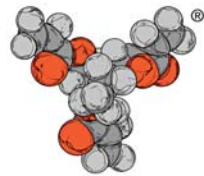


# SARTOMER

*Our name means tailor-made.™*



## Corporate Headquarters

### Americas

Sartomer Company, Inc.  
Oaklands Corporate Center  
502 Thomas Jones Way  
Exton, PA 19341  
USA

Tel: 610-363-4100 / 800-SARTOMER  
Fax: 610-363-4140  
E-mail: [contact@sartomer.com](mailto:contact@sartomer.com)

### Europe, Middle East and Africa

Sartomer Europe  
Immeuble City Défense  
16-32, rue Henri Regnault  
La Défense 6  
F-92902 Paris La Défense Cedex  
France

CONTACT: Philippe Thepot: Tel: 33-1-4796-9922  
Fax: 33-1-4796-9993  
E-mail: [sartomer.information@sartomereurope.com](mailto:sartomer.information@sartomereurope.com)

### Asia

Sartomer Asia Limited  
Unit 1106, 11/F., DCH Commercial Centre  
25, Westlands Road  
Quarry Bay  
Hong Kong

Tel: (852) 2161-0600  
Fax: (852) 2161-0678  
E-mail: [fanny.ho@sartomerasia.com](mailto:fanny.ho@sartomerasia.com)

For contact information worldwide, please refer to Sartomer's  
web site at: <http://www.sartomer.com/sales.asp>

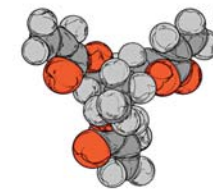


The information in this bulletin is believed to be accurate, but all recommendations are made without warranty since the conditions of use are beyond SARTOMER Company's control. The listed properties are illustrative only, and not product specifications. SARTOMER Company disclaims any liability in connection with the use of the information, and does not warrant against infringement by reason of the use of its products in combination with other material or in any process.



# SARTOMER

*Our name means tailor-made.™*



## Naturally-Derived Products



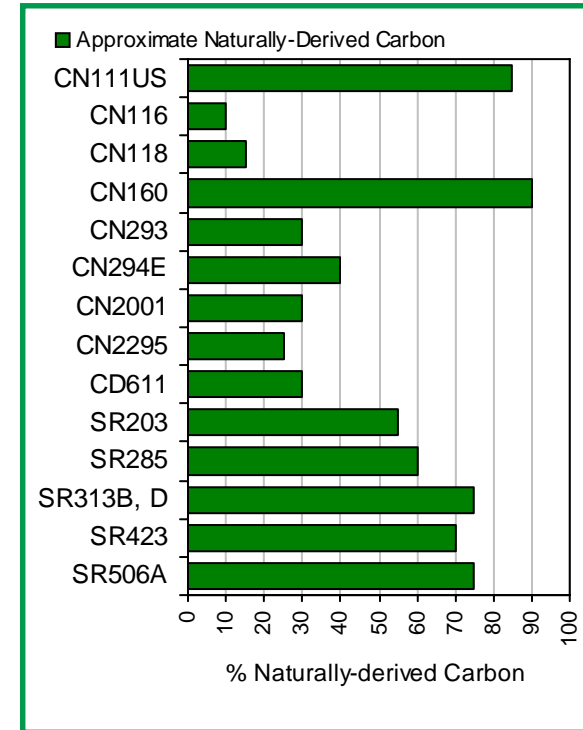
# Sartomer's Naturally-Derived Products

Sartomer has a diverse offering of monomers and oligomers that are based on naturally-derived raw materials. The backbones of the products in this bulletin are derived from a plant source or biomass, such as soy beans or linseeds. The higher viscosity of the resins or oils used as the oligomer backbones lead to higher viscosity acrylate products. Naturally-derived alcohols are used as backbones for (meth)acrylate monomers.

