



PALM-BASED FOOD GRADE BIODEGRADABLE GREASE

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TECHNOLOGY DESCRIPTION

The Grease Formulation

- Palm-based ester
- NSF HX1 and FDA approved
- Food-grade and biodegradable

The Grease Processing Method

- Validated from lab to pilot plant
- Scalable and reproducible
- Consistent grease quality

PRODUCT HIGHLIGHTS

- Locally sourced ingredients
- Fulfilled both food-grade and biodegradability requirements
- Scalable grease processing
- Eligible for tax incentives for manufacturers

PRODUCT SPECIFICATION

NLGI grade	ASTM D217	2
Colour	Visual	Orange
Appearance	Handfeel	Tacky
Operating temperature	/	-20 to 120°C
Penetration at 25°C	ASTM D217	282 x10 ⁻¹ mm
Four ball weld load	ASTM D2596	200 kg
Anti-rust performance	ASTM D4048	1b
Dropping point	ASTM D2265	> 150°C
Oil separation	ASTM D6184	0.12%

ECONOMIC ANALYSIS

Cost of raw materials per kg product	RM19.50 per kg
Selling price per kg product	RM30 per kg
Capital expenditure, RM	RM2,000,000
Net present value (NPV)	RM4,488,661
Internal rate of return (IRR)	43%
Discounted payback period	3 years
Discounted benefit: Cost ratio	1.11

* Calculated based on discounted rate of 10%

BIOLUBRICANT FOR SUSTAINABLE PLANET



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