CATALOGUE
POLYETHYLENE
WAXES
2016

Ed. 2 July 2016
<table>
<thead>
<tr>
<th>GRADE</th>
<th>TYPE</th>
<th>VISCOSITY BROOKFIELD (C.P.S.)</th>
<th>DROP POINT ASTM 566 (ºC)</th>
<th>CONGEALING POINT ASTM D938 (ºC)</th>
<th>PENETRATION 25ºC ASTM D113 (ºC)</th>
<th>ACIDITY DIN51902 (mg KOH)</th>
<th>DENSITY (G/CC)</th>
<th>COLOUR</th>
<th>PRESENTATION</th>
<th>INDUSTRIES OF APPLICATION</th>
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<tr>
<td>CWN-105</td>
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<td>114-118</td>
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<td>CWF-102</td>
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<td>CWO-315</td>
<td>OXIDIZED PE WAX</td>
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**INDUSTRIES OF APPLICATION**
- Hotmelt
- Powder Paints
- PVC
- Rubber
- Road Marking
- Masterbatch
- Candles
- Textile Emulsions
- Emulsions

**www.zellwax.com**

technical@zellwax.com  Telf: 0034 96 186 21 20  Fax: 0034 96 185 5743  Av. General Urrutia, 75. Oficinas 1-A y 3-A | 46013 | Valencia | España
CWF-101 is an ethylene homopolymer of linear crystalline chain and low molecular weight of aliphatic hydrocarbons.

Due to its ultra-low viscosity and a similar behaviour to Fischer-Tropsch waxes, CWF-101 is perfect to improve the features of hotmelt products to high temperature without increasing viscosity.

CWF-101 is used as a regulator of open-time and set-time in adhesives while providing better elongation and flexibility.

CWF-101 is compatible with EVA copolymers, tackifiers, pigments, loads and fillers and is recommended for road marking paints, solvent based coatings and colour masterbatch.

Did you know that:

Zell Waxes are manufactured in Spain and:

- Are chemically inert.
- Provide good antiblocking action.
- Have good solvent retention.
- Improve hotmelt behaviour to high temperatures without increasing viscosity.
- Improve the properties of flow and humidifies facilitates cleaner and faster process being safer and more profitable.
- Are suitable for food contact.
## Technical Data Sheet

**CWF-101**  
**Ultra-low viscosity**  
**Polyethylene wax**

### Characteristics

<table>
<thead>
<tr>
<th>CHARACTERISTICS</th>
<th>NORM</th>
<th>VALUE</th>
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<tbody>
<tr>
<td>Drop Point, °C</td>
<td>ASTM 566</td>
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<td>Congealing Point, °C</td>
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<td>Colour</td>
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<td>Presentation</td>
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</table>

**CAS:** 9002-88-4  
**EINECS:** 200-885-3

### Packing:

**RAFFIA SACKS 20KG, 1000/1100/1200 KG PER PALLETS**  
**Pallet Size:** 1250 X 1050 MM.

**12 T. PER 20 FEET CONTAINER (10 PALLETS X 1200KG)**  
**22 T. PER 40 FEET CONTAINER (20 PALLETS X 1100 KG)**

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**International rules of application:**


- German regulations 131 Mitteilung, Bundesgesundheitsblatt 21,447 1978, Section XXV and Section II of 1978 132 Mitteilung, Bundesgesundheitsblatt 21,474.

- Annex VI of the CLP Regulation and Substances of Very High Concern (SVHC) candidate lists of 28/10/2008; 13/01/2010; 30/03/2010; 18/06/2010; 15/12/2010; 21/06/2011; 19/12/2011; 18/06/2012; 19/12/2012; 20/06/2013; 17/12/2015.

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technical@zellwax.com  
Av. General Urrutia 75, Oficinas 1-A y 3-A | 46013 | Valencia | Spain  
www.zellwax.com
CWF-102 is an ethylene homopolymer of linear crystalline chain and low molecular weight of aliphatic hydrocarbons.

Due to its ultra-low viscosity and a similar behaviour to Fischer-Tropsch waxes, CWF-102 is perfect to improve the features of hotmelt products to high temperature without increasing viscosity.

