

THERMAL VACUUM OUTGASSING

ACCORDING TO MIL-DTL-83513,
ASTM E595 & ECSS-Q-ST-70-02C

NICOMATIC MATERIALS COMPATIBILITY

Spacecraft and some associated equipment are exposed to vacuum environments. Outgassing properties of materials used in those environments have to be known to ensure suitability, for example, to prevent condensation on optical equipment.

Results described in this document have all been measured according to ECSS-Q-ST-70-02C test procedures and attest that our connectors meet or exceed requirements.

TEST CONDITIONS

DURATION

24 h

TEMPERATURE

125 °C

VACUUM

10^{-3} Pa

Requirement				CVCM (%)	TML (%)	Test Report
				< 0.1	< 1	
NICOMATIC Connector Family			Material			
DLMM	DMM	CMM	PPS	0.00	0.06	QTR1576
			ThreeBond 2273D	0.00	0.44	
			ULTEM	0.00	0.32	QTR18082
EMM / AMM			PEEK	0.01	0.18	QTR18034
			LCP	0.01	0.06	
Backpotting			Stycast 2651	0.01	0.43	

More details available on demand

DEFINITION

1 - Collected volatile condensable material (CVCM) = Quantity of outgassed matter from a test specimen that condenses on a collector maintained at a specific temperature for a specific time.

2 - Total mass loss (TML) = total mass loss of material outgassed from a specimen that is maintained at a specific constant temperature and operating pressure for a specified time.