

11.0 Appendix. Single-Lap-Joint Fabrication Check List

Sample ID's: 20140469 , 20140470 , 20140471 , 20140472 , 20140473Date: 12-9-2014 Temperature: 71.4°F Humidity 37%

Testing facility and operator: _____

Adhesive, type, and form: LOCTITE ER 9309.3 EALot ID, manufacturer's code, expiration date: PART A BATCH # JH3JAE8725 DOM 9/24/2014
PART B BATCH # JH3JAE8725 DOM 9/24/2014

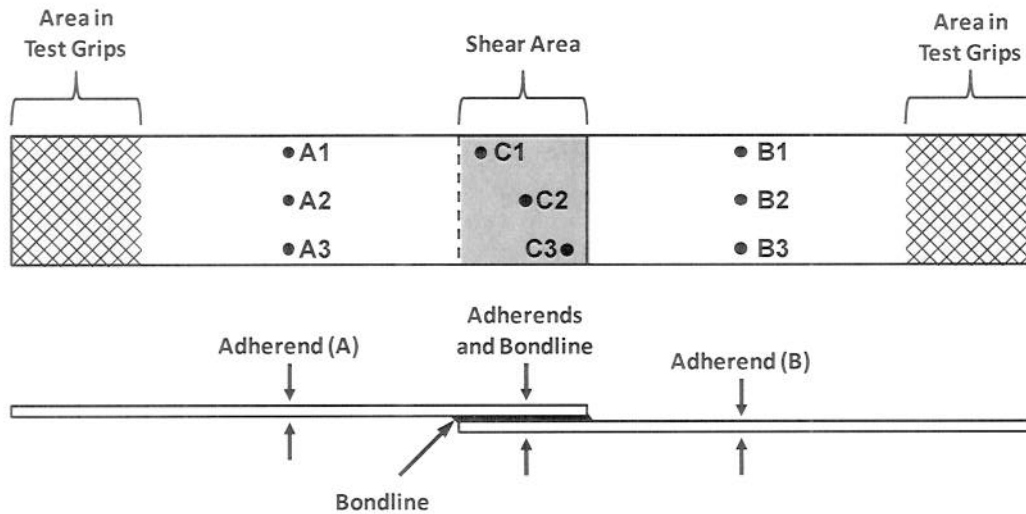
Method of cleaning and preparing bonding surface:

ACETONE WIPE , SCOTCH-BRITE , GRIT BLAST , NITROGEN BLOW OFF , GPS A/A
2 MIN. NITROGEN BLOW OFF , 212°F 1 HRS.GPS ALARICH #440167-100 ML LOT# STB07744V EX. 7/2016
SCOTCH BRITE # 048011-05530 GRABER A VEN // GRIT ALUMINUM OXIDE 60

Adhesive preparation, application, and bonding conditions:

MIX RATIO 100/22 A TO B BY WEIGHT
MIKED 4 MIN. ~~2 MIN.~~ 2 MIN. @ 2000 RPM 2 MIN. @ 2500 RPM
SPEEDMIKERTooling fixture and bonding pressure notes: ALUMINUM TOOL w/ 3 STEEL WEIGHTSAdhesive mixing to applied pressure time: 6 MINUTESCure cycle: COLD OVEN 4 HRS TO REACH 150°F 1 HR @ 150°FOven used (model and serial number): TAS/BLUEM SN 0909000029 MS: JCSA-326Conditioning procedure: SAMPLES STORED IN VACUUM CHAMBER @ RT 22 IN HG.Comments: SAMPLE FOR HOT/WET TESTING.ALUMINUM SUBSTRATE 2024 T3GPSGPS - ALARICH 440167 LOT# STB07744V EX 07/2016

13.0 Appendix. Bondline Thickness Measurements



Aluminum grade: 2024 Mfg. nominal thickness: .0625 (mm in)

Micrometer model, serial number, calibration date SPI 14-797-5
CAL. DATE 12/17/2012 CAL DUE 12/2/15

Measurement units (circle) – mm or in

Sample ID	Adherend (A1)	Adherend (A2)	Adherend (A3)	Average (A)
20140469	.0627	.0626	.0626	.06263
Comments	Adherend (B1)	Adherend (B2)	Adherend (B3)	Average (B)
	.0627	.0627	.0627	.0627
	Adherends and Bondline (C1)	Adherends and Bondline (C2)	Adherends and Bondline (C3)	Average (C)
	.1300	.1297	.1301	.12993
	H/302 EA9309-ARL-2015-RT-11-WET			C – (A + B)
GPS H/W		Average bondline thickness		.0046

Sample ID	Adherend (A1)	Adherend (A2)	Adherend (A3)	Average (A)
20140470	.0627	.0626	.0626	.06263
Comments	Adherend (B1)	Adherend (B2)	Adherend (B3)	Average (B)
	.0627	.0627	.0627	.0627
	Adherends and Bondline (C1)	Adherends and Bondline (C2)	Adherends and Bondline (C3)	Average (C)
	.1303	.1296	.1298	.1299
				C – (A + B)
	Average bondline thickness			.00457

Sample ID	Adherend (A1)	Adherend (A2)	Adherend (A3)	Average (A)
20140471	.0627	.0627	.0627	.0627
Comments	Adherend (B1)	Adherend (B2)	Adherend (B3)	Average (B)
	.0628	.0627	.0629	.0628
	Adherends and Bondline (C1)	Adherends and Bondline (C2)	Adherends and Bondline (C3)	Average (C)
	.1298	.1291	.1291	.12933
				C – (A + B)
	Average bondline thickness			.06383

Sample ID	Adherend (A1)	Adherend (A2)	Adherend (A3)	Average (A)
20140472	.0628	.0628	.0628	.0628
Comments	Adherend (B1)	Adherend (B2)	Adherend (B3)	Average (B)
	.0627	.0626	.0625	.0626
	Adherends and Bondline (C1)	Adherends and Bondline (C2)	Adherends and Bondline (C3)	Average (C)
	.1272	.1280	.1288	.1280
				C – (A + B)
	Average bondline thickness			.0026

.0627

Sample ID	Adherend (A1)	Adherend (A2)	Adherend (A3)	Average (A)
20140473	.0626	.0625	.0625	.06253
Comments	Adherend (B1)	Adherend (B2)	Adherend (B3)	Average (B)
	.0626	.0626	.0625	.06251
	Adherends and Bondline (C1)	Adherends and Bondline (C2)	Adherends and Bondline (C3)	Average (C)
	.1297	.1287	.1292	.1292
				C – (A + B)
	Average bondline thickness			.0041

.06253

12.0 Appendix. Single-Lap-Joint Mechanical Testing Check List

Sample ID's: 20140469, 20140470, 20140471, 20140472, 20140473Test date: 3/2/2015 Test temperature: 23.7°C Test humidity 45%Testing facility and operator: ADTest frame model and serial number: 5500A 1123 5054Test frame calibration date: 9/10/2014Load cell model and serial number: 2511 325Load cell calibration date: 9/10/2014Crosshead speed: 1.3 mm/min (0.05 in/min), list other 1.27 mm/min

Nature of failure and other comments:

Temp/Hum SN: 150034154