

# WORLD OF WAXES

**CERALENE<sup>®</sup>**  
polyolefin waxes  
synthetic waxes



## Company Introduction

euroceras is a manufacturer of a broad range of synthetic waxes under the brand name CERALENE®. euroceras can look back onto a more than 45 years experience in the production of polyethylene waxes. euroceras has reactors for the production of non polar LDPE-, HDPE-, PP- waxes as well as polar copolymer waxes and unique polyester waxes. Main application fields of CERALENE® waxes in plastics are dispersion in color and additive masterbatches, external and internal lubrication in PVC processing as well as flow improvement in technical plastics and fibre filled compounds. For applications in polar plastics

euroceras is producing PE/MAA-copolymer waxes and unique synthetic polyester waxes which have similar properties like montan waxes.

euroceras has been established within the last years on the market as a reliable, global acting supplier of high quality waxes. euroceras acts flexible, innovative and fast to offer best possible solutions to customers. The company is certified by ISO 9001:2015 and ISO 14001:2015 quality management system to meet customers high quality demands.



## CERALENE® waxes

### For different kinds of technical applications

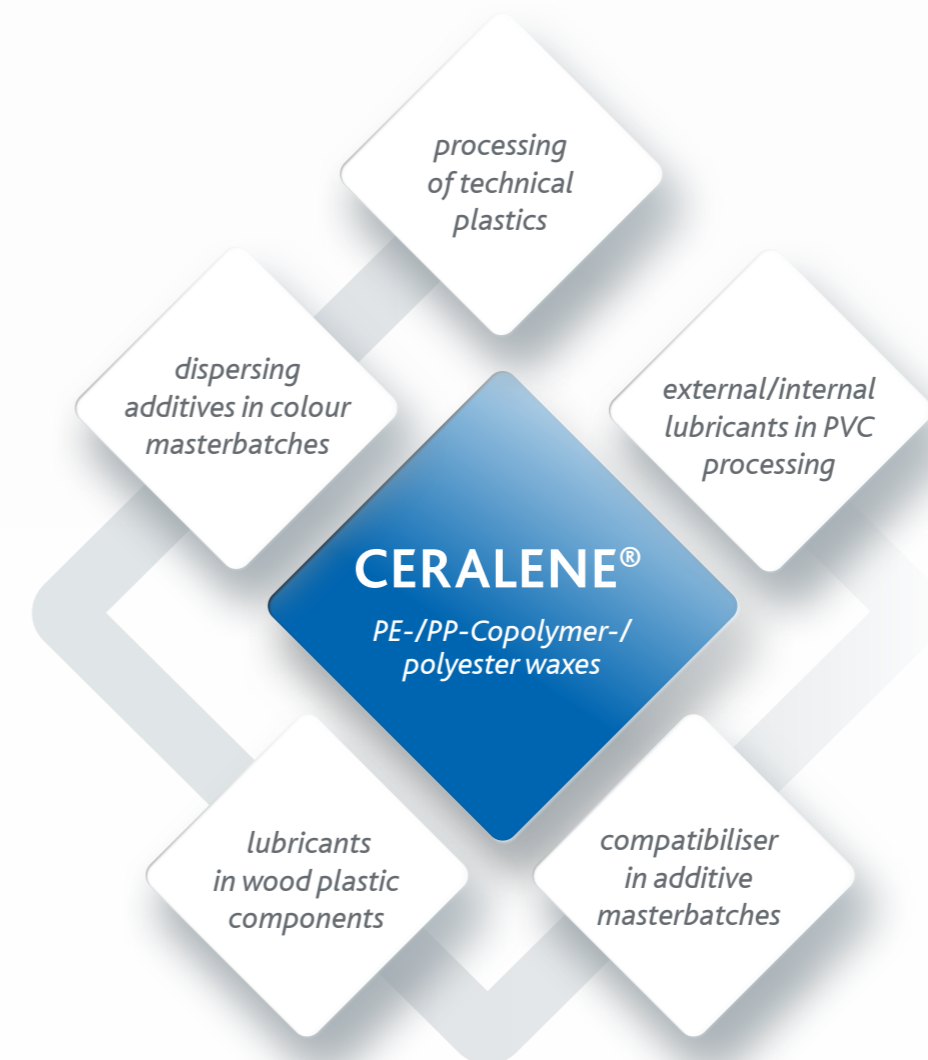
- colour masterbatches (dispersing additive)
- PVC (ext. release, surface improvement, int./ext. lubricant)
- technical plastics (flow/surface improvement, mould release)
- additive masterbatches (dispersing additive, compatibilizer)
- duroplasts (flow, levelling, pigment dispersion)
- pigment and fillers (surface coating)
- rubber processing (release)
- powder coatings (flow/levelling/scratch resistance)
- bitumen
- hot melt adhesives
- aqueous and solvent based coating systems
- toner
- also for cosmetic applications

