

801-4100	High Solids Long Oil Alkyd												
Description	CHEMPOL® 801-4100 is high solids soya-based long oil alkyd supplied in aliphatic solvents. It is based on CCP's unique sucrose ester technology which provides high crosslink density at low molecular weight. This combination offers fast positive dry at low VOC content. CHEMPOL® 801-4100 will meet 250 g/l VOC requirements for architectural enamels.												
Performance Characteristics	<ul style="list-style-type: none">• Excellent flow, leveling, and brushing characteristics• Dry characteristics comparable to conventional alkyd systems• Good metal adhesion and wetting characteristics• Good color and gloss retention• Excellent flexibility and solvent resistance												
Recommendations for Use	<ul style="list-style-type: none">• Architectural Interior/Exterior enamels• Light Industrial Maintenance Coatings• Marine Enamels• Water-proofing Wood Stains												
Sales Specifications	<table border="1"><tr><td>% Solids</td><td>84-86</td></tr><tr><td>Viscosity GH, as Supplied</td><td>Z-Z2</td></tr><tr><td>Reduced Viscosity, 60% in Mineral Spirits</td><td>A-D</td></tr><tr><td>Acid Value (max), on Solids</td><td>6.0</td></tr><tr><td>Color (max), GH</td><td>8</td></tr><tr><td>Wt/gal, lb/gal.</td><td>7.9-8.1</td></tr></table>	% Solids	84-86	Viscosity GH, as Supplied	Z-Z2	Reduced Viscosity, 60% in Mineral Spirits	A-D	Acid Value (max), on Solids	6.0	Color (max), GH	8	Wt/gal, lb/gal.	7.9-8.1
% Solids	84-86												
Viscosity GH, as Supplied	Z-Z2												
Reduced Viscosity, 60% in Mineral Spirits	A-D												
Acid Value (max), on Solids	6.0												
Color (max), GH	8												
Wt/gal, lb/gal.	7.9-8.1												
Other Properties	<table border="1"><tr><td>Solvent</td><td>Mineral Spirits</td></tr><tr><td>VOC as Supplied</td><td>Approximately 144g/l</td></tr><tr><td>Renewable Resource Content based on Polymer solids</td><td>Approximately 78%</td></tr></table>	Solvent	Mineral Spirits	VOC as Supplied	Approximately 144g/l	Renewable Resource Content based on Polymer solids	Approximately 78%						
Solvent	Mineral Spirits												
VOC as Supplied	Approximately 144g/l												
Renewable Resource Content based on Polymer solids	Approximately 78%												
Storage	CHEMPOL® 801-4100 should be stored indoors in the original unopened container at temperatures between 40 °F and 100 °F. Exposure to direct sunlight should be avoided. Under proper storage conditions, the shelf life will be 1 year from date of manufacture. Material safety data sheet is available on request												

CHEMPOL® 801-4100

Long Oil Alkyd

Page 2 of 3

Dry Characteristics as Clear Film (1.5. mil wet on glass):**Drier Content (% metal based on polymer solids):**

0.07% Co
 0.1% Ca
 0.2% Zr
 0.6% Activ-8
 0.2% Anti-skinning Agent

Set: 2:15
 200 g Zapon: 4:50
 500 g Zapon: 4:50
 Dry Hard: 5:20

LOW VOC WHITE LONG OIL ALKYD ENAMEL**1.8 VOC**

<u>INGREDIENTS</u>	<u>POUNDS</u>	<u>GALLONS</u>
CHEMPOL® MPS 801-4100	100.47	12.51
Mineral Spirits	50.23	7.80
¹ Crayvallac® OC-150	5.03	0.41
² Byk P104	4.02	0.51
³ TiPure® R902	401.86	12.07
⁴ Lampblack, LB 1011	0.10	0.01
High Speed Cowles disperse 15 minutes and letdown with		
CHEMPOL® MPS 801-4100	477.36	59.45
Mineral spirits	15.39	2.39
⁵ 12% Cobalt	2.87	0.34
⁶ Exkin® #2	2.15	0.28
⁷ Activ-8	3.28	0.38
⁸ 5% Calcium	9.74	1.29
⁹ 12% Zirconium	8.21	1.01
Mineral spirits, adjusting	<u>10.04</u>	<u>1.56</u>
	1090.75	100.00

