NASWG
Anti-Shrink & Warpage Glass Material
Grade: ASP-YY, SAP-FF

 EVERSUN POLYCARBON SCI&TECH CORP.
Are you in trouble with the follows?

◆ warpage
◆ shrinkage
◆ Surface smoothness
◆ Transverse mechanics

SAP-YY or SAP-FF can settle them!
What is NASWG?

NASWG is a modified resin additives. It is a two-dimensional nano glass matter, coated with special organic matter surface and a flat-structured space, which improve its dispersion in the resin. It can improve the transverse mechanics of the resin, anti-warpage, reduce the shrinkage and improve the surface properties.
High diameter to thickness ratio, improve material sealing property, high resilience and tearing resistance. Micro single plane structure, improve material anti-shrinkage and warpage. Two dimensional nano-structure, improve dispersibility and mobility. Surface treated by reaction group, improves compatibility, dispersibility and impact resistance.
**NASWG** SAP-YY and SAP-FF series

**Application:**

Anti-warpage, anti-shrinkage,
High flow requirement, Special high temperature plastic filling and anti-tearing condition
<table>
<thead>
<tr>
<th>Product Code</th>
<th>Whiteness</th>
<th>Applicable Resin</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td>PA HTPA PC PP PE PBT LCP PPS</td>
</tr>
<tr>
<td>YY SAP-YY01</td>
<td>76</td>
<td>O ⊗ O O ⊗ O ⊗ O</td>
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<tr>
<td>SAP-YY03</td>
<td>76</td>
<td>⊗</td>
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<tr>
<td>FF SAP-FF902</td>
<td>92</td>
<td>O O O O ⊗ ⊗</td>
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<tr>
<td>SAP-FF903</td>
<td>92</td>
<td>⊗</td>
</tr>
<tr>
<td>SAP-FF904</td>
<td>92</td>
<td>⊗ O ⊗</td>
</tr>
</tbody>
</table>

◎: highly applicable  O: applicable
NASWG test result comparison

Anti-warpage

[Images of a warped and a flat object]

Resin+GF  Resin+GF+SAP-YY / SAP-FF

SAP-YY/FF improved product dimensional stability and good surface smoothness
Suitable for making electronic appliance case
NASWG test result comparison

Surface smoothness and glossiness

resin+GF+YY/FF  resin+GF

SAP-YY/FF improve resin mobility in processing and improve the surface smoothness and glossiness
**Automotive industry**

- **Intake manifold**
  - PA66+GF25+filler
  - Stable in size, high temperature resistant

- **Door handle**
  - PA6+filler/GF, good smoothness and glossiness, high impact resistant

- **Engine cover**
  - PA66/PA6T+filler

- **Rear view mirror base**
  - PA6+filler
  - Anti-weathering, good glossiness, impact resistant

- **Intake grille**
  - PA6+20GF/filler+UV, heat resistant, support coloring

- **Bumper**
  - PP+EPDM+GF+filler
  - (for PC/PBT)
NASWG  SAP-YY and SAP-FF application (II)

Others industry

PC+GF10/filler  PC+GF50/filler  PP/PE plastic bag  PBAT/PLA degradable plastic  PU leather
Company information

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