CHEM GROUP

PF-Marine™ LS 380

PF-Marine™ LS 380 is a high-energy, ultra-clean residual bunker fuel engineered for demanding marine and inland waterway operations. Derived from a premium aromatic feedstock, it delivers measurably higher BTU output per gallon while maintaining near-zero levels of ash, metals, and sediment.

Where most residual fuels trade cleanliness for energy density, PF-Marine LS 380 delivers both — resulting in lower maintenance intervals, reduced engine deposits, and a strong cost-per-MMBTU advantage. Formulated for blending with Marine Gas Oil (MGO) at 55–60% to achieve full ISO 8217 RMG 380 compliance.

APPLICATION

PF-Marine™ LS 380 is designed for use in medium- and slow-speed marine diesel engines operating on residual fuel. Typical applications include:

- Towboats, push boats, and river barges
- Ocean-going and coastal vessels
- Blend on-spec RMG 380
- Cold-climate and winter operations

BENEFITS

Higher Energy per Gallon

Approximately 165,000 BTU/gal — typically 3–8% higher than competing residual fuels — reducing fuel consumption per unit of work and delivering a direct $/MMBTU cost advantage.

Exceptionally Clean Fuel

Near-zero ash, ultra-low metals (Al, Si, V, Na ≈ 0), micro carbon residue of just 1.08%, and zero sediment translate to less injector fouling, fewer engine deposits, and extended equipment life.

Superior Combustion Performance

Low MCR combined with high aromatic content produces a cleaner, more stable burn with reduced soot and improved heat-transfer efficiency.

Excellent Cold-Flow Handling

A pour point of −6°C dramatically outperforms typical residual fuels, easing winter operations and reducing heating requirements throughout the inland waterway market.

Outstanding Fuel Stability

Zero sediment and consistent composition minimize sludge formation, improving storage stability and reducing tank and filter maintenance.

IMO 2020 Regulatory Compliance

Meets all ISO 8217 RMG 380 requirements except density. When density below 991 kg/m^3 is required, a 55–60% blend with Marine Gas Oil (MGO) brings the fuel into full compliance. Sulfur ≤0.50% satisfies the IMO 2020 global cap for all open-sea and ECA operations.

Regional Logistics Advantage

Truck-to-dock delivery throughout the Ohio River corridor provides faster turnaround, flexible volumes, and reduced dependency on traditional port bunker infrastructure.

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- Sulfur ≤0.50% — IMO 2020 compliant
- Energy ~165,000 BTU/gal
- Ash 0.000% — virtually zero metallic residue
- Sediment 0.00% — minimal sludge risk
- MCR 1.08% — clean combustion profile
- Pour point −6°C — superior cold-flow handling
- Vanadium 0 mg/kg
- Sodium 0 mg/kg
- H_2S <0.40 mg/kg — safe cargo handling
- Density 1,056 kg/m³ — blend-to-spec capable
- Viscosity in RMG 380 range
- Truck-to-dock delivery

SAFETY DATA

Flash Point	ASTM D93	> 60	°C
Pour Point	ASTM D97	−6	°C
H_2S Content	IP 570	< 0.40	mg/kg
Vanadium	ASTM D5708	0	mg/kg
Sodium	ASTM D5708	0	mg/kg
Sulfur	ASTM D4294	≤0.50	% m/m
Regulatory Status	IMO MARPOL	Compliant	IMO 2020

PHYSICAL PROPERTIES

Density @ 15°C	ISO 3675 / ASTM D1298	1,056	kg/m³
Kinematic Viscosity @ 50°C	ISO 3104	380	mm²/s (cSt)
Sulfur Content	ISO 8754 / ASTM D4294	≤0.50	% m/m
Micro Carbon Residue (MCR)	ISO 10370	1.08	% m/m
Ash Content	ISO 6245	0.000	% m/m
Sediment by Extraction	ISO 3735	0.00	% m/m
Pour Point	ISO 3016 / ASTM D97	−6	°C
Vanadium	ISO 14597 / ASTM D5708	0	mg/kg
Sodium	ASTM D5708	0	mg/kg
H_2S	IP 570	< 0.40	mg/kg
Gross Calorific Value	ASTM D240	~165,000	BTU/gal
Appearance	—	Dark viscous liquid	—

Storage Temperature

Maintain above the pour point (−6°C). No auxiliary heating required under most ambient conditions — a significant handling advantage for inland waterway operations.

Tank Compatibility

Compatible with standard carbon-steel or stainless-steel marine bunker tanks. Synthetic elastomers (Viton, NBR) are recommended for seals and gaskets.

Segregation

Store separately from distillate fuels. Do not blend with fuels of unknown origin without laboratory compatibility testing.

Shelf Life

Product remains stable for 12 months from date of delivery under proper storage conditions. Zero sediment minimizes sludge accumulation.

Handling Precautions

H_2S <0.40 mg/kg; standard marine safety protocols apply. Use appropriate personal protective equipment during tank entry and sampling. Full SDS available upon request.

Disposal

Dispose of used fuel, sludge, and contaminated materials in accordance with MARPOL Annex I and applicable local environmental regulations. Do not discharge to waterways. Before disposing of any off-spec product, please contact CHEM Group — in some cases, off-spec fuel can be recovered at one of our facilities. For material that cannot be recovered, contact a licensed waste contractor.