

# «MAKCOЙЛ»® OIL ADDITIVES "MAXOIL"

# MAXimum opportunities for your car



# pour point depressants



tech spec 0257-001-48328353-00

### **MAXOIL D**

### pour point depressant

Purpose

Effective multi-purpose, resistant to destruction pour point depressant, designed for engine oil, hydraulic fluids and gear oils.

**Effect** 

The applied technology effectively provides pour point depression across a broad range of lubricants. Particularly effective in formulations using catalytically dewaxed base stocks and higher-ethylene-content OCP viscosity modifiers. Common addition rates are 0.3 - 0.5% by weight.

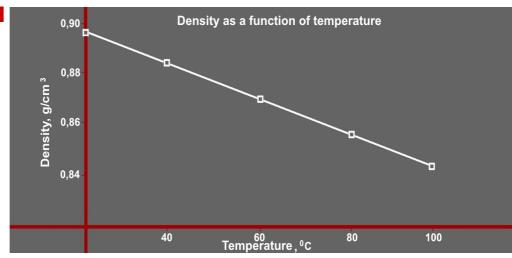
Composition

MAXOIL D is a viscous concentrate of polyalkyl-methacrylate in a solvent-refined mineral oil.

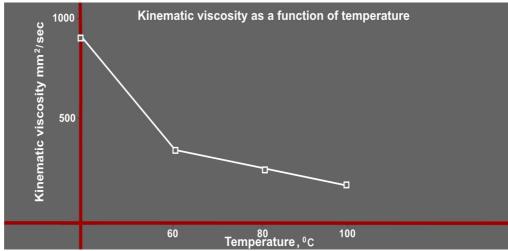
### **Physical properties**

Appearance		transparent viscous liquid
Color		1,00
Basic substance content,	%	35-40
Viscosity at 100 °C,	mm²/sec	100-150
Viscosity at 40 °C,	mm²/sec	900
Density at 15 °C,	g/cm³	0,90
Flash point,	°C	190

### Density



**Viscosity** 



**Delivery** 

20—30t tank trucks 60t railway tanks

in the steel barrels up to 185 kg net weight (up to 200 kg gross)

The information gives the description of our products and conesponds to the results at the tests

This information represents neither a commitment on our part for a guarantee.

The consumer is not exempt from the need to winduct a thorough inspection of the properties and possibilities concerning the application of our products in its manufacturing process.



tech spec 0257-001-48328353-00 (changes 2)

### MAXOIL D concentrate

### pour point depressant

**Purpose** 

Effective multi-purpose, resistant to destruction pour point depressant, designed for engine oil, hydraulic fluids and gear oils

**Effect** 

Advanced technology which is applied here provides effective reduction of the freezing temperature across a broad range of lubricants. Particularly effective in formulations using catalytically dewaxed base stocks and higher-ethylene-content OCP viscosity index improvers. Common addition rates are 0.1 — 0.3% by weight. Higher treat rates – for example, 0.5% to 1.0% by weight — may be required for SAE 80W-90 gear oils.

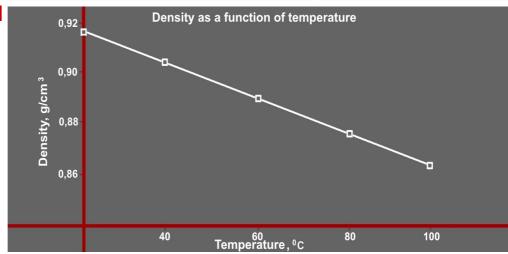
Composition

MAXOIL D is a viscous concentrate of polyalkyl-methacrylate in a solvent-refined mineral oil.

