



ADECO® D2 DIZEL ADITIV

FOR IMPROVED LUBRICITY OF EURO DIESEL FUEL

Lubricity improver for low-sulfur diesel fuels and light fuel oil for household

Chemical composition: fat acids and light base oil mixture

Solubility: The product is soluble in most of aromatic hydrocarbons and gas oils.
Insoluble in water!

Product Description: ADECO D2 DIZEL ADITIV for improved lubricity of euro diesel fuel. Improves lubricating properties of all diesel fuels with low and ultra-low sulfur content. Pour into a tank and mix with diesel fuel in motor vehicles and machines of older generation according to the mixing table. Provides very good lubricity of high pressure pump ("Bosch" pump) in all diesel engines, that decreases wear of all moving parts of pump and ensures extended service life of equipment and parts. The product should be used each time the tank is filled.

The Main Advantages:

- provides reliable protection against premature failure of parts of the fuel system;
- protects rotary pumps - high pressure pumps from wear and tear;
- reduces the wear of all parts of the injection system.

Mixing table:

ADECO D2 DIZEL ADITIV	100 ml	200 ml	1000 ml
DIESEL FUEL	50 lit.	100 lit.	500 lit.

Use: The diesel fuel injection equipment, as well as the pump, is prone to excessive wear when diesel fuel with low and ultra-low sulfur content is used. ADECO D2 DIZEL ADITIV improves the lubricity of diesel fuel with low sulfur and aromatic content. This improvement can be measured by dint of the HFRR (High Frequency Reciprocating Rig) test, according to ISO standard 12 156-1.

Performances:

Standard diesel fuel, which is in accordance with EN 590 with a sulfur content <0.05% - Euro 5, when is mixed with ADECO D2 DIZEL ADITIV according to the table, reducing the wear diameter below 460 micrometers, according to the HFRR test.

Pump Test :

ADECO D2 DIZEL ADITIV was tested on Bosch pump for 1000 operating hours, according to VP2 procedure in independent laboratory. Diesel fuel was tested with and without additive. Rating of the pump with fuel without additive is 3, and with additive above 5. That indicates sufficient lubricity.

Compatibility:

ADECO D2 DIZEL ADITIV is not mixed with oils for lubrication which content detergents, as Ca-sulfonate, because of forming of gels and deposits. ADECO D2 DIZEL ADITIV does not influence on diesel fuel properties – as e.g. the flow properties on cold, oxidation stability, the cetane number, and is not mixed with markers which is used in motor and industrial gas oils. Also, does not influence on cleanliness of fuel injection system (according to Peugeot KSUD 9 test, CIK PF 26). The performed tests do not indicate deterioration in the prescribed emissions (HC, CO, NOx, particulates) in light duty diesel engines. The product is accepted by CEPMA (Central Europe Pipeline Management



Technical Data Sheet

Agency) based on tests, according to IP test guidelines.

Physical and Chemical Properties:

Characteristic:	Referential Values
Appearance	Amber color
Viscosity at 40°C	under 20 mm ² /s ASTM D 445
Viscosity at 20°C	under 40 mm ² /s ASTM D 445
Viscosity at 0°C	under 100 mm ² /s ASTM D 445
Flash Point	>100°C ASTM D 93
Pour Point	<-6°C ASTM D 97

Explanation:

High pressure pump (Bosch) is construct for diesel fuel with from 50 to >150 ppm sulfur content– for ecological standards Euro 2, Euro 3 and Euro 4. Sulfur, in addition to the negative effects (the formation of soot, sulfuric acid - which dilute the oil and causes corrosion) has positive characteristics. Namely, sulfur in elementary state or in compound with metals, creates solid lubricants. The most famous is molybdenum disulfide, which is, for example, the basis of some additives for motor oils and lubricants. Sulfur-free fuels according to Euro 5 standard and with <10 ppm sulfur content ("dry" fuels) are consuming Bosch pumps and injectors more, because such fuel does not provide good lubrication of the high pressure pump plates and injectors, resulting in accelerated failure. With the addition of additives for improving lubricity of euro diesel, the lubrication and protection against wear are achieved.

Diesel Fuel Standard	% S	The Cetane Number, min.
EURO 1	0.200	49
EURO 2	0.050	49
EURO 3	0.035	51
EURO 4	0.005	51
EURO 5	0.001	51

Storage: ADECO D2 DIZEL ADITIV can be stored under normal storage conditions (from 0 ° C to 40 ° C, in closed and covered areas) for at least 1 year. For low storage temperatures, note that the pour point is: -5 ° C, and viscosity at 0 ° C to 100 mm² / s. This additive is compatible with materials such as carbon and steel, polyethylene, polypropylene or PTFE, but not with rubber and polystyrene. The shelf life is unlimited in the original packaging and under prescribed storage conditions. After use, empty packaging should be disposed of in accordance with the applicable legal procedure. Do not spill into nature!

Packaging: 100 ml, 500 ml