

Balmerol® Protomac CLP Series

High Performance Gear Oil

Technical Data Sheet

Product Description:

Balmerol Protomac CLP gear oils are extra high performance gear oils with excellent load carrying and extreme pressure properties. Balmerol Protomac CLP Oils are fortified with ash-less Extreme Pressure (EP) / Anti-wear additives, Anti-oxidants and Rust & Corrosion Inhibitors. Balmerol Protomac CLP gear oils have very good demulsibility properties and readily shed off water during operation.

Balmerol Protomac CLP Series **meets** DIN 51517 Part 3, CLP; AGMA 9005 E-02; U.S Steel 224.

Features & Benefits:

Very good EP/ Anti-wear properties	Enhanced protection of gears and bearings leading to more reliable operation
Lower Deposit formation and superior Oxidation & Thermal stability	Clean performance even during high temperature operation and also ensuring higher oil drain interval
Very good anti-foam characteristics	Better protection of equipment from foaming related failures (excessive oxidation, cavitations), as well as better house keeping
Very good Rust protection & Demulsibility characteristics	Easily sheds off water from the oil and ensures better component protection

Balmerol Protomac CLP Series helps reduce overall maintenance and operating costs, which helps increase "Productivity".

Applications / Recommendations:

Balmerol Protomac CLP gear oils are recommended for use in enclosed industrial gears with splash / circulation lubrication, heavily loaded plain and rolling contact slow speed bearings and gear couplings where operating or bulk oil temperatures are upto 100°C.

Balmerol Protomac CLP gear oils are compatible with metallic, as well as elastomeric seal materials.

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Typical Properties:

Balmerol Protomac CLP Series						
Properties	Protomac CLP 100	Protomac CLP 150	Protomac CLP 220	Protomac CLP 320	Protomac CLP 460	Protomac CLP 680
ISO VG Grade	100	150	220	320	460	680
Viscosity, ASTM D 445						
cst @ 40°C	95	149	222	324	455	684
cst @ 100°C	10.9	14.70	19.15	24.60	30.70	41.00
Viscosity Index, ASTM D 2270	99	97	97	97	97	99
Pour Point, °C ASTM D 97	-24	-21	-15	-12	-9	-9
Flash Point, °C ASTM D 92	≥ 225	≥ 230	≥ 230	≥ 230	≥ 235	≥ 235
Copper Strip Corrosion, ASTM D 130, 3 hrs @ 100°C	1b	1b	1b	1b	1b	1b
FZG Test (A/8.3/90), Fail Stage, DIN 51354	12	12	12	12	12	12
Four Ball EP Test (Weld Point) Kg, ASTM D 2783	≥ 250	≥ 250	≥ 250	≥ 250	≥ 250	≥ 250

Health and Safety:

Balmerol Protomac CLP Series oils are not expected to produce adverse effects on health when used for the intended application and the recommendations provided in the Material Safety Data Sheet (MSDS) are followed. For MSDS please contact your local Balmer Lawrie Marketing / Technical Service team.

For Further Information, contact:

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