DIACARNA™ Synthetic Wax Additive

DIACARNA™ is a synthetic wax copolymer of α-olefin and maleic anhydride. It has a wide variety of applications including use as resin molding lubricants, mold release agents, compatibility agents, binders for thermal-printing inks and more. Due to the polar maleic anhydride group, DIACARNA's dispersibility is superior to that of natural wax or other synthetic waxes. This specialty synthetic has outstanding resistance to thermal degradation, which makes it especially well-suited for high temperature applications such as engineering plastic processing. Having both a non-polar (α-olefin) structure and a polar (maleic anhydride) structure, DIACARNA™ is also useful as a compatibility accelerator to facilitate the mixing of non-polar and polar species.

Characteristics

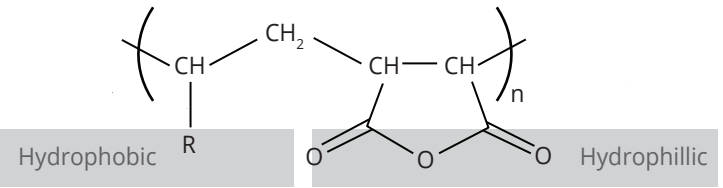
- Excellent dispersing power for carbon black, pigments and filler
- Excellent heat-resistance
- High gloss
- Good hardness at high temperatures

Applications

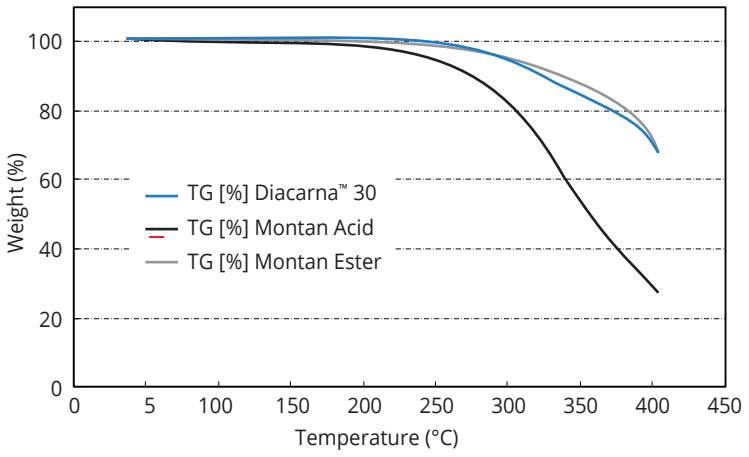
- Ideal for carbon dispersion in thermal printing ribbon
  - Excellent dispersing power for carbon black, pigments and filler
- Polymer alloy (ex. PC/ABS allow with Diacarna™)
- High-temperature engineering plastic fabrication
- Lubricants, Mold-releasing agents
- Car wax

Material Properties	
Product	Diacarna™ 30
Appearance	Pale yellow solid
Melting Point (˚C)	70~76
Viscosity (mPa•s at 100˚C)	150~210
Penetration (1/10mm at 25˚C)	3~4
Saponication value (mgKOH/g)	95~110

Product Structure



Thermal Stability of Diacarna™ (TG-DTA)



Weight Loss Starting Temperature

Wax	1% Weight Loss
Diacarna™ 30	252 °C
Montan Wax (Acid type)	188 °C
Montan Wax (Ester type)	238 °C

Diacarna™ shows equal heat-resistance compared with Montan Ester wax and significantly better heat-resistance than Montan Acid wax.