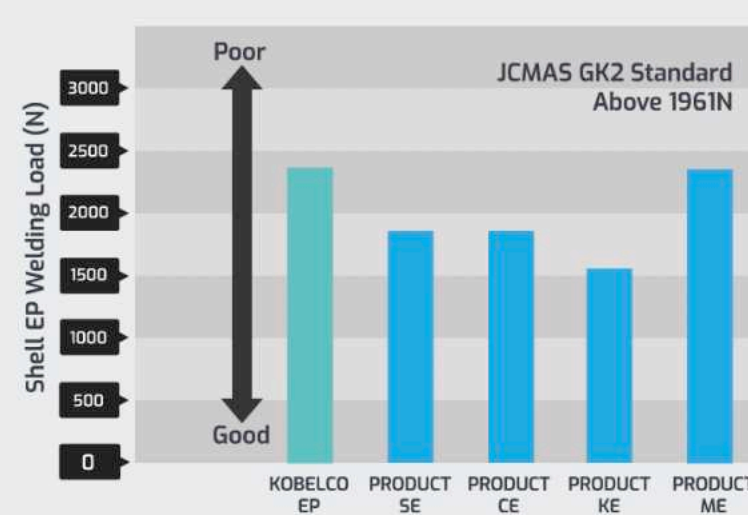
<Test Condition>

- Temperature 80°C
- Speed 165 rpm
- Duration 20h
- Filling 50 gram of test grease to Cylinder
- After inserting a steel shaft to cylinder, rolling cylinder to apply a load to test grease
- Evaluate the shear resistance according to the penetration changes before and after the test



Superior Shearing Stability and Keeping a Good Condition

Excellent Performance of Ex-Pressure Property



FOUR-BALL EXTREME PRESSURE PROPERTIES TEST (ASTM D2596)

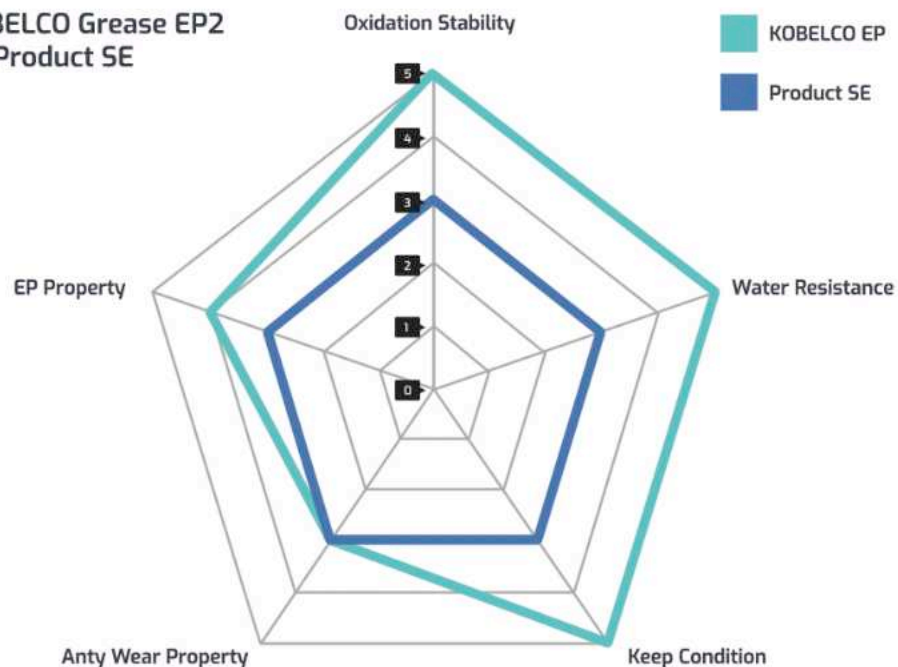
<Test Condition>

- Room temperature
- Speed 1800 rpm
- Duration 10sec
- Put the fixed ball in the cup and fill with grease, making sure there are no gaps
- Put the rotating sphere and rotate it at 1800rpm for 10 seconds
- Stepwise increase the load, evaluate the extreme pressure property of the grease when the welded load is reached

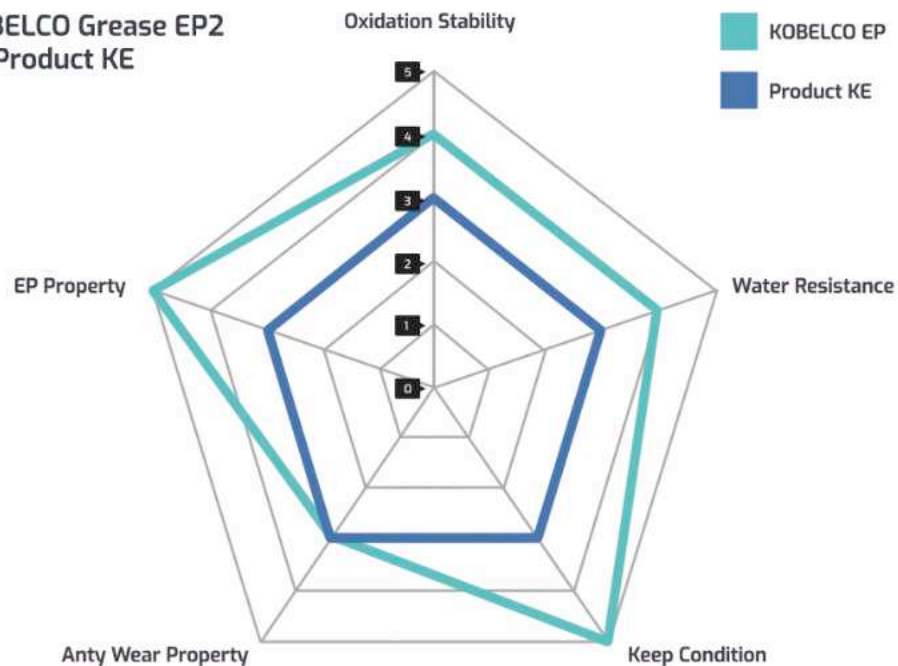


Good Performance and Balanced in all The Required Characteristics and especially excellent keep condition

**KOBELCO Grease EP2
VS Product SE**



**KOBELCO Grease EP2
VS Product KE**



OUR PACKAGING OF KOBELCO GENUINE GREASE EP2

| Parts Number | Description |
|------------------|--------------------------------------|
| DKLGREASE-EP2-PL | KOBELCO MULTI GREASE EP 2 PAIL 16 KG |
| DKLGREASE-EP2-SR | KOBELCO MULTI GREASE EP2 (400GR) |

