

# SYLVASOLV™

## Biobased Oils

### High-Performance Biobased Oils as Plasticizer for Coatings

SYLVASOLV oils are 100% biobased additives used as plasticizers in epoxy and polyurethane-based protective coatings to optimize elasticity, hardness, adhesion to substrates, and dry-film appearance. These oils are a non-flammable, sustainable option to reduce glass transition temperature and increase plasticity and fluidity to enable proper film formation.

SYLVASOLV oils are derived from pine wood pulping by-products from responsibly managed forests, providing formulators with a 100% biobased, lower carbon footprint, no land-use change, and non-food sourced plasticizer for protective coatings. Additionally, SYLVASOLV oils are non-flammable with minimal VOC, offering safer handling.

#### Performance and Property Benefits:

- » Increased Flexural Strength & Elongation<sup>1</sup>
- » Phthalate Free
- » Good Gloss Retention
- » Minimal VOC<sup>2</sup>

#### Sustainability Advantages:

- » 100% Biobased<sup>3</sup>
- » Lower Carbon Footprint<sup>4</sup>
- » Sourced from Responsibly Managed Forests
- » Does Not Compete for Land with Food Crops

#### Applications:

- » Metal and Concrete Protective Coatings
- » Epoxy Based Coatings
- » Polyurethane Based Coatings

<sup>1</sup>Increased flexural strength and elongation when compared to 20% Diisononyl Phthalate Plasticized resins.

<sup>2</sup>The boiling point distribution of the product was assessed by SIM-Dist analysis performed according to EN-15199-2 and ASTM D2887 to classify low VOC based on EU Directive 2004/42/EC and CARB LVP-VOC.

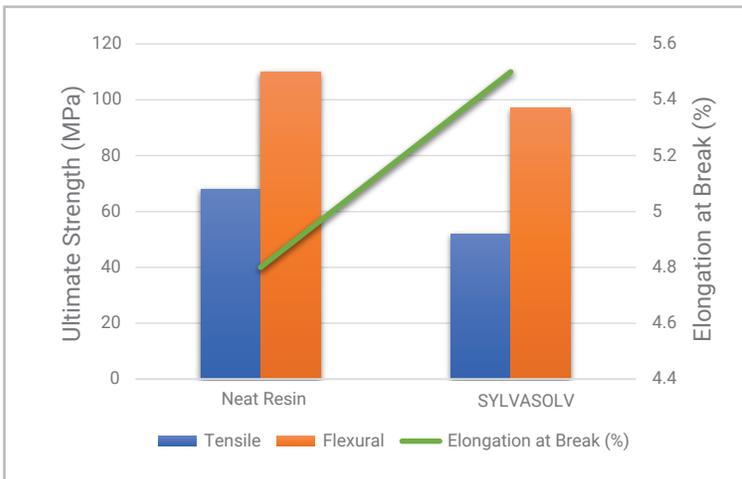
<sup>3</sup>Provisional biobased carbon content based on radiocarbon C14 test by USDA certified lab, according to USDA BioPreferred® program.

<sup>4</sup>Product specific biogenic carbon credit depends on process, composition, and local energy source. The actual life cycle performance improvement that is achieved by using Kraton products can only be concluded through an ISO-certified process.

## SYLVASOLV Biobased Oil Typical Properties

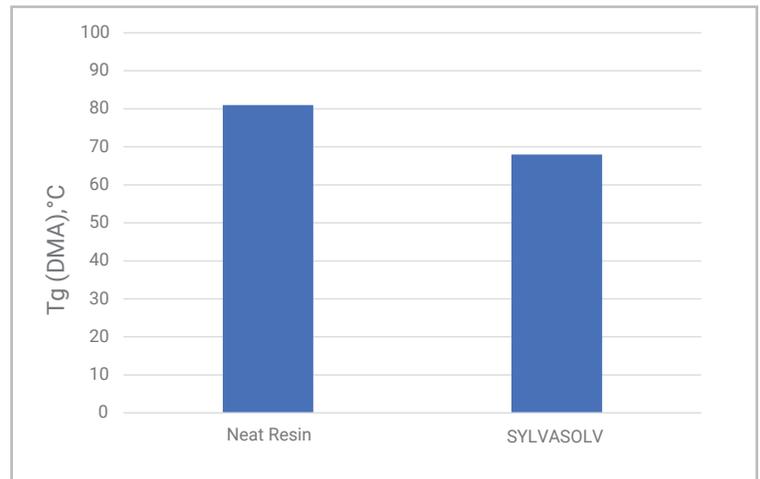
Property	Method	1000 Series	3000 Series	Unit
Kinematic Viscosity (40°C)	ASTM D-445	45	22	cSt
Density at 20°C	ASTM D-1480	0.97	0.96	g/cm <sup>3</sup>
Color	AQCM 002	12	2	Gardner
Acid Value	AQCM 001	8	3	mg KOH/g
Pour Point	ASTM D-97	-14	-24	°C

### SYLVASOLV Oils' Impact on Mechanical Properties



20% SYLVASOLV increases elongation at break in Epoxy coating

### SYLVASOLV Oils' Impact on Glass Transition Temperature



20% SYLVASOLV acts as a plasticizer and decreases the Tg of Epoxy Resin System

20% SYLVASOLV added to the polymer matrix increases the elongation at break by improving the flexibility and workability of the epoxy coating. In addition, the glass transition temperature (Tg) of the polymer system is reduced, and as the chain mobility is increased, the polymer becomes softer and more pliable.

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Learn more about our pine chemistry.

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