UHV Test Report - Outgassing

ACKTAR Black Coatings

Courtesy of CECOM, Italy

Assembling place	Clean room	**Assembling room temp. (°C)**	22
Leak test procedure	IO-10/A	**Used leak detector**	ADIXEN ASM 340
Bakeout procedure	IO-40	**Used vacuum pumping system**	VARIAN V551 NAVIGATOR
			VARIAN VACION PLUS 300 STARCELL
Specific outgassing rate measurement procedure	IO-41	**Used total pressure gauge**	OBERLIKON LEYBOLD IONIVAC – IE514
RGA analysis procedure	IO-42	**Used RGA Gauge**	INFICON TRANSPECTOR 2 – H200 M

Leak test results (details in the following pages):

Description	Required	Measured	Result (OK/NO)	Qty.	Notes
Value pre-bakeout [mbar×l/s]	1.00E-10	<1E-10	OK	2	NA
Value during bakeout [mbar×l/s]	NA	NA	NA	NA	NA
Value post-bakeout [mbar×l/s]	1.00E-10	<1E-10	OK	1	NA

Bakeout parameters (details in the following pages):

Description	Required	Applied	Result (OK/NO)	Qty.	Notes
Bakeout temp. [°C]	180	170	OK	2	NA
Heating ramp [°C/h]	30	26			
Bakeout temp. permanence [h]	15	15			
Cooling ramp [°C/h]	30	12			
Ultimate pressure [mbar]	1.00E-09	2.44E-10			

Specific outgassing rate measurement (details in the following pages):

Description	Required	Measured	Result (OK/NO)	Qty.	Notes
Value [mbar×l/(s×cm^2)]	1.00E-12	1.32E-13	OK	2	NA

RGA – residual gas analysis (details in the following pages):

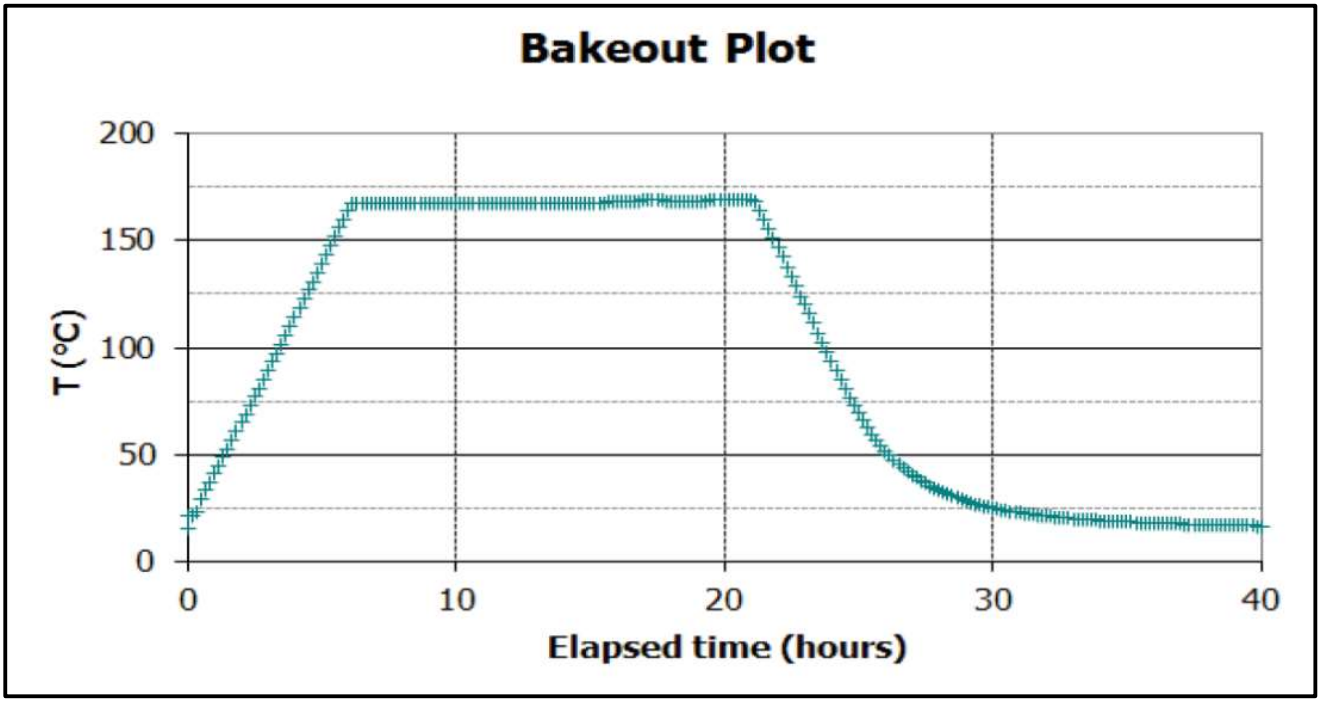
Description	Required	Measured	Result (OK/NO)	Qty.	Notes
General contaminants (%)	1.00	0.24	OK	2	NA

