

# DIRGHAYU

## I Pe/EC9/SO 10

### Green – Biobased Spindle Oil for Textile machines



#### 'PRODUCT INFORMATION'

#### Application –

Modern high speed spindles employed in spinning machines are revolving at 15000 to 23000 rpm. Spindle bearings; therefore require lubricants having high lubricity and low viscosity as well as high viscosity index. The overall ambient conditions are humid & hot. These are continuously operating for 24 hrs a day & throughout the year. Thus they require good oxidative stability & protection against rust & corrosion. The life expectancy is also high.

Machine tools, timing gears, centrifuge and such high speed applications also require similar properties for lubricating oils.

#### Properties & Benefits –

Dirghayu' Spindle oil I Pe/EC9/SO 10 is from 'Dirghayu' biobased lubricants range. Being biobased, it has **very high lubricity**. (This can be verified from very low four ball scar diameter in TDS). High lubricity is a prime requirement for high speed bearings. **The high lubricity results in energy saving.**

Moreover, low friction also results in low temp rise, compared to petro or synthetic. Unlike petro or synthetic, **biobased provide polar property. The thin film of the oil will have adhesion with balls & recess.** This avoids spill over on load & metal to metal contact.

It has high viscosity index almost 2 times petro & 1.5 times synthetic. (More than 200) **This result in consistency of viscosity over working temp range & less consumption avoiding evaporation**

Chemically modified vegetable base oils have good qualities of oxidative, thermal stability & rust prevention. The properties are further fortified with **anti oxidant, anti wear, anti rust & Defoaming additives.**

**Overall the life of the oil is 6 months or more.**

**Being biobased, the spent lubricants do not require ETP. They can be burnt with fuel or can be composted.**



## TECHNICAL DATA SHEET OF IPe/EC9/SO 10

				<u>IPe/EC9/SO</u>
<b>SR.NO.</b>	<b>PROPERTY</b>	<b>UNIT</b>	<b>Test Method</b>	<b>Grade 10</b>
1	Appearance		Visual	Light amber
2	Density @15 °C	Kg/m <sup>3</sup>	Hydrometer Method	0.870 to 0.9
3	pH		pH Method	7
4	Viscosity @ 40 °C	centistokes	ASTM D 445	9.5 to 11
5	Viscosity @ 100 °C	centistokes	ASTM D 445	2.5 to 3.5
6	Viscosity index	centistokes	ASTM D 2270	270
7	Water Content	ppm	Evaporation Method	<500
8	Acid Number	mg KOH/g	AOCS Te 1a-64	<0.8
9	Flash Point	°C	ASTM D 92	170
11	Antifoam Test	ml		Pass
12	Cu Corrosion Test		ASTM D 4048	1a
13	pour point	°C	ASTM D 97	-3
14	Four Ball scar	mm	ASTM D 4172	0.42
15	Four Ball weld load	Kg	ASTM D 2783	240
16	Spindle Speed	RPM		10000-24000
17	Oxidation Stability	Min	ASTM D 2272	Passes

**COMMITTED TO ENERGY CONSERVATION & ENVIRONMENT PROTECTION**

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