Your coatings aren't just lighter. They're better.



3M Science. Applied to Life.[™]

Benefits

- Can be used in multiple sealing applications
- Helps reduce plastisol weight up to 40% – higher if applied using precision automated equipment
- Allows increased volume loading while maintaining viscosity, helping reduce resin cost
- Low aspect ratio enables faster wettability and dispersion
- Produces surfaces that are easily skived (trimmed to desired thickness)
- Can reduce sag on vertical applications
- High strength and pressure stable to achieve consistent, low density in multi-seal applications
- Helps reduce equipment wear compared to irregular fillers
- Certain grades of 3M[™] Glass Bubbles can help enable a Class A paintable surface

Compounders and automotive OEM designers can be more confident than ever that their seam sealant and underbody coatings help reduce vehicle weight – and still meet a range of requirements, now and for the future.

Lighter weight coatings – and much more

Long proven as a reliable solution for automotive lightweighting, 3M[™] Glass Bubbles are hollow glass microspheres that replace heavier fillers such as calcium carbonate. 3M Glass Bubbles contributes to lower overall vehicle weight, helping OEM designers meet increasinglystringent industry and government standards and helping OEM designers improve battery range and life in electric and hybrid vehicles.

Developed specifically for plastisol production today and tomorrow, 3M Glass Bubbles can reduce the weight of plastisols used in seam sealants and underbody coatings by up to 40% – even higher if the coatings are applied using precision automated equipment. Best of all, 3M Glass Bubbles can enable durable, lightweight coatings with a Class A paintable finish.

Reducing the cost of regulatory compliance

To achieve mandated reductions in their use of PVC, automakers must increasingly choose sealants and coatings with more expensive resins such as acrylics. Adding 3M Glass Bubbles to the resin mix can help automakers minimize this added cost to suppliers and OEMs.

Customer results may vary depending on formulation and application technique. For questions regarding bubble usage for seam sealing and underbody coating applications, contact 3M technical support at 1-800-367-8905.

Lightweight plastisol accelerated equipment wear study $3M^{\rm w}$ Glass Bubbles vs. Standard Density



Typical Reduction with 3M[™] Glass Bubbles

Component	Heavyweight (Control)	Lightweight with 3M [™] Glass Bubbles
PVC Resin	30 vol%	25 vol%
Plasticizer	41 vol%	35 vol%
Diluent	7 vol%	6 vol%
Filler	22 vol%	4 vol%
3M [™] Glass Bubbles	-	30-50 vol%
Density	11.5–13 lbs/gal	6.5–8 lbs/gal
Density Reduction (%)	-	35-50%

Based on the results from the accelerated wear lab study:

Current 3M Glass Bubble technology enables ultralight weight plastisol formulations (<1.0 g/cc) that should demonstrate similar wear on the nozzle as the standard density formulation.

Results at higher loadings and pressures indicate that less attention is needed on pump systems and pressures to minimize breakage.

Application Examples

- Non-paintable interior seam seal
- Underbody sealer
- Hem seal / cosmetic seal / paintable seal
- Anti-chip
- Roof ditch

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