



VERILA® CS Complex EP 2 V180

High Performance, High Temperature, Water Resistant, Extreme Pressure, Calcium Sulfonate Complex Grease for Heavy Duty Applications



Technical Designation

- ISO 6743-9; ISO-L-XBEHB 2
- DIN 51502; KP2P-25
- ASTM D4950 GC-LB

Description

VERILA® CS Complex EP 2 V180 is high performance heavy duty lubricating grease based on calcium sulfonate complex thickener system and severely hydro-treated mineral base oil. A unique structure of calcium sulfonate complex thickener provide high dropping point, excellent inherent extreme pressure and anti wear performances, good rust protection and superior water spray off protection. This makes it truly multipurpose grease suitable for a wide range of marine, industrial and automotive applications

Application

VERILA® CS Complex EP 2 V180 is designed for all kind of heavy duty applications, including marine, off-shore, cement, still and paper industry, mining, agriculture and forestry, off highway and other industrial as well as automotive. It is suitable for applications in the most severe conditions, under extremely high and shock loads, elevated temperatures and in dirt and wet environment. Very high dropping point ensures temperature operating range from -25 up to 160°C (peaks to 180).

Performance Features

- **Exceptional Water Resistance** – the thickener structure offer high level of resistance to water wash-out.
- **Inherent Extreme Pressure & Anti-wear Performances** – the thickener structure provide to withstand heavy and shock loads without failure of the lubricant film. Extend bearing life under shock-load conditions.
- **Excellent thermal stability** – does not liquefy until >300°C
- **Rust and Corrosion Protection** – protecting metal parts from corrosion and rust
- **Improved Oxidation Stability** – minimize grease degradation
- **Excellent Mechanical Stability and High Shear Resistance** – This is particularly important where poor mechanical stability can lead to grease softening with subsequent loss of lubrication performance and leakage.
- **Good Adhesive Properties** – ensures that the grease stays in place for longer re-lubrication intervals
- **Wide Range of Applications** – A truly multipurpose grease

Technical Data

Characteristics	Test Method	Unit	Typical Value
NLGI Grade	ASTM D217		2
Thickener			Calcium Sulfonate Complex
Base Oil			Mineral
Base Oil Viscosity at 40°C		mm ² /s	180
Color	Visual		Brown
Appearance	Visual		Smooth and Buttery
Cone Penetration, Worked	ISO 2137	1/10 mm	280
Dropping Point	ISO 2176	°C	> 305

While the information and figures given here are typical of current production and confirm to VERILA specification, minor variations may occur. No warranty expressed or implied is given concerning the accuracy of the information or the suitability of the product

PERFORMANCE TESTS	Test Method	Unit	Typical Value	
LOW TEMPERATURE PROPERTIES				
Low Temp. Flow Pressure	DIN 51 805	mbar	-	at -30°C
RUST & CORROSION PREVENTING PROPERTIES				
Corrosive Effects on Copper	ASTM D4048	Rated	1a	24 hrs at 100°C
Dynamic Rust Test, EMCOR	ISO 11007	Rated	0-0	Distilled Water
Dynamic Rust Test, EMCOR	ISO 11007	Rated	-	Synthetic Sea Water
Rust Protection	ASTM D1743	Rated	Pass	
EFFECT ON WATER				
Water Washout Test	ISO 11009	%	2	60 min at 80°C
Water Resistance Test	DIN 51 807-1	Rated	-	3 hrs at 90°C
OIL SEPARATION – STORAGE STABILITY				
Oil Separation	DIN 51 817	%	-	168 hrs at 40°C – MW
	ASTM D1742	%	0.5	24 hrs at 25°C – AP
MECHANICAL STABILITY				
Prolonged Cone Penetration	ISO 2137	1/10 mm	+ 2	10K cycles
Roll Stability	ASTM D1831	%	± 5	
EXTREME PRESSURE PROPERTIES				
Four-Ball EP Test				
- Weld Point	ASTM D2596	N	5000	1770 rpm, 10 s, 27°C
	DIN 51350-4	N	-	1420 rpm, 60 s, Room
Four-Ball Wear Test				
- Wear Scar Diameter	ASTM D2266	mm	-	1200 rpm, 60 min, 75°C, 392N
	DIN 51350-5	mm	-	1420 rpm, 60 min, Room, 300N (Proc. D)
Timken Test, OK Load	ASTM D2509	N	65	
OXIDATION STABILITY				
Oxidation Stability, Pressure Drop	ASTM D942	kPa	6	100 hrs at 100°C

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