

Table 1. ATMI Silane Release Data Summary

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Test Conditions														
Test System	HP 49L (VAC Simulation with High Pressure Cylinder)					VAC 02L	VAC 49L							
Series ID Number	H5020	H5014	H5020P	H5014P	H2530P	V550	V5014	V5020	V5010	V5010I	V5014I	V5020I	V5030I	V5040I
Trial Numbers	1 - 7	8 - 12	13 - 19	20 - 24	25 - 30 ^a	31	32 - 36	37 - 41	42 - 46	47 - 52	53 - 57	58 - 62	63 - 64	65
RFO Location	Outlet	Outlet	Outlet	outlet	Outlet	no RFO	outlet	Outlet	Outlet	in-line	in-line	in-line	in-line	in-line
Purge Technique	Pre/post test purge	pre/post test purge	post test purge only	post test purge only	post test purge only	no purge	pre/post test purge	pre/post test purge	pre/post test purge	pre/post test purge	pre/post test purge	pre/post test purge	pre/post test purge	pre/post test purge
Delivery Pressure (psig)	50	50	50	50	25	(550 torr)	54	54	54	54	54	54	54	54
RFO ID (inches)	0.020	0.014	0.020	0.014	0.030	0.125	0.014	0.020	0.010	0.010	0.014	0.020	0.030	0.040
Release Fitting	1/2" VCR	1/2" VCR	1/4" pigtail	1/4" pigtail	1/2" VCR	Valve outlet	"1/4" tube	"1/4" tube	"1/4" tube	"1/4" tube	"1/4" tube	"1/4" tube	"1/4" tube	"1/4" tube
Internal Diameter (inches)	0.400	0.400	0.180	0.180	0.400	0.400	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180
Length (inches)	0.800	0.800	44.000	44.000	0.800	0.800	1.750	1.750	1.750	1.750	1.750	1.750	1.750	1.750
Calculated Release Conditions^b														
Exhaust SiH ₄ Conc. (%v/v)	0.16	0.08	0.15	0.08	0.22	<0.00002	0.08	0.17	0.04	0.04	0.08	0.17	0.38	0.66
Exhaust SiH ₄ Conc. (%LEL)	11	5	11	5	15	<0.001	6	12	3	3	6	12	27	47
Cabinet Ventilation Data														
Exhaust Flow Rate (CFM)	200	204	204	205	205	200	200	202	200	206	206	203	206	206
Avg. Linear Velocity (fpm)	67	68	68	68	68	67	67	67	67	69	69	68	69	69
Air Exchanges per min.	18	18	18	18	18	18	18	18	18	18	18	18	18	18
Static Pressure (" WC)	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
Air Temperature (°C)	20	22	22	21	20	18	18	18	18	21	22	22	22	22
Air Relative Humidity (%)	10	8	9	19	20	18	18	26	26	12	15	15	21	21
Atmospheric Press. (mm Hg)	641	646	647	646	646	647	647	646	645	646	646	646	646	645
Release Results														
Ignition Frequency	0/7	0/5	5/7	5/5	1/5	0/1	2/5	0/5	2/5	6/6	5/5	4/5	1/2	0/1
Relative Ignition Freq. (%)	0	0	71	100	20	0	40	0	40	100	100	80	50	0