CWF-102 is used as a regulator of open-time and set-time in adhesives while providing better elongation and flexibility.

CWF-102 is compatible with EVA copolymers, tackifiers, pigments, loads and fillers and is recommended for road marking paints, solvent based coatings and colour masterbatch.

**Did you know that:**

Zell Waxes are manufactured in Spain and:

- Are chemically inert.
- Provide good antiblocking action.
- Have good solvent retention.
- Improve hotmelt behaviour to high temperatures without increasing viscosity.
- Improve the properties of flow and humidifies, facilitates cleaner and faster process being safer and more profitable.
- Are suitable for food contact.
### CHARACTERISTICS

<table>
<thead>
<tr>
<th>CHARACTERISTICS</th>
<th>NORM</th>
<th>VALUE</th>
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<tr>
<td>DROP POINT, °C</td>
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<td>CONGEALING POINT, °C</td>
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<td>COLOUR</td>
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<td>POWDER</td>
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<tr>
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<tr>
<td>DENSITY (25°C), g/cc</td>
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**CAS:** 9002-88-4; **EINECS:** 200-885-3

### PACKING:

RAFFIA SACKS 20KG; 1000/1100/1200 KG PER PALLETT; PALLET SIZE : 1250 X 1050 MM.

12 T. PER 20 FEET CONTAINER (10 PALLETS X 1200KG) ;

22T. PER 40 FEET CONTAINER (20 PALLETS X 1100 KG)

**International rules of application:**


- German regulations 131 Mitteilung, Bundesgesundheitsblatt 21,447 1978, Section XXV and Section II of 1978 132 Mitteilung, Bundesgesundheitsblatt 21,474.

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CWN-105 is an ethylene homopolymer of linear crystalline chain and low molecular weight of aliphatic hydrocarbons. Due to its ultra-low viscosity is perfect to reduce Mooney viscosity and improve “blooming effect” in rubber processing.

CWN-105 is a non-oxidized wax, a perfect agent for dispersion and humidifying pigments in colour masterbatch.

CWN-105 is non-polar and acts as a good external lubricant in PVC production.

Its low-cost and high performance makes our CWN-105 our most competitive grade.

**APPLICATION INDUSTRIES**

- PVC
- MASTERBATCH
- RUBBER
- CANDLES

**Did you know that?:**

Zell Waxes are manufactured in Spain and

- Are chemically inert.
- Are compatibles with EVA resins and copolymers.
- Is an excellent aid for rubber processing.
- Have good solvent retention.
- As external lubricant provides smooth and uniform surfaces, reducing energy consumption in extrusion and optimizing costs.
- Facilitate recycling of final product.
- Are suitable for food contact.

**DISPERION**

- PE: **EXCELLENT**
- PP: **GOOD**
- PVC: **GOOD**
# TECHNICAL DATA SHEET

## CWN-105

**Ultra-low viscosity**

**Non-Oxidized PE wax**

- **CHARACTERISTICS**
  - **DROP POINT, °C**: ASTM 566, 105-112
  - **CONGEALING POINT, °C**: ASTM D 938, 95-102
  - **PENETRATION (25°C), 10^-1 mm**: ASTM D 1321, 6-8
  - **VISCOSITY (150°C), cP**: BROOMFIELD, 15-45
  - **COLOUR**: ZELL WAX, WHITE
  - **PRESENTATION**: ZELL WAX, POWDER
  - **ACIDITY, mg KOH/g**: DIN 5324, 0
  - **DENSITY (25°C), g/cc**: ZELL WAX, 0.955

- **CAS**: 9002-88-4; **EINECS**: 200-885-3

## PACKING:

- RAFFIA SACKS 20KG; 1000/1100/1200 KG PER PALLET; PALLET SIZE: 1250 X 1050 MM.

- 12 T. PER 20 FEET CONTAINER (10 PALLETS X 1200KG);

- 22T. PER 40 FEET CONTAINER (20 PALLETS X 1100 KG)

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International rules of application:


- German regulations 131 Mitteilung, Bundesgesundheitsblatt 21,447 1978, Section XXV and Section II of 1978 132 Mitteilung, Bundesgesundheitsblatt 21,474.

