

VGP Compliance Declaration - ECOSTERN SMX

ECOSTERN SMX is an Environmentally Acceptable Lubricant (EAL) according to the definitions and requirements of the US EPA 2013 Vessel General Permit, as described below.

VGP Section 2.2.9

All vessels must use an EAL in all oil to sea interfaces, unless technically infeasible. "Environmentally acceptable lubricants" means lubricants that are "biodegradable" and "minimally-toxic" and are "not bio-accumulative" as defined in Appendix A of the permit.

Environmentally Acceptable Lubricant Definition - VGP Appendix A

In order to be classified as an "Environmentally acceptable lubricant" the oil maker must determine that the lubricant is "biodegradable", "minimally-toxic" and "not bio-accumulative" as defined in Appendix A of the permit. Alternatively, oils that are labelled by one of several programs specified in the permit are regarded as acceptable.

ECOSTERN SMX and its components have been evaluated by independent laboratories. Using these test results, Vickers Oils has determined that it meets the VGP definition of an Environmentally Acceptable Lubricant.

Biodegradability / Non Bioaccumulation - VGP Appendix A

The VGP definitions of "Biodegradable" include lubricant formulations that contain at least 90% by weight of a constituent substance or constituent substances that give a minimum test result of 60% according to OECD 301B. For the 10% of the formulation that need not meet the above biodegradability requirements, up to 5% may be non-biodegradable (but not bio-accumulative) while the remainder must be inherently biodegradable. Acceptable test methods to demonstrate inherent biodegradability include >20% according to OECD 301B.

In order to comply with the 2013 VGP biodegradability / bioaccumulation requirement, it is necessary to consider the constituent substances. Only substances present in the formulation above 0.10% need be assessed. As stated above, the requirements for bioaccumulation only apply to non-biodegradable constituent substances.

The constituent substances of **ECOSTERN SMX** meet the above requirements.

Minimally Toxic - VGP Appendix A

The VGP definitions for "Minimally-Toxic" fluids include achieving acute toxicity results of at least 100 mg/L according to OECD 201, 202, and 203 (Algae, Daphnia and Fish).

ECOSTERN SMX meets the above requirements.

Record Keeping – VGP Section 4.2

Vessel must keep records on the vessel that include the Technical Data Sheets for all EALs used in Oil-to-Sea interfaces on board the vessel in order to prove compliance with the permit.



Peter JF Vickers
Chairman & Managing Director

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