

## INNOLEIC™ GPe 9

### PRODUCT DESCRIPTION

Innoleic™ GPe 9 is a general-purpose sustainable plasticizer for S-PVC compounds and plastisols for cost-sensitive applications. The product is manufactured under state-of-the-art vegetable oil chemical modification processes to result in a phthalate-free alternative primary plasticizer, without the typical compatibility issues of ESO-type materials.

### BENEFITS

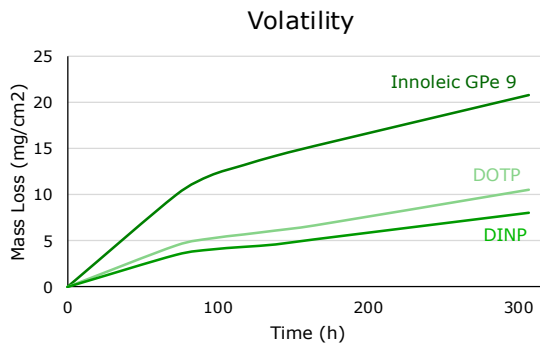
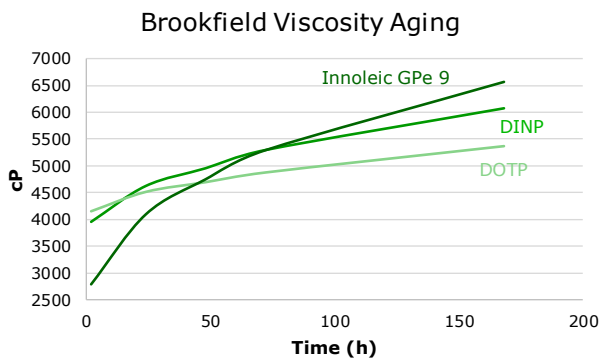
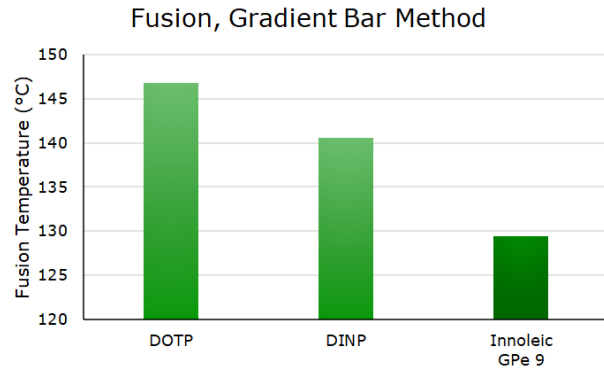
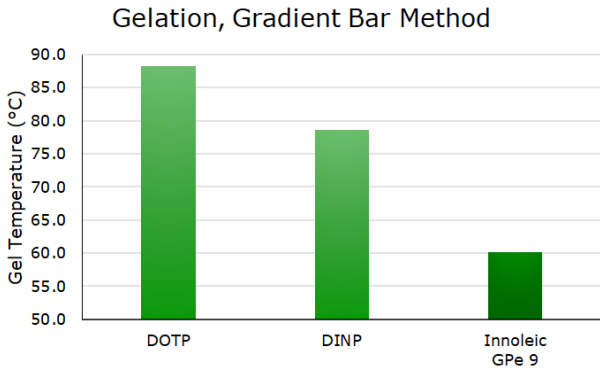
Reduced plastisol gelation and fusion temperatures when compared to other general-purpose plasticizers	<ul style="list-style-type: none"> <li>○ Increased throughput, reducing unit manufacturing costs</li> <li>○ Lower oven temperatures, reducing energy costs</li> <li>○ Wider array of heat-sensitive substrates and components</li> </ul>
Improved thermal stabilization due to its inherent Epoxy groups	<ul style="list-style-type: none"> <li>○ Allows the complete replacement of ESO as a co-stabilizer, simplifying the formulation and reducing raw material inventory and SKUs</li> </ul>
Improved dry-up time for S-PVC compounds	<ul style="list-style-type: none"> <li>○ Reduced dry-blend cycle time</li> </ul>
Reduced fusion temperatures when used as a replacement for petroleum-based GP plasticizers	<ul style="list-style-type: none"> <li>○ Increased clarity and surface gloss of final products</li> </ul>
Reduced carbon footprint	<ul style="list-style-type: none"> <li>○ Primary phthalate-free alternative, vegetable-based product providing a lower carbon footprint</li> </ul>

### PROPERTIES

Characteristic	Method	Specification	Typical Values
Color	PE 0006	Light yellow	Pass
Spec. Gravity (25°C), g/cm <sup>3</sup>	PE 0005	0.930-0.960	0.948
Acidity, (1g KOH/g)	PE 0004	3.0 max.	0.5
Iodine Index, cg I <sub>2</sub> /g	PE 0002	3.5 max.	1.5
Oxirane Index, weight%	PE 0001	5.0 min.	6.5

## PERFORMANCE

Innoleic™ GPe 9 presents lower gel and fusion temperatures when compared to traditional general-purpose plasticizers. Although the material presents reasonable mass loss, in comparison with petroleum-based general-purpose plasticizers, the higher volatility makes it suitable for less volatility-sensitive applications. Also, the comparative slightly higher viscosity aging may require formulation adjustments for plastisols.



Notes: Plastisols were formulated with 100 parts e-PVC resin (K=75), 60 parts plasticizer, 2 parts stabilizer (CaZn).  
Oven aging @ 105 °C, 14 air exchanges/hour

## PACKAGING

Material can be acquired in bulk, 275 gal totes, or 55 gal drums.

## SHELF LIFE

24 months when properly stored in accordance with good warehousing practices in tightly sealed containers to avoid contamination. To maintain workable plasticizer viscosities, the temperature should be maintained above 50°F (10 °C).