### Status under food legislation

FDA/BfR and Regulation (EU) No. 10/2011 on request.

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# CERALENE® types for a broad range of industrial applications

## Benefits

- plasticising
- viscosity reduction
- internal/external lubrication
- reduced energy input/friction
- slip and anti-blocking effect
- improved wetting of pigments, fillers and fibres

## Survey about CERALENE® types

CERALENE® grade	wax type	appearance	density [g/cm³] at 23°C	drop point [°C]	viscosity [mPa · s] at 120°C	penetration [mm · 10 <sup>-1</sup> ] at 25°C	acid value [mg KOH/g]
1X	LDPE	white prills	0.92	102	170	4	0
1M	LDPE	white prills	0.92	104	240	3	0
2E	LDPE	white prills	0.92	106	550	2	0
2H	LDPE	white prills	0.92	108	850	2	0
2T	LDPE	white prills	0.92	109	1.100	2	0
2G	LDPE	white prills	0.93	109	140	3	0
2V/220	LDPE	white prills	0.92	101	220	3	0
2V/320	LDPE	white prills	0.92	101	320	3	0
3G	PE	white prills	0.93	111	80*	2	0
120/200	HDPE	almost white prills	0.96	122	200*	< 1	0
120	HDPE	almost white prills	0.96	122	400*	< 1	0
120/800	HDPE	almost white prills	0.96	122	800*	< 1	0
882	Polyolefin	almost white prills	0.92	146	175**	2	0
885	Polyolefin	almost white prills	0.91	150	225**	< 1	0
850	PP	almost white prills	0.90	152	80**	< 1	0
691	Polyester mod.	white prills	0.97	70	130	3	10
692C	Polyester mod. cosmetic grade	white prills	0.97	60	300	5	12
693	Polyester mod.	white prills	0.97	70	300	3	16
694	Polyester mod.	white prills	0.97	70	170	3	19
CP15M	Polar copolymer	off-white prills	0.93	104	500*	4	17
CP30M	Polar copolymer	off-white prills	0.93	98	500*	5	28
CP45M	Polar copolymer	off-white prills	0.93	98	600*	7	40
CP12H	Polar copolymer	off-white prills	0.95	122	800*	1	13
CP14P	Polar copolymer	off-white prills	0.91	152	150**	< 3	13
1007	HDPE	almost white prills	0.95	121	170	1	7-8

