



# Mobel Polymers

Mobel Polymers For Polymers , Chemicals & Paints



- EMULISON
- ALKYD RESIN
- PIGMENT PASTE
- ADDITIVES AND DRYERS

## MATERIALS FOR FACTORIES

Paint factories, adhesives factories, industrial sponge factories, leather factories  
wood factories, carpet & mokit factories, paper factories, carton factories.

## مواد للمصانع

مصانع الدهانات - مصانع المواد اللاصقة - مصانع الاسفنج الصناعي - مصانع الجلود  
مصانع الأخشاب - مصانع السجاد والموكيت - مصانع الأوراق - مصانع الكرتون

## *Company Profile*



Mobel Polymers established in 2005 with a floor area of 12000 square meters ; a staff of 103 people .

Our estimated volume for next year is 40.000.000 Egyptian pound.  
( Including exporting volume )

Our main products are high quality polymers such as ( Polyvinyl, acetate, homopolymer, Copolymers, Styrene acrylic, Furthermore, Alkyd Resin ( long - medium - short ) . And all kinds of pigments paste ( water, solvent and universal base )

Indeed, we produce dryers and additives such as cobalt, calcium, lead, and Zirconium octoate also Antifoaming.

Most of our products are exported to the top 10 factories in Lebanon, Hungary and from it to many countries with excellent management team, under the guidance of German license , ISO 9001 and ISO 14001.

Our company is developing into a modern enterprise with standard management.

You are welcome to visit our factory at any time. We would like to establish friendly business relationship with you to create a brilliant future.







**MobeI Polymers**  
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# *Emulsions*

## Technical data sheet

**Code:** MOBECOL 501/50

**Description :** Polyvinyl Acetate Homopolymer water based .

**Application fields :**

- It is particularly suitable for the preparation of adhesives for wood and paper.
- It can be used in the building sector to make parquet adhesives in bookbinding.
- It used in the textile industry as stiffening and sizing agent.

**Properties :**

▪ viscosity at 23° C by Brookfield	60000 $\pm$ 750
▪ solid content	50 $\pm$ 1 %
▪ pH value	4.5 $\pm$ 0.5
▪ Density at 23° C	1.1gm / cm <sup>3</sup>
▪ Minimum temperature for film formation	14
▪ Prevailing particle size range	0.6

**Shelf life :**

One year at room temperature.

**Storage conditions :**

It should be stored indoors in the original unopened plastic drums at normal conditions, temperatures between 3°C and 30°C.

**Packing :**

120 kg in plastic drums .







## Technical data sheet



**Code: MOBECOL 502/50**

**Description :** Polyvinyl Acetate Homopolymer

**Application fields :**

- It is particularly suitable for the preparation of adhesives for wood and paper.
- It can be used in the building sector to make parquet adhesives in bookbinding.
- It used in the textile industry as stiffening and sizing agent.

**Properties :-**

▪ viscosity at 23° C by Brookfield	45000 $\pm$ 10000
▪ solid content	50 $\pm$ 2 %
▪ pH value	4.5 - 6.5
▪ Density at 23° C	1.1gm /cm <sup>3</sup>
▪ Minimum temperature for film formation	14

**Shelf life :**

One year at room temperature.

**Storage conditions :**

It should be stored indoors in the original unopened plastic drums at normal conditions, temperatures between 3°C and 30°C.

**Packing :**

120 kg in plastic drums .

## Technical data sheet

**Code:** MOBECOL 503/45

**Description :** Polyvinyl Acetate Homopolymer water based .

### Application fields :

- It is particularly suitable for the preparation of adhesives for wood and paper.
- It can be used in the building sector to make parquet adhesives in bookbinding.
- It used in the textile industry as stiffening and sizing agent.

### Properties :

▪ viscosity at 23° C by Brookfield	40000 ± 10000
▪ solid content	45 ± 1 %
▪ pH value	4,5 ± 0.5
▪ Density at 23° C	1.1 gm / cm <sup>3</sup>
▪ Minimum temperature for film formation ,	14
▪ Prevailing particle size range	0.6

### Shelf life :

One year at room temperature.

### Storage conditions :

It should be stored indoors in the original unopened plastic drums at normal conditions, temperatures between 3°C and 30°C and relative humidity 65 %.

### Packing :

120 kg in plastic drums.







## Technical data sheet



**Code: MOBECOL 504/40**

**Description :** Polyvinyl Acetate Homopolymer water based .

**Application fields :**

- It is particularly suitable for the preparation of adhesives for wood and paper.
- It can be used in the building sector to make parquet adhesives in bookbinding.
- It used in the textile industry as stiffening and sizing agent.

**Properties :**

▪ viscosity at 23° C by Brookfield	35000± 10000
▪ solid content	40 ± 1 %
▪ pH value	4.5 ± 0.5
▪ Density at 23°C	1.1gm / cm <sup>3</sup>
▪ Minimum temperature for film formation	14
▪ Prevailing particle size range	0.6

**Shelf life :**

One year at room temperature.

**Storage conditions :**

It should be stored indoors in the original unopened plastic drums at normal conditions, temperatures between 3°C and 30°C.

**Packing :**

120 kg in plastic drums .



## Technical data sheet

**Code: MOBECOL 505/35**

**Description :-** Polyvinyl Acetate Homopolymer , water base .

### Application fields :

- It is particularly suitable for the preparation of adhesives for wood and paper.
- It can be used in the building sector to make parquet adhesives in bookbinding.
- It used in the textile industry as stiffening and sizing agent.
- It shows excellent permanent elasticity.
- It has high stability and good compatibility with plasticizers.

### Properties :-

▪ viscosity at 23° C by Brookfield	30000 ± 10000
▪ solid content	35 ± 2 %
▪ pH value	4.5 - 6.5
▪ Density at 23° C	1.1 gm / cm <sup>3</sup>
▪ Minimum temperature for film formation	14
▪ Prevailing particle size range	0.6
▪ Diluent	water

### Shelf life :

One year at room temperature.