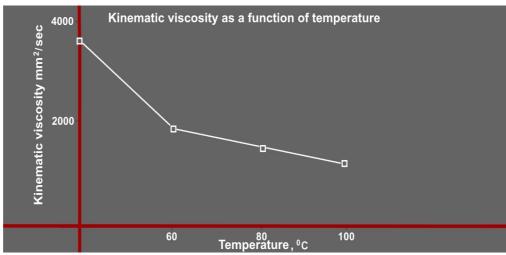
### **Physical properties**

Appearance		transparent viscous liquid
Color		1,00
Basic substance content,	%	not less than 55
Viscosity at 100 °C,	mm²/sec	300-500
Viscosity at 40 °C,	mm²/sec	3800
Density at 15 °C,	g/cm³	0,92
Flash point,	°C	180

### **Density**



### **Viscosity**



**Delivery** 

20-30t tank trucks 60t railway tanks

in the steel barrels up to 185 kg net weight (up to 200 kg gross)

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tech spec 0257-001-48328353-00 (changes 1)

### MAXOIL D with thickening properties

### pour point depressant

Purpose

Multipurpose pour point depressant / viscosity modifier for a broad range of lubricants.

**Effect** 

Cost-effective pour point depressant provides low-temperature properties of oils and increased viscosity / viscosity index. Normal input rate is 0,3 - 0,6% of the mass. A higher input percentage may be required to increase viscosity and the index of viscosity.

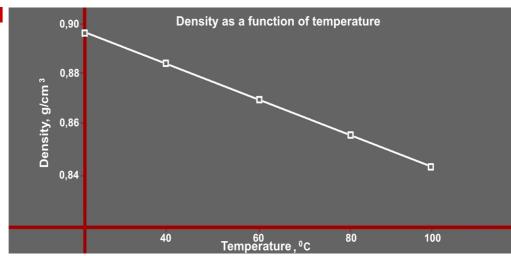
Composition

MAXOIL D with thickening properties is a viscous solution of polyalkyl-methacrylate in solvent-refined mineral oil.

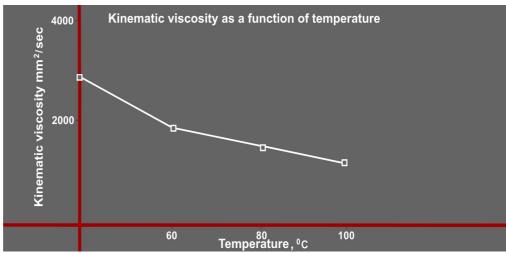
### **Physical properties**

Appearance		transparent viscous liquid
Color		1,00
Basic substance content,	%	35-40
Viscosity at 100 °C,	mm²/sec	320
Viscosity at 40 °C,	mm²/sec	2000-3200
Density at 15 °C,	g/cm³	0,90
Flash point,	°C	190

### Density



### **Viscosity**



Delivery

20—30t tank trucks 60t railway tanks

in the steel barrels up to 185 kg net weight (up to 200 kg gross)

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# viscosity modifiers



### tech spec 0257-002-48328553-02

### MAXOIL V concentrate

### viscosity modifier

### **Purpose**

MAXOIL V concentrate is a multi-purpose concentrated modifier for engine oils. It possesses both thickening and depressing properties and is designed for all-season oils in gasoline and diesel engines. The use of Maxoil concentrate allows producing oils which meet the highest requirements of API and ACEA.

### **Effect**

MAXOIL V concentrate is a cost-effective viscosity modifier with a high thickening capacity. The use of MAXOIL V concentrate provides oils with good low-temperature properties, high resistance to destruction and low pour point.

### Composition

MAXOIL V concentrate is a low-viscous emulsion of linear OCP in the carrying oil.

