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AB Petrochem Pvt. Ltd.

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Tackiness Agent:

Additive used to increase the adhesive properties of a lubricant, improve retention, and prevent dripping and splattering.

Tacky:

A descriptive term applied to lubricating oils and greases which appear particularly sticky or adhesive.

TAN (Total Acid Number):

The quantity of base, expressed in terms of the equivalent number of milligrams (mg) of Potasium Hydroxide, that is required to titrat the strong acid constituents present in 1 gram (g) of oil sample. (ASTM Method D 644 or D 974).

TBN (Total Base Number) :

The quantity of acid, expressed in terms of the equivalent number of milligrams (mg) of Potasium Hydroxide, that is required to titrat the strong base constituents present in 1 gram (g) of oil sample. (ASTM Method D 644 or D 974).

Teflon (PTFE):

The original form of Teflon® is polytetrafluoroethylene, or PTFE. The molecular structure of Teflon® is based on a chain of carbon atoms, the same as all polymers. Unlike some other fluoropolymers, in Teflon® this chain is completely surrounded by fluorine atoms. The bond between carbon and fluorine is very strong, and the fluorine atoms shield the vulnerable carbon chain. This unusual structure gives Teflon® its unique properties. In addition to its extreme slipperiness, it is inert to almost every known chemical.

Thixotropy :

The property of a grease or some gels to decrease in cosnsistency when subjected to a shear stress and return to original consistency when the stress is removed.

Timken EP tester :

One of may laboratory machines used in determining the load carrying ability and capacity of oils and greases; it measures the extreme-pressure properties of a lubricating oil (see EP oil).

In this tester (Timiken Machine), an outer race of a roller bearing, which is lubricated by the product under test, is rotated against a steel block. The test continues under increasing load (pressure) until a measurable wear scar is formed on the block.

The Timken OK load is the highest load under which a lubricant prevents scoring of the steel block by the rotating cup. This load is the reported value.

Tribo-:

Combining form meaning friction

Tribology:

Science devoted to the study of friction, wear and lubrication between interacting parts, in intimate contact during relative motion, such as gears and bearings.

Ultraviolet Absorbance : Measurement of the ultraviolet absorption of petroleum products, determined by standardized tests, such as ASTM D 2008. Aromatics absorb more

ultraviolet light than do naphthenes and paraffins, and the amount of absorbance can be used as an indication of the amount of aromatics in a product. Certain polynuclear aromatics (PNA) are known carcinogens (cancer-causing substances), with peaks of absorbance generally between 280 and 400 millimicrons. The Food and Drug Administration (FDA) has therefore imposed limits on the amount of ultraviolet absorbance at these wavelengths for materials classified as food additives. However, not all materials with ultraviolet absorbance at these wavelengths are carcinogenic.

Unsaturated Hydrocarbon :

Hydrocarbon lacking a full complement of hydrogen atoms, and thus characterized by one or more double or triple bonds between carbon atoms. Hydrocarbons having only one double bond between adjacent carbon atoms in the molecule are called olefins; those having two double bonds in the molecule are diolefins. Hydrocarbons having alternating single and double bonds between adjacent carbon atoms in a benzene-ring configuration are called aromatics. Hydrocarbons with a triple bond between carbon atoms are called acetylenes. Unsaturated hydrocarbons readily attract additional hydrogen, oxygen, or other atoms,

and are therefore highly reactive.



V6:

Is an internal combustion piston engine with six cylinders in a "V" configuration. It is the second most common engine configuration in modern cars after the straight-4; it shares with that engine a compactness very suited to the popular front wheel drive layout, and is becoming more popular as car weights increase. The first V6 was introduced by Italian Lancia on the 1924 Lancia Lambda, but it made little impact. The design was reintroduced by the company in 1950 with the Lancia Aurelia; this time, other manufacturers took note and soon other V6 engines were in use.

Varnish:

- 1. hard, varnish-like coating formed from oil oxidation products, that bakes on to pistons during high-temperature operation of automotive engines and industrial machinery. Varnish can accelerate cylinder wear. Varnish formation can be reduced with the use of a detergent-dispersant and an oxidation inhibitor in the oil. See engine deposits
- 2. In ink formation, varnish composed of resin, solvent, and additives is the vehicle to which pigment is added to make printing ink.