### Storage conditions :

It should be stored indoors in the original unopened plastic drums at normal conditions, temperatures between 3°C and 30°C.

### Packing :

120 kg in plastic drums.





## Technical data sheet

**Code :-** COBECOL 601/55

**Description :-** Vinyl acetate / Acrylate copolymer water base .

### Application fields:-

- It is suitable for production of high pigmented coats for inside and outside.
- It uses as binding – agent in the construction industry.
- It is suitable for paper and wall- paper coating, textile finishing, hot sealing lamination, etc...

### Properties :-

- |                                          |                |
|------------------------------------------|----------------|
| ▪ Viscosity at 23°C by Brookfield        | 2500 ± 0.750   |
| ▪ Solid content                          | 55 ± 2%        |
| ▪ pH value                               | 5              |
| ▪ Specific gravity                       | 1.10           |
| ▪ Average particle size                  | 0.3 - 1.5 µ    |
| ▪ Protection colloid / Emulsifier        | high – polymer |
| ▪ Minimum temperature for film formation | + 14 C         |

### Shelf life :-

One year at room temperature.

### Storage conditions :

It should be stored indoors in the original unopened plastic drums at normal conditions, temperatures between 3°C and 30°C and relative humidity 65 %.

### Packing :-

120 kg in plastic drums .







## Technical data sheet

**Code:-** Stymobil Co 700/50

**Description :-** Styrene Acrylic co polymer water base .

### **Application fields:-**

- ☐ It is suitable for production of excellent paintings for interior use and exterior as well as for construction – adhesives.
- ☐ Especially to be marked are the excellent weather resistance of exterior paints.

### **Properties :-**

<input type="checkbox"/> Viscosity at 23°C by Brookfield	2000 ± 200
<input type="checkbox"/> Solid content	50 ± 1%
<input type="checkbox"/> pH value	7.5 to 9
<input type="checkbox"/> Specific gravity	1.1 g/cm <sup>3</sup>
<input type="checkbox"/> Average particle size	0.1 μ
<input type="checkbox"/> Thinner	water
<input type="checkbox"/> Tensile strength	13 N / mm
<input type="checkbox"/> Max elongation until rupture	200 %

### **Shelf life :-**

One year at room temperature.

### **Storage conditions :**

It should be stored indoors in the original unopened plastic drums at normal conditions, temperatures between 3°C and 30°C and relative humidity 65 %.

### **Packing :-**

120 kg in plastic drums .





## **Technical data sheet**

**Code :** THICR 118

**Description :** Acrylic thickner water base .

### **General characteristics :**

It is a cross – linked acrylic emulsion .when emulsion is diluted with water & treated with alkali, each emulsion particle swells & emulsion becomes clear & viscous.

### **Application fields :**

THICR 118 can be incorporated directly into the system to be thickened without pre-neutralization. The neutralizer can then be added in the system making it viscous.

### **Properties :-**

- |                            |                      |
|----------------------------|----------------------|
| ▪ Appearance               | : Milky white liquid |
| ▪ Total Solids, Percentage | : 26-28              |
| ▪ Viscosity ,cps           | : 4-5                |
| ▪ pH value                 | : 3-4                |
| ▪ Particle Size            | : 0.1 - 0.3          |
| ▪ Specific Gravity         | : 0.054              |

### **Shelf life :**

One year at room temperature .

### **Storage conditions :**

It should be stored indoors in the original unopened plastic drums at normal conditions, temperatures between 3°C and 30°C and relative humidity 65 %.

### **Packing :**

120 kg in plastic drums .





## **Technical data sheet**

**Code :** THICR 118

**Description :** Acrylic thickner water base .

### **General characteristics :**

It is a cross – linked acrylic emulsion .when emulsion is diluted with water & treated with alkali, each emulsion particle swells & emulsion becomes clear & viscous.

### **Application fields :**

THICR 118 can be incorporated directly into the system to be thickened without pre-neutralization. The neutralizer can then be added in the system making it viscous.

### **Properties :-**

- |                            |                      |
|----------------------------|----------------------|
| ▪ Appearance               | : Milky white liquid |
| ▪ Total Solids, Percentage | : 26-28              |
| ▪ Viscosity ,cps           | : 4-5                |
| ▪ pH value                 | : 3-4                |
| ▪ Particle Size            | : 0.1 - 0.3          |
| ▪ Specific Gravity         | : 0.054              |

### **Shelf life :**

One year at room temperature .

### **Storage conditions :**

It should be stored indoors in the original unopened plastic drums at normal conditions, temperatures between 3°C and 30°C and relative humidity 65 %.

### **Packing :**

120 kg in plastic drums .







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# *ALKYD RESIN*





## **MOBEL LONG OIL ALKYED 70% ( S63W70)**

### **TECHNICAL DATA**

**OIL TYPE:** Soy or sunflower oil

**OIL LENGTH:** 63%

**PHTHALIC CONTENT:** 25%

**SOLVENT:** White Spirit

**SOLID CONTENT:** 70%  $\pm$  1

( At 125 °c 1 hour, ~ 2gr alkyd + 2gr toluol )

**VISCOSITY:** 10000 - 15000 cp (At 25°C, Brookfield RDV II )

( Gardner hold )  $Z_8 - Z_{10}$

**ACID:** ( mg KOH / gr ) Max. 10

**COLOR:** ( LICO 50 ) Max. 4 Gardner

**DENSITY:** (At 20°C )  $0.95 \pm 0.02$

**FLASH POINT:** 36°C

**SOLUBILITY:**

White Spirit	Soluble
Solvent Naphtha	Soluble
Xylol	Soluble
Toluol	Soluble
Butyl Acetate	Soluble
Ethyl Glycol Acetate	Soluble
Butanol	Limited
Ethanol	Insoluble

**SPECIFICATIONS:** Good Solubility in aliphatic and aromatic solvents, pigment wetting, shining, resistance to climatic conditions, good adhering and elasticity.

