

FLEXcon BS 5609 COMPLIANCE SUMMARY REPORT

Product: FLEXcon DRUMcal™ 51932 to BS 5609 SECTION TWO FOR FLEXCON

CONCLUSIONS: Flexcon label base materials reference ‘Drumcal 51932’ meets the requirements of BS 5609 Section Two Part 4.1 ‘Marine Exposure’

TEST METHOD – Section Two, Part 4.1 – Marine Performance Test			
Marine Exposure	Adhesion	Specification	RESULTS
13 weeks exposure on south facing aluminum panel at Adhesive Technical Services’ half tide site, on the Essex coast. Tests carried out according to BS 5609 Appendix A1, to panels prepared according to Appendix B.	180° peel adhesion at 300mm/minute according to BS 5609 Appendix D. Average adhesion and percentages of readings above specification recorded.	80% of readings not less than 10 N/25mm	Readings not Less Than 10 N/25mm (36.3 oz/in) <i>PASS</i>
			100%
			Mean Adhesion
			Approximately 15 N/25mm

Product: **FLEXcon DRUMcal™ 21046TL LABEL BASE MATERIAL**
 2.0 mil print receptive white polyester with an aggressive high performance permanent acrylic adhesive on a 60 lb. two side polycoated layflat release liner. Thermal transfer and laser printable.

BS 5609 Section Two (February 11, 1998)

CONCLUSIONS: **FLEXcon DRUMcal™ 21046TL label base material meets the requirements of BS 5609 Section Two. Pressure-Sensitive, Adhesive Coated Label Base Material.**

TEST METHOD – Section Two, Part 4.1 – Marine Performance Test			
Marine Exposure	Adhesion	Specification	RESULTS
14 weeks exposure on south facing aluminum panel at Adhesive Technical Services' half tide site, on the Essex coast. Tests carried out according to BS 5609 Appendix C. Labels applied according to BS 5609 Appendix A1, to panels prepared according to Appendix B.	180° peel adhesion at 300 mm/minute (11.8 in/minute) according to BS 5609 Appendix D. Average adhesion and percentage of readings above specification recorded.	80% of readings not less than 10 N/25mm (36.3 oz/in)	Readings not Less Than 10 N/25mm (36.3 oz/in) <i>PASS</i>
			100%
			Mean Adhesion
			13.8 N/25mm (50.1 oz/in)

TEST METHOD – Section Two, Part 4.2.1 – Dimensional Stability			
Weathering	Measurement	Specification	RESULTS
Tests carried out on samples exposed for 14 weeks at marine half tide site for Part 4.1.	Samples measured in both directions before and after weathering. Samples conditioned for 48 hours at 23°C (73.4°F) and 50+/-% relative humidity prior to measuring. Maximum increase and decrease in dimensions and average change recorded.	Dimensions shall not alter by more than +1% or -3%	Maximum Increase in Dimension <i>PASS</i>
			0.1%
			Maximum Decrease in Dimension <i>PASS</i>
			0.0%
			Average Change in Dimensions
			+0.01%

Product: FLEXcon DRUMcal™ 21046TL LABEL BASE MATERIAL
 BS 5609 Section Two – continued

TEST METHOD – Section Two, Part 4.2.2 – Adhesion After 48 Hours			
Application	Measurement	Specification	RESULTS
Labels applied to aluminum test plates prepared according to Appendix B, using a 2 kg (4.4 lb) rubber coated roller according to Appendix A3.	180° peel adhesion at 300 mm/minute (11.8 in/minute) in accordance with Appendix D. Average adhesion and percentage of readings above specification recorded.	80% of readings not less than 12.5 N/25mm (45.4 oz/in)	Readings not Less Than 12 N/25mm (45.4 oz/in) PASS
			100%
			Mean Adhesion
			20.8 N/25mm (75.5 oz/in)

TEST METHOD – Section Two, Part 4.2.3 – Adhesion After Artificial Weathering				
Application	Weathering	Measurement	Specification	RESULTS
Labels applied to aluminum test plates prepared according to Appendix B, using a 2 kg (4.4 lb) rubber coated roller according to Appendix A3.	Samples exposed to laboratory artificial weathering in accordance with Appendix E.	180° peel adhesion at 300 mm/minute (11.8 in/minute) in accordance with Appendix D. Average adhesion and percentage of readings above specification recorded.	80% of readings not less than 12.5 N/25mm (45.4 oz/in)	Readings not Less Than 12 N/25mm (45.4 oz/in) PASS
				100%
				Mean Adhesion
				14.2 N/25mm (51.5 oz/in)

TEST METHOD – Section Two, Part 4.2.4 – Adhesion After Temperature Cycling				
Application	Temperature Cycling	Measurement	Specification	RESULTS
Labels applied to aluminum test plates prepared according to Appendix B, using a 2 kg (4.4 lb) rubber coated roller according to Appendix A3.	Samples submitted to temperature cycling in accordance with Appendix F.	180° peel adhesion at 300 mm/minute (11.8 in/minute) in accordance with Appendix D. Average adhesion and percentage of readings above specification recorded.	80% of readings not less than 12.5 N/25mm (45.4 oz/in)	Readings not Less Than 12 N/25mm (45.4 oz/in) PASS
				100%
				Mean Adhesion
				17.9 N/25mm (65.0 oz/in)

Product: FLEXcon DRUMcal™ 21046TL LABEL BASE MATERIAL
 BS 5609 Section Two – continued

TEST METHOD – Section Two, Part 4.2.5 – Color Fastness of Base Material				
Weathering	Color Fastness	Hue	Specification	RESULTS
Tests carried out on samples exposed for 14 weeks at marine half tide site for Part 4.1.	Grey scale measurements according to Appendix G.	Visual Assessment	Color fastness rating not less than 2 compared with unweathered specimen. Color to remain recognizable as original hue.	Color Fastness <i>PASS</i>
				3 ½
				Hue <i>PASS</i>
				Remained recognizable as original hue.

TESTED BY: Adhesive Technical Services Ltd., P.O. Box 51, Botany Way, Beacon Hill Industrial Estate.
 Purfleet, Essex RM 16 1SY Telephone: 01708 867355 Fax: 01708 869804

FLEXcon BS 5609 COMPLIANCE SUMMARY REPORT

Product: **FLEXcon DRUMcal™ 21246TI LABEL BASE MATERIAL**
 2.0 mil matte topcoated white polyester with an aggressive high performance permanent acrylic adhesive on a 60 lb. two side polycoated layflat release liner. Thermal transfer and dot matrix/impact printable.

BS 5609 Section Two (February 11, 1998)

CONCLUSIONS: **FLEXcon DRUMcal™ 21246TI label base material meets the requirements of BS 5609 Section Two. Pressure-Sensitive, Adhesive Coated Label Base Material.**

TEST METHOD – Section Two, Part 4.1 – Marine Performance Test			
Marine Exposure	Adhesion	Specification	RESULTS
14 weeks exposure on south facing aluminum panel at Adhesive Technical Services' half tide site, on the Essex coast. Tests carried out according to BS 5609 Appendix C. Labels applied according to BS 5609 Appendix A1, to panels prepared according to Appendix B.	180° peel adhesion at 300 mm/minute (11.8 in/minute) according to BS 5609 Appendix D. Average adhesion and percentage of readings above specification recorded.	80% of readings not less than 10 N/25mm (36.3 oz/in)	Readings not Less Than 10 N/25mm (36.3 oz/in) <i>PASS</i>
			100%
			Mean Adhesion
			15.2 N/25mm (55.2 oz/in)

TEST METHOD – Section Two, Part 4.2.1 – Dimensional Stability			
Weathering	Measurement	Specification	RESULTS
Tests carried out on samples exposed for 14 weeks at marine half tide site for Part 4.1.	Samples measured in both directions before and after weathering. Samples conditioned for 48 hours at 23°C (73.4°F) and 50+/-% relative humidity prior to measuring. Maximum increase and decrease in dimensions and average change recorded.	Dimensions shall not alter by more than +1% or -3%	Maximum Increase in Dimension <i>PASS</i>
			0.0%
			Maximum Decrease in Dimension <i>PASS</i>
			0.0%
			Average Change in Dimensions
			0.0%

Product: FLEXcon DRUMcal™ 21246TI LABEL BASE MATERIAL
 BS 5609 Section Two – continued

TEST METHOD – Section Two, Part 4.2.2 – Adhesion After 48 Hours			
Application	Measurement	Specification	RESULTS
Labels applied to aluminum test plates prepared according to Appendix B, using a 2 kg (4.4 lb) rubber coated roller according to Appendix A3.	180° peel adhesion at 300 mm/minute (11.8 in/minute) in accordance with Appendix D. Average adhesion and percentage of readings above specification recorded.	80% of readings not less than 12.5 N/25mm (45.4 oz/in)	Readings not Less Than 12.5 N/25mm (45.4 oz/in) <i>PASS</i>
			100%
			Mean Adhesion
			15.2 N/25mm (55.2 oz/in)

TEST METHOD – Section Two, Part 4.2.3 – Adhesion After Artificial Weathering				
Application	Weathering	Measurement	Specification	RESULTS
Labels applied to aluminum test plates prepared according to Appendix B, using a 2 kg (4.4 lb) rubber coated roller according to Appendix A3.	Samples exposed to laboratory artificial weathering in accordance with Appendix E.	180° peel adhesion at 300 mm/minute (11.8 in/minute) in accordance with Appendix D. Average adhesion and percentage of readings above specification recorded.	80% of readings not less than 12.5 N/25mm (45.4 oz/in)	Readings not Less Than 12.5 N/25mm (45.4 oz/in) <i>PASS</i>
				100%
				Mean Adhesion
				17.3 N/25mm (62.8 oz/in)

TEST METHOD – Section Two, Part 4.2.4 – Adhesion After Temperature Cycling				
Application	Temperature Cycling	Measurement	Specification	RESULTS
Labels applied to aluminum test plates prepared according to Appendix B, using a 2 kg (4.4 lb) rubber coated roller according to Appendix A3.	Samples submitted to temperature cycling in accordance with Appendix F.	180° peel adhesion at 300 mm/minute (11.8 in/minute) in accordance with Appendix D. Average adhesion and percentage of readings above specification recorded.	80% of readings not less than 12.5 N/25mm (45.4 oz/in)	Readings not Less Than 12.5 N/25mm (45.4 oz/in) <i>PASS</i>
				100%
				Mean Adhesion
				18.2 N/25mm (66.1 oz/in)

Product: FLEXcon DRUMcal™ 21246TI LABEL BASE MATERIAL
 BS 5609 Section Two – continued

TEST METHOD – Section Two, Part 4.2.5 – Color Fastness of Base Material				
Weathering	Color Fastness	Hue	Specification	RESULTS
Tests carried out on samples exposed for 14 weeks at marine half tide site for Part 4.1.	Grey scale measurements according to Appendix G.	Visual Assessment	80% of readings not less than 12.5 N/25mm (45.4 oz/in)	Color Fastness <i>PASS</i>
				3 ½
				Hue <i>PASS</i>
				Remained recognizable as original hue.

TESTED BY: Adhesive Technical Services Ltd., P.O. Box 51, Botany Way, Beacon Hill Industrial Estate.
 Purfleet, Essex RM 16 1SY Telephone: 01708 867355 Fax: 01708 869804

FLEXcon BS 5609 COMPLIANCE SUMMARY REPORT

Product: FLEXcon DRUMcal™ PM-200-White V-344DL LABEL BASE MATERIAL
 2.0 mil print receptive white polyester with an aggressive high performance permanent acrylic adhesive. Thermal transfer and laser printable.

BS 5609 Section Two (February 11, 1998)

CONCLUSIONS: FLEXcon DRUMcal™ PM-200-White V-344DL label base material meets the requirements of BS 5609 Section Two. Pressure-Sensitive, Adhesive Coated Label Base Material.