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CWN-201 is an ethylene homopolymer of linear crystalline chain and low molecular weight of aliphatic hydrocarbons.

Due to its ultra-low viscosity is perfect to reduce Mooney viscosity and improve “blooming effect” in rubber processing.

CWN-201 is a non-oxidized wax, a perfect agent for dispersion and humidifying pigments in colour masterbatch.

CWN-201 is non-polar and acts as a good external lubricant in PVC production.

CWN-201 is very versatile and high performance which makes it in our most universal application grade.

Did you know that:

Zell Waxes are manufactured in Spain and:

- Are chemically inert.
- Are compatibles with EVA resins and copolymers.
- Is an excellent aid for rubber processing.
- Have good solvent retention.
- As external lubricant provides smooth and uniform surfaces, reducing energy consumption in extrusion and optimizing costs.
- Facilitate recycling of final product.
- Are suitable for food contact.

www.zellwax.com technical@zellwax.com Telf.: 0034 96 186 21 20 Fax: 0034 96 185 5743 Av. General Urrutia, 75. Oficinas 1-A y 3-A | 46013 | Valencia | España
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### TECHNICAL DATA SHEET

**CWN-201**

**Ultra-low viscosity**

**Non-Oxidized PE wax**

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<tr>
<th>CHARACTERISTICS</th>
<th>NORM</th>
<th>VALUE</th>
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<tbody>
<tr>
<td>DROP POINT, °C</td>
<td>ASTM 566</td>
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<tr>
<td>CONGEALING POINT, °C</td>
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<td>COLOUR</td>
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<td>PRESENTATION</td>
<td>ZELL WAX</td>
<td>POWDER</td>
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<td>ACIDITY, mg KOH/g</td>
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<tr>
<td>DENSITY (25°C), g/cc</td>
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**CAS:** 9002-88-4  **EINECS:** 200-885-3

### PACKING:

RAFFIA SACKS 20KG; 1000/1100/1200 KG PER PALLETS; PALLET SIZE : 1250 X 1050 MM.

12 T. PER 20 FEET CONTAINER (10 PALLETS X 1200KG);

22T. PER 40 FEET CONTAINER (20 PALLETS X 1100 KG)

**International rules of application:**


- German regulations 131 Mitteilung, Bundesgesundheitsblatt 21,447 1978, Section XXV and Section II of 1978 132 Mitteilung, Bundesgesundheitsblatt 21,474.

- Annex VI of the CLP Regulation and Substances of Very High Concern (SVHC) candidate lists of 28/10/2008; 13/01/2010; 30/03/2010; 18/06/2010; 15/12/2010; 21/06/2011; 19/12/2011; 18/06/2012; 19/12/2012; 20/06/2013; 17/12/2015.

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CWN-209 is an ethylene homopolymer of linear crystalline chain and low molecular weight of aliphatic hydrocarbons. Due to its ultra-low viscosity and high hardness is specially recommended for offset ink and paint manufacturing.

As non-oxidized wax CWN-209 is a perfect agent for dispersion and humidifying pigments in colour masterbatch.

CWN-209 is a good regulator of open-time and set-time in hotmelt products.

Its hardness and compatibility makes it our most recommended grade for high performance applications.

**APPLICATION INDUSTRIES**

- HOTMELT
- MASTERBATCH
- OFFSET INKS
- POWDER PAINTS
- COATINGS

**Did you know that:**

Zell Waxes are manufactured in Spain and:

- Are chemically inert.
- Are compatibles with EVA resins and copolymers.
- Is an excellent aid for rubber processing.
- Have good solvent retention.
- As external lubricant provides smooth and uniform surfaces, reducing energy consumption in extrusion and optimizing costs.
- Facilitate recycling of final product.
- Are suitable for food contact.

