

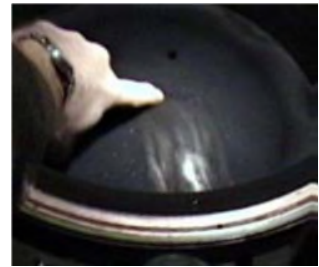


THERMAL STABILITY FUEL OIL TREATMENT

The World's Most Advanced HFO Treatment Solution

PMAX INCREASE • SLUDGE REDUCTION • DEPOSIT PREVENTION • EMISSIONS CONTROL

PRI-RS is a scientifically designed additive chemistry formulated to successfully overcome the challenges associated with today's heavy fuel oil qualities worldwide. Compromised ignition quality, increased sludge precipitation and premature engine component failure are but a few of the negative impacts associated with this trend in fuel degradation.



One Product for Optimum Performance

- **PMAX INCREASE – SFOC REDUCTION:** **PRI-RS** elevates peak firing pressure (pmax) in a range of 4-to-6 bars. In so doing, specific fuel oil consumption (SFOC) is reduced 1.0-to-1.5 percent (0.25% reduction for every bar pmax increase).
- **SLUDGE REDUCTION:** **PRI-RS** contains a series of highly effective dispersant chemistries verified to inhibit organic fuel sludge by as much as 75 percent. Not only are fuel delivery systems kept sludge free, the fuel value recovered provides a very significant return on investment.
- **CARBON & VANADATE DEPOSIT PREVENTION:** **PRI-RS** greatly reduces post-combustion carbon and soot. Highly effective vanadium control chemistries prevent formation of low melting point vanadates - preventing damaging high temperature corrosion.
- **EMISSIONS COMPLIANCE:** The cleaner combustion proven with **PRI-RS** results in greatly reduced visible smoke (particulate reduction), and major reductions in other emissions – ensuring compliance with Marpol Annex VI standards.

Tested & Proven

- **MAN B&W MARPOL ANNEX VI TESTING:** Rigorous testing by the engine maker Man B&W under Marpol Annex VI protocol verifies **PRI-RS** capability to improve combustion and dramatically reduce harmful products of combustion.
- **WARTSILA/SULZER COMPLIANCE:** **PRI-RS** chemistry has been reviewed and deemed safe to use by Wartsila, meeting the company's demanding standards. Stocks are available worldwide. Call PRI today to discover the myriad of ways to optimize

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Specifications	
Color & Appearance	Dark Amber Liquid
Odor	Hydrocarbon
Boiling Point	213 C.
Flash Point	68 C.
Specific Gravity	0.78 – 0.81
Water Solubility	Insoluble
USA DOT ID Number	UN 1268
Class/Division	Combustible Liquid
IMDG	Not classified as dangerous under IMDG regulation
IATA	Not classified as dangerous under IATA regulations

Dosage Rate:

PRI-RS is dosed at the rate of 1:4000, regardless of fuel specifications under ISO 8217. The fixed dosage rate was developed in consideration of the fact that heavy fuel oil characteristics can be widely variable, and that quality standards, as proscribed under ISO 8217 do not completely account for all deficiencies associated with fuel performance.

Hence, optimal protection is ensured at the 1:4,000 dose rate.

Dosage Method:

Power Research Inc. suggests that **PRI-RS** can be dosed at the main bunker manifold by means of a safe and easily operated air driven gear pump arrangement. However, **PRI-RS** is highly miscible with heavy fuel oil and may be added directly to tanks no greater than 60 minutes prior to bunkering. Agitation from fuel flow into the tank typically provides a sufficient mixture.

Quality control:

PRI-RS is manufactured in accordance with strict, chemical manufacturing standards. Each blend is numbered, and a retain sample is FTIR tested against a laboratory standard to ensure optimal conformance.

Miscibility:

PRI-RS is a highly complex blend of organic chemistries that, once blended with heavy fuel, will not stratify or separate, even with fuel purification. In fact purification systems remain cleaner and more efficient when processing **PRI-RS** treated fuels.