TEST METHOD – Section Two, Part 4.1 – Marine Performance Test			
Marine Exposure	Adhesion	Specification	RESULTS
14 weeks exposure on south facing aluminum panel at Adhesive Technical Services' half tide site, on the Essex coast. Tests carried out according to BS 5609 Appendix C. Labels applied according to BS 5609 Appendix A1, to panels prepared according to Appendix B.	180° peel adhesion at 300 mm/minute (11.8 in/minute) according to BS 5609 Appendix D. Average adhesion and percentage of readings above specification recorded.	80% of readings not less than 10 N/25mm (36.3 oz/in)	Readings not Less Than 10 N/25mm (36.3 oz/in) <i>PASS</i>
			100%
			Mean Adhesion
			13.8 N/25mm (50.1 oz/in)

TEST METHOD – Section Two, Part 4.2.1 – Dimensional Stability			
Weathering	Measurement	Specification	RESULTS
Tests carried out on samples exposed for 14 weeks at marine half tide site for Part 4.1.	Samples measured in both directions before and after weathering. Samples conditioned for 48 hours at 23°C (73.4°F) and 50+/-% relative humidity prior to measuring. Maximum increase and decrease in dimensions and average change recorded.	Dimensions shall not alter by more than +1% or -3%	Maximum Increase in Dimension <i>PASS</i>
			0.1%
			Maximum Decrease in Dimension <i>PASS</i>
			0.0%
			Average Change in Dimensions
			+0.01%

Product: FLEXcon DRUMcal™ PM-200-White V-344DL LABEL BASE MATERIAL
 BS 5609 Section Two – continued

TEST METHOD – Section Two, Part 4.2.2 – Adhesion After 48 Hours			
Application	Measurement	Specification	RESULTS
Labels applied to aluminum test plates prepared according to Appendix B, using a 2 kg (4.4 lb) rubber coated roller according to Appendix A3.	180° peel adhesion at 300 mm/minute (11.8 in/minute) in accordance with Appendix D. Average adhesion and percentage of readings above specification recorded.	80% of readings not less than 12.5 N/25mm (45.4 oz/in)	Readings not Less Than 12.5 N/25mm (45.4 oz/in) PASS
			100%
			Mean Adhesion
			20.8 N/25mm (75.0 oz/in)

TEST METHOD – Section Two, Part 4.2.3 – Adhesion After Artificial Weathering				
Application	Weathering	Measurement	Specification	RESULTS
Labels applied to aluminum test plates prepared according to Appendix B, using a 2 kg (4.4 lb) rubber coated roller according to Appendix A3.	Samples exposed to laboratory artificial weathering in accordance with Appendix E.	180° peel adhesion at 300 mm/minute (11.8 in/minute) in accordance with Appendix D. Average adhesion and percentage of readings above specification recorded.	80% of readings not less than 12.5 N/25mm (45.4 oz/in)	Readings not Less Than 12.5 N/25mm (45.4 oz/in) PASS
				100%
				Mean Adhesion
				14.2 N/25mm (51.5 oz/in)

TEST METHOD – Section Two, Part 4.2.4 – Adhesion After Temperature Cycling				
Application	Temperature Cycling	Measurement	Specification	RESULTS
Labels applied to aluminum test plates prepared according to Appendix B, using a 2 kg (4.4 lb) rubber coated roller according to Appendix A3.	Samples submitted to temperature cycling in accordance with Appendix F.	180° peel adhesion at 300 mm/minute (11.8 in/minute) in accordance with Appendix D. Average adhesion and percentage of readings above specification recorded.	80% of readings not less than 12.5 N/25mm (45.4 oz/in)	Readings not Less Than 12.5 N/25mm (45.4 oz/in) PASS
				100%
				Mean Adhesion
				17.9 N/25mm (65.0 oz/in)

Product: FLEXcon DRUMcal™ PM-200-White V-344DL LABEL BASE MATERIAL
 BS 5609 Section Two – continued

TEST METHOD – Section Two, Part 4.2.5 – Color Fastness of Base Material				
Weathering	Color Fastness	Hue	Specification	RESULTS
Tests carried out on samples exposed for 14 weeks at marine half tide site for Part 4.1.	Grey scale measurements according to Appendix G.	Visual Assessment	Color fastness rating not less than 2 compared with unweathered specimen. Color to remain recognizable as original hue.	Color Fastness <i>PASS</i>
				3 ½
				Hue <i>PASS</i>
				Remained recognizable as original hue.

TESTED BY: Adhesive Technical Services Ltd., P.O. Box 51, Botany Way, Beacon Hill Industrial Estate.
 Purfleet, Essex RM 16 1SY Telephone: 01708 867355 Fax: 01708 869804

FLEXcon BS 5609 COMPLIANCE SUMMARY REPORT

Product: FLEXcon DRUMcal™ PM-200-White MT/C-352 V-344DL LABEL BASE MATERIAL
2.0 mil matte topcoated white polyester with an aggressive high performance permanent acrylic adhesive. Thermal transfer printable.

BS 5609 Section Two (February 11, 1998)

CONCLUSIONS: FLEXcon DRUMcal™ PM-200-White MT/C-352 V-344DL label base material meets the requirements of BS 5609 Section Two. Pressure-Sensitive, Adhesive Coated Label Base Material.

TEST METHOD – Section Two, Part 4.1 – Marine Performance Test			
Marine Exposure	Adhesion	Specification	RESULTS
14 weeks exposure on south facing aluminum panel at Adhesive Technical Services' half tide site, on the Essex coast. Tests carried out according to BS 5609 Appendix C. Labels applied according to BS 5609 Appendix A1, to panels prepared according to Appendix B.	180° peel adhesion at 300 mm/minute (11.8 in/minute) according to BS 5609 Appendix D. Average adhesion and percentage of readings above specification recorded.	80% of readings not less than 10 N/25mm (36.3 oz/in)	Readings not Less Than 10 N/25mm (36.3 oz/in) <i>PASS</i>
			100%
			Mean Adhesion
			15.2 N/25mm (55.2 oz/in)

TEST METHOD – Section Two, Part 4.2.1 – Dimensional Stability			
Weathering	Measurement	Specification	RESULTS
Tests carried out on samples exposed for 14 weeks at marine half tide site for Part 4.1.	Samples measured in both directions before and after weathering. Samples conditioned for 48 hours at 23°C (73.4°F) and 50+/-% relative humidity prior to measuring. Maximum increase and decrease in dimensions and average change recorded.	Dimensions shall not alter by more than +1% or -3%	Maximum Increase in Dimension <i>PASS</i>
			0.0%
			Maximum Decrease in Dimension <i>PASS</i>
			0.0%
			Average Change in Dimensions
			0.0%

Product: FLEXcon DRUMcal™ PM-200-White MT/C-352 V-344DL LABEL BASE MATERIAL
BS 5609 Section Two – continued

TEST METHOD – Section Two, Part 4.2.2 – Adhesion After 48 Hours			
Application	Measurement	Specification	RESULTS
Labels applied to aluminum test plates prepared according to Appendix B, using a 2 kg (4.4 lb) rubber coated roller according to Appendix A3.	180° peel adhesion at 300 mm/minute (11.8 in/minute) in accordance with Appendix D. Average adhesion and percentage of readings above specification recorded.	80% of readings not less than 12.5 N/25mm (45.4 oz/in)	Readings not Less Than 12.5 N/25mm (45.4 oz/in) PASS
			100%
			Mean Adhesion
			15.2 N/25mm (55.2 oz/in)

TEST METHOD – Section Two, Part 4.2.3 – Adhesion After Artificial Weathering				
Application	Weathering	Measurement	Specification	RESULTS
Labels applied to aluminum test plates prepared according to Appendix B, using a 2 kg (4.4 lb) rubber coated roller according to Appendix A3.	Samples exposed to laboratory artificial weathering in accordance with Appendix E.	180° peel adhesion at 300 mm/minute (11.8 in/minute) in accordance with Appendix D. Average adhesion and percentage of readings above specification recorded.	80% of readings not less than 12.5 N/25mm (45.4 oz/in)	Readings not Less Than 12.5 N/25mm (45.4 oz/in) PASS
				100%
				Mean Adhesion
				17.3 N/25mm (62.8 oz/in)

TEST METHOD – Section Two, Part 4.2.4 – Adhesion After Temperature Cycling				
Application	Temperature Cycling	Measurement	Specification	RESULTS
Labels applied to aluminum test plates prepared according to Appendix B, using a 2 kg (4.4 lb) rubber coated roller according to Appendix A3.	Samples submitted to temperature cycling in accordance with Appendix F.	180° peel adhesion at 300 mm/minute (11.8 in/minute) in accordance with Appendix D. Average adhesion and percentage of readings above specification recorded.	80% of readings not less than 12.5 N/25mm (45.4 oz/in)	Readings not Less Than 12.5 N/25mm (45.4 oz/in) PASS
				100%
				Mean Adhesion
				18.2 N/25mm (66.1 oz/in)

Product: FLEXcon DRUMcal™ PM-200-White MT/C-352 V-344DL LABEL BASE MATERIAL
 BS 5609 Section Two – continued

TEST METHOD – Section Two, Part 4.2.5 – Color Fastness of Base Material				
Weathering	Color Fastness	Hue	Specification	RESULTS
Tests carried out on samples exposed for 14 weeks at marine half tide site for Part 4.1.	Grey scale measurements according to Appendix G.	Visual Assessment	Color fastness rating not less than 2 compared with unweathered specimen. Color to remain recognizable as original hue.	Color Fastness <i>PASS</i>
				3 ½
				Hue <i>PASS</i>
				Remained recognizable as original hue.

TESTED BY: Adhesive Technical Services Ltd., P.O. Box 51, Botany Way, Beacon Hill Industrial Estate.
 Purfleet, Essex RM 16 1SY Telephone: 01708 867355 Fax: 01708 869804

FLEXcon BS 5609 COMPLIANCE SUMMARY REPORT

Product: **FLEXcon DRUMcal™ 41046L LABEL BASE MATERIAL**
 3.5 mil flexible white vinyl with an aggressive high performance permanent acrylic adhesive on a 60 lb. two side polycoated layflat release liner. Requires press-applied varnish for laser printability.

BS 5609 Section Two (February 11, 1998)

CONCLUSIONS: **FLEXcon DRUMcal™ 41046L label base material meets the requirements of BS 5609 Section Two. Pressure-Sensitive, Adhesive Coated Label Base Material.**

TEST METHOD – Section Two, Part 4.1 – Marine Performance Test			
Marine Exposure	Adhesion	Specification	RESULTS
14 weeks exposure on south facing aluminum panel at Adhesive Technical Services' half tide site, on the Essex coast. Tests carried out according to BS 5609 Appendix C. Labels applied according to BS 5609 Appendix A1, to panels prepared according to Appendix B.	180° peel adhesion at 300 mm/minute (11.8 in/minute) according to BS 5609 Appendix D. Average adhesion and percentage of readings above specification recorded.	80% of readings not less than 10 N/25mm (36.3 oz/in)	Readings not Less Than 10 N/25mm (36.3 oz/in) <i>PASS</i>
			100%
			Mean Adhesion
			23.4 N/25mm (84.9 oz/in)

TEST METHOD – Section Two, Part 4.2.1 – Dimensional Stability			
Weathering	Measurement	Specification	RESULTS
Tests carried out on samples exposed for 14 weeks at marine half tide site for Part 4.1.	Samples measured in both directions before and after weathering. Samples conditioned for 48 hours at 23°C (73.4°F) and 50+/-% relative humidity prior to measuring. Maximum increase and decrease in dimensions and average change recorded.	Dimensions shall not alter by more than +1% or -3%	Maximum Increase in Dimension <i>PASS</i>
			+0.2%
			Maximum Decrease in Dimension <i>PASS</i>
			0.0%
			Average Change in Dimensions
			+0.02%

Product: FLEXcon DRUMcal™ 41046L LABEL BASE MATERIAL
 BS 5609 Section Two – continued