**PACKING:** 185 Kg. Drums

**STORAGE:** In closed package for 1 year at 25°C

**WARNING:**

**Risk:** R-10 Flammable.

R-20 Harmful to human health when inhaled

**Safety:** S-25 / 25 Avoid contact with eyes and skin

**Dager:** H<sub>2</sub> Explosive liquids. X<sub>n</sub> Harmful

**Storing:** C<sub>3</sub> Corrosive



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## **MOBEL LONG OIL ALKYD 60% ( S62W70)**

### **TECHNICAL DATA**

**OIL TYPE:** Soy or sunflower oil

**OIL LENGTH:** 62%

**PHTHALIC CONTENT:** 26%

**SOLVENT:** White Spirit

**SOLID CONTENT:** 60%  $\pm$  1

( At 125 °c 1 hour, ~ 2gr alkyd + 2gr toluol )

**VISCOSITY:** 2500 - 5000 cp (At 25°C, Brookfield RDV II )

( Gardner hold ) Z<sub>1</sub> - Z<sub>3</sub>

**ACID:** ( mg KOH / gr ) Max. 10

**COLOR:** ( LICO 50 ) Max. 4 Gardner

**DENSITY:** (At 20°C ) 0.93  $\pm$  0.02

**FLASH POINT:** 33°C

#### **SOLUBILITY:**

White Spirit	Soluble
Solvent Naphtha	Soluble
Xylol	Soluble
Toluol	Soluble
Butyl Acetate	Soluble
Ethyl Glycol Acetate	Soluble
Butanol	Limited
Ethanol	Insoluble

**SPECIFICATIONS:** Good Solubility in aliphatic and aromatic solvents, pigment wetting, shining, resistance to climatic conditions, good adhering and elasticity.

**AREA OF USE:** Decorative and top coat, primer for wooden and Metal surfaces.

**PACKING:** 185 Kg. Drums

**STORAGE:** In closed package for 1 year at 25°C

#### **WARNING:**

**Risk:** R-10 Flammable.

R-20 Harmful to human health when inhaled

**Safety:** S-24 / 25 Avoid contact with eyes and skin

**Danger:** H<sub>2</sub> Explosive liquids. X<sub>n</sub> Harmful

**Storing:** C<sub>3</sub> Corrosive



## **MOBEL MEDIUM OIL ALKYD 60 % ( S52W60 )**

### **TECHNICAL DATA**

**OIL TYPE:** Soy or sunflower oil

**OIL LENGTH:** 62%

**PHTHALIC CONTENT:** 32%

**SOLVENT:** White Spirit

**SOLID CONTENT:** 60%  $\pm$  1

( At 125 °c 1 hour, ~ 2gr alkyd + 2gr toluol )

**VISCOSITY:** 5000 - 10000 cp (At 25°C, Brookfield RDV II )

( Gardner hold ) Z<sub>3</sub> - Z<sub>5</sub>

**ACID:** ( mg KOH / gr ) Max. 15

**COLOR:** ( LICO 50 ) Max. 4 Gardner

**DENSITY:** (At 20°C ) 0.94  $\pm$  0.02

**FLASH POINT:** 32°C

#### **SOLUBILITY:**

White Spirit	Soluble
Solvent Naphtha	Soluble
Xylol	Soluble
Toluol	Soluble
Butyl Acetate	Soluble
Ethyl Glycol Acetate	Soluble
Butanol	Limited
Ethanol	Insoluble

**SPECIFICATIONS:** Good Solubility in aliphatic and aromatic solvents, good drying, permanent shining, resistance to climatic conditions.

**AREA OF USE:** Decorative and top coat primer, for wooden and metal surface, synthetic auto paints and varnish for wooden surfaces.

**PACKING:** 185 Kg. Drums

**STORAGE:** In closed package for 1 year at 25°C

#### **WARNING:**

**Risk:** R-10 Flammable.

R-20 Harmful to human health when inhaled

**Safety:** S-24 / 25 Avoid contact with eyes and skin

**Danger:** H<sub>2</sub> Explosive liquids. X<sub>n</sub> Harmful

**Storing:** C<sub>3</sub> Corrosive







## **MOBEL SHORT OIL ALKYD 60 % ( S32T60 )**

### **TECHNICAL DATA**

**OIL TYPE:** Soy or sunflower oil

**OIL LENGTH:** 32%

**PHTHALIC CONTENT:** 46 %

**SOLVENT:** Toluol

**SOLID CONTENT:** 60%  $\pm$  1

( At 125 °c 1 hour, ~ 2gr alkyd + 2gr toluol )

**VISCOSITY:** 3000 - 5000 cp (At 25°C, Brookfield RDV II )

( Gardner hold ) Z<sub>4</sub> - Z<sub>6</sub>

**ACID:** ( mg KOH / gr ) Max. 1.5

**COLOR:** ( LICO 50 ) Max. 5 Gardner

**DENSITY:** (At 20°C ) 1.03  $\pm$  0.02

**FLASH POINT:** 10°C

#### **SOLUBILITY:**

White Spirit	Soluble
Solvent Naphtha	Limited
Xylol	Soluble
Toluol	Soluble
Butyl Acetate	Soluble
Ethyl Glycol Acetate	Soluble
Butanol	Limited
Ethanol	Limited