**DISPERSION**

- EXCELLENT
- GOOD
ZELL WAX
INDUSTRIAL ADDITIVES

TECHNICAL DATA SHEET
CWN-209
Ultra-low viscosity
Non-Oxidized PE wax

<table>
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<th>CHARACTERISTICS</th>
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<td>DROP POINT, °C</td>
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<td>CONGEALING POINT, °C</td>
<td>ASTM 938</td>
<td>104-110</td>
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<td>ASTM D321</td>
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<tr>
<td>VISCOSITY [150°C], cP</td>
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<td>COLOUR</td>
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<td>WHITE</td>
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<td>PRESENTATION</td>
<td>ZELL WAX</td>
<td>POWDER</td>
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<tr>
<td>ACIDITY, mg KOH/g</td>
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<tr>
<td>DENSITY [25°C], g/cc</td>
<td>ZELL WAX</td>
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CAS: 9002-88-4; EINECS: 200-885-3

PACKING:
RAFFIA SACKS 20KG; 1000/1100/1200 KG PER PALLET; PALLET SIZE : 1250 X 1050 MM.
12 T. PER 20 FEET CONTAINER (10 PALLETS X 1200KG);
22T. PER 40 FEET CONTAINER (20 PALLETS X 1100 KG)

International rules of application:
- German regulations 131 Mitteilung, Bundesgesundheitsblatt 21,447 1978, Section XXV and Section II of 1978 132 Mitteilung, Bundesgesundheitsblatt 21,474.
- Annex VI of the CLP Regulation and Substances of Very High Concern (SVHC) candidate lists of 28/10/2008; 13/01/2010; 30/03/2010; 18/06/2010; 15/12/2010; 21/06/2011; 19/12/2011; 18/06/2012; 19/12/2012; 20/06/2013; 17/12/2015.

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www.zellwax.com
CWO-308 is an ethylene homopolymer of linear crystalline chain and medium molecular weight of aliphatic hydrocarbons.

CWO-308 oxidized PE wax is compatible with PVC resin improving flow properties and internal lubrication.

CWO-308 it is also emulsifiable in water with huge amount of applications from coating to textile or even citric application.

Regulates the gelifying effect, improves thermal stability and increases dispersibility.

CWO-308 is our hardest oxidized wax with the lowest acidity value.

Did you know that:

Oxidized polyethylene Zell Waxes are manufactured in Spain and:

- Are chemically inert
- Are compatibles with PVC resin and rest of additives and provide internal lubrication.
- Improve thermal stability.
- Improve flow properties, reducing torque.
- Are suitable for food contact.
- The use of clean additives, like PE waxes, contributes to facilitate recycling of PVC products.

APPLICATION INDUSTRIES

- PVC
- CITRIC EMULSIONS
- TEXTILE EMULSIONS
- WATER-BASED COATINGS

DISPERSION

EXCELLENT

GOOD

EXCELLENT

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**CHARACTERISTICS**

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<tr>
<td>DROP POINT, °C</td>
<td>ASTM 566</td>
<td>99-112</td>
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<tr>
<td>CONGEALING POINT, °C</td>
<td>ASTM D 938</td>
<td>89-102</td>
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<tr>
<td>PENETRATION (25°C), 10^-1 mm</td>
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<td>VISCOSITY (150°C), cP</td>
<td>BROOKFIELD</td>
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<td>COLOUR</td>
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<td>WHITE</td>
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<tr>
<td>PRESENTATION</td>
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<td>ACIDITY, mg KOH/g</td>
<td>DIN 5324</td>
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<tr>
<td>DENSITY (25°C), g/cc</td>
<td>ZELL WAX</td>
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**CAS:** 68441-17-8; **EINECS:** 200-815-3

**PACKING:**

RAFFIA SACKS 20KG; 1000/1100/1200 KG PER PALLETS; PALLETS SIZE : 1250 X 1050 MM.

12 T. PER 20 FEET CONTAINER (10 PALLETS X 1200KG);

22T. PER 40 FEET CONTAINER (20 PALLETS X 1100 KG)

International rules of application:


- German regulations 131 Mitteilung, Bundesgesundheitsblatt 21,447 1978, Section XXV and Section II of 1978 132 Mitteilung, Bundesgesundheitsblatt 21,474.

