



LSFO

Heavy fuel oils are referred to as low sulfur fuel oil (LSFO) if their sulfur content is below 1%. Usually these are marine fuel types IFO 180 or IFO 380, which have been desulfurized. Until the end of 2014, ships could still travel through Emission Control Areas (ECAs) with this type of marine fuel. Since January 1, 2015, in accordance with Annex VI of the MARPOL Conventions, ship emissions must contain no more than 0.1% sulfur in such protected areas (ECAs). Due to these tightened restrictions, LSFOs no longer play an appreciable role in these areas and have been virtually replaced with the ultra-low sulfur fuel oil (ULSFO) marine fuel, which complies with those limits. Today, the term ultra-low sulfur fuel oil usually refers not to desulfurized heavy fuel oils, but to marine gasoil, which is already low in sulfur. It is composed exclusively of distillates and has a sulfur content of under 0.1%. This marine fuel is also known as ultra-low marine gasoil. ULSFO is used in medium- to high-speed diesel engines.

TYPICAL SPECIFICATION			
CHERCTRISTICS	UNIT	SPECIFICATION	TEST METHODE
Density @ 15 °C	Kg/l	960,0	IP 365/97
Kinematic Viscosity @ 50 °C	CSt	Max 30	ASTM D445/01
Flash Point	°C	Min 60	ASTM D 93B/02
Pour Point	°C	Max 6	ASTM D97/02
Water Content	% Vol.	Max 0.50	ASTM D95/99
Sulphur Content	% m/m	< 0.5	ASTM D4294/02
Carbon Residue	% m/m	Max 0.10	ASTM D4530/00
Total Sediment	% m/m	Max 0.10	IP 390A/94
Ash	% m/m	Max 0,070	ASTM D482/95
Vanadium	mg/kg	Max 150	IP 501/05
Sodium	mg/kg	Max 100	IP 501/05
Aluminium + Silicon	mg/kg	Max 40	IP 501/05
Calcium	mg/kg	Max 30	IP 501/05
Zinc	mg/kg	Max 15	IP 501/05
Phosphorus	mg/kg	Max 15	IP 501/05