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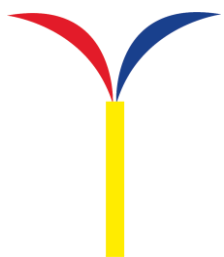
T-1804 Efficient Diesel oil flow Improver Specification

1、Brief introduce

The products of T1804 series of diesel oil pour point depressant use ethylene and vinyl acetate as the main raw material, adding to third monomer for improving the polarity with high pressure solution polymerization process, coupled with the appropriate dispersant. In order to adapt to different diesel quality sensibility, grades are divided into: T1804, T1804B, T1804C, T1804D.

When the temperature of the diesel oil drops to the cloud point, the paraffin wax begins to precipitate. As the temperature decreases, the paraffin wax grows to a size of 200 μm and forms a plate-like rhombic crystal. These crystals are interconnected to form a three-dimensional structure. Loss flowability, clog tubing and filters. there is 0.5 ~ 2% paraffin precipitation in diesel, which can cause diesel solidification. the role of flow improver is to inhibit the growth of wax and forming a network structure in diesel oil.

Diesel flow improvers first effect with the high-carbon alkanes in diesel, enlarge their compatibilization, and precipitation at a lower temperature , the modifier will act as a nucleater, will be crystallized with paraffin and forms into fine crystalline, and the macromolecular polymer lateral chain polar group can be absorbed on the surface of paraffin crystalline, and due to the mutual repulsion of Van Der Waals Force between



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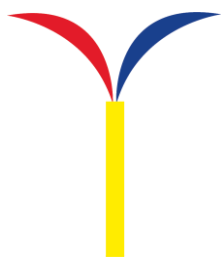
electric charges, the growth of paraffin crystalline is surpassed and maintained at tiny needle shape, and thus the cold filter plugging point and pour point of diesel are reduced, and the diesel is enabled to pass oil pipe and filter mesh smoothly in low temperature, and excellent low-temperature flowability performance is maintained

Based on the distribution of diesel paraffin carbon, our company adjusted and improved the polymer molecular weight of the improvement agent, the distribution of molecular chain polar groups and the varieties of polar groups, and enabled the matching between the gap of polymer polar group and the carbon number of paraffin crystalline. The addition of strong polar groups into polymer molecular chain improves the polarity of polymer, increases the repulsion between crystalline, reduces the particle size of crystalline, and reduce the cold filter plugging point of diesel more substantially.

2、Product usage

Most of China's diesel oil is based paraffin crude oil .wax content is relatively high, n-alkanes in diesel generally 30-45%. So the production of wax content is also high, diesel low-temperature fluidity is poor, high freezing point, high cold filter point.

It is mainly used as the additive to diesel to reduce the cold filter plugging point and pour point of diesel and improve the low-temperature flowability performance of diesel. It can enhance the diesel yield and improve the economic benefits of refineries, save the energy, increase energy utilization ratio, improve performance , reach the high quality level is obtained when using domestic and overseas technologies.



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3、 Method

1. The dosage is usually under 0.1%, and for most refineries, between 0.01~0.06%.

2. The performance not only depends on the performance of the improvement agent itself, but also is closely related to the diesel types and the refinery technologies. To enable better results, experiment shall be carried out before formal application , so that appropriate configuration is determined.

3. During the application, do not add the improver into the diesel if possible, as direct adding of it may affect the performance. It shall be first blended into mother liquid, homogenous mixing between the improver and diesel should be ensured so as to achieve the expected performance.

Preparation of mother liquid: Dilute the improver with jet fuel or ordinary diesel, with the ratio between the improver and the diluent in 1:15, and under the operation ambient temperature no less than 50°C, add the mother liquid into the diesel and blend it to even.

4.Product specifications

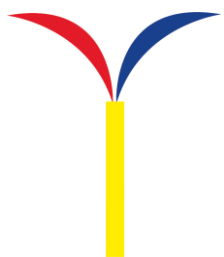
Item	Index
Appearance	Orange yellow viscous oily liquid
Density (20°C) , kg/m ³	850~970
Pour point °C , ≤	30
Kinematic viscosity (50°C) , mm ² /s	10~200

5、 Packing

Packaged in galvanized iron bucket, in net weight of 170 kg/drum

6、 Precautions

This product in storage, use can not be in contact with the fire, keep



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the product clean, to prevent moisture, impurities mixed.