Many of the products that are based on naturally-derived backbones are used in UV/EB ink formulations. The polyester acrylate oligomers CN2001 and CN2295 and the acrylated polyester oligomers CN293 and CN294E are mainly used in ink formulations. These oligomers impart good pigment wetting, water balance, and cure speeds to UV/EB inks. The CN111US and CN160 impart flow and pigment wetting to ink formulations and are often used in coating formulations to decrease the  $T_g$  and to increase flexibility. CN116 and CN118 are fatty acid-modified epoxy acrylates. The fatty acid modification improves the pigment wetting of the oligomer and reduces the shrinkage and brittleness of the cured system.

CD611, SR203, SR285 are all (meth)acrylates of tetrahydrofurfuryl (THF) alcohol. The CD611 is an alkoxyated acrylate version that reduces irritancy versus SR285. Generally THF monomers are used to improve adhesion to a variety of

CN111US	Epoxidized Soybean Oil Acrylate
CN116	Modified Epoxy Acrylate
CN118	Modified Epoxy Acrylate
CN160	Acrylated Linseed Oil Oligomer
CN293	Acrylated Polyester Oligomer
CN294E	Acrylated Polyester Oligomer
CN2001	Polyester Acrylate Oligomer
CN2295	Polyester Acrylate Oligomer
CD611	Alkoxyated Tetrahydrofurfuryl Acrylate
SR203	Tetrahydrofurfuryl Methacrylate
SR285	Tetrahydrofurfuryl Acrylate
SR313B, D	C12 C14 Alkyl Methacrylate
SR423	Isobornyl Methacrylate
SR506A	Isobornyl Acrylate



non-porous substrates. SR423 and SR506A are isobornyl (meth)acrylates. Isobornyl-based monomers have a higher  $T_g$  with low shrinkage and low crosslinking. The SR313 has two grades, B and D, that are based on naturally-derived alcohols. The SR313 products have a low  $T_g$  and are mainly used to impart flexibility to formulations.

The naturally-derived carbon content for each product was calculated by the carbon contribution from both biomass and petroleum sources.

CN111US and CN160 are the direct acrylates of epoxidized natural oils and thus, have high amounts of naturally-derived content. In the other oligomers, the naturally-derived content is used to modify the backbone and is in the final product at a lower percentage.

The alkoxyated monomer CD611 contains a lower amount of naturally-derived content because the alkoxylation dilutes the base alcohol. The other (meth)acrylate monomers offer fairly high amounts of naturally-derived content.

The (meth)acrylated products based on naturally-derived raw materials can offer excellent performance for both formulators and end-users. Sartomer is committed to the development and use of naturally-derived content in our product offerings and is working to develop the next generation of products to fill our customers' needs.

Sartomer Product Code	Description	Functionality	Viscosity, cps at 25°C	Viscosity, cps at 60°C	Density, lbs/gal	Color, APHA or Gardner(G)	Surface Tension, dynes/cm <sup>2</sup>	Refractive Index
CN111US	Epoxidized Soybean Oil Acrylate	2	25,000	1,300	1.03	4G		1.479
CN160	Acrylated Linseed Oil Oligomer	2	100,000	2,600	1.08	6G		1.484
CN293	Acrylated Polyester Oligomer	6	7,700	400	1.07	6G		1.489
CN2295	Polyester Acrylate Oligomer	6	41,000	2,400	1.07	12G		1.489
CN294E	Acrylated Polyester Oligomer	4	141,500	2,600	1.07	9G		1.478
CN118	Modified Epoxy Acrylate	2	> 1,000,000	4,800	1.13	5G		1.528
CN116	Modified Epoxy Acrylate	2	216,500	2,100	1.13	2G		1.544
CN2001	Polyester Acrylate Oligomer	6	47,500	1,900	1.08	11G		1.480
SR285	THFA	1	6		1.07	80	36.1	1.458
SR506A	I BOA	1	9		0.99	20	31.7	1.474
SR313B	C12 C14 Alkyl MA	1	8		0.87	10	29.1	1.444
SR313D	C12 C14 Alkyl MA	1	9		0.88	6	29.1	1.444
CD611	Alkoxyated THFA	1	11		1.03	55	32.9	1.453
SR203	THFMA	1	5		1.04	65	34.6	1.455
SR423A	I BOMA	1	10		0.98	0	30.1	1.474