



# GEON<sup>®</sup> 85857

## Extrusion Cube Compound

### Color Weatherability

Geon 85857 is a proven weatherable rigid vinyl compound that has been successfully used in exterior applications for many years. The following table summarizes the actual outdoor weathering data for this compound.

	6 Months			12 Months			24 Months			36 Months			60 Months		
	AZ	OH	FL	AZ	OH	FL	AZ	OH	FL	AZ	OH	FL	AZ	OH	FL
<b>White 138</b>															
Δ L	-0.15	-0.79	0.51	0.62	0.42	0.26	-0.05	0.80	0.77	0.01	0.48	-0.11	-	-	-
Δ a	-0.27	-0.10	0	-0.19	0.14	0.20	0.06	0.11	0.08	0.11	0.23	0.16	-	-	-
Δ b	1.56	0.51	0.03	1.82	-0.16	-0.14	2.22	-0.08	-0.09	0.93	-0.58	-0.24	-	-	-
Δ E	<b>1.59</b>	<b>0.94</b>	<b>0.51</b>	<b>1.93</b>	<b>0.47</b>	<b>0.36</b>	<b>2.22</b>	<b>0.81</b>	<b>0.78</b>	<b>0.94</b>	<b>0.79</b>	<b>0.31</b>	-	-	-
<b>White 141</b>															
Δ L	1.42	-0.21	0.58	2.37	-0.03	0.82	2.60	0.61	0.73	2.42	-1.77	1.08	2.67	0.26	0.94
Δ a	-1.42	-1.26	-1.54	-1.13	-0.87	-0.44	-1.35	-1.16	-1.61	-1.04	-1.34	-1.44	-0.91	-1.35	-1.35
Δ b	4.86	3.50	4.06	3.94	2.86	3.25	5.77	4.08	3.30	5.64	5.02	5.10	6.45	4.96	4.85
Δ E	<b>5.26</b>	<b>3.72</b>	<b>4.38</b>	<b>4.74</b>	<b>2.99</b>	<b>3.38</b>	<b>6.48</b>	<b>4.28</b>	<b>3.74</b>	<b>6.23</b>	<b>5.49</b>	<b>5.41</b>	<b>7.04</b>	<b>5.15</b>	<b>5.02</b>
<b>White 156</b>															
Δ L	-0.67	-0.67	-0.24	-1.58	-1.00	-0.41	-2.46	-0.47	-0.86	-	-	-	-	-	-
Δ a	-0.58	-0.11	-0.14	-0.33	-0.40	-0.11	0.36	0.05	0.04	-	-	-	-	-	-
Δ b	2.64	0.41	0.54	4.33	2.12	0.66	3.57	0.07	0.21	-	-	-	-	-	-
Δ E	<b>2.78</b>	<b>0.79</b>	<b>0.61</b>	<b>4.62</b>	<b>2.38</b>	<b>0.78</b>	<b>4.35</b>	<b>0.48</b>	<b>0.89</b>	-	-	-	-	-	-
<b>Gray 238</b>															
Δ L	-	-	-	0.08	2.09	2.07	-0.04	4.29	3.35	-	-	-	-	-	-
Δ a	-	-	-	-0.98	-0.57	-0.65	-0.37	-0.11	-0.16	-	-	-	-	-	-
Δ b	-	-	-	2.26	1.23	1.34	2.42	0.67	0.65	-	-	-	-	-	-
Δ E	-	-	-	<b>2.46</b>	<b>2.50</b>	<b>2.54</b>	<b>2.45</b>	<b>4.35</b>	<b>3.42</b>	-	-	-	-	-	-
<b>Black 288</b>															
Δ L	0.28	0.05	-0.90	0.05	-0.21	-1.80	0.84	-1.02	-0.97	-	-	-	-	-	-
Δ a	-0.04	0.01	-0.04	-0.04	-0.06	-0.01	-0.08	-0.06	-0.06	-	-	-	-	-	-
Δ b	-0.21	-0.29	-0.05	-0.06	-0.17	-0.05	0.09	-0.17	-0.15	-	-	-	-	-	-
Δ E	<b>0.35</b>	<b>0.30</b>	<b>0.90</b>	<b>0.09</b>	<b>0.27</b>	<b>1.80</b>	<b>0.85</b>	<b>0.27</b>	<b>0.98</b>	-	-	-	-	-	-

#### Color Change in Hunter L,a,b units

- Δ L - change in lightness/darkness direction
- Δ a - change in red/green direction
- Δ b - change in yellow/blue direction
- Δ E - total color change

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## Extrusion Cube Compound Color Weatherability

Geon 85857 is a proven weatherable rigid vinyl compound that has been successfully used in exterior applications for many years. The following table summarizes the actual outdoor weathering data for this compound.