PAINT PROPERTIES

% solids by weight	83.6	<u>Viscosity</u> 113 KU	<u>VOC</u> 215 g/l
% solids by volume	72.5	101 KU	232 g/l
P/B wt. ratio	0.79	95 KU	249 g/l
% PVC	16.7		
Viscosity, KU	113		
VOC, pounds / gallon	1.79		
grams / liter	215		

Dry – 1.5 mils wet over glass

Set to touch	2½	hours
500 gram Zapon	4½	hours
Dry Hard	5½ - 6	hours

Paint Film Properties - 10 days air dry over Bare CRS

Mils DFT	1.7
Crosshatch adhesion	3B
20° / 60° gloss	83 / 91
MEK dr's to metal	250
Pencil hardness	2B
Direct impact	160+
1/8" conical mandrel	pass

FORMULATION NOTES

Ingredient Description Supplier

¹ Crayvallac® OC-150	Organoclay thixotrope	Cray Valley / CCP
² Byk P104	Pigment dispersant	Byk Chemie
³ R902	Titanium dioxide	DuPont
⁴ LB1011	Lampblack	Elementis
⁵ Cobalt 12%	Cobalt Ten-Cem	OMG Group, Inc.
⁶ Exkin® #2	Anti Skin Agent	Condea Servo LLC
⁷ Activ-8	Chelating agent	R. T. Vanderbilt
⁸ 5% Calcium	Calcium Ten-Cem	OMG
⁹ 12% Zirconium	Through drier	OMG

COOK COMPOSITES AND POLYMERS CO.

WARRANTIES, DISCLAIMERS AND LIMITATION OF LIABILITY (Rev. 03/09)

Seller warrants that: (i) Buyer shall obtain good title to the product sold hereunder, (ii) at Shipment such product shall conform to Seller's specifications; and (iii) the sale or use of such product will not infringe the claims of any U.S. patent covering the product itself, but Seller does not warrant against infringement which might arise by the use of said product in any combination with other products or arising in the operation of any process. **SELLER MAKES NO OTHER WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE, EVEN IF THAT PURPOSE IS KNOWN TO SELLER. ANY APPLICATION INFORMATION OR ASSISTANCE WHICH SELLER MAY FURNISH TO BUYER IS GRATUITOUS AND SHALL IN NO WAY BE DEEMED PART OF THE SALE OF PRODUCT HEREUNDER OR A WARRANTY OF THE RESULTS OBTAINED THROUGH THE USE OF SUCH PRODUCT.**

Without limiting the generality of the foregoing, if any product fails to meet warranties mentioned above, Seller shall at Seller's option either replace the nonconforming product at no cost to Buyer or refund the Buyer the purchase price thereof. The foregoing is Buyer's sole and exclusive remedy for failure of Seller to deliver or supply product that meets the foregoing warranties. Seller's liability with respect to this contract and the product purchased under it shall not exceed the purchase price of the portion of such product as to which such liability arises. Seller shall not be liable for any injury, loss or damage, resulting from the handling or use of the product shipped hereunder whether in the manufacturing process or otherwise. In no event shall Seller be liable for special, incidental or consequential damages, including without limitations loss of profits, capital or business opportunity, downtime costs, or claims of customers or employees of Buyer. Failure to give Seller notice of any claim within thirty (30) days of shipment of the product concerned shall constitute a waiver of such claim by Buyer. Any product credit received by Buyer hereunder, if not used, shall automatically expire one (1) year from the date the credit was granted. Notwithstanding any applicable statute of limitations to the contrary, any action by Buyer relation to a claim hereunder must be instituted no later than two (2) years after the occurrence of the event upon which the claim is based. All the foregoing limitations shall apply irrespective of whether Buyer's claim is based upon breach of contract, breach of warranty, negligence, strict liability, or any other legal theory.