TEST METHOD – Section Two, Part 4.2.2 – Adhesion After 48 Hours			
Application	Measurement	Specification	RESULTS
Labels applied to aluminum test plates prepared according to Appendix B, using a 2 kg (4.4 lb) rubber coated roller according to Appendix A3.	180° peel adhesion at 300 mm/minute (11.8 in/minute) in accordance with Appendix D. Average adhesion and percentage of readings above specification recorded.	80% of readings not less than 12.5 N/25mm (45.4 oz/in)	Readings not Less Than 12.5 N/25mm (45.4 oz/in) PASS
			100%
			Mean Adhesion
			28.6 N/25mm (103.8 oz/in)

TEST METHOD – Section Two, Part 4.2.3 – Adhesion After Artificial Weathering				
Application	Weathering	Measurement	Specification	RESULTS
Labels applied to aluminum test plates prepared according to Appendix B, using a 2 kg (4.4 lb) rubber coated roller according to Appendix A3.	Samples exposed to laboratory artificial weathering in accordance with Appendix E.	180° peel adhesion at 300 mm/minute (11.8 in/minute) in accordance with Appendix D. Average adhesion and percentage of readings above specification recorded.	80% of readings not less than 12.5 N/25mm (45.4 oz/in)	Readings not Less Than 12.5 N/25mm (45.4 oz/in) PASS
				100%
				Mean Adhesion
				27.2 N/25mm (98.7 oz/in)

TEST METHOD – Section Two, Part 4.2.4 – Adhesion After Temperature Cycling				
Application	Temperature Cycling	Measurement	Specification	RESULTS
Labels applied to aluminum test plates prepared according to Appendix B, using a 2 kg (4.4 lb) rubber coated roller according to Appendix A3.	Samples submitted to temperature cycling in accordance with Appendix F.	180° peel adhesion at 300 mm/minute (11.8 in/minute) in accordance with Appendix D. Average adhesion and percentage of readings above specification recorded.	80% of readings not less than 12.5 N/25mm (45.4 oz/in)	Readings not Less Than 12.5 N/25mm (45.4 oz/in) PASS
				100%
				Mean Adhesion
				27.1 N/25mm (98.4 oz/in)

Product: FLEXcon DRUMcal™ 41046L LABEL BASE MATERIAL
 BS 5609 Section Two – continued

TEST METHOD – Section Two, Part 4.2.5 – Color Fastness of Base Material				
Weathering	Color Fastness	Hue	Specification	RESULTS
Tests carried out on samples exposed for 14 weeks at marine half tide site for Part 4.1.	Grey scale measurements according to Appendix G.	Visual Assessment	Color fastness rating not less than 2 compared with unweathered specimen. Color to remain recognizable as original hue.	Color Fastness <i>PASS</i>
				4 ½
				Hue <i>PASS</i>
				Remained recognizable as original hue.

TESTED BY: Adhesive Technical Services Ltd., P.O. Box 51, Botany Way, Beacon Hill Industrial Estate.
 Purfleet, Essex RM 16 1SY Telephone: 01708 867355 Fax: 01708 869804

FLEXcon BS 5609 COMPLIANCE SUMMARY REPORT

Product: **FLEXcon DRUMcal™ 41146T LABEL BASE MATERIAL**
 3.25 mil thermal transfer printable topcoated flexible white vinyl with an aggressive high performance permanent acrylic adhesive on a 60 lb. two side polycoated layflat release liner. Thermal transfer printable.

BS 5609 Section Two (February 11, 1998)

CONCLUSIONS: **FLEXcon DRUMcal™ 41146T label base material meets the requirements of BS 5609 Section Two. Pressure-Sensitive, Adhesive Coated Label Base Material.**

TEST METHOD – Section Two, Part 4.1 – Marine Performance Test			
Marine Exposure	Adhesion	Specification	RESULTS
14 weeks exposure on south facing aluminum panel at Adhesive Technical Services' half tide site, on the Essex coast. Tests carried out according to BS 5609 Appendix C. Labels applied according to BS 5609 Appendix A1, to panels prepared according to Appendix B.	180° peel adhesion at 300 mm/minute (11.8 in/minute) according to BS 5609 Appendix D. Average adhesion and percentage of readings above specification recorded.	80% of readings not less than 10 N/25mm (36.3 oz/in)	Readings not Less Than 10 N/25mm (36.3 oz/in) <i>PASS</i>
			100%
			Mean Adhesion
			27.0 N/25mm (98.0 oz/in)

TEST METHOD – Section Two, Part 4.2.1 – Dimensional Stability			
Weathering	Measurement	Specification	RESULTS
Tests carried out on samples exposed for 14 weeks at marine half tide site for Part 4.1.	Samples measured in both directions before and after weathering. Samples conditioned for 48 hours at 23°C (73.4°F) and 50+/-% relative humidity prior to measuring. Maximum increase and decrease in dimensions and average change recorded.	Dimensions shall not alter by more than +1% or -3%	Maximum Increase in Dimension <i>PASS</i>
			0.0%
			Maximum Decrease in Dimension <i>PASS</i>
			-0.5%
			Average Change in Dimensions
			-0.18%

Product: FLEXcon DRUMcal™ 41146T LABEL BASE MATERIAL
BS 5609 Section Two – continued

TEST METHOD – Section Two, Part 4.2.2 – Adhesion After 48 Hours			
Application	Measurement	Specification	RESULTS
Labels applied to aluminum test plates prepared according to Appendix B, using a 2 kg (4.4 lb) rubber coated roller according to Appendix A3.	180° peel adhesion at 300 mm/minute (11.8 in/minute) in accordance with Appendix D. Average adhesion and percentage of readings above specification recorded.	80% of readings not less than 12.5 N/25mm (45.4 oz/in)	Readings not Less Than 12.5 N/25mm (45.4 oz/in) PASS
			100%
			Mean Adhesion
			23.2 N/25mm (84.2 oz/in)

TEST METHOD – Section Two, Part 4.2.3 – Adhesion After Artificial Weathering				
Application	Weathering	Measurement	Specification	RESULTS
Labels applied to aluminum test plates prepared according to Appendix B, using a 2 kg (4.4 lb) rubber coated roller according to Appendix A3.	Samples exposed to laboratory artificial weathering in accordance with Appendix E.	180° peel adhesion at 300 mm/minute (11.8 in/minute) in accordance with Appendix D. Average adhesion and percentage of readings above specification recorded.	80% of readings not less than 12.5 N/25mm (45.4 oz/in)	Readings not Less Than 12.5 N/25mm (45.4 oz/in) PASS
				100%
				Mean Adhesion
				24.4 N/25mm (88.6 oz/in)

TEST METHOD – Section Two, Part 4.2.4 – Adhesion After Temperature Cycling				
Application	Temperature Cycling	Measurement	Specification	RESULTS
Labels applied to aluminum test plates prepared according to Appendix B, using a 2 kg (4.4 lb) rubber coated roller according to Appendix A3.	Samples submitted to temperature cycling in accordance with Appendix F.	180° peel adhesion at 300 mm/minute (11.8 in/minute) in accordance with Appendix D. Average adhesion and percentage of readings above specification recorded.	80% of readings not less than 12.5 N/25mm (45.4 oz/in)	Readings not Less Than 12.5 N/25mm (45.4 oz/in) PASS
				100%
				Mean Adhesion
				26.1 N/25mm (94.7 oz/in)

Product: FLEXcon DRUMcal™ 41146T LABEL BASE MATERIAL
 BS 5609 Section Two – continued

TEST METHOD – Section Two, Part 4.2.5 – Color Fastness of Base Material				
Weathering	Color Fastness	Hue	Specification	RESULTS
Tests carried out on samples exposed for 14 weeks at marine half tide site for Part 4.1.	Grey scale measurements according to Appendix G.	Visual Assessment	Color fastness rating not less than 2 compared with unweathered specimen. Color to remain recognizable as original hue.	Color Fastness <i>PASS</i>
				4 ½
				Hue <i>PASS</i>
				Remained recognizable as original hue.

TESTED BY: Adhesive Technical Services Ltd., P.O. Box 51, Botany Way, Beacon Hill Industrial Estate.
 Purfleet, Essex RM 16 1SY Telephone: 01708 867355 Fax: 01708 869804

FLEXcon BS 5609 COMPLIANCE SUMMARY REPORT

Product: **FLEXcon DRUMcal™ 41446LI LABEL BASE MATERIAL**
 3.5 mil matte topcoated flexible white vinyl with an aggressive high performance permanent acrylic adhesive on a 60 lb. two side polycoated layflat release liner. Laser and dot matrix/impact printable.

BS 5609 Section Two (February 11, 1998)

CONCLUSIONS: **FLEXcon DRUMcal™ 41446LI label base material meets the requirements of BS 5609 Section Two. Pressure-Sensitive, Adhesive Coated Label Base Material.**

TEST METHOD – Section Two, Part 4.1 – Marine Performance Test			
Marine Exposure	Adhesion	Specification	RESULTS
14 weeks exposure on south facing aluminum panel at Adhesive Technical Services’ half tide site, on the Essex coast. Tests carried out according to BS 5609 Appendix C. Labels applied according to BS 5609 Appendix A1, to panels prepared according to Appendix B.	180° peel adhesion at 300 mm/minute (11.8 in/minute) according to BS 5609 Appendix D. Average adhesion and percentage of readings above specification recorded.	80% of readings not less than 10 N/25mm (36.3 oz/in)	Readings not Less Than 10 N/25mm (36.3 oz/in) <i>PASS</i>
			100%
			Mean Adhesion
			24.4 N/25mm (88.6 oz/in)

TEST METHOD – Section Two, Part 4.2.1 – Dimensional Stability			
Weathering	Measurement	Specification	RESULTS
Tests carried out on samples exposed for 14 weeks at marine half tide site for Part 4.1.	Samples measured in both directions before and after weathering. Samples conditioned for 48 hours at 23°C (73.4°F) and 50+/-% relative humidity prior to measuring. Maximum increase and decrease in dimensions and average change recorded.	Dimensions shall not alter by more than +1% or -3%	Maximum Increase in Dimension <i>PASS</i>
			0.0%
			Maximum Decrease in Dimension <i>PASS</i>
			0.0%
			Average Change in Dimensions
			0.0%

Product: FLEXcon DRUMcal™ 41446LI LABEL BASE MATERIAL
 BS 5609 Section Two – continued

TEST METHOD – Section Two, Part 4.2.2 – Adhesion After 48 Hours			
Application	Measurement	Specification	RESULTS
Labels applied to aluminum test plates prepared according to Appendix B, using a 2 kg (4.4 lb) rubber coated roller according to Appendix A3.	180° peel adhesion at 300 mm/minute (11.8 in/minute) in accordance with Appendix D. Average adhesion and percentage of readings above specification recorded.	80% of readings not less than 12.5 N/25mm (45.4 oz/in)	Readings not Less Than 12.5 N/25mm (45.4 oz/in) PASS
			100%
			Mean Adhesion
			27.6 N/25mm (100.2 oz/in)

TEST METHOD – Section Two, Part 4.2.3 – Adhesion After Artificial Weathering				
Application	Weathering	Measurement	Specification	RESULTS
Labels applied to aluminum test plates prepared according to Appendix B, using a 2 kg (4.4 lb) rubber coated roller according to Appendix A3.	Samples exposed to laboratory artificial weathering in accordance with Appendix E.	180° peel adhesion at 300 mm/minute (11.8 in/minute) in accordance with Appendix D. Average adhesion and percentage of readings above specification recorded.	80% of readings not less than 12.5 N/25mm (45.4 oz/in)	Readings not Less Than 12.5 N/25mm (45.4 oz/in) PASS
				100%
				Mean Adhesion
				25.7 N/25mm (93.3 oz/in)

TEST METHOD – Section Two, Part 4.2.4 – Adhesion After Temperature Cycling				
Application	Temperature Cycling	Measurement	Specification	RESULTS
Labels applied to aluminum test plates prepared according to Appendix B, using a 2 kg (4.4 lb) rubber coated roller according to Appendix A3.	Samples submitted to temperature cycling in accordance with Appendix F.	180° peel adhesion at 300 mm/minute (11.8 in/minute) in accordance with Appendix D. Average adhesion and percentage of readings above specification recorded.	80% of readings not less than 12.5 N/25mm (45.4 oz/in)	Readings not Less Than 12.5 N/25mm (45.4 oz/in) PASS
				100%
				Mean Adhesion
				26.8 N/25mm (97.3 oz/in)

Product: FLEXcon DRUMcal™ 41446LI LABEL BASE MATERIAL
 BS 5609 Section Two – continued

TEST METHOD – Section Two, Part 4.2.5 – Color Fastness of Base Material				
Weathering	Color Fastness	Hue	Specification	RESULTS
Tests carried out on samples exposed for 14 weeks at marine half tide site for Part 4.1.	Grey scale measurements according to Appendix G.	Visual Assessment	Color fastness rating not less than 2 compared with unweathered specimen. Color to remain recognizable as original hue.	Color Fastness <i>PASS</i>
				4
				Hue <i>PASS</i>
				Remained recognizable as original hue.

