

# Balmerol® Protomac SP Series

## Industrial Gear Oil

Technical Data Sheet

### Product Description:

Balmerol Protomac SP Series are premium quality all purpose industrial gear oils. Balmerol Protomac SP Series oils are blended from carefully selected paraffinic basestocks and combination of synergistic additives to achieve the required performance level of different standards as well as compatibility with normal seal materials. Balmerol Protomac SP Series oils can be filtered or centrifuged without the loss of additives.

Balmerol Protomac SP Series **meets** the following specifications:

- IS : 8406-1993 – Reaffirmed 2001
- AGMA 9005-E02 EP
- DIN 51517 Part 3, CLP
- ISO 12925-1 Type CKD
- ISO 12925-1 Type CKC
- US Steel : 222 and 224
- IPSS: 1-09-003

### Features & Benefits:

Very good EP/ Anti-wear properties	Enhanced protection of gears and bearings leading to more reliable operation
Superior filterability characteristics	No loss of additives during filtration
Compatible with normal seal materials	Less leakage, lower chance of ingress of contaminants in equipment, better equipment protection and housekeeping

### Applications / Recommendations:

Balmerol Protomac SP Series is recommended for lubrication of all types of circulation, spray and splash or dip bath lubrication mechanisms.

- Most suitable for use in all conventional types of gears, sliding mechanisms, chain drives and flexible couplings.
- Recommended for use in mechanisms operating under heavy / shock loads and vibrations.
- Suitable for use in continuous recirculation systems incorporating filters

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### Typical Properties:

Balmerol Protomac SP				
Properties	Protomac SP 68	Protomac SP 100	Protomac SP 150	Protomac SP 220
ISO VG Grade	68	100	150	220
Viscosity, ASTM D 445				
cSt @ 40°C	64 -72	90 -105	135 - 165	200 - 230
Viscosity Index, ASTM D 2270	90 minimum	90 minimum	90 minimum	90 minimum
Pour Point, °C ASTM D 97	-6 max	-6 max	-6 max	-3 max
Flash Point, °C ASTM D 92	205 minimum	205 minimum	205 minimum	230 minimum
Rust Characteristics Test , ASTM D665	No Rust	No Rust	No Rust	No Rust
FZG Rating, 12 Stage, (A/8.3/90) DIN 51354	Pass	Pass	Pass	Pass
Timken EP Test (OK Load) lb, ASTM D 2782	60	60	60	60

Balmerol Protomac SP					
Properties	Protomac SP 257	Protomac SP 320	Protomac SP 460	Protomac SP 680	Protomac SP 1000
ISO VG Grade	-	320	460	680	1000
Viscosity, ASTM D 445					
cSt @ 40°C	250 -280	300 - 350	420 -480	640 -700	900-1100
Viscosity Index, ASTM D 2270	90 minimum	90 minimum	90 minimum	85 minimum	85 minimum
Pour Point, °C ASTM D 97	-3 max	-3 max	0 max	0 max	0 max
Flash Point, °C ASTM D 92	230 minimum	230 minimum	230 minimum	240 minimum	240 minimum
Rust Characteristics Test , ASTM D665	No Rust	No Rust	No Rust	No Rust	No Rust
FZG Rating, 12 Stage, (A/8.3/90) DIN 51354	Pass	Pass	Pass	Pass	Pass
Timken EP Test (OK Load) lb, ASTM D 2782	60	60	60	65	70

### Health and Safety:

Balmerol Protomac SP 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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