	6 Months			12 Months			24 Months			36 Months			60 Months		
	AZ	OH	FL	AZ	OH	FL	AZ	OH	FL	AZ	OH	FL	AZ	OH	FL
<b>Beige 348</b>															
Δ L	0.95	-0.76	0.88	1.24	1.26	1.39	3.21	2.99	3.51	-	-	-	-	-	-
Δ a	-0.18	-0.08	-0.08	-0.26	-0.13	-0.18	-0.36	-0.29	-0.24	-	-	-	-	-	-
Δ b	0.05	-0.76	-0.68	-0.32	-1.02	-0.85	-1.34	-2.29	-2.26	-	-	-	-	-	-
Δ E	<b>0.97</b>	<b>1.07</b>	<b>1.12</b>	<b>1.31</b>	<b>1.63</b>	<b>1.64</b>	<b>3.49</b>	<b>3.77</b>	<b>4.18</b>	-	-	-	-	-	-
<b>Beige 349</b>															
Δ L	-0.23	-0.38	0.07	-0.03	-0.23	0.19	0.49	1.95	0.14	-0.12	2.33	0.15	-0.23	1.85	-0.36
Δ a	-0.13	0.03	0	-0.09	0.02	-0.05	-0.04	-0.04	-0.04	-0.21	0	-0.10	-0.14	0.01	-0.07
Δ b	0.84	0.01	-0.88	0.29	-0.47	-0.17	-0.31	-1.75	-0.03	1.02	-2.12	0.34	0.99	-1.43	0.66
Δ E	<b>0.88</b>	<b>0.38</b>	<b>0.88</b>	<b>0.30</b>	<b>0.53</b>	<b>0.26</b>	<b>0.58</b>	<b>2.62</b>	<b>0.15</b>	<b>1.05</b>	<b>3.15</b>	<b>0.38</b>	<b>1.03</b>	<b>2.34</b>	<b>0.76</b>
<b>Beige 359</b>															
Δ L	1.57	0.55	1.62	4.61	3.48	3.03	3.03	7.29	4.22	2.48	7.63	3.22	-	-	-
Δ a	-0.28	-0.14	-0.26	-0.70	-0.64	-0.59	-0.44	-1.21	-0.59	-0.40	-1.32	-0.50	-	-	-
Δ b	-0.65	-0.52	-0.78	-1.11	-1.52	-1.23	-0.52	-2.68	-1.30	-0.31	-2.49	-0.92	-	-	-
Δ E	<b>1.73</b>	<b>0.77</b>	<b>1.81</b>	<b>4.79</b>	<b>3.86</b>	<b>3.32</b>	<b>3.10</b>	<b>7.86</b>	<b>4.46</b>	<b>2.53</b>	<b>8.13</b>	<b>3.38</b>	-	-	-
<b>Gray 238</b>															
Δ L	-	-	-	0.08	2.09	2.07	-0.04	4.29	3.35	-	-	-	-	-	-
Δ a	-	-	-	-0.98	0.57	-0.65	-0.37	-0.11	-0.16	-	-	-	-	-	-
Δ b	-	-	-	2.26	1.23	1.34	2.42	0.67	0.65	-	-	-	-	-	-
Δ E	-	-	-	<b>2.46</b>	<b>2.50</b>	<b>2.54</b>	<b>2.45</b>	<b>4.35</b>	<b>3.42</b>	-	-	-	-	-	-
<b>Black 288</b>															
Δ L	0.28	0.05	-0.90	0.05	-0.21	-1.80	0.84	-1.02	-0.97	-	-	-	-	-	-
Δ a	-0.04	0.01	-0.04	-0.04	-0.06	-0.01	-0.08	-0.06	-0.06	-	-	-	-	-	-
Δ b	-0.21	-0.29	-0.05	-0.06	-0.17	-0.05	0.09	-0.17	-0.15	-	-	-	-	-	-
Δ E	<b>0.35</b>	<b>0.30</b>	<b>0.90</b>	<b>0.09</b>	<b>0.27</b>	<b>1.80</b>	<b>0.85</b>	<b>0.27</b>	<b>0.98</b>	-	-	-	-	-	-

### Color Change in Hunter L,a,b units

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Extrusion Cube Compound  
Impact Performance

## ASTM D - 4226 Drop Impact Test (in.lbs./mil.) C. 125 dart

	ORIGINAL	6 Months			12 Months			24 Months			36 Months			60 Months		
		AZ	OH	FL	AZ	OH	FL	AZ	OH	FL	AZ	OH	FL	AZ	OH	FL
<b>360 °F - 370°F Melt</b>																
A	1.2	1.0	1.0	1.0	1.0	1.0	1.0	0.8	1.0	0.9	0.6	0.7	0.5	0.5	0.7	0.6
B	1.2	1.0	1.0	1.0	1.0	1.0	1.0	0.8	1.0	0.9	1.0	0.7	0.5	0.5	0.7	0.6
<b>390 °F Melt</b>																
A	1.2	1.0	1.2	1.2	1.0	1.0	1.1	1.2	1.1	1.1	0.7	0.9	0.8	0.5	0.9	0.6
B	4.2+	4.0+	4.2+	4.2+	4.0+	4.0+	4.0+	2.9	3.7+	4.2	0.7	1.9	1.4	0.5	0.9	0.6

**Note:** Impact and impact retention is greatly affected by the melt temperature, internal stresses and product surface.

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