TESTED BY: Adhesive Technical Services Ltd., P.O. Box 51, Botany Way, Beacon Hill Industrial Estate.
 Purfleet, Essex RM 16 1SY Telephone: 01708 867355 Fax: 01708 869804

FLEXcon BS 5609 COMPLIANCE SUMMARY REPORT

Product: FLEXcon DRUMcal™ V-325-F WHITE V-344DL LABEL BASE MATERIAL
 3.25 flexible white vinyl with an aggressive high performance permanent acrylic adhesive. Requires press-applied varnish for laser printability.

BS 5609 Section Two (February 11, 1998)

CONCLUSIONS: FLEXcon DRUMcal™ V-325-F WHITE V-344DL label base material meets the requirements of BS 5609 Section Two. Pressure-Sensitive, Adhesive Coated Label Base Material.

TEST METHOD – Section Two, Part 4.1 – Marine Performance Test			
Marine Exposure	Adhesion	Specification	RESULTS
14 weeks exposure on south facing aluminum panel at Adhesive Technical Services' half tide site, on the Essex coast. Tests carried out according to BS 5609 Appendix C. Labels applied according to BS 5609 Appendix A1, to panels prepared according to Appendix B.	180° peel adhesion at 300 mm/minute (11.8 in/minute) according to BS 5609 Appendix D. Average adhesion and percentage of readings above specification recorded.	80% of readings not less than 10 N/25mm (36.3 oz/in)	Readings not Less Than 10 N/25mm (36.3 oz/in) <i>PASS</i>
			100%
			Mean Adhesion
			21.4 N/25mm (77.7 oz/in)

TEST METHOD – Section Two, Part 4.2.1 – Dimensional Stability			
Weathering	Measurement	Specification	RESULTS
Tests carried out on samples exposed for 14 weeks at marine half tide site for Part 4.1.	Samples measured in both directions before and after weathering. Samples conditioned for 48 hours at 23°C (73.4°F) and 50+/-% relative humidity prior to measuring. Maximum increase and decrease in dimensions and average change recorded.	Dimensions shall not alter by more than +1% or -3%	Maximum Increase in Dimension <i>PASS</i>
			0.0%
			Maximum Decrease in Dimension <i>PASS</i>
			-0.3%
			Average Change in Dimensions
			-0.09%

Product: FLEXcon DRUMcal™ V-325-F WHITE V-344DL LABEL BASE MATERIAL
 BS 5609 Section Two – continued

TEST METHOD – Section Two, Part 4.2.2 – Adhesion After 48 Hours			
Application	Measurement	Specification	RESULTS
Labels applied to aluminum test plates prepared according to Appendix B, using a 2 kg (4.4 lb) rubber coated roller according to Appendix A3.	180° peel adhesion at 300 mm/minute (11.8 in/minute) in accordance with Appendix D. Average adhesion and percentage of readings above specification recorded.	80% of readings not less than 12.5 N/25mm (45.4 oz/in)	Readings not Less Than 12.5 N/25mm (45.4 oz/in) PASS
			100%
			Mean Adhesion
			28.2 N/25mm (102.4 oz/in)

TEST METHOD – Section Two, Part 4.2.3 – Adhesion After 48 Hours			
Application	Measurement	Specification	RESULTS
Labels applied to aluminum test plates prepared according to Appendix B, using a 2 kg (4.4 lb) rubber coated roller according to Appendix A3.	180° peel adhesion at 300 mm/minute (11.8 in/minute) in accordance with Appendix D. Average adhesion and percentage of readings above specification recorded.	80% of readings not less than 12.5 N/25mm (45.4 oz/in)	Readings not Less Than 12.5 N/25mm (45.4 oz/in) PASS
			100%
			Mean Adhesion
			25.2 N/25mm (91.5 oz/in)

TEST METHOD – Section Two, Part 4.2.4 – Adhesion After Temperature Cycling				
Application	Temperature Cycling	Measurement	Specification	RESULTS
Labels applied to aluminum test plates prepared according to Appendix B, using a 2 kg (4.4 lb) rubber coated roller according to Appendix A3.	Samples submitted to temperature cycling in accordance with Appendix F.	180° peel adhesion at 300 mm/minute (11.8 in/minute) in accordance with Appendix D. Average adhesion and percentage of readings above specification recorded.	80% of readings not less than 12.5 N/25mm (45.4 oz/in)	Readings not Less Than 12.5 N/25mm (45.4 oz/in) PASS
				100%
				Mean Adhesion
				27.1 N/25mm (98.4 oz/in)

Product: FLEXcon DRUMcal™ V-325-F WHITE V-344DL LABEL BASE MATERIAL
 BS 5609 Section Two – continued

TEST METHOD – Section Two, Part 4.2.5 – Color Fastness of Base Material				
Weathering	Color Fastness	Hue	Specification	RESULTS
Tests carried out on samples exposed for 14 weeks at marine half tide site for Part 4.1.	Grey scale measurements according to Appendix G.	Visual Assessment	Color fastness rating not less than 2 compared with unweathered specimen. Color to remain recognizable as original hue.	Color Fastness <i>PASS</i>
				4 ½
				Hue <i>PASS</i>
				Remained recognizable as original hue.

TESTED BY: Adhesive Technical Services Ltd., P.O. Box 51, Botany Way, Beacon Hill Industrial Estate.
 Purfleet, Essex RM 16 1SY Telephone: 01708 867355 Fax: 01708 869804

FLEXcon BS 5609 COMPLIANCE SUMMARY REPORT

Product: FLEXcon DRUMcal™ V-325-F WHITE T/C-381 V-344DL LABEL BASE MATERIAL
3.25 mil topcoated flexible white vinyl with an aggressive high performance permanent acrylic adhesive. Thermal transfer printable.

BS 5609 Section Two (February 11, 1998)

CONCLUSIONS: FLEXcon DRUMcal™ V-325-F WHITE T/C-381 V-344DL label base material meets the requirements of BS 5609 Section Two. Pressure-Sensitive, Adhesive Coated Label Base Material.

TEST METHOD – Section Two, Part 4.1 – Marine Performance Test			
Marine Exposure	Adhesion	Specification	RESULTS
14 weeks exposure on south facing aluminum panel at Adhesive Technical Services' half tide site, on the Essex coast. Tests carried out according to BS 5609 Appendix C. Labels applied according to BS 5609 Appendix A1, to panels prepared according to Appendix B.	180° peel adhesion at 300 mm/minute (11.8 in/minute) according to BS 5609 Appendix D. Average adhesion and percentage of readings above specification recorded.	80% of readings not less than 10 N/25mm (36.3 oz/in)	Readings not Less Than 10 N/25mm (36.3 oz/in) <i>PASS</i>
			100%
			Mean Adhesion
			27.0 N/25mm (98.0 oz/in)

TEST METHOD – Section Two, Part 4.2.1 – Dimensional Stability			
Weathering	Measurement	Specification	RESULTS
Tests carried out on samples exposed for 14 weeks at marine half tide site for Part 4.1.	Samples measured in both directions before and after weathering. Samples conditioned for 48 hours at 23°C (73.4°F) and 50+/-% relative humidity prior to measuring. Maximum increase and decrease in dimensions and average change recorded.	Dimensions shall not alter by more than +1% or -3%	Maximum Increase in Dimension <i>PASS</i>
			0.0%
			Maximum Decrease in Dimension <i>PASS</i>
			-0.5%
			Average Change in Dimensions
			-0.18%

Product: FLEXcon DRUMcal™ V-325-F WHITE T/C-381 V-344DL LABEL BASE MATERIAL
 BS 5609 Section Two – continued

TEST METHOD – Section Two, Part 4.2.2 – Adhesion After 48 Hours			
Application	Measurement	Specification	RESULTS
Labels applied to aluminum test plates prepared according to Appendix B, using a 2 kg (4.4 lb) rubber coated roller according to Appendix A3.	180° peel adhesion at 300 mm/minute (11.8 in/minute) in accordance with Appendix D. Average adhesion and percentage of readings above specification recorded.	80% of readings not less than 12.5 N/25mm (45.4 oz/in)	Readings not Less Than 12.5 N/25mm (45.4 oz/in) PASS
			100%
			Mean Adhesion
			23.2 N/25mm (84.2 oz/in)

TEST METHOD – Section Two, Part 4.2.3 – Adhesion After Artificial Weathering				
Application	Weathering	Measurement	Specification	RESULTS
Labels applied to aluminum test plates prepared according to Appendix B, using a 2 kg (4.4 lb) rubber coated roller according to Appendix A3.	Samples exposed to laboratory artificial weathering in accordance with Appendix E.	180° peel adhesion at 300 mm/minute (11.8 in/minute) in accordance with Appendix D. Average adhesion and percentage of readings above specification recorded.	80% of readings not less than 12.5 N/25mm (45.4 oz/in)	Readings not Less Than 12.5 N/25mm (45.4 oz/in) PASS
				100%
				Mean Adhesion
				24.4 N/25mm (88.6 oz/in)

TEST METHOD – Section Two, Part 4.2.4 – Adhesion After Temperature Cycling				
Application	Temperature Cycling	Measurement	Specification	RESULTS
Labels applied to aluminum test plates prepared according to Appendix B, using a 2 kg (4.4 lb) rubber coated roller according to Appendix A3.	Samples submitted to temperature cycling in accordance with Appendix F.	180° peel adhesion at 300 mm/minute (11.8 in/minute) in accordance with Appendix D. Average adhesion and percentage of readings above specification recorded.	80% of readings not less than 12.5 N/25mm (45.4 oz/in)	Readings not Less Than 12.5 N/25mm (45.4 oz/in) PASS
				100%
				Mean Adhesion
				26.1 N/25mm (94.7 oz/in)

Product: FLEXcon DRUMcal™ V-325-F WHITE T/C-381 V-344DL LABEL BASE MATERIAL
 BS 5609 Section Two – continued

TEST METHOD – Section Two, Part 4.2.5 – Color Fastness of Base Material				
Weathering	Color Fastness	Hue	Specification	RESULTS
Tests carried out on samples exposed for 14 weeks at marine half tide site for Part 4.1.	Grey scale measurements according to Appendix G.	Visual Assessment	Color fastness rating not less than 2 compared with unweathered specimen.	Color Fastness <i>PASS</i>
				4 ½
				Hue <i>PASS</i>
				Remained recognizable as original hue.

TESTED BY: Adhesive Technical Services Ltd., P.O. Box 51, Botany Way, Beacon Hill Industrial Estate.
 Purfleet, Essex RM 16 1SY Telephone: 01708 867355 Fax: 01708 869804

FLEXcon BS 5609 COMPLIANCE SUMMARY REPORT

Product: FLEXcon DRUMcal™ V-400-F WHITE V-344DL LABEL BASE MATERIAL
 3.5 mil flexible white vinyl with an aggressive high performance permanent acrylic adhesive. Requires press-applied varnish for laser printability.

BS 5609 Section Two (February 11, 1998)

CONCLUSIONS: FLEXcon DRUMcal™ V-400-F WHITE V-344DL label base material meets the requirements of BS 5609 Section Two. Pressure-Sensitive, Adhesive Coated Label Base Material.