### Physical properties

Appearance		cloudy solution
Color (visual)		light-brown
Viscosity at 100°C,	mm²/sec	3200
Density at 15ºC,	g/sm³	0,9
Thickening capacity in oil I-20A at 100℃ and the input of 2.5%,	mm²/sec	not less than 5

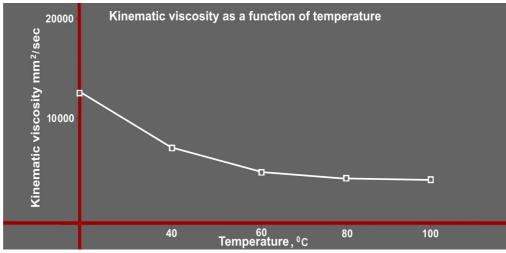
### **Advantages**

In contrast to other traditional polymeric viscosity modifiers with the same resistance to destruction MAXOIL V concentrate has a lower percentage of input:

- · 4 times less than a usual OCP improver.
- · 2.5 times lower than a poly methacrylate viscosity modifier.

In contrast to traditional OCP modifiers MAXOIL V concentrate may be used even at room temperature. Low viscosity of MAXOIL V concentrate modifier guarantees easy pumping and mixing of the modifier over a wide temperature range.

### Viscosity



### Delivery

20—30t tank trucks 60t railway tanks

in the steel barrels up to 185 kg net weight (up to 200 kg gross)

### **Storage**

The improver MAXOIL V concentrate is an emulsion, therefore it is highly recommended to stir it from time to time or use forced circulation. The storage temperature must not be more than 80°C and the pumping temperature – not more than 130°C.

For more specific information concerning the storage of the viscosity modifier address our company representative.

The consumer is not exempt from the need to winduct a thorough inspection of the properties and possibilities concerning the application of our products in its manufacturing process.



tech spec 0257-004-48328553-12

### MAXOIL V2

### viscosity modifier

**Purpose** 

**Effect** 

MAXOIL V2 is a viscosity modifier for hydraulic oils.

MAXOIL V2 provides effective thickening and an increase of the viscosity index in cost-effective formulations. Maxoil V2 effectively controls wax crystallization and allows producing hydraulic oils which are of low viscosity at low temperatures and have a low pour point. Maxoil V2 is designed for oils based on wax components or a mix of wax and naphthenic base components.

### Composition

MAXOIL V2 is a solution of poly-alkyl-methacrylate in mineral oil of deep purification.

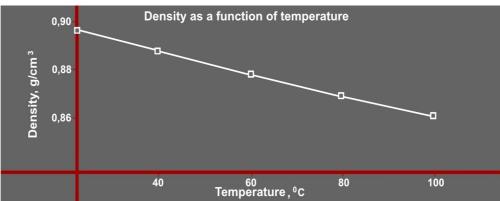
### Physical properties

Appearance		transparent viscous liquid
		a anoparone viscous iiquia
Color	24	
Viscosity at 100°C,	mm²/sec	770
Density at 15ºC,	g/sm³	0,90
Flash point,	°C	140

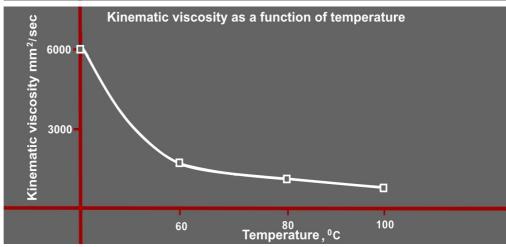
Thickening capacity The influence of MAXOIL V2 modifier on the kinematic viscosity of distillate base oil.

Oil	I12A		I20A			
Modifier content, %mass	0	10	20	0	10	20
Viscosity at 100°C, cSt	3,8	11,5	22,6	5,3	17,8	29,0

### **Density**



### **Viscosity**



### **Delivery**

20-30t tank trucks 60t railway tanks in the steel barrels up to 185 kg net weight (up to 200 kg gross)

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# МАКСОЙЛ®V3-01

tech spec 0257-003-48328553-12

### MAXOIL B3-01

### viscosity modifier

**Purpose Effect** 

Viscosity modifier / pour-point depressant for hydraulic oils.

MAXOIL V3-01 provides cost-effective thickening as well as good resistance to destruction. MAXOIL V3-01 effectively controls wax crystallization and allows producing hydraulic oils which are of low viscosity at low temperatures and have a low pour point. MAXOIL V3-01 is designed for oils based on wax components or a mix of wax and naphthenic base components.