**SPECIFICATIONS:** Shiny, good adhering, elasticity

**Area of use :** Oven and cellulose paint and varnishes.

**PACKING:** 200 Kg. Drums

**STORAGE:** In closed package for 1 year at 25°C

#### **WARNING:**

**Risk:** R-10 Flammable.

R-20 Harmful to human health when inhaled

**Safety:** S-24 / 25 Avoid contact with eyes and skin

**Dager:** H<sub>2</sub> Explosive liquids. X<sub>n</sub> Harmful

**Storing:** C<sub>3</sub> Corrosive





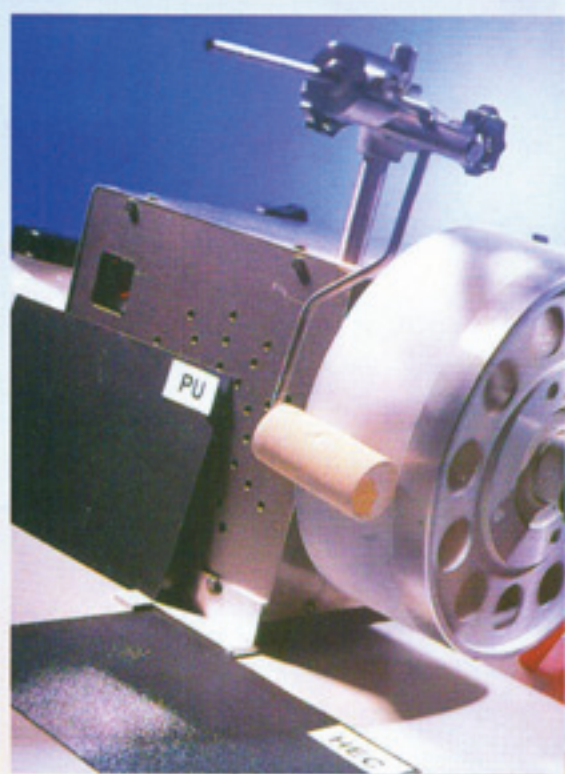
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# Mobel Polymers

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## Universal Colorants for Anticorrosive and industrial Paints



CHARACTERISTICS				FASTNESS							
Code	Color	Color Index	% Pigment	Heat 15°-150°C 0-5	Light 0-8		Wheather 0-5		Acids 0-5	Alkalis 0-5	Solvents 0-5
					Full Shades	Pastel Shades	Full Shades	Pastel Shades			
MO.BA	White	White 6	63	5	8	8	5	5	5	5	5
MO.JO	Oxide Yellow	Yellow 42	52	5	8	8	5	5	5	5	5
MO.RO	Oxide Red	Red 101	32	5	8	8	5	5	5	5	5
MO.NO	Black	Black 7	9	5	8	8	5	5	5	5	5
MO.BE	Blue	Blue 15:4	21	5	8	8	5	5	4-5	4-5	5
MO.VR	Green	Green 7	22	5	8	8	5	5	5	5	4-5
MO.BO	Claret	Violet 19	13	5	7-8	7-8	3-4	4	5	5	3-5
MO.VI	Violet	Violet 23	10	4	8	7-8	5	4	5	5	4-5
MO.SJ	Yellow SP	Yellow 184	30	4	8	8	4-5	4-5	4-5	5	5
MO.SO	Orange SP	Yellow 139	32	5	8	7-8	5	4	5	5	5
MO.SR	Red Sp	Red 255	32	4	8	8	5	4	5	5	4-5
MO.NE	Neutral	White 21	70	5	8	8	5	5	5	5	5
MO.PP	Green Yellow	Yellow 34	62	5	7-8	7-8	4-5	4-5	4-5	4	5
MO.PJ	Gold Yellow	Yellow 34	62	4-5	7-8	7-8	4-5	4-5	4-5	4	5
MO.PO	Orange	Red 104	65	4	7	7-8	4-5	4-5	3	3	5
MO.PR	Red	Red 104	65	4-5	7	7-8	4-5	4-5	3-4	4	5



## MOBEL URETHAN ALKYD 60 % ( U61W60 )

### TECHNICAL DATA

**OIL TYPE:** Soy or sunflower oil

**OIL LENGTH:** 61%

**SOLVENT:** White Spirit

**SOLID CONTENT:** 60%  $\pm$  1

( At 125 °c 1 hour, ~ 2gr alkyd + 2gr toluol )

**VISCOSITY:** 2000 - 3500 cp (At 25°C, Brookfield RDV II )

( Gardner hold ) Z<sub>4</sub> - Z<sub>6</sub>

**ACID:** ( mg KOH / gr ) Max. 2

**COLOR:** ( LICO 50 ) Max. 5 Gardner

**DENSITY:** (At 20°C ) 0.94  $\pm$  0.02

**FLASH POINT:** 35°C

#### SOLUBILITY:

White Spirit	Soluble
Solvent Naphtha	Soluble
Xylol	Soluble
Toluol	Soluble
Butyl Acetate	Soluble
Ethyl Glycol Acetate	Soluble
Butanol	Limited
Ethanol	Insoluble

**SPECIFICATIONS:** Good drying, endurance to chemical substances and water, endurance to friction.

**Area of use :** parquet and primers because of these specifications.  
(It is not recommended to white paints due to its yellowing feature.)

**PACKING:** 185 Kg. Drums

**STORAGE:** In closed package for 1 year at 25°C

#### WARNING:

**Risk:** R-10 Flammable.

R-20 Harmful to human health when inhaled

**Safety:** S-24 / 25 Avoid contact with eyes and skin

**Dager:** H<sub>2</sub> Explosive liquids. X<sub>n</sub> Harmful

**Storing:** C<sub>3</sub> Corrosive



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## MOBEL POLYURETHANE GLOSSY ALKYD 60 % ( P40T60 )

### TECHNICAL DATA

**OIL TYPE:** Soy or sunflower oil

**OIL LENGTH:** 40%

**PHTHALIC CONTENT:** 41 %

**SOLVENT:** Toluol

**SOLID CONTENT:** 60%  $\pm$  1

( At 125 °c 1 hour, ~ 2gr alkyd + 2gr toluol )

**VISCOSITY:** 3000 - 5000 cp (At 25°C, Brookfield RDV II )

( Gardner hold )  $Z_4 - Z_6$

**ACID:** ( mg KOH / gr ) Max. 10

**COLOR:** ( LICO 50 ) Max. 5 Gardner

**DENSITY:** (At 20°C )  $1.03 \pm 0.02$

**FLASH POINT:** 10°C

#### SOLUBILITY:

White Spirit	Insoluble
Solvent Naphtha	Limited
Xylol	Soluble
Toluol	Soluble
Butyl Acetate	Soluble
Ethyl Glycol Acetate	Soluble
Butanol	Limited
Ethanol	Limited