TEST METHOD – Section Two, Part 4.1 – Marine Performance Test			
Marine Exposure	Adhesion	Specification	RESULTS
14 weeks exposure on south facing aluminum panel at Adhesive Technical Services' half tide site, on the Essex coast. Tests carried out according to BS 5609 Appendix C. Labels applied according to BS 5609 Appendix A1, to panels prepared according to Appendix B.	180° peel adhesion at 300 mm/minute (11.8 in/minute) according to BS 5609 Appendix D. Average adhesion and percentage of readings above specification recorded.	80% of readings not less than 10 N/25mm (36.3 oz/in)	Readings not Less Than 10 N/25mm (36.3 oz/in) <i>PASS</i>
			100%
			Mean Adhesion
			23.4 N/25mm (84.9 oz/in)

TEST METHOD – Section Two, Part 4.2.1 – Dimensional Stability			
Weathering	Measurement	Specification	RESULTS
Tests carried out on samples exposed for 14 weeks at marine half tide site for Part 4.1.	Samples measured in both directions before and after weathering. Samples conditioned for 48 hours at 23°C (73.4°F) and 50+/-% relative humidity prior to measuring. Maximum increase and decrease in dimensions and average change recorded.	Dimensions shall not alter by more than +1% or -3%	Maximum Increase in Dimension <i>PASS</i>
			+0.2%
			Maximum Decrease in Dimension <i>PASS</i>
			0.0%
			Average Change in Dimensions
			+0.02%

Product: FLEXcon DRUMcal™ V-400-F WHITE V-344DL LABEL BASE MATERIAL
BS 5609 Section Two – continued

TEST METHOD – Section Two, Part 4.2.2 – Adhesion After 48 Hours			
Application	Measurement	Specification	RESULTS
Labels applied to aluminum test plates prepared according to Appendix B, using a 2 kg (4.4 lb) rubber coated roller according to Appendix A3.	180° peel adhesion at 300 mm/minute (11.8 in/minute) in accordance with Appendix D. Average adhesion and percentage of readings above specification recorded.	80% of readings not less than 12.5 N/25mm (45.4 oz/in)	Readings not Less Than 12.5 N/25mm (45.4 oz/in) PASS
			100%
			Mean Adhesion
			28.6 N/25mm (103.8 oz/in)

TEST METHOD – Section Two, Part 4.2.3 – Adhesion After Artificial Weathering				
Application	Weathering	Measurement	Specification	RESULTS
Labels applied to aluminum test plates prepared according to Appendix B, using a 2 kg (4.4 lb) rubber coated roller according to Appendix A3.	Samples exposed to laboratory artificial weathering in accordance with Appendix E.	180° peel adhesion at 300 mm/minute (11.8 in/minute) in accordance with Appendix D. Average adhesion and percentage of readings above specification recorded.	80% of readings not less than 12.5 N/25mm (45.4 oz/in)	Readings not Less Than 12.5 N/25mm (45.4 oz/in) PASS
				100%
				Mean Adhesion
				27.2 N/25mm (98.7 oz/in)

TEST METHOD – Section Two, Part 4.2.4 – Adhesion After Temperature Cycling				
Application	Temperature Cycling	Measurement	Specification	RESULTS
Labels applied to aluminum test plates prepared according to Appendix B, using a 2 kg (4.4 lb) rubber coated roller according to Appendix A3.	Samples submitted to temperature cycling in accordance with Appendix F.	180° peel adhesion at 300 mm/minute (11.8 in/minute) in accordance with Appendix D. Average adhesion and percentage of readings above specification recorded.	80% of readings not less than 12.5 N/25mm (45.4 oz/in)	Readings not Less Than 12.5 N/25mm (45.4 oz/in) PASS
				100%
				Mean Adhesion
				27.1 N/25mm (98.4 oz/in)

Product: FLEXcon DRUMcal™ V-400-F WHITE V-344DL LABEL BASE MATERIAL
 BS 5609 Section Two – continued

TEST METHOD – Section Two, Part 4.2.5 – Color Fastness of Base Material				
Weathering	Color Fastness	Hue	Specification	RESULTS
Tests carried out on samples exposed for 14 weeks at marine half tide site for Part 4.1.	Grey scale measurements according to Appendix G.	Visual Assessment	Color fastness rating not less than 2 compared with unweathered specimen. Color to remain recognizable as original hue.	Color Fastness <i>PASS</i>
				4 ½
				Hue <i>PASS</i>
				Remained recognizable as original hue.

TESTED BY: Adhesive Technical Services Ltd., P.O. Box 51, Botany Way, Beacon Hill Industrial Estate.
 Purfleet, Essex RM 16 1SY Telephone: 01708 867355 Fax: 01708 869804

FLEXcon BS 5609 COMPLIANCE SUMMARY REPORT

Product: FLEXcon DRUMcal™ V-400-F WHITE MT/C-354 V-344DL LABEL BASE MATERIAL
3.5 mil matte topcoated flexible white vinyl with an aggressive high performance permanent acrylic adhesive. Dot matrix/impact and laser printable.

BS 5609 Section Two (February 11, 1998)

CONCLUSIONS: FLEXcon DRUMcal™ V-400-F WHITE MT/C-354 V-344DL label base material meets the requirements of BS 5609 Section Two. Pressure-Sensitive, Adhesive Coated Label Base Material.

TEST METHOD – Section Two, Part 4.1 – Marine Performance Test			
Marine Exposure	Adhesion	Specification	RESULTS
14 weeks exposure on south facing aluminum panel at Adhesive Technical Services' half tide site, on the Essex coast. Tests carried out according to BS 5609 Appendix C. Labels applied according to BS 5609 Appendix A1, to panels prepared according to Appendix B.	180° peel adhesion at 300 mm/minute (11.8 in/minute) according to BS 5609 Appendix D. Average adhesion and percentage of readings above specification recorded.	80% of readings not less than 10 N/25mm (36.3 oz/in)	Readings not Less Than 10 N/25mm (36.3 oz/in) <i>PASS</i>
			100%
			Mean Adhesion
			24.4 N/25mm (88.6 oz/in)

TEST METHOD – Section Two, Part 4.2.1 – Dimensional Stability			
Weathering	Measurement	Specification	RESULTS
Tests carried out on samples exposed for 14 weeks at marine half tide site for Part 4.1.	Samples measured in both directions before and after weathering. Samples conditioned for 48 hours at 23°C (73.4°F) and 50+/-% relative humidity prior to measuring. Maximum increase and decrease in dimensions and average change recorded.	Dimensions shall not alter by more than +1%.	Maximum Increase in Dimension <i>PASS</i>
			0.0%
			Maximum Decrease in Dimension <i>PASS</i>
			0.0%
			Average Change in Dimensions
			0.0%

Product: FLEXcon DRUMcal™ V-400-F WHITE MT/C-354 V-344DL LABEL BASE MATERIAL
BS 5609 Section Two – continued

TEST METHOD – Section Two, Part 4.2.2 – Adhesion After 48 Hours			
Application	Measurement	Specification	RESULTS
Labels applied to aluminum test plates prepared according to Appendix B, using a 2 kg (4.4 lb) rubber coated roller according to Appendix A3.	180° peel adhesion at 300 mm/minute (11.8 in/minute) in accordance with Appendix D. Average adhesion and percentage of readings above specification recorded.	80% of readings not less than 12.5 N/25mm (45.4 oz/in)	Readings not Less Than 12.5 N/25mm (45.4 oz/in) PASS
			100%
			Mean Adhesion
			27.6 N/25mm (100.2 oz/in)

TEST METHOD – Section Two, Part 4.2.3 – Adhesion After Artificial Weathering				
Application	Weathering	Measurement	Specification	RESULTS
Labels applied to aluminum test plates prepared according to Appendix B, using a 2 kg (4.4 lb) rubber coated roller according to Appendix A3.	Samples exposed to laboratory artificial weathering in accordance with Appendix E.	180° peel adhesion at 300 mm/minute (11.8 in/minute) in accordance with Appendix D. Average adhesion and percentage of readings above specification recorded.	80% of readings not less than 12.5 N/25mm (45.4 oz/in)	Readings not Less Than 12.5 N/25mm (45.4 oz/in) PASS
				100%
				Mean Adhesion
				25.7 N/25mm (93.3 oz/in)

TEST METHOD – Section Two, Part 4.2.4 – Adhesion After Temperature Cycling				
Application	Temperature Cycling	Measurement	Specification	RESULTS
Labels applied to aluminum test plates prepared according to Appendix B, using a 2 kg (4.4 lb) rubber coated roller according to Appendix A3.	Samples submitted to temperature cycling in accordance with Appendix F.	180° peel adhesion at 300 mm/minute (11.8 in/minute) in accordance with Appendix D. Average adhesion and percentage of readings above specification recorded.	80% of readings not less than 12.5 N/25mm (45.4 oz/in)	Readings not Less Than 12.5 N/25mm (45.4 oz/in) PASS
				100%
				Mean Adhesion
				26.8 N/25mm (97.3 oz/in)

Product: FLEXcon DRUMcal™ V-400-F WHITE MT/C-354 V-344DL LABEL BASE MATERIAL
 BS 5609 Section Two – continued

TEST METHOD – Section Two, Part 4.2.5 – Color Fastness of Base Material				
Weathering	Color Fastness	Hue	Specification	RESULTS
Tests carried out on samples exposed for 14 weeks at marine half tide site for Part 4.1.	Grey scale measurements according to Appendix G.	Visual Assessment	Color fastness rating not less than 2 compared with unweathered specimen. Color to remain recognizable as original hue.	Color Fastness <i>PASS</i>
				4
				Hue <i>PASS</i>
				Remained recognizable as original hue.

TESTED BY: Adhesive Technical Services Ltd., P.O. Box 51, Botany Way, Beacon Hill Industrial Estate.
 Purfleet, Essex RM 16 1SY Telephone: 01708 867355 Fax: 01708 869804

FLEXcon BS 5609 COMPLIANCE SUMMARY REPORT

Product: **FLEXcon DRUMcal™ 31046T LABEL BASE MATERIAL**
 3.8 mil print treated flexible white matte polyethylene with an aggressive high performance permanent acrylic adhesive on a 60 lb. two side polycoated layflat release liner. Thermal transfer printable.

BS 5609 Section Two (February 11, 1998)

CONCLUSIONS: **FLEXcon DRUMcal™ 31046T label base material meets the requirements of BS 5609 Section Two. Pressure-Sensitive, Adhesive Coated Label Base Material.**

TEST METHOD – Section Two, Part 4.1 – Marine Performance Test			
Marine Exposure	Adhesion	Specification	RESULTS
14 weeks exposure on south facing aluminum panel at Adhesive Technical Services' half tide site, on the Essex coast. Tests carried out according to BS 5609 Appendix C. Labels applied according to BS 5609 Appendix A1, to panels prepared according to Appendix B.	180° peel adhesion at 300 mm/minute (11.8 in/minute) according to BS 5609 Appendix D. Average adhesion and percentage of readings above specification recorded.	80% of readings not less than 10 N/25mm (36.3 oz/in)	Readings not Less Than 10 N/25mm (36.3 oz/in) PASS
			100%
			Mean Adhesion
			14.6 N/25mm (53.0 oz/in)

TEST METHOD – Section Two, Part 4.2.1 – Dimensional Stability			
Weathering	Measurement	Specification	RESULTS
Tests carried out on samples exposed for 14 weeks at marine half tide site for Part 4.1.	Samples measured in both directions before and after weathering. Samples conditioned for 48 hours at 23°C (73.4°F) and 50+/-% relative humidity prior to measuring. Maximum increase and decrease in dimensions and average change recorded.	Dimensions shall not alter by more than +1% or -3%.	Maximum Increase in Dimension PASS
			+0.1%
			Maximum Decrease in Dimension PASS
			-0.3%
			Average Change in Dimensions
			-0.02%

Product: FLEXcon DRUMcal™ 31046T LABEL BASE MATERIAL
 BS 5609 Section Two – continued

