

KOYOTO Xtreme Protect Grease CS-2 SERIES **KOYOTO**

Extreme-Pressure Water Resistant High Temperature Calcium Sulphonate Complex Grease.

LUBRICANTS

Product Data Sheet

Product Description

KOYOTO Xtreme Protect Grease CS-2 is a high performance grease, made of the NEW GENERATION calcium sulfonate complex soap designed by KOYOTO Lubricants. This new soap has enhanced properties in terms of water resistance, load capacity, thermal resistance, anticorrosion properties while keeping a very high level of pumpability and ability to lubricate well in case of high speeds.

Features & Benefits

- Calcium Sulphonate complex soap developed by KOYOTO Lubricants allows KOYOTO Xtreme Protect Grease CS-2 to work well in bearings even if rotation speeds are high. Presents outstanding performances even at high nDm where the NEW GENERATION keeps all benefits in terms of corrosion protection, bearings lifetime, high loads and thermal resistance.
- Excellent anti-oxidation and anti-corrosion properties thanks to the excellent behavior of the calcium sulphonates, also in the presence of sea water.
- The NEW GENERATION of calcium sulphonate complex soap allows to keep outstanding performances even in case of high speed applications where normally polyurea or lithium complex greases are requested.
- Does not contain lead, or other heavy metals considered harmful to human health and the environment.

Application

Meets & exceeds the following Industry specifications

- ISO 6743-9: L-XCFIB1/2
- DIN 51 502: KP1/2R-30

Application

KOYOTO Xtreme Protect Greases are suitable for most types of Marine, Automotive & Industrial applications.

- Suitable for the lubrication of continuous castings and rolling mills in steel plants, bearings in wet and dry (felt rolls) sections of paper mills and all industrial applications under severe conditions (wet, loaded, high temperature, dust, etc.,)
- Suitable for the lubrication of all kinds of components subject to high loads, shock loads, working in conditions where the grease is in frequent contact with water (even in sea water due to enhanced antirust performance of the grease).
- Suitable for use in centralized greasing systems.
- Always avoid contamination of the grease by dust and/or dirt when applying.
- Preferably use a pneumatic pump system.

The above figures are typical of blends with normal production tolerance and do not constitute a specification.

Typical Characteristics

KOYOTO Xtreme Protect Grease CS-2	Test Method	Units	CS-2
NLGI Grade	ASTM D 217/ DIN 51 818	--	1-2
Thickener Type	--	--	Calcium Sulphonate
Penetration, Worked @ 25 °C	ASTM D 217/ DIN 51 818	0.1mm	280-310
Penetration, Worked @ 25 °C, after 100,000 strokes	ISO 2137	0.1mm	+11
Shell Roller 100 hours at 80°C	ASTM D 1831 mod	0.1mm	-8
Shell Roller 100 hours at 80°C + 10% water	ASTM D 1831 mod	0.1mm	-12
Kinematic viscosity of the base oil at 40°C	ASTM D 445/ DIN 51 562-1/ ISO 3104/ IP71	mm ² /s (cSt)	220
Operating temperature range		°C	-30 to 180
Antirust properties			
EMCOR, distilled water	ISO 11007	Rating	0-0
EMCOR, synthetic sea water	ISO 11007	Rating	0-0
Copper corrosion, 24 hours at 100°C	ASTM D 4048	Rating	1b
Antiwear and EP properties			
Four ball wear (scar diameter)	ASTM D 2266	mm	0.37
Four ball weld load	ASTM D 2596	Kgf	500
Cold properties			
Penetration at -20°C	ISO 13737	0.1mm	160
Flow pressure at -20°C	DIN 51 805	mbar	560
Flow pressure at 1400 mbar	DIN 51 805	°C	-30
Torque at -20°C			
Starting torque	ASTM D 1478	g.cm	2600
After 1 hour		g.cm	460
Thermal Stability			
Dropping point	IP 396/ASTM D566	°C	>300
Oxidation stability at 99°C +0.5°C			
Pressure drop after 100 hours	ASTM D 942	Psi	4
Pressure drop after 500 hours		Psi	13.5
Oil release 50 hours, 100 °C	ASTM D 6184	%	1.4
Oil release 168 hours, 40°C	NF T 60-191	%	0.9

The above figures are typical of blends with normal production tolerance and do not constitute a specification.