**SPECIFICATIONS:** Permanently shiny and good adhering.

**Area of use :** Polyurethane, cellulose, oven top coat paints and varnishes.

**PACKING:** 200 Kg. Drums

**STORAGE:** In closed package for 1 year at 25°C

#### WARNING:

**Risk:** R-10 Flammable.

R-20 Harmful to human health when inhaled

**Safety:** S-24 / 25 Avoid contact with eyes and skin

**Dager:** H<sub>2</sub> Explosive liquids. X<sub>n</sub> Harmful

**Storing:** C<sub>3</sub> Corrosive





## MOBEL POLYURETHANE FILLING ALKYD 60 % ( a40t60 )

### TECHNICAL DATA

**OIL TYPE:** Soy or sunflower oil

**OIL LENGTH:** 40%

**PHTHALIC CONTENT:** 41%

**SOLVENT:** Toluol

**SOLID CONTENT:** 60%  $\pm$  1

( At 125 °c 1 hour, ~ 2gr alkyd + 2gr toluol )

**VISCOSITY:** 3000 - 3500 cp (At 25°C, Brookfield RDV II )

( Gardner hold ) Z<sub>4</sub> - Z<sub>6</sub>

**ACID:** ( mg KOH / gr ) Max. 10

**COLOR:** ( LICO 50 ) Max. 7 Gardner

**DENSITY:** (At 20°C ) 1.04  $\pm$  0.02

**FLASH POINT:** 10°C

**SOLUBILITY:**

White Spirit	Insoluble
Solvent Naphtha	Limited
Xylol	Soluble
Toluol	Soluble
Butyl Acetate	Soluble
Ethyl Glycol Acetate	Soluble
Butanol	Limited
Ethanol	Limited

**SPECIFICATIONS:** Good emery and filling geatures.

**AREA OF USE:** Polyurethane and cellulose filling, primer and mat paints.

**PACKING:** 200 Kg. Drums

**STORAGE:** In closed package for 1 year at 25°C

**WARNING:**

**Risk:** R-10 Flammable.

R-20 Harmful to human health when inhaled

**Safety:** S-24 / 25 Avoid contact with eyes and skin

**Dager:** H<sub>2</sub> Explosive liquids. X<sub>n</sub> Harmful

**Storing:** C<sub>3</sub> Corrosive



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# *DRIERS & ADDITIVES*





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# *DRIERS & ADDITIVES*



## Driers

### INTRODUCTION

Driers are a group of metallic soaps containing either alkaline-earth metals or heavy metals combined with mono-basic carboxylic acids. They are soluble in organic solvents and binders. The driers are represented by the general formula  $(RCOO)_M$  where R is an aliphatic or alicyclic and M a metal with valence x, as in the case of a natural soap. The acid or anion portion of the metallic soap can be varied. Typical anions currently used are either naphthenic acid, 2-ethyl hexanoic acids.

Driers are added to coatings, (paints, varnishes and inks) to speedup the physical change from the liquid to the solid state. This change is effected by an oxidative crosslinking mechanism accelerated by the metallic cation of the added drier. The acid is present to secure adequate distribution of the metal throughout the medium. There are two main categories of driers, i.e.:

Primary/active driers : cobalt, manganese  
Auxiliary driers : lead, zirconium, lithium,  
strontium, calcium, zinc,  
barium

The auxiliary driers are used in conjunction with active driers to improve the final properties of the coatings. The solubility or solvent of these metallic soaps in a variety of organic solvents accounts for their many and varied other uses, such as catalysts, fungicides, fuel additives, stabilizers and wetting agents.

Our many years experience in the manufacture of driers has lead in recent years to the development of highly concentrated driers and combination driers, and a new generation of driers for water-borne paints.

Comprehensive information about these driers together with our regular range is given further on in the brochure.

Details are also given about yet another category of driers which are becoming increasingly popular. These are the Lead-, or Barium-free driers.

#### Zirconium

Zirconium is an excellent substitute for Lead in Lead-free paints.

It strongly activates the primary driers, Cobalt and Manganese and is particularly recommended for eliminating tacking of certain tall-oil alkyd resins.

Zirconium is also less toxic than Lead or Barium.

#### Lithium

Lithium is a substitute for lead and is used in lead-free drier compositions in conjunction with Cobalt and Calcium.

They are excellent drying catalysts even in high-solids, however, the whiteness of long-oil alkyd-based paints may be influenced.

#### Calcium

This is an interesting drier since there are indications that when used in combination with other metal soaps a metal complex is formed. That is to say that if a violet Cobalt solution is added to Calcium then a vivid blue colour appears.

Calcium prevents haze formation in certain alkyd resins that are siccated with Lead. Excessive dosages however should be avoided in connection with the water sensitivity (outdoor durability) of the paint film.

#### Zinc

When used in combination with cobalt this type of drier produces a hard film. Zinc keeps the film open thereby allowing oxygen easy access which ensures hardening throughout the paint film.

Of all the driers, Zinc is the best wetting agent. The gloss of the film is also often improved and it has an added property of counteracting mildew formation.

A good quality drier should meet the following requirements:

- Uniform metal content
- Readily liquid for easy workability and dosage
- Constant colour and viscosity
- Readily soluble in all binders
- Good stability

Mobel manufactures the following types of driers:

- A. driers\*
- B. WEB driers
- C. Spécial cobalt-free driers
- D. Drier Promoter Drymax

A short description of driers based on various metals

#### Primary/active driers – Cobalt

This is the most active of the driers. It effects rapid surface drying and is generally used in conjunction with auxiliary driers.

An excessive amount of Cobalt however, reduces the water resistance of the paint and increases the risk of wrinkling.