Leak test details:

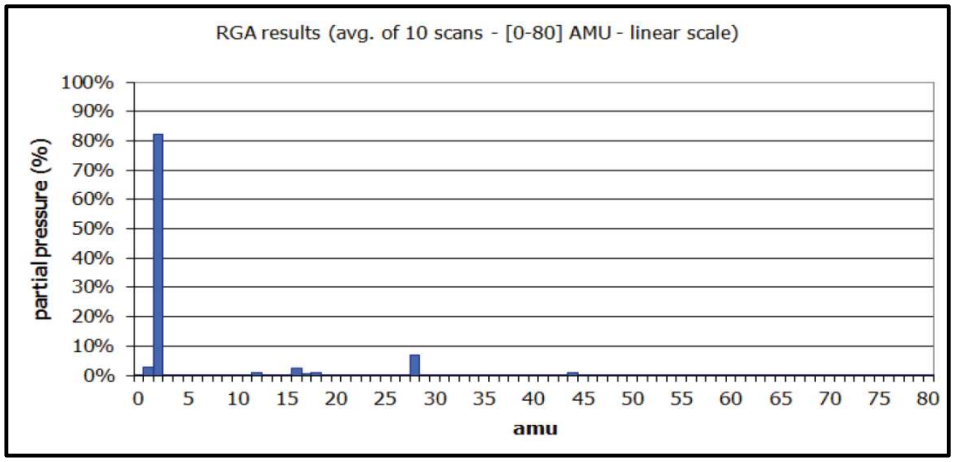
Description	Leak test		
	Pre-bakeout	During bakeout	Post-bakeout
Stand-by signal [mbar×l/s]	5.00E-12	NA	5.00E-12
Leak detector pressure during measurement [mbar]	2.10E-02	NA	2.10E-02
Signal without He [mbar×l/s]	8.20E-11	NA	7.40E-11
Max. signal during test [mbar×l/s]	7.20E-11	NA	7.00E-11

Specific outgassing rate measurement details:

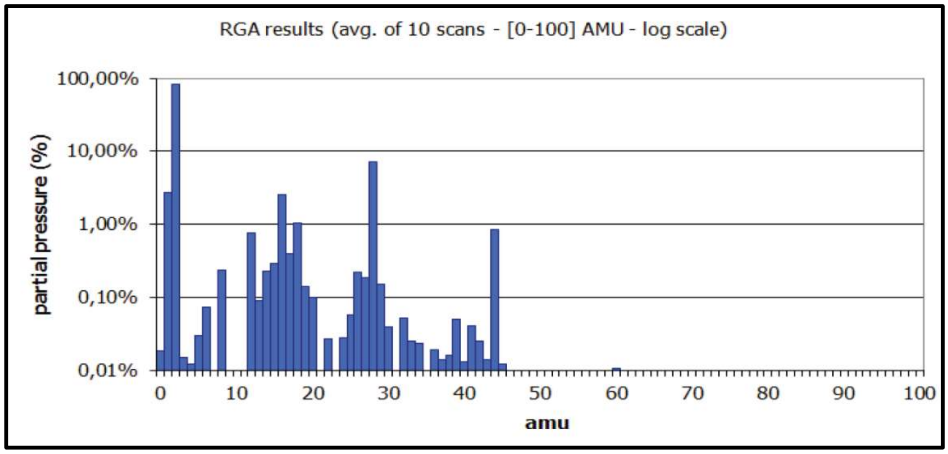
Pressure rise method	
Inner volume (l)	14.4
Inner surface (cm^2)	5955
Initial pressure (mbar)	2.44E-10
Final pressure (mbar)	3.84E-08
Pressure rise time (s)	700



RGA SPECTRUM (linear scale)



RGA SPECTRUM (log scale)



RGA ANALOG SPECTRUM (log scale)