

# STORM ST

## 5W-30, 5W-40, 10W-30, 10W-40, 20W-50

### SYNTHETIC TECHNOLOGY PETROL ENGINE OIL

**BULWARK STORM ST** oils are multi-grade synthetic technology motor oils of the latest generation suitable for use in modern engines of passenger cars, light commercial trucks, sport cars and vans including turbocharged engines. The product is manufactured using a combination of premium quality synthetic and mineral base stocks and advanced technology additive packages to provide best in class anti-wear protection and improved cold start.

**BULWARK STORM ST 10W-30 and 10W-40** oils are recommended for use in gasoline engines of cars from Japanese, American and Korean automakers requiring API SN or SM, ACEA A3/B3, A3/B4 performance level

#### PERFORMANCE LEVEL\*

- API SN/SM
- API SN (20W-50)
- ACEA A3/B4 (10W-30 & 10W-40)
- VW 502.00/505.00 (5W-30 & 5W-40)
- MB 229.3
- RN 0700/0710

#### KEY BENEFITS

- Good anti-oxidation & anti-corrosion properties provide greater protection to the engine components against wear in extreme operating conditions.
- Enables easy cold start due to excellent low-temperature properties.
- Reduced high and low temperature deposits formation.
- Higher BN reserves and acid neutralizing additives increases corrosion protection.

#### TYPICAL CHARACTERISTICS\*\*

Properties	Test Methods	5W-30	5W-40	10W-30	10W-40	20W-50
Density @ 29.5°C, Kg/m <sup>3</sup>	ASTM D4052	0.857	0.859	0.857	0.858	0.878
Kinematic Viscosity @ 100°C cSt	ASTM D7042	10.82	14.12	10.62	14.72	1850
Viscosity Index	ASTM D2270	162	172	165	169	132
Cold Cranking Viscosity at -30°C, mPa-s -25°C, mPa-s -15°C, mPa-s	ASTM D5293	5,490 – –	5,890 – –	– 5,090 –	– 5,360 –	– – 8,200
Borderline Pumping Viscosity 35°C, mPa-s 30°C, mPa-s 20°C, mPa-s	ASTM D4684	30,520 – –	34,520 – –	– 39,020 –	– 34,670 –	– – 32,600
Sulphated Ash, %	ASTM D874	1.10	1.10	1.10	1.10	1.17
Flash Point, COC, °C	ASTM D92	232	242	234	242	256
Foam Stability	ASTM D892					
Seq I		0/0	0/0	0/0	0/0	0/0
Seq II		0/0	0/0	0/0	0/0	0/0
Seq III		0/0	0/0	0/0	0/0	0/0
Pour Point, °C	ASTM D97	-42	-42	-39	-39	-30
Total Base Number, mg KOH/g	ASTM D2896B	7.32	7.32	7.32	7.32	7.32

\* Performance levels indicated may include licensed API specs or specs that our products meet or exceed

\*\* Typical Characteristics are typical values. Minor variations within the permissible tolerance limits may be expected on the final product.

#### STORAGE

All packages should be stored under cover. Where outside storage is unavoidable, drums should be laid horizontally to avoid the possible ingress of water and the obliteration of drum markings. Products should not be stored above 60°C, exposed to hot sun or freezing conditions.

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