



**Resiflow™ LH-240 Technical Brief #1**  
*Preliminary Evaluation of Resiflow Products in a commercial Gel Coat*

**Objectives:**

- Evaluation of a range of Resiflow additives for flow, leveling & air release characteristics in a commercial Iso Clear Gel Coat.
- Comparative analyses for thixotropic properties, gel time, clarity/compatibility, flow, leveling and air release

**Activities:**

- The following Resiflow products were selected for evaluation  
LV, L-67, LH-240, L-37, L-65, L-16, LF, Q-92, T-1
- The additives were incorporated at 1% with a commercial Iso gel coat
- Samples were shaken vigorously and placed in the 25°C (77°F) waterbath for 24 hours. This allowed for temperature equilibration and the release of any incorporated air, which could alter viscosity measurements
- Brookfield Viscosity measurements were taken with a #4 spindle at 6 rpm and 60 rpm, 25°C.  
Thixotropic Index = (cps @ 6 rpm) / (cps @ 60 rpm)
- Gel Time test was slightly modified from the provided test procedure; only 50g gel coat was used with 0.75g DDM-9 (MEK peroxide)
- Each sample was sprayed 20 - 30 mils (500 - 750 µm) onto pre-waxed<sup>1</sup> glass plates and allowed to cure overnight
- Conclusions were made on the final peeled-off films

**Data and Results:**

- See Data Table on next page
- Relative number ratings for clarity, air release and leveling for each Resiflow product were assigned by visual examination
- Air Release is quite important, because residual air pockets can result in blistering in some final use situations
- Leveling property is integral for next coat adhesion to the backside of the gel coat (especially in laminates).

**Gel Coat Specifications**

Viscosity	3400-3600 cps
Thix. Index	5.5-6.5
Gel Time	6-9 minutes
Film Cure	60 min, Max

**DATA**

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<sup>1</sup> TR High Temp Mold Release from Ashland Distributor would be a better selection for release agent than the S.C. Johnson's Carnuba Wax

Iso Clear Gel Coat	6 rpm	60 rpm	Thixo. Index	Cup Gel Time	Clarity	Air Release	Leveling
No Additives	15 500	2 340	6.62	11.5			
With an Air Release	16 300	2 440	6.68	9.7			
With a Flow Control	18 000	2 660	6.76	9.5			
With Resiflow LV	14 200	2 240	6.34	10:10	8	2	8
Resiflow L-67	15 600	2 380	6.55	11:30	6	8	7
<b>Resiflow LH-240</b>	<b>13 700</b>	<b>2 040</b>	<b>6.71</b>	<b>9:58</b>	<b>10</b>	<b>9</b>	<b>9</b>
Resiflow L-37	15 400	2 450	6.28	11:30	5	9	8
Resiflow L-65	16 600	2 530	6.56	16:30 <sup>2</sup>	8	9	9
Resiflow L-16	15 500	2 410	6.43	10:33	8	9	9
Resiflow LF	16 400	2 330	7.04	10:29	3	8	5
Resiflow Q-92	15 900	2 380	6.68	10:26	8	9	8
Resiflow T-1	18 100	2 600	6.96	9:30	3	6	9

### Conclusions

- LH-240 appears to be the best Resiflow candidate for the Gel Coatings Market.
- LH-240 does not drastically affect the Thixotropic index, which is important for spraying application purposes.
- LH-240 exhibits superb clarity, as well as exceptional air release and leveling properties

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<sup>2</sup> Additives which greatly retard the cup gel time are not desirable, because they increase delay in production time from gel coat setup to next layer application