

# BIODEGRADABLE LUBRICANTS



- Hydraulics
- Greases
- o Chain oils
- Other products







Today biodegradable lubricants are considered as vital in the operation of equipment in accordance with existing laws when used in an environmentally sensitive area. This is why IGOL has developed **PROBEOL**, a range of biodegradable lubricants.

Public works, green areas, forestry sites, shipping and sailing, hydro-electrics, skiing resorts, national parks, agriculture, concrete demoulding and rail transport are just some of the areas concerned.

All the lubricants in the **PROBEOL** range display intrinsic properties that make them specific in regard to oil-derived lubricants :

- Performance
- Biodegradability
- Non-toxicity
- Renewability
- A natural lubricating power
- Good surface adhesiveness
- Good lubricity
- A viscosity index adapted to service constraints

### Chain oils

#### **PROBEOL CHAÎNE 150 EL**

Biodegradable lubricant in accordance with OECD 301 B norm, non ecotoxic, for chainsaw and guide bar oiling. Specially formulated to fulfill the strict requirements of lubrication.



Biodegradability > 95% (OECD 301 B norm)

#### **PROBEOL CHAÎNE 100/150**

Biodegradable lubricant for chainsaw and guide bar oiling. Excellent lubrication properties and strong tackiness.

#### PROBEOL PULVOCOUPE V

Grade 32 cutting oil for the lubrication of band saws. Biodegradable, nontoxic, microspray oil. Primary biodegradability > 90% (in accordance with NFT 60-198)

#### PROBEOL PULVOCOUPE F

Grade 32 cutting oil for the lubrication of band saws. Biodegradable, nontoxic microspray oil. Suitable for outdoor use and cold temperatures not exceeding -15°C.

Primary biodegradability > 90% (in accordance with NFT 60-198)

#### **PROBEOL EMULSCIE V**

Emulsionable fluid for lubrication and saw-milling with a recommended concentration varying from 4 to 10%. The tryglycerides contained in the fluid coat the lubrified parts and display a high level of tackiness on the steel. Excellent dissolving power on the resins which easily become attached to the blade ensuring longer blade life. No unpleasant odours, leaves clothes odour-free. Non-flammable emulsion.

This product also exists in edible form (EMULSCIE AL).

Primary biodegradability> 90% (in accordance with NFT 60-198)

## Hydraulic range

#### **Hydraulic oils:**

#### **PROBEOL HV 46**

Also available in grades 32 and 68

DIN 51524, HVLP ISO 15380 (HEES)

PROBEOL HV 46 is a high quality hydraulic fluid, based on biodegradable synthetic esters and high-performance additives resulting from laboratory research. PROBEOL HV 46 should be used as a hydraulic fluid in environmentally sensitive areas to prevent the risk of pollution. PROBEOL HV 46 has been specially formulated for top of the range hydraulic lubrication for use in the most extreme conditions on public works machinery, farming machinery (tractors, tools, quarry machinery) and industrial machinery (presses, cylinders, machine tools, etc.)

Due to its strengthened additivation, PROBEOL

Due to its strengthened additivation, PROBEOL HV 46 provides excellent oxidation resistance, very good thermal stability and an outstanding hydrolytic stability.

Biodegradability > 70% (in accordance with OECD 301B norm)

#### **PROBEOL SAT 46**

Also available in grades 22 and 32

ISO 15380 (HEES) DIN 51524-2 - DIN 51524-3

Synthetic, biodegradable hydraulic fluid, formulated with over 50% renewable saturated esters. This high-level performance fluid is also environmentally friendly.

Biodegradability > 60% (in accordance with the OECD 301B norm)

#### **PROBEOL HEES 46**

ISO 15380 (HEES) - VDMA 24568 (HEES)

Biodegradable hydraulic lubricant based on unsaturated esters recommended for use in agriculture and forestry and in high temperatures (< 90°C)

Biodegradability > 70% (in accordance with OECD 301B norm)

#### **PROBEOL HETG 46**

ISO 15380 (HETG) - VDMA 24568 (HETG)

Biodegradable hydraulic vegetable oil-based lubricant. Adapted for agricultural machinery and recommended for use in environmentally sensitive areas. Intended for use in hydraulic systems at moderate temperatures (< 70°C).

Biodegradability > 70% (in accordance with OECD 301B norm)

HETG: Hydraulic Environmental Triglyceride oil based on rapeseed and/or oleic sunflower

HEES: Hydraulic Environmental Synthetic Ester lubricant

#### **Rinsing fluid:**

#### **PROBEOL FLUSH**

Biodegradable zinc-free vegetable oil-based rinsing fluid, essential for maintaining the biodegrable qualities of hydraulic lubricants when changing from mineral-based hydraulic fluids to biodegradable PROBEOL.

Biodegradability > 60% (in accordance with the OECD 301B norm)

## Transmission & gear oils

#### **PROBEOL MU XTREM**

API GL-4 ISO-VG-46 John Deere J20C NH 410 BS

Hydraulic transmission oil for wet brake systems > UTTO (Universal Tractor Transmission Oil)
Very high-quality biodegradable oil, for hydraulic and mechanical transmissions in public works and agricultural engines and machinery. The improved additivation of PROBEOL MU XTREM ensures high

viscosity on gears and hydraulic systems preventing wet brake chatter.

