



Ecomax ESE

Biodegradable stern tube lubricant

Description

Ecomax ESE lubricants are a range of high performance emulsifying biodegradable oils based on synthetic esters, developed primarily for use in stern tubes and bearings where water ingress may occur.

Ecomax ESE meets the criteria in the US Coastguard Vessel General Permit (VGP) definitions for biodegradable, minimally – toxic and non-bio accumulative published by the US EPA in March 2013.

Benefits

- Very high viscosity index
- Biodegradable & non - toxic
- Excellent wear protection
- Excellent corrosion protection

- Superior level of lubrication even when water ingress occurs
- Miscible with conventional mineral oils
- Meets CEC-L-33-T-93

Applications

These stern tube oils are intended as drop-in replacements for conventional mineral oils in equipment where there is a risk of accidental spillage or leakage and consequential environmental damage. Next to stern tubes, Ecomax ESE also suited for the application in reduction gear, thruster, spur, couplings and helical and planetary gear units.

Typical performance data

	Test method	ESE 68	ESE 100	ESE 150	ESE 220
Density @ 20 °C, g/m ³	ISO 3675	0.92	0.92	0.93	0.93
Viscosity @ 40 °C, cSt	ISO 3104	68	100	150	220
Viscosity @ 100 °C, cSt	ISO 3104	13	18	21	34
Viscosity Index	ASTM D2270	210	205	130	210
Pour point, °C	ASTM D97	<-24	<-24	-30	-25
Flash point, °C	ASTM D93	>240	>240	260	230
Steel Corrosion Sea Water	ASTM 665	Pass	Pass	Pass	Pass
TOST test, h	ASTM D-943	>600	>600	>600	>600

Acute Toxicity

LC ₅₀ (96 h) > 10000 mg/l	OECD 203
EL ₅₀ (15 d) > 2570 mg/l	(Daphnia) OECD 202 part 2
EC ₅₀ (3 h) > 10000 mg/l	OECD 209

All performance data on this Technical Data Sheet are indicative only and can vary during production

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