TEST METHOD – Section Two, Part 4.2.2 – Adhesion After 48 Hours			
Application	Measurement	Specification	RESULTS
Labels applied to aluminum test plates prepared according to Appendix B, using a 2 kg (4.4 lb) rubber coated roller according to Appendix A3.	180° peel adhesion at 300 mm/minute (11.8 in/minute) in accordance with Appendix D. Average adhesion and percentage of readings above specification recorded.	80% of readings not less than 12.5 N/25mm (45.4 oz/in)	Readings not Less Than 12.5 N/25mm (45.4 oz/in) PASS
			100%
			Mean Adhesion
			28.2 N/25mm (102.4 oz/in)

TEST METHOD – Section Two, Part 4.2.3 – Adhesion After Artificial Weathering				
Application	Weathering	Measurement	Specification	RESULTS
Labels applied to aluminum test plates prepared according to Appendix B, using a 2 kg (4.4 lb) rubber coated roller according to Appendix A3.	Samples exposed to laboratory artificial weathering in accordance with Appendix E.	180° peel adhesion at 300 mm/minute (11.8 in/minute) in accordance with Appendix D. Average adhesion and percentage of readings above specification recorded.	80% of readings not less than 12.5 N/25mm (45.4 oz/in)	Readings not Less Than 12.5 N/25mm (45.4 oz/in) PASS
				100%
				Mean Adhesion
				14.3 N/25mm (52.0 oz/in)

TEST METHOD – Section Two, Part 4.2.4 – Adhesion After Temperature Cycling				
Application	Temperature Cycling	Measurement	Specification	RESULTS
Labels applied to aluminum test plates prepared according to Appendix B, using a 2 kg (4.4 lb) rubber coated roller according to Appendix A3.	Samples submitted to temperature cycling in accordance with Appendix F.	180° peel adhesion at 300 mm/minute (11.8 in/minute) in accordance with Appendix D. Average adhesion and percentage of readings above specification recorded.	80% of readings not less than 12.5 N/25mm (45.4 oz/in)	Readings not Less Than 12.5 N/25mm (45.4 oz/in) PASS
				100%
				Mean Adhesion
				17.2 N/25mm (62.4 oz/in)

Product: FLEXcon DRUMcal™ 31046T LABEL BASE MATERIAL
 BS 5609 Section Two – continued

TEST METHOD – Section Two, Part 4.2.5 – Color Fastness of Base Material				
Weathering	Color Fastness	Hue	Specification	RESULTS
Tests carried out on samples exposed for 14 weeks at marine half tide site for Part 4.1.	Grey scale measurements according to Appendix G.	Visual Assessment	Color fastness rating not less than 2 compared with unweathered specimen. Color to remain recognizable as original hue.	Color Fastness <i>PASS</i>
				4
				Hue <i>PASS</i>
				Remained recognizable as original hue.

TESTED BY: Adhesive Technical Services Ltd., P.O. Box 51, Botany Way, Beacon Hill Industrial Estate.
 Purfleet, Essex RM 16 1SY Telephone: 01708 867355 Fax: 01708 869804

FLEXcon BS 5609 COMPLIANCE SUMMARY REPORT

Product: **FLEXcon DRUMcal™ 314461 LABEL BASE MATERIAL**
 3.8 mil matte topcoated flexible white matte polyethylene with an aggressive high performance permanent acrylic adhesive on a 60 lb. two side polycoated layflat release liner. Dot matrix/impact printable.

BS 5609 Section Two (February 11, 1998)

CONCLUSIONS: **FLEXcon DRUMcal™ 314461 label base material meets the requirements of BS 5609 Section Two. Pressure-Sensitive, Adhesive Coated Label Base Material.**

TEST METHOD – Section Two, Part 4.1 – Marine Performance Test			
Marine Exposure	Adhesion	Specification	RESULTS
14 weeks exposure on south facing aluminum panel at Adhesive Technical Services' half tide site, on the Essex coast. Tests carried out according to BS 5609 Appendix C. Labels applied according to BS 5609 Appendix A1, to panels prepared according to Appendix B.	180° peel adhesion at 300 mm/minute (11.8 in/minute) according to BS 5609 Appendix D. Average adhesion and percentage of readings above specification recorded.	80% of readings not less than 10 N/25mm (36.3 oz/in)	Readings not Less Than 10 N/25mm (36.3 oz/in) <i>PASS</i>
			100%
			Mean Adhesion
			19.4 N/25mm (70.4 oz/in)

TEST METHOD – Section Two, Part 4.2.1 – Dimensional Stability			
Weathering	Measurement	Specification	RESULTS
Tests carried out on samples exposed for 14 weeks at marine half tide site for Part 4.1.	Samples measured in both directions before and after weathering. Samples conditioned for 48 hours at 23°C (73.4°F) and 50+/-% relative humidity prior to measuring. Maximum increase and decrease in dimensions and average change recorded.	Dimensions shall not alter by more than +1% or -3%.	Maximum Increase in Dimension <i>PASS</i>
			0.0%
			Maximum Decrease in Dimension <i>PASS</i>
			-0.2%
			Average Change in Dimensions
			-0.03%

Product: FLEXcon DRUMcal™ 314461 LABEL BASE MATERIAL
 BS 5609 Section Two – continued

TEST METHOD – Section Two, Part 4.2.2 – Adhesion After 48 Hours			
Application	Measurement	Specification	RESULTS
Labels applied to aluminum test plates prepared according to Appendix B, using a 2 kg (4.4 lb) rubber coated roller according to Appendix A3.	180° peel adhesion at 300 mm/minute (11.8 in/minute) in accordance with Appendix D. Average adhesion and percentage of readings above specification recorded.	80% of readings not less than 12.5 N/25mm (45.4 oz/in)	Readings not Less Than 12.5 N/25mm (45.4 oz/in) PASS
			100%
			Mean Adhesion
			19.6 N/25mm (71.2 oz/in)

TEST METHOD – Section Two, Part 4.2.3 – Adhesion After Artificial Weathering				
Application	Weathering	Measurement	Specification	RESULTS
Labels applied to aluminum test plates prepared according to Appendix B, using a 2 kg (4.4 lb) rubber coated roller according to Appendix A3.	Samples exposed to laboratory artificial weathering in accordance with Appendix E.	180° peel adhesion at 300 mm/minute (11.8 in/minute) in accordance with Appendix D. Average adhesion and percentage of readings above specification recorded.	80% of readings not less than 12.5 N/25mm (45.4 oz/in)	Readings not Less Than 12.5 N/25mm (45.4 oz/in) PASS
				100%
				Mean Adhesion
				19.0 N/25mm (69.0 oz/in)

TEST METHOD – Section Two, Part 4.2.4 – Adhesion After Temperature Cycling				
Application	Temperature Cycling	Measurement	Specification	RESULTS
Labels applied to aluminum test plates prepared according to Appendix B, using a 2 kg (4.4 lb) rubber coated roller according to Appendix A3.	Samples submitted to temperature cycling in accordance with Appendix F.	180° peel adhesion at 300 mm/minute (11.8 in/minute) in accordance with Appendix D. Average adhesion and percentage of readings above specification recorded.	80% of readings not less than 12.5 N/25mm (45.4 oz/in)	Readings not Less Than 12.5 N/25mm (45.4 oz/in) PASS
				100%
				Mean Adhesion
				20.1 N/25mm (73.0 oz/in)

Product: FLEXcon DRUMcal™ 314461 LABEL BASE MATERIAL
 BS 5609 Section Two – continued

TEST METHOD – Section Two, Part 4.2.5 – Color Fastness of Base Material				
Weathering	Color Fastness	Hue	Specification	RESULTS
Tests carried out on samples exposed for 14 weeks at marine half tide site for Part 4.1.	Grey scale measurements according to Appendix G.	Visual Assessment	Color fastness rating not less than 2 compared with unweathered specimen.	Color Fastness <i>PASS</i>
				3
				Hue <i>PASS</i>
				Remained recognizable as original hue.

TESTED BY: Adhesive Technical Services Ltd., P.O. Box 51, Botany Way, Beacon Hill Industrial Estate.
 Purfleet, Essex RM 16 1SY Telephone: 01708 867355 Fax: 01708 869804

FLEXcon BS 5609 COMPLIANCE SUMMARY REPORT

Product: **FLEXcon DRUMcal™ 31846T LABEL BASE MATERIAL**
 3.8 mil topcoated flexible white matte polyethylene with an aggressive high performance permanent acrylic adhesive on a 60 lb. two side polycoated layflat release liner. Thermal transfer printable.

BS 5609 Section Two (February 11, 1998)

CONCLUSIONS: **FLEXcon DRUMcal™ 31846T label base material meets the requirements of BS 5609 Section Two. Pressure-Sensitive, Adhesive Coated Label Base Material.**

TEST METHOD – Section Two, Part 4.1 – Marine Performance Test			
Marine Exposure	Adhesion	Specification	RESULTS
14 weeks exposure on south facing aluminum panel at Adhesive Technical Services' half tide site, on the Essex coast. Tests carried out according to BS 5609 Appendix C. Labels applied according to BS 5609 Appendix A1, to panels prepared according to Appendix B.	180° peel adhesion at 300 mm/minute (11.8 in/minute) according to BS 5609 Appendix D. Average adhesion and percentage of readings above specification recorded.	80% of readings not less than 10 N/25mm (36.3 oz/in)	Readings not Less Than 10 N/25mm (36.3 oz/in) PASS
			100%
			Mean Adhesion
			14.4 N/25mm (52.3 oz/in)

TEST METHOD – Section Two, Part 4.2.1 – Dimensional Stability			
Weathering	Measurement	Specification	RESULTS
Tests carried out on samples exposed for 14 weeks at marine half tide site for Part 4.1.	Samples measured in both directions before and after weathering. Samples conditioned for 48 hours at 23°C (73.4°F) and 50+/-% relative humidity prior to measuring. Maximum increase and decrease in dimensions and average change recorded.	Dimensions shall not alter by more than +1% or -3%.	Maximum Increase in Dimension PASS
			0.0%
			Maximum Decrease in Dimension PASS
			-0.1%
			Average Change in Dimensions
			-0.03%

Product: FLEXcon DRUMcal™ 31846T LABEL BASE MATERIAL
 BS 5609 Section Two – continued

TEST METHOD – Section Two, Part 4.2.2 – Adhesion After 48 Hours			
Application	Measurement	Specification	RESULTS
Labels applied to aluminum test plates prepared according to Appendix B, using a 2 kg (4.4 lb) rubber coated roller according to Appendix A3.	180° peel adhesion at 300 mm/minute (11.8 in/minute) in accordance with Appendix D. Average adhesion and percentage of readings above specification recorded.	80% of readings not less than 12.5 N/25mm (45.4 oz/in)	Readings not Less Than 12.5 N/25mm (45.4 oz/in) PASS
			100%
			Mean Adhesion
			19.6 N/25mm (71.2 oz/in)

TEST METHOD – Section Two, Part 4.2.3 – Adhesion After Artificial Weathering				
Application	Weathering	Measurement	Specification	RESULTS
Labels applied to aluminum test plates prepared according to Appendix B, using a 2 kg (4.4 lb) rubber coated roller according to Appendix A3.	Samples exposed to laboratory artificial weathering in accordance with Appendix E.	180° peel adhesion at 300 mm/minute (11.8 in/minute) in accordance with Appendix D. Average adhesion and percentage of readings above specification recorded.	80% of readings not less than 12.5 N/25mm (45.4 oz/in)	Readings not Less Than 12.5 N/25mm (45.4 oz/in) PASS
				100%
				Mean Adhesion
				16.5 N/25mm (59.9 oz/in)

TEST METHOD – Section Two, Part 4.2.4 – Adhesion After Temperature Cycling				
Application	Temperature Cycling	Measurement	Specification	RESULTS
Labels applied to aluminum test plates prepared according to Appendix B, using a 2 kg (4.4 lb) rubber coated roller according to Appendix A3.	Samples submitted to temperature cycling in accordance with Appendix F.	180° peel adhesion at 300 mm/minute (11.8 in/minute) in accordance with Appendix D. Average adhesion and percentage of readings above specification recorded.	80% of readings not less than 12.5 N/25mm (45.4 oz/in)	Readings not Less Than 12.5 N/25mm (45.4 oz/in) PASS
				100%
				Mean Adhesion
				19.2 N/25mm (69.7 oz/in)

Product: FLEXcon DRUMcal™ 31846T LABEL BASE MATERIAL
 BS 5609 Section Two – continued

TEST METHOD – Section Two, Part 4.2.5 – Color Fastness of Base Material				
Weathering	Color Fastness	Hue	Specification	RESULTS
Tests carried out on samples exposed for 14 weeks at marine half tide site for Part 4.1.	Grey scale measurements according to Appendix G.	Visual Assessment	Color fastness rating not less than 2 compared with unweathered specimen.	Color Fastness <i>PASS</i>
				4 ½
				Hue <i>PASS</i>
				Remained recognizable as original hue.