Vegetable oils:

These are derived from a vegetable source. From pure lubrication considerations, they may be regarded as superior to mineral oils as their chemical nature provides excellent adhesion to metal surfaces due to their inherent polarity. However, they have relatively poor high temperature stability and are costly.

VI (Viscosity Index):

An arbitrary scale used to show the magnitude of viscosity changes in lubricating oils with changes in temperature. Oils with low VI number such as VI=0 ("zero") have high dependence of viscosity change on temperature. They thicken quickly with decreasing temperature, and thin out quickly with increasing temperature. Oils with high VI number such as VI=200, will still thicken with decreasing temperature but not as rapidly, and also will thin out with increasing temperature, but again not as much as low VI oil.

VI number can also be "negative"

Tables found in ASTM Method D 2270 are widely used to determine VI number.

However, VI does not tell the whole story -- it only reflects the viscosity/temperature relationship between temperatures of 40°C and 100°C. Two lubricants or base oils with the same VI number may perform dramatically different at low temperatures in the -5°C to - 50°C range.

Viscometer:

Device for measuring viscosity; commonly in the form of a calibrated capillary tube through which a liquid is allowed to pass at a controlled temperature in a specified time period.

Viscosity :

The measure of the internal friction or the resistance to flow a liquid. Low viscosity fluids flow easily (water); High viscosity fluids pour slowly (molasses).

measurement of a fluid's resistance to flow. The common metric unit of absolute viscosity is the poise, which is defined as the force in dynes required to move a surface one square centimeter in area past a parallel surface at a speed of one centimeter per second, with the surfaces separated by a fluid film one centimeter thick. For convenience, the centipoise (cp) — one one-hundredth of a poise — is the unit customarily used. Laboratory measurements of viscosity normally use the force of gravity to produce flow through a capillary tube (viscometer) at a controlled temperature. This measurement is called kinematic viscosity. The unit of kinematic viscosity is the stoke, expressed in square centimeters per second. The more customary unit is the centistoke (cSt) — one one-hundredth of a stoke. Kinematic viscosity can be related to absolute viscosity by the equation:

$cSt = cp \div fluid density$

In addition to kinematic viscosity, there are other methods for determining viscosity, including:

- 1. Saybolt Universal viscosity
- 2. Saybolt Furol viscosity
- 3. Engler viscosity
- 4. Redwood viscosity.

Since viscosity varies inversely with temperature, its value is meaningless unless the temperature at which it is determined is reported.

Viscosity Index Improver (VII) :

Chemical additive that is added to finished lubricants to improve the viscosity index.

lubricant additive, usually a high-molecular-weight polymer, that reduces the tendency of an oil to change viscosity with temperature. Multi-grade oils, which provide effective lubrication over a broad temperature range, usually contain V.I. improvers.



The manner in which the viscosity of a given fluid varies inversely with temperature. Because of the mathematical relationship that exists between these two variables, it is possible to predict graphically the viscosity of a petroleum fluid at any temperature within a limited range if the viscosities at two other temperatures are known. The charts used for this purpose are the ASTM Standard Viscosity-Temperature Charts for Liquid Petroleum Products, available in 6 ranges. If two known viscosity-temperature points of a fluid are located on the chart and a straight line drawn through them, other viscosity-temperature values of the fluid will fall on this line; however, values near or below the cloud point of the oil may deviate from the straight-line relationship.

Viscous :

Possessing viscosity. Frequently used to imply high viscosity.

Volatility :

The degree to which a substance tends to vaporise or evaporate; expression of evaporation tendency.

Liquids with high volatility will loose (by evaporation) high percentage of their weight or volume when heated to specific test temperature (Noack Volatility Test). The more volatile a petroleum liquid, the lower its boiling point and the greater its flammability. The volatility of a petroleum product can be precisely determined by tests for evaporation rate; also, it can be estimated by tests for flash point and vapor pressure, and by distillation tests.