Biodegradability > 70% (in accordance with OECD 301B norm)

#### **PROBEOL SP 150 220 320**

ISO VG 150-220-320 CLP (DIN 51517 poste 3)
Biodegradable gear oil, based on synthetic esters.
Biodegradability > 70% (in accordance with OECD 301B norm)

### Engine oils

#### 4-stroke engines:

#### **PROBEOL PLX 5W-30**

ACEA E6/E7 - API CI-4 - CAT ECF-1a -MAN M 3277 low ash, MAN M3477 -Mercedes-Benz 228.51 - MTU category 3 & 3.1 -Renault RXD - Volvo VDS-3

100% synthetic long lasting multigrade motor oil. 5W-30 provides PROBEOL PLX with a high performance level, fuel economy and considerable wear and friction reduction. Especially recommended for use in environmentally sensitive areas exposed to pollution risks. In addition to its biodegradability, PROBEOL PLX 5W30 complies with the most stringent demands of many manufacturers. PROBEOL PLX thus enables users to observe recommended oil-change intervals.

Biodegradability > 60% (in accordance with OECD 301B norm)



#### 2-stroke engines:

#### **PROBEOL 2T TR**

JASO FC (anti-smoke) ; ISO-L-EGD

In compliance with the stringent anti-smoke norms, JASO FC, PROBEOL 2T TR is a high-quality synthetic oil for 2-stroke engine land vehicles. This oil is formulated from biodegradable complex esters and high-performance additives improving its lubricating properties and resistance to oxida-

Biodegradability > 64% (OECD 301 B norm)

### Absorbents & detergents

#### **PROBEOL ABSORB**

formulated from renewable energy wood chippings and in compliance with N° 336 NF Environment

PROBEOL ABSORB is free of heavy metals, has significant absorption qualities, and creates minimum ash when incinerated.

Absorption capacity (NF T 90-361): Diesel 335 %, water 434 %, oil 15W-40 319 %.





AFNOR NORM: Absorbent for use in industrial environments and on roads (NF P 98-190) – Labelling in accordance with AFNOR NF T 90-363 AFNOR NF ENVIRONMENT TRADEMARK: Licences n° 01/01 Absorbent for use in industrial environments & on roads - NF 336

#### **IGOSOLVE VG 20**

Grease solvent for professional use, IGOSOLVE VG-20 is designed for cleaning mechanical parts. Tank mix or application with cloth or paintbrush. IGO-SOLVE VG-20 is odourless and free of chlorine and fluorine. Nontoxic solvent, formulated with specially transformed natural-sourced raw materials.

With its low-volatility, IGOSOLVE VG-20 does not

VOCs (volatile organic compounds) • chlorine compounds • fluorine compounds • aromatic compounds • Odourless

Biodegradability > 80% (in accordance with OECD 301B norm)

#### **PROBEOL POUDRE MAINS**

Organic-based, solvent-free hand cleaner. Contains purified micronized pinewood cellulose, with exfoliating and absorbency properties fixing the dirt onto the soap.



Glycerine-enriched PROBEOL POUDRE MAINS scented with essential oils of lavendin keeps skin soft and moisturized.

#### PROBEOL ASPHALTE

Improved biodegradable release agent with active ingredients designed to protect production equipment in asphalt and bitumen works and to prevent sticking in transport containers.

Biodegradability > 60% (in accordance with OECD 301B norm)

### Greases & demoulding oils

#### **PROBEOL GREASE G 000**

PROBEOL GREASE G 000 liquid low-temperature grease to be used in centralised lubrication systems

Biodegradability > 90% (in accordance with CEC-L-33 T-82 norm)

#### **PROBEOL GREASE SHP 50**

DIN 51502:KPE2K-18 ISO 6743 / 12924:L-XBCHB2 For use within -20 to +145 °C Dropping point >160°C

Lubricating lithium and calcium soap-based grease with synthetic esters and vegetable oils. Particularly recommended for use in environmentally sensitive areas: forestry sites, green areas, proximity to water courses, locks and barges. Exceptional resistance to salt water.

Inherently biodegradable > 50% (in accordance with OECD 301B norm)

#### **PROBEOL VIBROLINE**

Deferred mould release lubricant for vibrated concrete, wood and metal moulds and formwork. PROBEOL VIBROLINE contains vegetable oils enhancing its excellent consistency. Straight oil to be used undiluted in spray-form or applied with a brush.

Biodegradability > 90% (in accordance with OECD 301B norm)

#### **VEGELUB** (Aerosol)

100% vegetable-based biodegradable oil for general applications particularly adapted for lubrication purposes in the agro-food industry.

Recommended for use where food contamination risks are likely or in order to avoid accidental pollution to the environment.

### Cooling products & windscreen washers

#### PROBEOL LR MPG

#### **AFNOR (NFR 15-601 Type 2)**

Ready-to-use biodegradable coolant for cooling systems in HGV and industrial vehicles. Nontoxic, environmentally-friendly. Protection up to -25°C.

Biodegradability > 70% (in accordance with OECD 302 B method)

#### PROBEOL PROTECT PULVE

Antigel pulvé is a glycerine-based antifreeze containing corrosion inhibitors for metal protection and surfactants for sprayer maintenance.

Easily biodegradable and organic-based. Its colour is derived from natural chlorophyll extract.

#### PROBEOL LAVE-GLACE

PROBEOL LAVE GLACE for the cleaning of vehicle windows and windscreens.

Can be used in freezing temperatures. Protection up to -20°C. Contains beet, wheat or sugarcane derived others!

The surfactants are formulated from essentially organic-based raw materials (coconut) and guaranteed GMO-free. Its colour is derived from natural chlorophyll extract.

Biodegradability > 99% (in accordance with OECD 302 B norm)



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