Composition

MAXOIL V3-01 is a solution of poly-alkyl-methacrylate in mineral oil of deep purification.

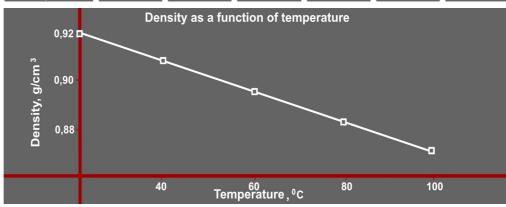
Physical properties

Appearance		transparent liquid
Color		0,5
Viscosity at 100°C,	mm²/sec	700
Density at 15⁰C,	g/sm³	0,93
Flash point,	°C	140

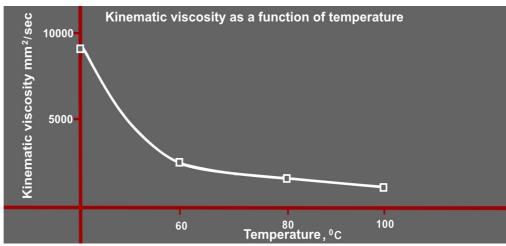
Thickening capacity The influence of MAXOIL V3-01 modifier on the kinematic viscosity of distillate base oil.

Oil	I12A		I20A			
Modifier content, %mass	0	10	20	0	10	20
Viscosity at 100°C, cSt	3,8	9,9	20,7	5,3	16,2	26,9

**Density** 



**Viscosity** 



**Delivery** 

20-30t tank trucks 60t railway tanks

in the steel barrels up to 185 kg net weight (up to 200 kg gross)

# МАКСОЙЛ® V3-02

tech spec 0257-005-48328553-12

### MAXOIL B3-02

### viscosity modifier

**Purpose** 

Viscosity modifier / pour-point depressant for hydraulic oils.

**Effect** 

MAXOIL V3-01 provides cost-effective thickening as well as good resistance to destruction. MAXOIL V3-01 effectively controls wax crystallization and allows producing hydraulic oils which are of low viscosity at low temperatures and have a low pour point. MAXOIL V3-01 is designed for oils based on wax components or a mix of wax and naphthenic base components.

Composition

MAXOIL V3-01 is a solution of poly-alkyl-methacrylate in mineral oil of deep purification.

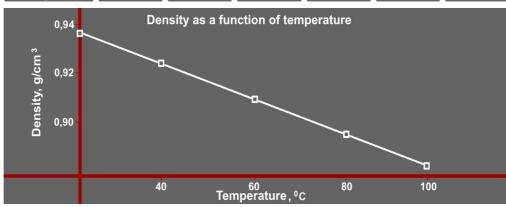
Physical properties

Appearance		transparent liquid
Color		0,5
Viscosity at 100°C,	mm²/sec	700
Density at 15⁰C,	g/sm³	0,93
Flash point,	°C	140

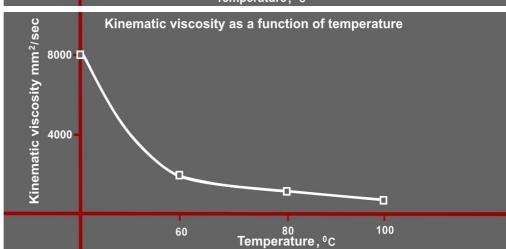
Thickening capacity The influence of MAXOIL V3-01 modifier on the kinematic viscosity of distillate base oil.

Oil	I12A		I20A			
Modifier content, %mass	0	10	20	0	10	20
Viscosity at 100°C, cSt	3,8	9,9	20,7	5,3	16,2	26,9

**Density** 



**Viscosity** 



**Delivery** 

20-30t tank trucks 60t railway tanks

in the steel barrels up to 185 kg net weight (up to 200 kg gross)

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