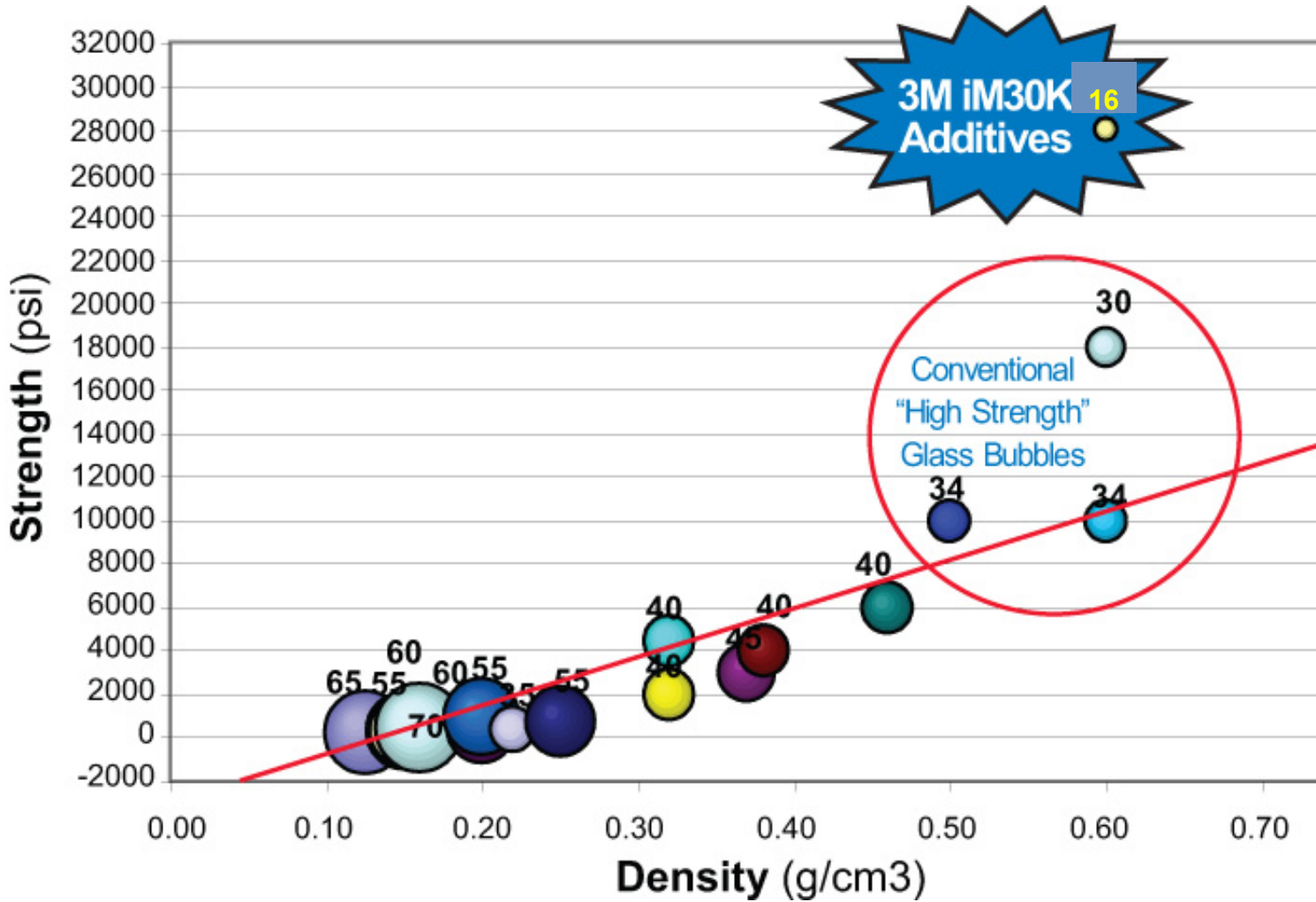


Glass Bubble Strength-Density-Size Map



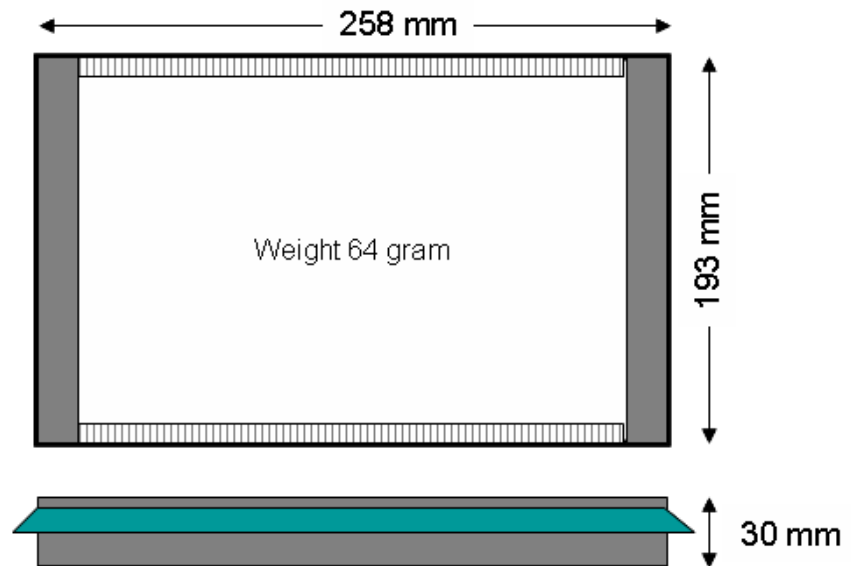
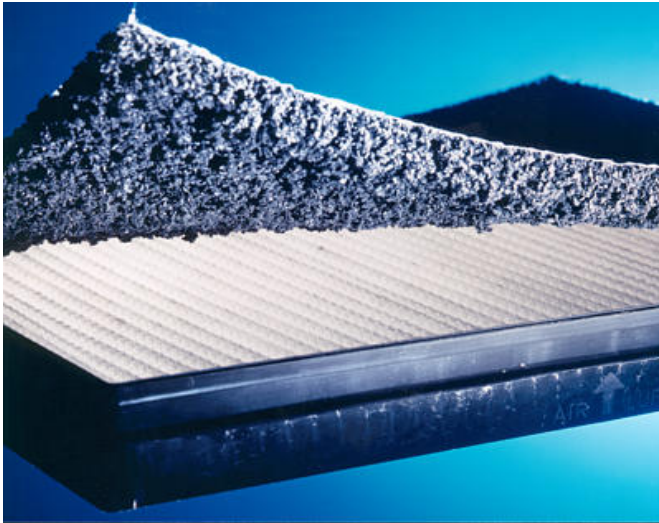
3M Performance Additives iM30K

LESS WEIGHT **MORE MUSCLE**

Weight Reduction of Plastics | 3M Performance Additives iM30K

Resin	Wt. % of iM30K	Vol. % of iM30K	Weight Reduction (%)
PC/ABS	15	26	13
PC + GF (20%)	15	29	17
PA 66	15	25	12
PA 66 + GF(30%)	15	28	16
Rigid PVC	15	28	16
30% Talc Filled PP	15	29	17
POM	15	29	17
PVDF	15	36	25

Injection Molding Cycle Time Reduction with iM30K



- Comparison of injection molding time for a Cabin Air Filter frame
- Traditional formulation: PP + 20% talc + carbon black (PPTV20A15)
- iM30K formulation: PP + 20% iM30K + carbon black (PPGB20)

Injection Molding Cycle Time Reduction with iM30K

Criteria	Target	PPTV20	PPGB20	Difference	Units
Density	1.04	1.043	0.846	- 18.8 %	(g/cm ³)
Length	258	257.41	258.07	- 0.59	(mm)
Width	193	192.38	192.99	- 0.61	(mm)
Height	30	30.07	30.02	- 0.05	(mm)
Part Weight	64	64.08	53.32	- 16.8 %	(g)

Injection Molding Cycle Time Reduction with iM30K

Molding Process for 3M CAF frames E-39