TESTED BY: Adhesive Technical Services Ltd., P.O. Box 51, Botany Way, Beacon Hill Industrial Estate.
 Purfleet, Essex RM 16 1SY Telephone: 01708 867355 Fax: 01708 869804

FLEXcon BS 5609 COMPLIANCE SUMMARY REPORT

Product: FLEXcon DRUMcal™ 35046TI LABEL BASE MATERIAL
 3.5 mil print receptive flexible white matte polyethylene with an aggressive high performance permanent acrylic adhesive on a 60 lb. two side polycoated layflat release liner. Thermal transfer and dot matrix/impact printable.

BS 5609 Section Two (February 11, 1998)

CONCLUSIONS: FLEXcon DRUMcal™ 35046TI label base material meets the requirements of BS 5609 Section Two. Pressure-Sensitive, Adhesive Coated Label Base Material.

TEST METHOD – Section Two, Part 4.1 – Marine Performance Test			
Marine Exposure	Adhesion	Specification	RESULTS
14 weeks exposure on south facing aluminum panel at Adhesive Technical Services' half tide site, on the Essex coast. Tests carried out according to BS 5609 Appendix C. Labels applied according to BS 5609 Appendix A1, to panels prepared according to Appendix B.	180° peel adhesion at 300 mm/minute (11.8 in/minute) according to BS 5609 Appendix D. Average adhesion and percentage of readings above specification recorded.	80% of readings not less than 10 N/25mm (36.3 oz/in)	Readings not Less Than 10 N/25mm (36.3 oz/in) <i>PASS</i>
			100%
			Mean Adhesion
			24.0 N/25mm (87.1 oz/in)

TEST METHOD – Section Two, Part 4.2.1 – Dimensional Stability			
Weathering	Measurement	Specification	RESULTS
Tests carried out on samples exposed for 14 weeks at marine half tide site for Part 4.1.	Samples measured in both directions before and after weathering. Samples conditioned for 48 hours at 23°C (73.4°F) and 50+/-% relative humidity prior to measuring. Maximum increase and decrease in dimensions and average change recorded.	Dimensions shall not alter by more than +1% or -3%.	Maximum Increase in Dimension <i>PASS</i>
			+0.1%
			Maximum Decrease in Dimension <i>PASS</i>
			-0.2%
			Average Change in Dimensions
			-0.1%

Product: FLEXcon DRUMcal™ 35046TI LABEL BASE MATERIAL
 BS 5609 Section Two – continued

TEST METHOD – Section Two, Part 4.2.2 – Adhesion After 48 Hours			
Application	Measurement	Specification	RESULTS
Labels applied to aluminum test plates prepared according to Appendix B, using a 2 kg (4.4 lb) rubber coated roller according to Appendix A3.	180° peel adhesion at 300 mm/minute (11.8 in/minute) in accordance with Appendix D. Average adhesion and percentage of readings above specification recorded.	80% of readings not less than 12.5 N/25mm (45.4 oz/in)	Readings not Less Than 12.5 N/25mm (45.4 oz/in) PASS
			100%
			Mean Adhesion
			22.8 N/25mm (82.8 oz/in)

TEST METHOD – Section Two, Part 4.2.3 – Adhesion After Artificial Weathering				
Application	Weathering	Measurement	Specification	RESULTS
Labels applied to aluminum test plates prepared according to Appendix B, using a 2 kg (4.4 lb) rubber coated roller according to Appendix A3.	Samples exposed to laboratory artificial weathering in accordance with Appendix E.	180° peel adhesion at 300 mm/minute (11.8 in/minute) in accordance with Appendix D. Average adhesion and percentage of readings above specification recorded.	80% of readings not less than 12.5 N/25mm (45.4 oz/in)	Readings not Less Than 12.5 N/25mm (45.4 oz/in) PASS
				100%
				Mean Adhesion
				22.1 N/25mm (80.2 oz/in)

TEST METHOD – Section Two, Part 4.2.4 – Adhesion After Temperature Cycling				
Application	Temperature Cycling	Measurement	Specification	RESULTS
Labels applied to aluminum test plates prepared according to Appendix B, using a 2 kg (4.4 lb) rubber coated roller according to Appendix A3.	Samples submitted to temperature cycling in accordance with Appendix F.	180° peel adhesion at 300 mm/minute (11.8 in/minute) in accordance with Appendix D. Average adhesion and percentage of readings above specification recorded.	80% of readings not less than 12.5 N/25mm (45.4 oz/in)	Readings not Less Than 12.5 N/25mm (45.4 oz/in) PASS
				100%
				Mean Adhesion
				24.8 N/25mm (90.0 oz/in)

Product: FLEXcon DRUMcal™ 35046TI LABEL BASE MATERIAL
 BS 5609 Section Two – continued

TEST METHOD – Section Two, Part 4.2.5 – Color Fastness of Base Material				
Weathering	Color Fastness	Hue	Specification	RESULTS
Tests carried out on samples exposed for 14 weeks at marine half tide site for Part 4.1.	Grey scale measurements according to Appendix G.	Visual Assessment	Color fastness rating not less than 2 compared with unweathered specimen. Color to remain recognizable as original hue.	Color Fastness <i>PASS</i>
				4 ½
				Hue <i>PASS</i>
				Remained recognizable as original hue.

TESTED BY: Adhesive Technical Services Ltd., P.O. Box 51, Botany Way, Beacon Hill Industrial Estate.
 Purfleet, Essex RM 16 1SY Telephone: 01708 867355 Fax: 01708 869804

FLEXcon BS 5609 COMPLIANCE SUMMARY REPORT

Product: FLEXcon DRUMcal™ PE-350-FWM P/T/P V-344DL LABEL BASE MATERIAL
 3.5 mil print receptive flexible white matte polyethylene with an aggressive high performance permanent acrylic adhesive. Thermal transfer printable.

BS 5609 Section Two (February 11, 1998)

CONCLUSIONS: FLEXcon DRUMcal™ PE-350-FWM P/T/P V-344DL label base material meets the requirements of BS 5609 Section Two. Pressure-Sensitive, Adhesive Coated Label Base Material.

TEST METHOD – Section Two, Part 4.1 – Marine Performance Test			
Marine Exposure	Adhesion	Specification	RESULTS
14 weeks exposure on south facing aluminum panel at Adhesive Technical Services' half tide site, on the Essex coast. Tests carried out according to BS 5609 Appendix C. Labels applied according to BS 5609 Appendix A1, to panels prepared according to Appendix B.	180° peel adhesion at 300 mm/minute (11.8 in/minute) according to BS 5609 Appendix D. Average adhesion and percentage of readings above specification recorded.	80% of readings not less than 10 N/25mm (36.3 oz/in)	Readings not Less Than 10 N/25mm (36.3 oz/in) <i>PASS</i>
			100%
			Mean Adhesion
			24.0 N/25mm (87.1 oz/in)

TEST METHOD – Section Two, Part 4.2.1 – Dimensional Stability			
Weathering	Measurement	Specification	RESULTS
Tests carried out on samples exposed for 14 weeks at marine half tide site for Part 4.1.	Samples measured in both directions before and after weathering. Samples conditioned for 48 hours at 23°C (73.4°F) and 50+/-% relative humidity prior to measuring. Maximum increase and decrease in dimensions and average change recorded.	Dimensions shall not alter by more than +1% or -3%.	Maximum Increase in Dimension <i>PASS</i>
			+0.1%
			Maximum Decrease in Dimension <i>PASS</i>
			-0.2%
			Average Change in Dimensions
			-0.1%

Product: FLEXcon DRUMcal™ PE-350-FWM P/T/P V-344DL LABEL BASE MATERIAL
BS 5609 Section Two – continued

TEST METHOD – Section Two, Part 4.2.2 – Adhesion After 48 Hours			
Application	Measurement	Specification	RESULTS
Labels applied to aluminum test plates prepared according to Appendix B, using a 2 kg (4.4 lb) rubber coated roller according to Appendix A3.	180° peel adhesion at 300 mm/minute (11.8 in/minute) in accordance with Appendix D. Average adhesion and percentage of readings above specification recorded.	80% of readings not less than 12.5 N/25mm (45.4 oz/in)	Readings not Less Than 12.5 N/25mm (45.4 oz/in) PASS
			100%
			Mean Adhesion
			22.8 N/25mm (82.8 oz/in)

TEST METHOD – Section Two, Part 4.2.3 – Adhesion After Artificial Weathering				
Application	Weathering	Measurement	Specification	RESULTS
Labels applied to aluminum test plates prepared according to Appendix B, using a 2 kg (4.4 lb) rubber coated roller according to Appendix A3.	Samples exposed to laboratory artificial weathering in accordance with Appendix E.	180° peel adhesion at 300 mm/minute (11.8 in/minute) in accordance with Appendix D. Average adhesion and percentage of readings above specification recorded.	80% of readings not less than 12.5 N/25mm (45.4 oz/in)	Readings not Less Than 12.5 N/25mm (45.4 oz/in) PASS
				100%
				Mean Adhesion
				22.8 N/25mm (80.2 oz/in)

TEST METHOD – Section Two, Part 4.2.4 – Adhesion After Temperature Cycling				
Application	Temperature Cycling	Measurement	Specification	RESULTS
Labels applied to aluminum test plates prepared according to Appendix B, using a 2 kg (4.4 lb) rubber coated roller according to Appendix A3.	Samples submitted to temperature cycling in accordance with Appendix F.	180° peel adhesion at 300 mm/minute (11.8 in/minute) in accordance with Appendix D. Average adhesion and percentage of readings above specification recorded.	80% of readings not less than 12.5 N/25mm (45.4 oz/in)	Readings not Less Than 12.5 N/25mm (45.4 oz/in) PASS
				100%
				Mean Adhesion
				24.8 N/25mm (90.0 oz/in)

Product: FLEXcon DRUMcal™ PE-350-FWM P/T/P V-344DL LABEL BASE MATERIAL
 BS 5609 Section Two – continued

TEST METHOD – Section Two, Part 4.2.5 – Color Fastness of Base Material				
Weathering	Color Fastness	Hue	Specification	RESULTS
Tests carried out on samples exposed for 14 weeks at marine half tide site for Part 4.1.	Grey scale measurements according to Appendix G.	Visual Assessment	Color fastness rating not less than 2 compared with unweathered specimen. Color to remain recognizable as original hue.	Color Fastness <i>PASS</i>
				4 ½
				Hue <i>PASS</i>
				Remained recognizable as original hue.

TESTED BY: Adhesive Technical Services Ltd., P.O. Box 51, Botany Way, Beacon Hill Industrial Estate.
 Purfleet, Essex RM 16 1SY Telephone: 01708 867355 Fax: 01708 869804

FLEXcon BS 5609 COMPLIANCE SUMMARY REPORT

Product: FLEXcon DRUMcal™ PE-380-F WHITE MATTE P/T/P V-344DL LABEL BASE MATERIAL
3.5 mil print treated flexible white matte polyethylene with an aggressive high performance acrylic adhesive. Thermal transfer printable.

BS 5609 Section Two (February 11, 1998)

CONCLUSIONS: FLEXcon DRUMcal™ PE-380-F WHITE MATTE P/T/P V-344DL label base material meets the requirements of BS 5609 Section Two. Pressure-Sensitive, Adhesive Coated Label Base Material.