\* at T=140 °C, \*\* at T=170 °C

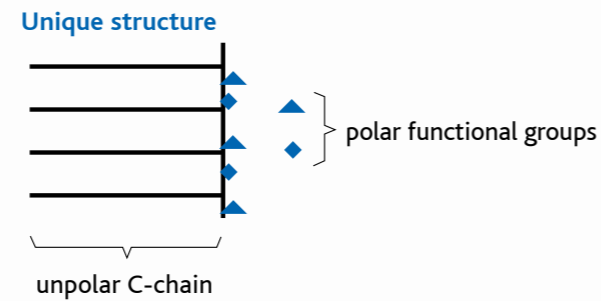
CERALENE®	masterbatch	technical resins	PVC	wood/fibre-plastic composites	bitumen	hotmelt adhesive	powder coatings	solvent based formulations (slip abrasion resistance)	water based additives (surface modification)
1X	○		○		+		○	○ <sup>1)</sup>	
1M	○		+					++ <sup>1)</sup>	
2E	++		++	++			+	+ <sup>1)</sup>	
2H	++	○	+	++			++	○ <sup>1)</sup>	
2T	++	○	+	++			++	○ <sup>1)</sup>	
2G	○		++						
2V/220	++		++					++	
2V/320	++		++					++	
3G			++		+		+		
120/200			○		++	+			
120	○		○		++	+			
120/800	+		○		++	+			
882	++		○		+	○			
885	+				+	○			
850	++			++	++	++	○		
691	++	++	+	++		+		++	
692C									
693	++	++	++	++		+		++	
694	++	++	++	++		+		++	
CP15M	++	++	++	++	++	++			
CP30M	++	++	++	++	++	++			+
CP45M	++	++	++	++	++	++			++
CP12H	++	++	++	++	++	++			++
CP14P	+	++		++	+	+		++	++
1007	+			○	+	+	○	○	++

