

Dear Customers:

News Release

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FE TRADE CO., LTD

## “TUV-19” UV Tire Dressing, Highly Weather Resistant Tire Wax Combining UV Protection Agent (UV Ray Absorbent) into Pure Silicone, is Released.

A Total Solution to Deteriorations Especially on Rubber Materials

FE TRADE CO., LTD released “TUV-19” UV Tire Dressing, which is highly weather resistant tire wax to prevent deterioration of tires due to UV rays, from our long-seller professional tire wax series.

### ■ Background of the Launch

The Japanese auto detailing market is thought to be matured even compared to the world standard, and its business is also diversified. Tire waxes play an important role to maintain the car appearance, and there are a variety of products, but many give priority to beautiful appearance as their purpose. Considering the increasing awareness of environmental issues, FE TRADE CO., LTD developed products aiming at protecting the materials to be treated while keeping the beautiful appearance. TUV-19 was developed as an environmentally-friendly tire protection product which is hardly affected by heat or undergoes hydrolysis. It prevents the deterioration due to UV rays and ozone by combining UV protection agent (UV ray absorbent) with highly weather resistant pure silicone of 100% active component without containing petroleum solvents at all.



### ■ Characteristics of the Product

#### ◎ Excels in Weather Resistance

TUV-19 contains “UV protection agent (UV ray absorbent) \*1” which is compatible with “Pure Silicone \*2”. It protects tires from UV rays and ozone which cause deterioration.

**\*1 Reason why silicone is better in heat and weather resistances compared to ordinary organic polymer.**

Silicone has a siloxane bond (-O-Si-O-Si-), and organic polymer has a carbon bond (-C-C-C-). Compared to a carbon bond, siloxane's bonding power is stronger. Therefore, it is said that siloxane bond is less susceptible to heat, UV rays, and hydrolysis.

#### \*2 Mechanism of UV absorbent

Since UV rays are high energy light, they damage materials which absorb UV rays. When rubber and plastic absorb UV rays with wavelength around 300-400nm, the high energy discolors or degrades the materials. On the other hand, the UV absorbent contained in this product also absorbs UV rays with wavelength around 300-400nm, but it has a structure to change the high energy into heat energy which has less effect to the materials by chemical reaction. Due to this mechanism, UV rays are cut off, and deterioration of the materials, such as rubber, is thought to be prevented.

#### ◎ Excels in Water-repellency and Oil Resistance

Pure Silicone, the main ingredient of TUV-19, uses high density silicone which has stronger bonding power than organic polymer products used in ordinary tire waxes, and 100% of it is active component. It has an excellent water-repellency and oil resistance and is less susceptible to hydrolysis and so on.

#### ◎ Not Harmful to the Tire Material

Petroleum solvents contained in ordinary oil-based tire waxes are one of the biggest causes to accelerate deterioration of tire material by penetrating in it. TUV-19 does not contain this petroleum solvent at all while it contains active component 100%. Thus, users can use it at ease.

#### ◎ Does not Lose Gloss but Keeps Beautiful Appearance and Texture

##### Just After Application

Pure Silicone gives deep, elegant, and long-lasting gloss, and it keeps the smooth texture right after application.

##### ◎ Economical

The high density Pure Silicone is formulated with multiple kinds of silicones with different viscosities. Since it is easy to spread, 4L can be applied to 400 to 500 cars (1,600-2,000 tires) making it very economical.

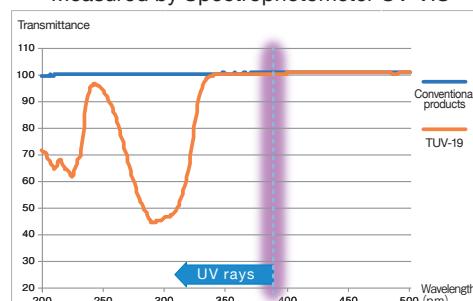
### ■ From the Section in Charge

As a result of focusing on protecting the materials to be treated, which has been a concern of tire waxes, we succeeded to develop an environmentally-friendly product without petroleum solvent at all, which is one of the causes of deterioration, after a lot of trials. Besides, we considered economic value as well. This product contains multiple silicones with different viscosities as main ingredients. Therefore, it is easy to spread, and application can be conducted with even small amount.

### ■ Product Summary

Product Name: TUV-19 Type: Oil-based Volume: 4L Color: Transparent Viscosity: 2

Measured by Spectrophotometer UV-VIS



#### Measurement conditions

- The sample is applied to the side (one side) of a quartz cell. (Applied amount 0.2mg/cm<sup>2</sup>)
- Transmittance of UV rays and visible rays is measured one minute later.

### Contact Details

<https://www.fe-trade.com/page.php?plid=32>