



PERMEABILITY RESULTS SMARTFLEX PIPING WITH "NEW" FLUIDS

Imola: April 9, 2008

Here below the final results of the test carried out in NUPI's Lab to verify the compliance of Smartflex piping system with *Biodiesel* and *E85* fluids.

It has been used the new UL 971 test method (otherwise known as final steady state). These results concern pipe&fitting samples and pipe samples.

The UL permeability requirement for primary carrier pipe is:

Permeability $\leq 1 \text{ g/m}^2 \text{ day}$, at final steady state, at 23°C

Internal Permeability Results: PIPES PLUS FITTINGS			
T=23°C – Final Steady state –			
Requirement → Max. 1.0 g/(m ² day)			
	Permeability g/(m ² day)		
Test Fuels	T SMA	T SMA XP	T SMA H
M15	-	-	-
E85	0,01	0,01	0,02
Biodiesel	0,01	0,00	0,00

Internal Permeability Results: PIPES			
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M15	-	-	-
E85	0,01	0,00	0,00
Biodiesel	0,00	0,02	0,00

These results show the compliance of Smartflex IP pipe (T SMA), Smartflex UL pipe (T SMA XP) and Smartflex EN pipe (T SMA H) with the biofuels E85 and Biodiesel.

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Cap. Soc. EURO 4.875.000 i.v. - Cod. Fisc. 00933220378 - Part. IVA 00527791206 - Mecc Import/Export N. BO 001355 - Trib. di BO N. 23379 - CCIAA BO N. 233440