#### Manganese

This is also an active drier though generally less active than Cobalt. As an accelerator of the polymerization in baking finishes, Manganese is usually more effective than Cobalt. Cobalt and Manganese primarily improve the surface drying of the paint film.

However, the relatively dark colour of the Manganese drier may be a disadvantage.

#### Auxiliary driers – Lead

An entirely different type of drier which is still an important auxiliary drier even through the substitution of Zirconium is becoming increasingly popular. Lead is mainly applied in combination with active driers such as Cobalt and Manganese. Due to its polymerizing effect, Lead ensures a thoroughly hardened film.

### MOBEL DRIERS

These are metallic salts of naphthenic and/or synthetic acid blends. They are stable and extremely soluble in all usual vehicles and thinners.

They also maintain their excellent stability even when a combination of metal soaps e.g., Cobalt, Zirconium and/ or Calcium are applied.

### MOBEL DRIERS AND APPLICATION PERCENTAGES

The percentages are calculated as metal on the quantity of the vehicle (solid matter). These percentages are however, very dependant upon the type of vehicle.

#### Application percentages

Calcium	0.03 - 0.3
Cobalt	0.01 - 0.1
Cerium	0.005 - 0.4
Lead	0.08 - 0.6
Lithium	0.01 - 0.05
Manganese	0.01 - 0.1
Zinc	0.03 - 0.5
Zirconium	0.05 - 0.3

As mentioned earlier, active driers are mostly used in combination with auxiliary driers. SERVO offers a range of ready-made drier combinations, which are called combi driers. These driers have amongst others, the following advantages:

- improved efficiency
- reduction of the amount of raw materials
- reduced risk of weighing errors
- optimal metal proportions
- simplified production process
- uniform quality

In order to meet individual needs, "custom-tailoring" of combination driers is also offered. And as you will see, the range also includes a number of Lead- and Barium-free drier combinations.



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## **MOBEX DRIERS**

### **Cobalt 6 %**

**Appearance :** clear blue-violet liquid

**Metal content :**  $6.0 \pm 0.2$

**Color, Gardner, max :** -

**Viscosity mPa.s, 20°C max. \* :** 100

**Density kg/m<sup>3</sup>, 20°C, approx.\* :** 910

**Solid matter, % m\* :** 42 - 46

### **Cobalt 10 %**

**Appearance :** clear blue-violet liquid

**Metal content :**  $10.0 \pm 0.2$

**Color, Gardner, max :** -

**Viscosity mPa.s, 20°C max. \* :** 300

**Density kg/m<sup>3</sup>, 20°C, approx.\* :** 1000

**Solid matter, % m\* :** 69 - 77





## **MOBEX DRIERS**

### **Cobalt 12 %**

**Appearance** : clear blue-violet liquid

**Metal content** :  $12.0 \pm 0.3$

**Color, Gardner, max** : -

**Viscosity mPa.s, 20°C max. \*** : 600

**Density kg/m<sup>3</sup>, 20°C, approx.\*** : 1050

**Solid matter, % m\*** : 72 - 80

### **Lead 36 %**

**Appearance** : clear liquid

**Metal content** :  $36.0 \pm 0.4$

**Color, Gardner, max** : 6

**Viscosity mPa.s, 20°C max. \*** : 400

**Density kg/m<sup>3</sup>, 20°C, approx.\*** : 1380

**Solid matter, % m\*** : 76 - 84



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## **MOBEX DRIERS**

### **Cobalt 12 %**

**Appearance :** clear blue-violet liquid

**Metal content :**  $12.0 \pm 0.3$

**Color, Gardner, max :** -

**Viscosity mPa.s, 20°C max. \* :** 600

**Density kg/m<sup>3</sup>, 20°C, approx.\* :** 1050

**Solid matter, % m\* :** 72 - 80

### **Lead 36 %**

**Appearance :** clear liquid

**Metal content :**  $36.0 \pm 0.4$

**Color, Gardner, max :** 6

**Viscosity mPa.s, 20°C max. \* :** 400

**Density kg/m<sup>3</sup>, 20°C, approx.\* :** 1380

**Solid matter, % m\* :** 76 - 84



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## **MOBEX DRIERS**

### **Calcium 5 %**

**Appearance : clear liquid**

**Metal content :  $5.0 \pm 0.2$**

**Color, Gardner, max : 6**

**Viscosity mPa.s, 20°C max. \* : 200**

**Density kg/m<sup>3</sup>, 20°C, approx.\* : 920**

**Solid matter, % m\* : 50 - 58**

### **Calcium 10 %**

**Appearance : clear/slightly hazy liquid**

**Metal content :  $10.0 \pm 0.2$**

**Color, Gardner, max : 4**

**Viscosity mPa.s, 20°C max. \* : 50**

**Density kg/m<sup>3</sup>, 20°C, approx.\* : 995**

**Solid matter, % m\* : 49 - 55**





## **MOBEX DRIERS**

### **Zinc 8 %**

**Appearance : clear liquid**

**Metal content :  $8.0 \pm 0.2$**

**Color, Gardner, max : 8**

**Viscosity mPa.s, 20°C max. \* : 50**

**Density kg/m<sup>3</sup>, 20°C, approx.\* : 910**

**Solid matter, % m\* : 46 - 52**

### **Zinc 12 %**

**Appearance : clear liquid**

**Metal content :  $12.0 \pm 0.3$**

**Color, Gardner, max : 8**

**Viscosity mPa.s, 20°C max. \* : 200**

**Density kg/m<sup>3</sup>, 20°C, approx.\* : 990**

**Solid matter, % m\* : 64 - 72**



## Mobel D 54 Mobel D 55



### Pigment Dispersing Agents

#### GENERAL INFORMATION

Mobel D 54 and Mobel D 55 are low foaming polymeric pigment dispersing agents that work effectively for many hydrophilic pigments and extenders, used in aqueous coatings. Both products contain the same active ingredients and differ only in concentration.

Mobel D 54 contains 30 % and Mobel D 55 contains 50 % active matter.

