2017.05 (Ver.1)

A new option of oil for sleek hair

ACROBUTE™ MB-90

NOF CORPORATION

Compliant with JSQI

1 Friction control

Stribeck Curve

Stribeck curve expressed the relationship between the friction coefficient [μ], viscosity of the lubricating oil [η], load [Fn], and velocity [v] (Figure1).

When the conditions of the load and the velocity are kept constant, the friction coefficient decreases in the mix lubrication region as viscosity increases.

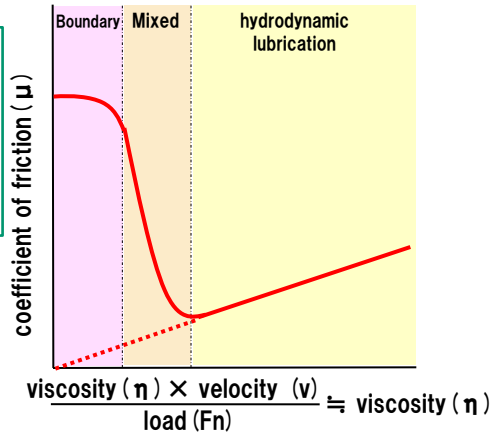


Figure1. Stribeck curve

Viscosity of Oil is very important for friction control

2 Oil Type and Viscosity Control

Oil	Friction control
Ester oil	Difficult
Nonpolar oil (paraffin, isobutene, etc)	Molecular weight increase causes solidification and stickiness
Silicone Oil	Possible by molecular weight control
Polyether Oil	Possible by molecular weight control

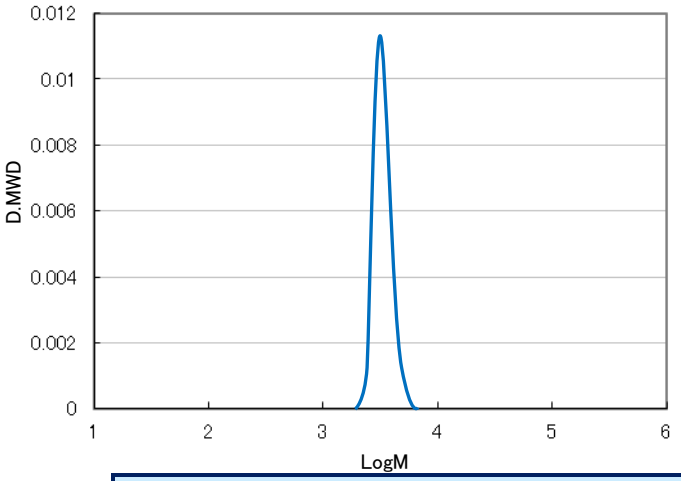
Polyether Oil can control viscosity by molecular weight.

3 ACROBUTE™ MB-90

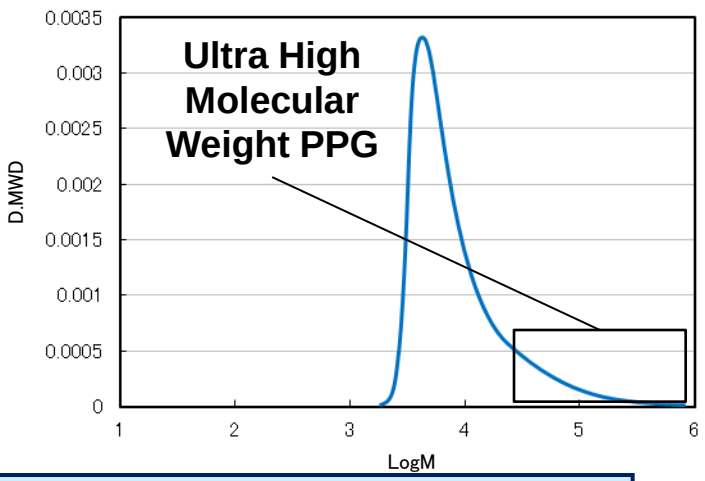
Chemical	$C_4H_9O-[C_3H_6O]_n-H$ n =90
INCI	PPG-90 BUTYL ETHER
Concept	*A new option of oil for sleek hair*

4 Molecular weight distribution of ACROBUTE™

General PPG derivatives



ACROBUTE™



Asymmetry molecular weight distribution containing Ultra High Molecular Weight PPG

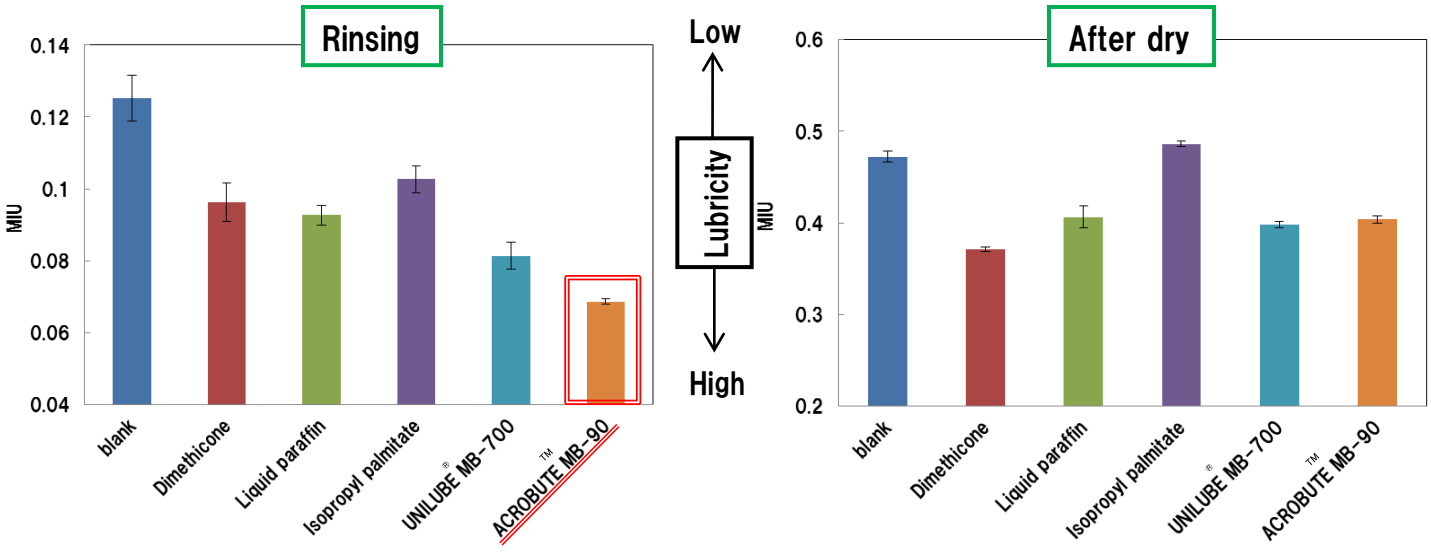
5 Lubricity (in treatment)

【Method】

①10wt% solution of treatment containing 5wt% oil (table1) are prepared as treated solution for hairs.
②Coefficient of kinetic friction (MIU) of artificial hairs is measured in treated solution ①.
③Rinsing hair with water and, after drying, measure MIU

Table.1

	INCI	wt%
Oil	Cetearyl Alcohol	5.0
Water	Behentrimonium Chloride	2.0
	Water	Blance
Additive	Phenoxyethanol	0.5
	Oil	5.0



※Dimethicone：KF-9028(Shin-Etsu Chemical Co., Ltd)

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