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Telf: 0034 96 186 21 20  Fax: 0034 96 185 5743  technical@zellwax.com
Av. General Urrutia 75, Oficinas 1-A y 3-A | 46013 | Valencia | Spain

www.zellwax.com
CWO-312 wax is an ethylene homopolymer of linear crystalline chain and medium molecular weight of aliphatic hydrocarbons.

CWO-312 oxidized PE wax is compatible with PVC resin improving flow properties and internal lubrication.

CWO-312 wax it is also emulsifiable in water with huge amount of applications from coating to textile or even citric applications.

Regulates gelifying effect, improves thermal stability and increases dispersibility.

CWO-312 is our best sale oxidized grade with medium-low acidity value.

Did you know that:

Oxidized polyethylene Zell Waxes are manufactured in Spain and:

- Are chemically inert
- Are compatibles with PVC resin and rest of additives and provide internal lubrication.
- Improve thermal stability.
- Improve flow properties, reducing torque.
- Are suitable for food contact.
- The use of clean additives, like PE waxes, contributes to facilitate recycling of PVC products.

APPLICATION INDUSTRIES

PVC

CITRIC EMULSIONS

TEXTILE EMULSIONS

WATER-BASED COATINGS

DISPERSION

EXCELLENT

GOOD

EXCELLENT
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**CHARACTERISTICS**

<table>
<thead>
<tr>
<th>CHARACTERISTICS</th>
<th>NORM</th>
<th>VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>DROP POINT, °C</td>
<td>ASTM 566</td>
<td>99-112</td>
</tr>
<tr>
<td>CONGEALING POINT, °C</td>
<td>ASTM 938</td>
<td>89-102</td>
</tr>
<tr>
<td>PENETRATION (25°C), 10^-1 mm</td>
<td>ASTM 1321</td>
<td>8-10</td>
</tr>
<tr>
<td>VISCOSITY (150°C), cP</td>
<td>BROOKFIELD</td>
<td>&lt;20</td>
</tr>
<tr>
<td>COLOUR</td>
<td>ZELL WAX</td>
<td>WHITE</td>
</tr>
<tr>
<td>PRESENTATION</td>
<td>ZELL WAX</td>
<td>POWDER</td>
</tr>
<tr>
<td>ACIDITY, mg KOH/g</td>
<td>DIN 5324</td>
<td>10-15</td>
</tr>
<tr>
<td>DENSITY (25°C), g/cc</td>
<td>ZELL WAX</td>
<td>0.955</td>
</tr>
</tbody>
</table>

**PACKING:**

RAFFIA SACKS 20KG; 1000/1100/1200 KG PER PALLETT; PALLET SIZE : 1250 X 1050 MM.

12 T. PER 20 FEET CONTAINER (10 PALLETS X 1200KG); 22T. PER 40 FEET CONTAINER (20 PALLETS X 1100 KG).

International rules of application:


- German regulations: 131 Mitteilung, Bundesgesundheitsblatt 21,447 1978, Section XXV and Section II of 1978 132 Mitteilung, Bundesgesundheitsblatt 21,474.

- Annex VI of the CLP Regulation and Substances of Very High Concern (SVHC) candidate lists of 28/10/2008; 20/06/2013; 17/12/2013.

www.zellwax.com

TECHNICAL DATA SHEET

CWO-312

Ultra-low viscosity

Oxidized PE Wax
CWO-314 wax is an ethylene homopolymer of linear crystalline chain and medium molecular weight of aliphatic hydrocarbons.

CWO-314 oxidized PE wax is compatible with PVC resin improving flow properties and internal lubrication.

CWO-314 it is also emulsifiable in water with huge amount of applications from coating to textile or even citrus applications.

Regulates gelifying effect, improves thermal stability and increases dispersibility.

CWO-314 is our best sale oxidized grade with medium-high acidity value.