#### PHYSICAL PROPERTIES

##### *Mobel D 54*

Appearance	: clear liquid
Active matter	: 30%
pH	: 7.0-9.0
Density, 20 °C (DIN 53217/3)	: 1130 kg/m <sup>3</sup>
Viscosity, 25 °C (DIN 53015)	: max. 40 mPa.s
Colour (DIN 53995)	: max. 3 Gardner
Solubility	: soluble in water
Flash point	: > 100 °C
Composition	: ammonium salt of a polymeric carboxylic acid

##### *Mobel D 55*

Appearance	: clear liquid
Active matter	: 50 %
pH	: 7.0 - 8.5
Density, 20 °C	: approx. 1220 kg/m <sup>3</sup>
Viscosity, 25 °C (DIN 53015)	: max. 1000 mPa.s
Colour (DIN 53995)	: max. 4 Gardner
Solubility	: soluble in water
Flash point	: > 100 °C
Composition	: ammonium salt of a polymeric carboxylic acid

#### APPLICATION AND PROPERTIES

Mobel D 55 and D 54 are applicable to practically all types of aqueous coatings based on polymeric binders, e.g. PVAC-, PAC-, PSB-, PSAC dispersions, terpolymers and latices etc. They also show excellent compatibility with those polymeric binders commonly used in aqueous formulations, e.g. paper coatings, adhesives, carpet backings and plastics etc.

Mobel D 55 and D 54 are applied as dispersing agents in many hydrophilic pigments and extenders in aqueous mediums such as titanium dioxides, calcium carbonate, barium sulphate, iron oxides etc. The products are strongly adsorbed onto these pigments and extenders and reduce the viscosity of the milling paste. If strongly hydrophobic pigments are used such as most organic types, it is recommended to use Mobel D 55 or D 54 in combination with a wetting agent, e.g. Mobel 1566 or Mobel 265.

Mobel D 55 and D 54 counteract flocculation, floating, flooding and pigment settling. They do not cause foam formation, not do they depolymerise upon storage. As a result coatings with improved performance and excellent stability are contained.

Mobel D 55 and D 54 also avoid the viscosity increase which usually occurs during storage with coatings formulated with less chemically stable dispersing agents such as most polyphosphates and various copolymeric dispersing agents.





## Mobel D 61

### Pigment Dispersing Agents

#### GENERAL INFORMATION

Mobel D 61 is a liquid, wetting and dispersing agent which has been especially formulated for use in organic solvent based paint systems.

Mobel D 61 is effective for both organic and inorganic pigments. Properties such as opacity, gloss, color strength and brightness can be considerably improved at lower costs.

#### PHYSICAL PROPERTIES

Appearance	: clear liquid
Active matter	: 50%
pH 2% solution in water	
(ASTM D 1172)	: 6.0 – 7.0
Density, 20°C	
(DIN 53217/3)	: approx. 1010 kg/m <sup>3</sup>
Viscosity, 25°C	
(DIN 53015)	: max. 100 Apha
Color, 10% in 50% IPA	
(ASTM D 1209)	: max. 100 Apha
Solubility	: soluble in xylene, white spirit and 2-propanol
Flash point	
(ASTM D 65)	: 40 - 42°C
Composition	: composition of surface active agents in solution
Ion character	: anionic

#### APPLICATION AND PROPERTIES

Mobel D 61 improves and accelerates the preparation of stable dispersions by ensuring optimum and uniform pigment wetting. In the wetting process the solid/air interface is replaced by the solid/liquid interface. Mobel D 61 molecules are strongly adsorbed onto the pigment surface. By entropic repulsion, the dispersed pigment particles are stabilised thereby considerably reducing the risks of re-agglomeration and flocculation.

Mobel D 61 increases the coloring power of pigments enabling substantial raw material cost savings to be achieved. Gloss properties of paints are also improved, particularly in systems using poor wetting binders.

#### DOSAGE

Mobel D 61 should be added to the milling paste prior to dispersion and is suitable for all organic solvent based paint systems, especially air drying and physically drying paints.

The product is generally added at a concentration of 5.0%, based on the weight of the milling paste. However, due to variations in pigments, extenders and binders, it is recommended to undertake laboratory trials in order to establish the exact quantity required for optimum results.

Mobel D 61 stabilises viscosity without exhibiting any detrimental effect on hardness, adhesion and elasticity. The addition of the product to pigment pastes generally reduces viscosity, which allows for a higher solids content.

An increase in viscosity is observed with very high pigment concentrations, therefore, tests are recommended in order to establish the acceptable optimum adjustment.

Mobel D 61 increases the pigment covering power and assists in preventing flocculation, flooding and pigment sedimentation.

Using the product also improves the compatibility of colorants in white base paint.

Mobel D 61 is also successfully used to disperse Ironoxide and Chromedioxide in polymers used in the production of magnetic audio-visual tapes.

#### Feature

- Strong adsorption on pigment surface

#### Consequence

- improved color development
- better and faster dispersion
- reduces rub-up and color float
- improved compatibility with universal colorants

- Multi-functional

- adsorbs onto a wide variety of pigments

- Low molecular weight

- fast adsorption
- lower process viscosity of the milling paste
- best cost/performance ratio

#### HANDLING AND SAFETY

More detailed information on handling and safety for each product is included in the relevant material safety data sheet, available for each product.

#### QUALITY ASSURANCE

Since 2005 the company is a holder of the ISO 9001 & 14001 certificate, which guarantees that all operations are conducted according to the stipulated standards.



## Mobel D 65

### Pigment Dispersing Agents

#### GENERAL INFORMATION

Mobel D 65 is a unique pigment dispersant used in both aqueous and organic solvent-based coatings. The product is a liquid polymeric multi-functional surfactant.

