

STUDY: PLASTICIZERS IN ACRYLATE SEALANTS

Hallstar designs, synthesizes and produces ester plasticizers for the adhesives and sealants markets through our global innovation and production facilities. With our latest acquisition of LANXESS production and product lines in Greensboro, North Carolina, we have further expanded our capabilities.

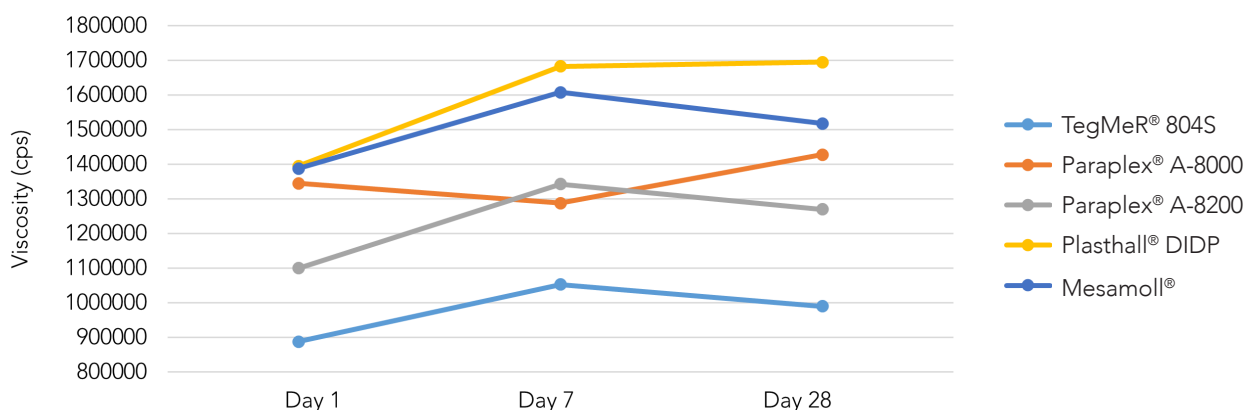
A study was conducted to identify performance advantages Hallstar's plasticizers vs. commodity plasticizers.

- Hallstar advantages:
- Efficiency
 - Peel strength
 - Tg reduction
 - Dry touch

Formulation	Loading (PHR)
Acronal® 81D	100
Calcium Carbonate	115
Mineral Spirits	5
Ethylene Glycol	5
Plasticizer	25

Plasticizers Evaluated
TegMeR® 804 (PEG Ester)
Paraplex® A-8000 (Polymeric Ester)
Paraplex® A-8200 (Polymeric Ester)
Diisodecyl Phthalate (DIDP)
*Mesamoll® (Alkyl Sulfonic Ester)
*Mesamoll® is a registered product of LANXESS

Viscosity Stability at 2RPM (25°C)



Performance Data

Plasticizer	TegMeR® 804	Paraplex® A-8000	Paraplex® A-8200	DIDP	Mesamoll®	
Physicals						
Feel	Tacky	Smooth/dry	Smooth/dry	Tacky	Tacky	Dry to the touch
Tensile Strength, psi	48.1	64.2	72.5	53.7	75.7	
Hardness Duro A, pts.	4	17	19	7	12	
Tg by DSC, °C	-81.8	-66.6	-58.7	-69.8	-65.1	Low Tg
ASTM C794 Adhesion-in-Peel (Aluminum)						
Dry, pli	2.6	5.6	11.6	2.4	4.3	Peel strength
Type of Failure	Adhesive	Adhesive	Cohesive	Adhesive	Adhesive	Cohesive failure
7-day Water Immers, pli	2.1	0	0.7	0	1.6	
Type of Failure	90% CO 10% Ad	30% CO 70% Ad	Cohesive	Adhesive	10% CO 90% Ad	

