



Outgassing Test at +125°C
On Radar Absorbing Material
Pre-baked 24h@150degC under secondary vacuum
mVCM ECSS Q70-02

Materials Report Number: 5835
Materials Space Evaluation & Radiation Effects Section
Materials and Components Evaluation Division

<i>Date:</i>	18/11/2009	<i>Initiated by:</i>	J.Sander (Astrium)
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TEST CONDITIONS

Outgassing Test at	125°C	24 hours	Pressure < 10 ⁻⁵ mbar
Condensation at	25°C		

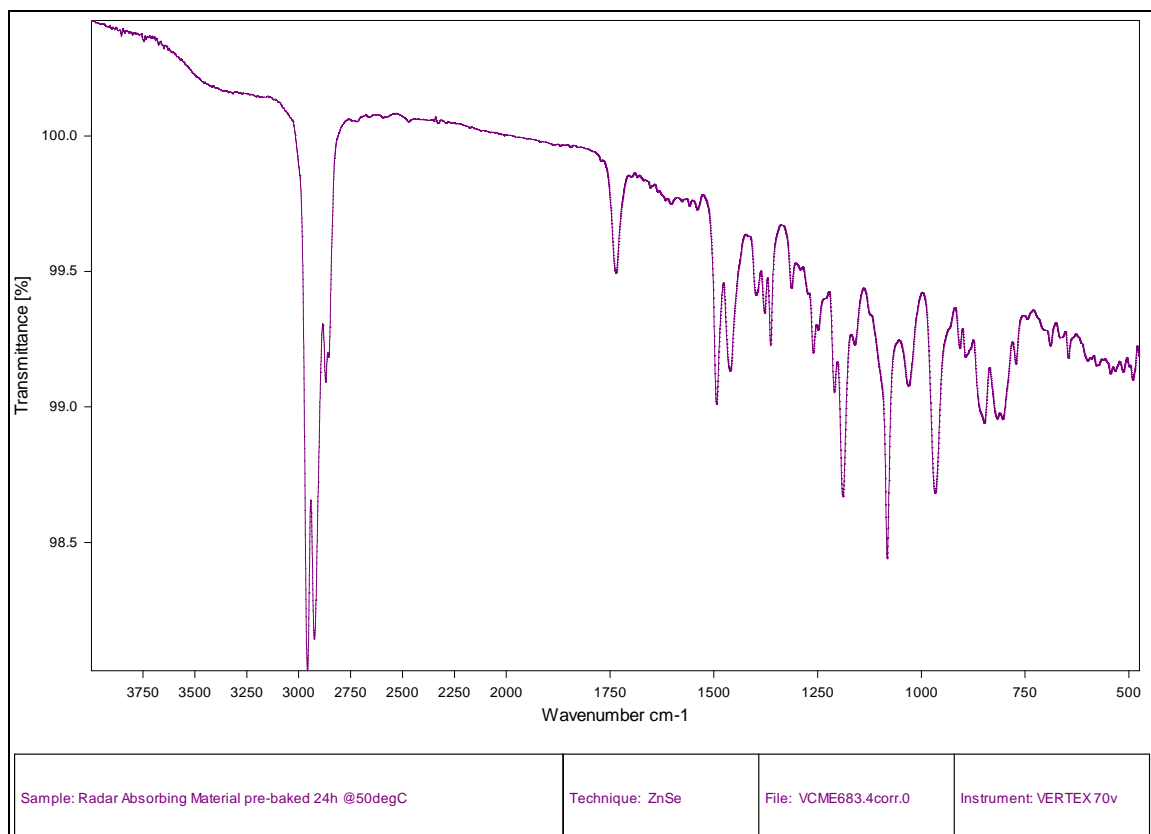
RESULTS

		Average [%]	Upper Limit [%]
TOTAL MASS LOSS (+125degC) = Total Mass Outgassed / Initial Mass	TML _{125°C} >	0.11	
RECOVERED MASS LOSS 24hrs (+125degC) = Mass Outgassed, water excluded / Initial Mass	RML _{125°C} =	0.07	1%
COLLECTED VOLATILE CONDENSABLE MATERIALS (+25degC) = Mass of material condensed / Initial Mass	CVCM _{125/25°C} =	0.02	0.1%

Note: Green → value compliant ; Red → value over the limit

The results are the average of the measurements on 3 samples in cups

IR signature of CVCN



MATERIALS IDENTIFICATION CARD

DESCRIPTION AND HISTORY OF SAMPLE a) TRADE NAME +NUMBER b) MANUFACTURER c) TYPE OF PRODUCT d) CHEMICAL NATURE e) PROCESSING DETAILS: e.g. - joining method - heat treatment - cure + postcure - cleaning method - relevant spec. no.	a/ RAM (Radar Absorbing Material) Tile	b/ Thomas Keating Ltd, UK	
	c/ Plastic microwave absorber	d/ Plastic	
	e/ Made from Polypropylene and Cabalaec 4865 Manufactured by Injection moulding Note: previous outgassing test was performed by: Matra Marconi, UK TEST DATE : April 1999 TEST NUMBER : T27298 Results: TML = 0.41 % RML = 0.21 % CVCM = 0.087 % (based on small RAM Tiles)		
Remark: Bakeout required for 24 Hours at 150°C before outgassing test !			
BATCH NUMBER SAMPLE QUANTITY PREPARATION DATE PREPARED BY	<ul style="list-style-type: none"> • - / - • 1 (11 x 11 x 1,3 cm) • 21. April 2009 • Astrium / FN 	- material density - substrate density - substrate material	950m Kg M ³ +/-10%
CONTRACTOR / EXPERIMENTER SAMPLE CODE (refer to the DML item number of the project)	Astrium / FN - / -	PROJECT / COST CODE ESTEC P.A. MANAGER OR ORGINATOR NAME & SIGNATURE	
APPLICATION: Microwave absorber material used in the "EarthCARE"-Project			
TEST SPEC. NO.	ECSS-Q-70-02		QUALITY CONTROL SAMPLE OR EVALUATION SAMPLE
FOR MATERIALS & PROCESSES DIVISION USE DATE RECEIVED : TEST DATE : REPORT NUMBER : RESPONSIBLE SECTION : TEST NUMBER : RESULTS : TML = RML = CVCM =			
			<input type="button" value="ACCEPT"/>
			<input type="button" value="REJECT"/>