Sunbesta® and Sunbesta® ZV Multi-layer Fuel Hose Constructions

Fueling Today's Requirements and Tomorrow's Challenges

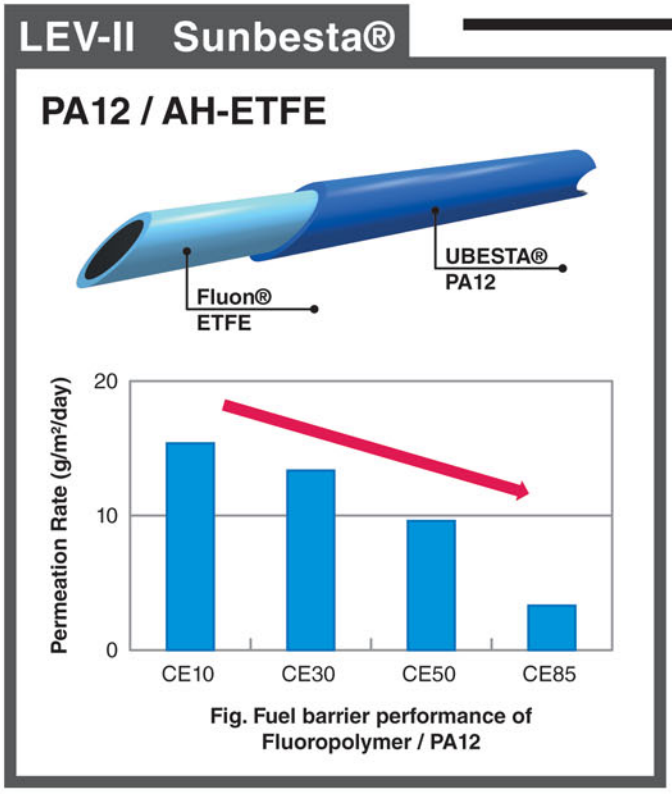
As the evaporative emission standards for cars become more severe year-by-year, lower fuel permeation and better adhesion properties are required. Overall performance is improved by using AGC's two-layer tube system Sunbesta®, which the automotive market has utilized globally for years.

AGC is pleased to announce the release of Sunbesta ZV… the next generation in fuel hose systems which offers superior performance, meeting tomorrow's standards, today!

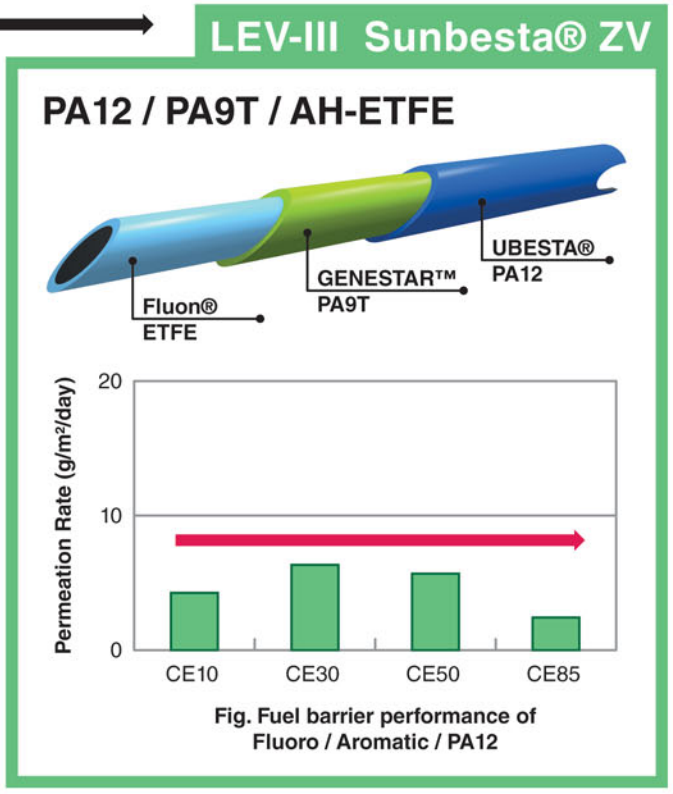
Sunbesta ZV tubing was jointly developed by AGC (Fluon® ETFE), Kuraray (GENESTAR™ PA9T) and UBE (UBESTA® Nylon 12).

Kind of Fuel

Fuel – C : isooctane + toluene = 50 : 50 (vol%) CE 10 , 30 , 50 , 85 : Fuel – C + ethanol (vol%)
Temp = 60°C



Current Generation



Next Generation

Technology

- Excellent resistance to all fuels (including wide alcohol content)
- Superior anti-static properties *
- Applicable for Urea tube for SCR/EGR systems
- Will decrease NOX content of exhaust
- Excellent adhesion and flexibility
- Lower fuel permeation
- Long-lasting performance

Performance Data to Specification SAE J2260

SAE J2260 Section	Item	Detail	Units	Sunbesta	Sunbesta ZV
Tubing Construction					
		Outer Layer		Ubesta 3030JI6L	Ubesta 3030JI26L
		Middle Layer		-	Genestar N1001D U83/02
		Inner Layer		***Fluon AH-3000L ETFE**	***Fluon AH-3000L ETFE**
		OD	mm	8 ± 0.1	8 ± 0.1
		Wall Thickness		1 ± 0.1	1 ± 0.1
Burst Properties					
7.1	Room Temp Burst Test	at 23°C	Mpa	7.1	7.1
7.2	High Temp Burst Test	at 115°C for 2 hrs		2.5	2.6
7.4	After Kinking	at 23°C		6.6	7
7.6	After Fuel Exposure	1000 hrs CE10 at 60°C		6.2	6.5
		1000 hrs CM15 at 60°C		6.6	6.3
7.14	Auto-oxidized Fuel Test	1000 hrs at 40°C		6.3	6.2
	After Heat Aging and Cold Impact	1000 hrs at 90°C then 48 hrs at 115°C then cold impact		9.1	11.9
Cold Impact Properties					
7.5	Initial Value	4 hrs at -40°C		no crack	no crack
7.6	After Fuel Exposure	1000 hrs CE10 at 60°C		no crack	no crack
7.7	After Methanol Exposure	1000 hrs CM15 at 60°C		no crack	no crack
7.8	Auto-oxidized Fuel Test	1000 hrs at 40°C		no crack	no crack
7.12	Zinc Chloride Resistance	200 hrs immersion at 23°C then 24 hrs dry at 23°C		no crack	no crack
Layer Adhesion					
7.6	After Fuel Exposure	1000 hrs CE10 at 60°C		no delamination	no delamination
7.7	After Methanol Exposure	1000 hrs CM15 at 60°C		no delamination	no delamination
7.8	Auto-oxidized Fuel Test	1000 hrs at 40°C		no delamination	no delamination
Electrical Resistance					
7.9	Initial Value	at 23°C	ohm/sq	3.7 x 10^5	6.0 x 10^3
7.4	After Kinking	at 23°C		1.3 x 10^6	9.0 x 10^3
7.5	After Cold Impact	4 hrs at -40°C		3.2 x 10^5	6.0 x 10^3
7.6	After Fuel Exposure	1000hrs CE10 at 60°C		2.8 x 10^5	8.0 x 10^3

* Conductive Materials Used

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Visit our website for compliance information and industry certifications.

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- Determination of the suitability of the finished product shall be the responsibility of your company.
- Specific application may be Subject to standards, regulations and commercial property right, fully researched by your company.
- Ask for "Product Safety Data Sheet" before using Asahi Glass, KURARAY and UBE's products.