

LANOPRO HYDRAULIC 32 EAL is an Environmentally Acceptable Lubricant (EAL) according to the definitions and requirements of the US EPA 2013 Vessel General Permit (VGP).

VGP Section 2.2.9 states that all vessels trading on US ports, must use an EAL in all oil to sea interfaces, unless technically infeasible. The criteria for an EAL are defined in Appendix A of the VGP.

EAL Definition - VGP Appendix A

A producer of lubricants will determine, and make a statement when their product meets the criteria for being EAL. The lubricant must be (1) "biodegradable", (2) "not bio-accumulative", and (3) "minimally-toxic" as defined in Appendix A of the Permit. If the lubricant has been labelled by one of the international labelling programs specified in the permit, e.g. OSPAR, Blue Angel, Swedish Standard, Nordic Swan or European EcoLabel, they are regarded as EALs.

1-2 EAL Biodegradability / Non Bioaccumulation criteria - VGP Appendix A

>90% (by weight) of constituent substance(s) shall be biodegradable >60% in 28 days (OECD 301A-F, 306, 310). For the remaining <10% (by weight) of the formulation, <5% may be non-biodegradable if not bio-accumulative, while the remainder shall be biodegradable >20% in 28 days (OECD 301A-F, 306, 310). Bioaccumulation potential shall be determined by defined standards (incl OECD 107, 117 or 123) if molecular weight is below defined levels. The requirements for bioaccumulation only apply to non-biodegradable constituent substances. Only constituent substances in the formulation above 0,10% needs to be determined.

3 EAL Minimally Toxic criteria - VGP Appendix A

"Minimally-Toxic" means substance(s) that pass OECD 201, 202 and 203 (Algae, Daphnia and Fish) for acute toxicity testing, or OECD 210 and 211 for chronic toxicity testing. (ISO10253, ISOTC147/SC5/W62 and OSPAR 2005 may substitute OECD 201,202,203.) LC50 of formulation or main constituents must be >100 mg/L. LC50 of total loss lubricants must be >1000mg/L. If substance is evaluated individually rather than by the complete formulation and main compounds, then constituents comprising <20% can have LC50 between 10-100mg/L or a NOEC between 1-10mg/l. Constituents <5% of formulation can have LC50 between 1-10mg/L or NOEC between 0.1-1mg/L. Constituents >1% of formulation can have LC50 between 1-mg/L or NOEC between 0-0.1mg/L.

Record Keeping - VGP Section 4.2

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

LANOPRO HYDRAULIC 32 EAL and its components have been examined and approved by the European Ecolabel and been awarded license number NL/027/914. It is announced on the official EU Ecolabel Product Catalogue: http://ec.europa.eu/ecat/. This accreditation is a third party compliance confirmation of the product being an EAL according to the Vessels General Permit regulation, according to EPA's definitions.

Houtan Houshangi Board Director

Frands P. Frandsen Managing Director

ID nr: VGP 100 152.02

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LanoPro Production AS Smedveien 7 1344 Haslum Norway

Phone: +47 40 00 15 14
Fax: +47 21 54 73 43
E-mail: mail@lanopro.com
Web: www.lanopro.com

LanoPro Pte Ltd 112 Robinson Road #12-01 Singapore 068902 Phone: +65 6222 3209
Fax: +65 6826 4109
E-mail: mail@lanopro.com
Web: www.lanopro.com

Dated: 1 March 2024