#### PHYSICAL PROPERTIES

Appearance	: clear red/brown liquid
Active matter	: 80%
pH, 3% solution in water	
(ASTM D 1172)	: 6.5 – 7.5
Density, 20°C	
(DIN 53217/3)	: approx. 1015 kg/m <sup>3</sup>
Viscosity, 25°C	
(DIN 53015)	: max. 600 mPa.s
Solubility	: soluble in water, ethylene glycol and xylene
Flash point	
(ASTM D 92)	: > 150 °C

#### APPLICATION AND PROPERTIES

Mobel D 65 is strongly adsorbed onto various substrates. The various reactive sites in the Mobel D 65 molecule explain the multifunctionality. Depending on the characteristic properties of the solid substrate, specific sites of the molecule will be attracted. This accounts for the excellent performance as a wetting and dispersing agent onto a very versatile collection of pigments.

Mobel D 65 is extremely effective when used in waterborne or aliphatic solvent-based coatings. In the systems Mobel D 65 improves pigment wetting and stability, thus reducing milling time. Flooding, floating and sedimentation are also inhibited.

Hydrophilic inorganic pigments and extenders usually do not require a wetting agent if dispersed in an aqueous medium with a polymeric dispersant such as Mobel D 65. Mobel D 65 displays excellent compatibility with Mobel D 54 and a combination of these is recommended when dispersing both hydrophilic and hydrophobic (mostly organic) pigments in an aqueous system.

#### DOSAGE

For maximum pigment wetting and dispersion, Mobel D 65 should be added prior to the grinding stage. We recommend the following dosages of Mobel D 65, calculated on the total weight of the coating:

- as a pigment dispersant in water borne paints: 0.1 – 0.5%
- in aliphatic solvent-based coatings: 0.3 – 1.0%
- to improve colorant compatibility: 0.2 – 0.5%
- as activator for bentonite in-situ addition (on bentonite): 30.0 – 100.0%

As the quality and production procedures of coatings may vary enormously, it is recommended to check applicability in each case separately.

Aliphatic solvent-based coatings usually display poor wetting properties for hydrophilic and hydrophobic pigments. However, Mobel D 65 benefits are clearly demonstrated at all times when dispersing pigments in such isoparaffinic but aromatic-free coatings. The product also reduces the tendency of sagging in these coatings.

Mobel D 65 is also successfully used to improve compatibility in base paints tinted with universal or aqueous colorants.

Furthermore, its usage as a gelling agent for bentonite ensures full activation of these thickeners.

Mobel D 65 has been successfully used in the following systems:

- dispersion paints
- waterborne alkyd paints
- waterborne epoxies
- aliphatic solvent-based coatings
- high solids
- polyvinyl chloride coatings

#### Feature

- Strongly reduces surface tension
- Strong adsorption on a wide range of pigments

#### Consequence

- speeds up wetting of the pigments
- improved color development
- better and faster dispersion
- reduces rub-up and color float
- improved compatibility of universal colorants

Electro-neutral compound - works with acid, neutral and basic pigments

#### HANDLING AND SAFETY

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#### QUALITY ASSURANCE

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## MOBEL GBR

### Anti-foaming Agent

#### GENERAL INFORMATION

MOBEL GBR is an economical liquid defoamer with an excellent stability, recommended for water-based systems, such as emulsions, emulsion paints and water dilutable resin systems.

#### PHYSICAL PROPERTIES

Appearance	: light yellow, hazy liquid
Active matter	: 99 – 100%
Density, 20°C (DIN 53217/3)	: approx. 895 kg/m <sup>3</sup>
Viscosity, 25°C (ASTM D 2669)	: 70 – 300 mPa.s
Solubility	: dispersible in water
Flash point	: >200°C
Composition	: composition of surface Active agents, silicon free
Ion character	: nonionic

#### APPLICATION AND PROPERTIES

Mobel GBR is specially recommended for systems with good emulsifying properties, such as surfactant stabilised emulsions and emulsion paints. MOBEL GBR coalesces minute air bubbles in the water phase, allowing them to rise and suppress foaming during the manufacture, the let-down-process, the canistering as well as during the application of the paint. Mobel GBR has excellent stability properties and can be stored for many months without the risk of separation of sedimentation.

Feature	Consequence
• Mineral oil-based silicon-free	- minimum risk of surface defects and loss of adhesion - works in a wide range of waterborne systems
• Low viscosity	- easy handling
• Low emulsifiability in in water	- provides longterm effectivity - decreased water sensitivity and increased scrub resistance

#### DOSAGE

It is recommended to add at least approx. half of the quantity of Mobel GBR to the mill base formulation and the rest during the letdown stage.

The exact concentration to be used depends on the individual conditions. In general a rate of 0.2 – 0.5% Mobel GBR, calculated on the total quantity of the paint system, will give excellent results.

#### HANDLING AND SAFETY

More detailed information on handling and safety for each product is included in the relevant material safety data sheet, available for each product.

#### QUALITY ASSURANCE

Since 2005 the company is a holder of the ISO 9001 & 14001 certificate, which guarantees that all operations are conducted according to the stipulated standards.





**Factory:** 10<sup>th</sup> Ramadan city, Industrial Zone B 4 Section No .91 **Telefax:** (002) 015 35 4955 ( 5 Lines ) - Egypt

**Head Office:** 30 G Anwar El mofty from Nasr Road , Rabaa El Adawia., Nasr Ciry, Cairo Egypt

**Branch :** 25 Ahmed Taiseer St., El Mergany Helioplies Cairo Egypt

**Tele fax:** (002 02 ) 2415-9655 / (00202) 2690-3681 / (00202) 2601-7623 **Mob.:** 012 211-5773

**Haungary Branch :** Pusztavacs Községi Önkormányzat (törzssám: 441784000, adószám: 15441788-2-13,

székhelye: 2378 Pusztavacs, Béke tér 10., törv. Képv.: Mihályi Sándor Pogármester) mint

eladó - a továbbiakban: Eladó **Tel.:** 003 613260341 **Mob.:** 003 6306039349

[www.mobelpolymers.com](http://www.mobelpolymers.com)