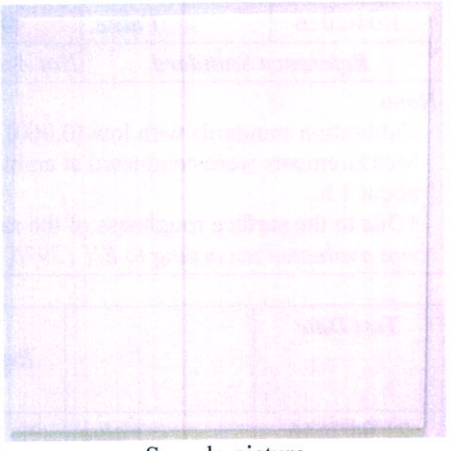
Sample Id.	TEST REPORT N° ETR-16-0061	Page
0117_01032016		1/2

GENERAL INFORMATION

Subject:	Test report on testing activities to determine solar reflectance, infrared emittance and solar reflectance index (SRI).		
Client	AMA Composites Srl Via Repubblica 7 42011 Campogalliano (MO) P.IVA: 02905040362	***Client reference person***	Marco Corradini Phone +39.059.851754 Email info@amacomposites.it
Commitment document	-	***Report release date***	22/04/2016

SAMPLE DATA

Receipt date	01/03/2016					
Sample id. sub.	-					
ECRC id	-					
Manufacturer	-					
Product name	Thermogel Metal					
Sampling	Supplied by the Client					
Short physical description*	Product type: aerogel water based enamel, for metal surfaces, with heat reflecting properties Substrate: Metal sheet					
Sample thickness	1.3 mm		***Total sample size***		300 x 210 mm	
Surface coated	YES		***Coating thickness***		N.A.	
Surface state	***variegated***	NO	***aged***	NO	***cleaned***	NO
Information on history and ageing*	N.A.					
Optical properties	Diffusive reflecting	NO				
	Specular reflecting	NO				
	Intermediate reflecting	YES				
	Clear transmitting	NO				
	Translucent transmitting	NO				
	Opaque	YES				



Sample picture

Notes
Information on surface coating, aging and cleaning provided by the Client where known.

Sample Id.	TEST REPORT N° ETR-16-0061	Page
0117_01032016		2/2

TEST RESULTS

Test Date		*Solar Reflectance (SR)*	*Standard Deviation*	*Measured Values*		
7/03/2016	*Value*	**0.865**	0.001	0.865	0.866	0.865
Reference Standard		*ASTM C1549-09*				
Reference Solar Spectrum		ASTM Standard G173 Hemispherical Tilt				

Notes

This test was performed according to *ASTM C1549-09: Standard Test Method for Determination of Solar Reflectance Near Ambient Temperature Using a Portable Reflectometer* with air mass 1.5. A solar spectrum reflectometer Devices and Services SSR-ER was used. Calibration standards with low (0.000) and high (0.864) solar reflectance were provided by the instrument manufacturer.

Measurements were conducted at ambient temperature of 22 ± 4°C and relative humidity of 41% ± 10%.

Test Date		*Infrared Emittance (IE)*	*Standard Deviation*	*Measured Values*				
21/04/2016	*Value*	**0.908***	0.004	0.912	0.913	0.906	0.904	0.907
Reference Standard		*Not Accredited Slide Method- Not Accredited EN 15976*						

Notes

Calibration standards with low (0.060) and high (0.870) emittance were provided by the instrument manufacturer.

Measurements were conducted at ambient temperature of 22 ± 4°C and relative humidity of 41% ± 10% in a time period of about 1 h.

*Due to the surface roughness of the sample, it was not possible to measure *IE* according to *ASTM C1371: Thermal Emittance was evaluated according to EN 15976, non-accredited method.*

Test Date		*Solar Reflectance (SR)*	*Infrared Emittance (IE)*	*Solar Reflectance Index (SRI)*[%]		
				Low wind	*Medium wind*	*High Wind*
21/04/2016	*Value*	0.865	0.908*	**110.4**	**109.4**	**108.9**
				Surface temperature (ST) [°C]		
				43.6	**41.0**	**39.0**
Reference Standard		*ASTM E1980-11**				

Notes

This calculation was performed according to *ASTM E1980-11: Standard Practice for Calculating Solar Reflectance Index of Horizontal and Low-Sloped Opaque Surfaces*. This utilizes the following values for the convection coefficient: h_c = 5 W/m^2·K for low-wind (0 to 2 m/s), h_c = 12 W/m^{2}K for medium-wind (2 to 6 m/s), and h_c = 30 W/m^{2}K for high-wind (6 to 10 m/s).

*Since it was not possible to measure *IE according to ASTM C1371, Thermal Emittance was evaluated according to EN 15976, non-accredited method.*

The Responsible of EELab Laboratory
Prof. Alberto Muscio