Did you know that:

Oxidized polyethylene Zell Waxes are manufactured in Spain and:

- Are chemically inert
- Are compatibles with PVC resin and rest of additives and provide internal lubrication.
- Improve thermal stability.
- Improve flow properties, reducing torque.
- Are suitable for food contact.
- The use of clean additives, like PE waxes, contributes to facilitate recycling of PVC products.

www.zellwax.com
TECHNICAL DATA SHEET

CWO-314

Ultra-low viscosity

Oxidized PE Wax

---

**CHARACTERISTICS** | **NORM** | **VALUE**
---|---|---
DROP POINT, °C | ASTM 566 | 99-112
CONGEALING POINT, °C | ASTMD 938 | 89-102
PENETRATION (25°C), 10^{-1} mm | ASTMD 1321 | 8-10
VISCOITY (150°C), cP | BROOKFIELD | <20
COLOUR | ZELL WAX | WHITE
PRESENTATION | ZELL WAX | POWDER
ACIDITY, mg KOH/g | DIN 5324 | 18-20
DENSITY (25°C), g/cc | ZELL WAX | 0.955

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**PACKING:**

RAFFIA SACKS 20KG; 1000/1100/1200 KG PER PALLETT; PALLET SIZE : 1250 X 1050 MM.
12 T. PER 20 FEET CONTAINER (10 PALLETS X 1200KG);
22T. PER 40 FEET CONTAINER (20 PALLETS X 1100 KG)

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**International rules of application:**


- German regulations 131 Mitteilung, Bundesgesundheitsblatt 21,447 1978, Section XXV and Section II of 1978 132 Mitteilung, Bundesgesundheitsblatt 21,474.

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www.zellwax.com
CWO-315 is an ethylene homopolymer of linear crystalline chain and medium molecular weight of aliphatic hydrocarbons.

CWO-315 oxidized PE wax is compatible with PVC resin improving flow properties and internal lubrication.

CWO-315 it is also emulsifiable in water with huge amount of applications from coating to textile or even citric applications.

Regulates gelifying effect, improves thermal stability and increases dispersibility.

CWO-315 is our best sale oxidized grade with high acidity value.

Did you know that:

Oxidized polyethylene Zell Waxes are manufactured in Spain and:

- Are chemically inert
- Are compatible with PVC resin and rest of additives and provide internal lubrication.
- Improve thermal stability.
- Improve flow properties, reducing torque.
- Are suitable for food contact.
- The use of clean additives, like PE waxes, contributes to facilitate recycling of PVC products.

**APPLICATION INDUSTRIES**

- PVC
- CITRIC EMULSIONS
- TEXTILE EMULSIONS
- WATER-BASED COATINGS

**DISPERSION**

- **EXCELLENT**
- **GOOD**
- **EXCELLENT**
## TECHNICAL DATA SHEET

**CWO-315**

Ultra-low viscosity

Oxidized PE Wax

<table>
<thead>
<tr>
<th>CHARACTERISTICS</th>
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<th>VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>DROP POINT, °C</td>
<td>ASTM 566</td>
<td>99-112</td>
</tr>
<tr>
<td>CONGEALING POINT, °C</td>
<td>ASTM D 938</td>
<td>89-102</td>
</tr>
<tr>
<td>PENETRATION (25°C), 10⁻¹ mm</td>
<td>ASTM D 1321</td>
<td>8-10</td>
</tr>
<tr>
<td>VISCOSITY (150°C), cP</td>
<td>BROOKFIELD</td>
<td>&lt;20</td>
</tr>
<tr>
<td>COLOUR</td>
<td>ZELL WAX</td>
<td>BLANCO</td>
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<tr>
<td>PRESENTATION</td>
<td>ZELL WAX</td>
<td>POLVO</td>
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<tr>
<td>ACIDITY, mg KOH/g</td>
<td>DIN 5324</td>
<td>20-22</td>
</tr>
<tr>
<td>DENSITY (25°C), g/cc</td>
<td>ZELL WAX</td>
<td>0.955</td>
</tr>
</tbody>
</table>

**CAS: 68441-17-8 EINECS: 200-815-3**

| PACKING: |

RAFFIA SACKS 20KG; 1000/1100/1200 KG PER PALLET; PALLET SIZE : 1250 X 1050 MM.

12 T. PER 20 FEET CONTAINER (10 PALLETS X 1200KG) ;

22T. PER 40 FEET CONTAINER (20 PALLETS X 1100 KG)

International rules of application:


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