○ suitable + recommended ++ specially recommended

<sup>1)</sup> inks

# Synthetic CERALENE® polyester waxes

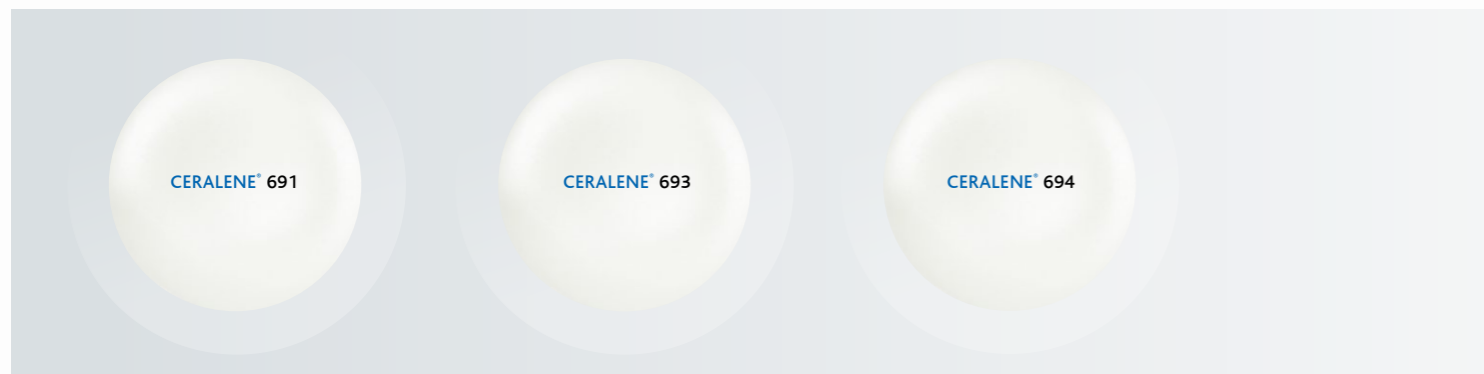
Synthetic alternatives to montan waxes



## Excellent thermal stability

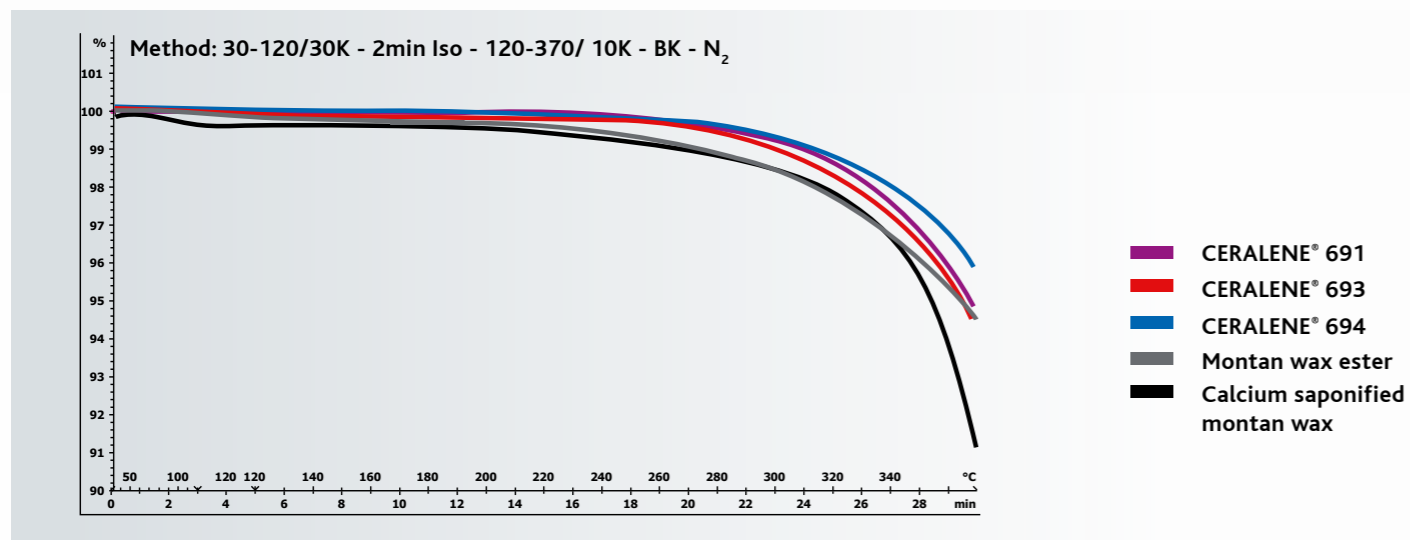
### Colour stability

Air draft oven at 160 °C, 24 hours



### Heat stability

Comparison heat stability of CERALENE® Polyester waxes vs. Montan waxes by TGA



TGA range °C	CERALENE® 691	CERALENE® 693	CERALENE® 694	Montan wax ester	Calcium saponified montan wax
30-250	0,19 %	0,30 %	0,32 %	0,70 %	0,76 %
30-300	0,80 %	0,88 %	1,01 %	1,67 %	1,55 %

## Excellent compatibility with polar and non-polar resins

Resin	Dosage CERALENE 694 (%)	Visual
Polycarbonate	0.4	+, slightly opaque
Polystyrene	0.5	+, slightly opaque
Polyamide	0.3	++
ABS	0.4	++
POM	0.3	++
PET	0.3	++
PP	0.3	++

## CERALENE® CP15M, CP30M and CP45M Polar copolymer wax

- as dispersing additive in colour masterbatches (e.g. for PP, PA, PE, PS, PC or ABS)
- in PVC as internal lubricant
- as compatibiliser between polar and non-polar resins as well as for fibres / fillers
- in hot melt applications / as adhesion promotor

## CERALENE® CP12H, CP14P Polar copolymer wax

- hot melt applications
- glass fibre sizing
- emulsions

## CERALENE® 850 PP homopolymer wax

- as dispersing additive for PP masterbatches, especially PP fibre masterbatches
- as additive for toner production
- hot melt applications

## CERALENE® waxes for plunger lubrication

Use as high performance plunger lubricant for aluminium die-casting machines.

CERALENE®	wax type	appearance	particle size [mm]	drop point [°C]	viscosity [mPa · s] at 120°C
DCG	LDPE/graphite	black prills	<2.0	108	600

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