TEST METHOD – Section Two, Part 4.1 – Marine Performance Test			
Marine Exposure	Adhesion	Specification	RESULTS
14 weeks exposure on south facing aluminum panel at Adhesive Technical Services' half tide site, on the Essex coast. Tests carried out according to BS 5609 Appendix C. Labels applied according to BS 5609 Appendix A1, to panels prepared according to Appendix B.	180° peel adhesion at 300 mm/minute (11.8 in/minute) according to BS 5609 Appendix D. Average adhesion and percentage of readings above specification recorded.	80% of readings not less than 10 N/25mm (36.3 oz/in)	Readings not Less Than 10 N/25mm (36.3 oz/in) <i>PASS</i>
			100%
			Mean Adhesion
			14.6 N/25mm (53.0 oz/in)

TEST METHOD – Section Two, Part 4.2.1 – Dimensional Stability			
Weathering	Measurement	Specification	RESULTS
Tests carried out on samples exposed for 14 weeks at marine half tide site for Part 4.1.	Samples measured in both directions before and after weathering. Samples conditioned for 48 hours at 23°C (73.4°F) and 50+/-% relative humidity prior to measuring. Maximum increase and decrease in dimensions and average change recorded.	Dimensions shall not alter by more than +1% or -3%.	Maximum Increase in Dimension <i>PASS</i>
			+0.1%
			Maximum Decrease in Dimension <i>PASS</i>
			-0.3%
			Average Change in Dimensions
			-0.02%

Product: FLEXcon DRUMcal™ PE-380-F WHITE MATTE P/T/P V-344DL LABEL BASE MATERIAL
BS 5609 Section Two – continued

TEST METHOD – Section Two, Part 4.2.2 – Adhesion After 48 Hours			
Application	Measurement	Specification	RESULTS
Labels applied to aluminum test plates prepared according to Appendix B, using a 2 kg (4.4 lb) rubber coated roller according to Appendix A3.	180° peel adhesion at 300 mm/minute (11.8 in/minute) in accordance with Appendix D. Average adhesion and percentage of readings above specification recorded.	80% of readings not less than 12.5 N/25mm (45.4 oz/in)	Readings not Less Than 12.5 N/25mm (45.4 oz/in) PASS
			100%
			Mean Adhesion
			28.2 N/25mm (102.4 oz/in)

TEST METHOD – Section Two, Part 4.2.3 – Adhesion After Artificial Weathering				
Application	Weathering	Measurement	Specification	RESULTS
Labels applied to aluminum test plates prepared according to Appendix B, using a 2 kg (4.4 lb) rubber coated roller according to Appendix A3.	Samples exposed to laboratory artificial weathering in accordance with Appendix E.	180° peel adhesion at 300 mm/minute (11.8 in/minute) in accordance with Appendix D. Average adhesion and percentage of readings above specification recorded.	80% of readings not less than 12.5 N/25mm (45.4 oz/in)	Readings not Less Than 12.5 N/25mm (45.4 oz/in) PASS
				100%
				Mean Adhesion
				14.3 N/25mm (51.9 oz/in)

TEST METHOD – Section Two, Part 4.2.4 – Adhesion After Temperature Cycling				
Application	Temperature Cycling	Measurement	Specification	RESULTS
Labels applied to aluminum test plates prepared according to Appendix B, using a 2 kg (4.4 lb) rubber coated roller according to Appendix A3.	Samples submitted to temperature cycling in accordance with Appendix F.	180° peel adhesion at 300 mm/minute (11.8 in/minute) in accordance with Appendix D. Average adhesion and percentage of readings above specification recorded.	80% of readings not less than 12.5 N/25mm (45.4 oz/in)	Readings not Less Than 12.5 N/25mm (45.4 oz/in) PASS
				100%
				Mean Adhesion
				17.2 N/25mm (62.4 oz/in)

Product: FLEXcon DRUMcal™ PE-380-F WHITE MATTE P/T/P V-344DL LABEL BASE MATERIAL
 BS 5609 Section Two – continued

TEST METHOD – Section Two, Part 4.2.5 – Color Fastness of Base Material				
Weathering	Color Fastness	Hue	Specification	RESULTS
Tests carried out on samples exposed for 14 weeks at marine half tide site for Part 4.1.	Grey scale measurements according to Appendix G.	Visual Assessment	Color fastness rating not less than 2 compared with unweathered specimen. Color to remain recognizable as original hue.	Color Fastness <i>PASS</i>
				4
				Hue <i>PASS</i>
				Remained recognizable as original hue.

TESTED BY: Adhesive Technical Services Ltd., P.O. Box 51, Botany Way, Beacon Hill Industrial Estate.
 Purfleet, Essex RM 16 1SY Telephone: 01708 867355 Fax: 01708 869804

FLEXcon BS 5609 COMPLIANCE SUMMARY REPORT

Product: FLEXcon DRUMcal™ PE-380-FWM T/C-238 V-344DL LABEL BASE MATERIAL
 3.8 mil thermal transfer printable topcoated flexible white matte polyethylene with an aggressive high performance permanent acrylic adhesive. Thermal transfer printable.

BS 5609 Section Two (February 11, 1998)

CONCLUSIONS: FLEXcon DRUMcal™ PE-380-FWM T/C-238 V-344DL label base material meets the requirements of BS 5609 Section Two. Pressure-Sensitive, Adhesive Coated Label Base Material.

TEST METHOD – Section Two, Part 4.1 – Marine Performance Test			
Marine Exposure	Adhesion	Specification	RESULTS
14 weeks exposure on south facing aluminum panel at Adhesive Technical Services' half tide site, on the Essex coast. Tests carried out according to BS 5609 Appendix C. Labels applied according to BS 5609 Appendix A1, to panels prepared according to Appendix B.	180° peel adhesion at 300 mm/minute (11.8 in/minute) according to BS 5609 Appendix D. Average adhesion and percentage of readings above specification recorded.	80% of readings not less than 10 N/25mm (36.3 oz/in)	Readings not Less Than 10 N/25mm (36.3 oz/in) <i>PASS</i>
			100%
			Mean Adhesion
			14.4 N/25mm (52.3 oz/in)

TEST METHOD – Section Two, Part 4.2.1 – Dimensional Stability			
Weathering	Measurement	Specification	RESULTS
Tests carried out on samples exposed for 14 weeks at marine half tide site for Part 4.1.	Samples measured in both directions before and after weathering. Samples conditioned for 48 hours at 23°C (73.4°F) and 50+/-% relative humidity prior to measuring. Maximum increase and decrease in dimensions and average change recorded.	Dimensions shall not alter by more than +1% or -3%.	Maximum Increase in Dimension <i>PASS</i>
			0.0%
			Maximum Decrease in Dimension <i>PASS</i>
			-0.1%
			Average Change in Dimensions
			-0.03%

Product: FLEXcon DRUMcal™ PE-380-FWM T/C-238 V-344DL LABEL BASE MATERIAL
 BS 5609 Section Two – continued

TEST METHOD – Section Two, Part 4.2.2 – Adhesion After 48 Hours			
Application	Measurement	Specification	RESULTS
Labels applied to aluminum test plates prepared according to Appendix B, using a 2 kg (4.4 lb) rubber coated roller according to Appendix A3.	180° peel adhesion at 300 mm/minute (11.8 in/minute) in accordance with Appendix D. Average adhesion and percentage of readings above specification recorded.	80% of readings not less than 12.5 N/25mm (45.4 oz/in)	Readings not Less Than 12.5 N/25mm (45.4 oz/in) PASS
			100%
			Mean Adhesion
			19.6 N/25mm (71.2 oz/in)

TEST METHOD – Section Two, Part 4.2.3 – Adhesion After Artificial Weathering				
Application	Weathering	Measurement	Specification	RESULTS
Labels applied to aluminum test plates prepared according to Appendix B, using a 2 kg (4.4 lb) rubber coated roller according to Appendix A3.	Samples exposed to laboratory artificial weathering in accordance with Appendix E.	180° peel adhesion at 300 mm/minute (11.8 in/minute) in accordance with Appendix D. Average adhesion and percentage of readings above specification recorded.	80% of readings not less than 12.5 N/25mm (45.4 oz/in)	Readings not Less Than 12.5 N/25mm (45.4 oz/in) PASS
				100%
				Mean Adhesion
				16.5 N/25mm (59.9 oz/in)

TEST METHOD – Section Two, Part 4.2.4 – Adhesion After Temperature Cycling				
Application	Temperature Cycling	Measurement	Specification	RESULTS
Labels applied to aluminum test plates prepared according to Appendix B, using a 2 kg (4.4 lb) rubber coated roller according to Appendix A3.	Samples submitted to temperature cycling in accordance with Appendix F.	180° peel adhesion at 300 mm/minute (11.8 in/minute) in accordance with Appendix D. Average adhesion and percentage of readings above specification recorded.	80% of readings not less than 12.5 N/25mm (45.4 oz/in)	Readings not Less Than 12.5 N/25mm (45.4 oz/in) PASS
				100%
				Mean Adhesion
				19.2 N/25mm (69.7 oz/in)

Product: FLEXcon DRUMcal™ PE-380-FWM T/C-238 V-344DL LABEL BASE MATERIAL
 BS 5609 Section Two – continued

TEST METHOD – Section Two, Part 4.2.5 – Color Fastness of Base Material				
Weathering	Color Fastness	Hue	Specification	RESULTS
Tests carried out on samples exposed for 14 weeks at marine half tide site for Part 4.1.	Grey scale measurements according to Appendix G.	Visual Assessment	Color fastness rating not less than 2 compared with unweathered specimen. Color to remain recognizable as original hue.	Color Fastness <i>PASS</i>
				4 ½
				Hue <i>PASS</i>
				Remained recognizable as original hue.

TESTED BY: Adhesive Technical Services Ltd., P.O. Box 51, Botany Way, Beacon Hill Industrial Estate.
 Purfleet, Essex RM 16 1SY Telephone: 01708 867355 Fax: 01708 869804

FLEXcon BS 5609 COMPLIANCE SUMMARY REPORT

Product: FLEXcon DRUMcal™ PE-380-FWM T/C-354 V-344DL LABEL BASE MATERIAL
 3.8 mil matte topcoated flexible white matte polyethylene with an aggressive high performance permanent acrylic adhesive. Dot matrix/impact printable.

BS 5609 Section Two (February 11, 1998)

CONCLUSIONS: FLEXcon DRUMcal™ PE-380-FWM T/C-354 V-344DL label base material meets the requirements of BS 5609 Section Two. Pressure-Sensitive, Adhesive Coated Label Base Material.

TEST METHOD – Section Two, Part 4.1 – Marine Performance Test			
Marine Exposure	Adhesion	Specification	RESULTS
14 weeks exposure on south facing aluminum panel at Adhesive Technical Services' half tide site, on the Essex coast. Tests carried out according to BS 5609 Appendix C. Labels applied according to BS 5609 Appendix A1, to panels prepared according to Appendix B.	180° peel adhesion at 300 mm/minute (11.8 in/minute) according to BS 5609 Appendix D. Average adhesion and percentage of readings above specification recorded.	80% of readings not less than 10 N/25mm (36.3 oz/in)	Readings not Less Than 10 N/25mm (36.3 oz/in) <i>PASS</i>
			100%
			Mean Adhesion
			19.4 N/25mm (70.4 oz/in)

TEST METHOD – Section Two, Part 4.2.1 – Dimensional Stability			
Weathering	Measurement	Specification	RESULTS
Tests carried out on samples exposed for 14 weeks at marine half tide site for Part 4.1.	Samples measured in both directions before and after weathering. Samples conditioned for 48 hours at 23°C (73.4°F) and 50+/-% relative humidity prior to measuring. Maximum increase and decrease in dimensions and average change recorded.	Dimensions shall not alter by more than +1% or -3%.	Maximum Increase in Dimension <i>PASS</i>
			0.0%
			Maximum Decrease in Dimension <i>PASS</i>
			-0.2%
			Average Change in Dimensions
			-0.03%

Product: FLEXcon DRUMcal™ PE-380-FWM T/C-354 V-344DL LABEL BASE MATERIAL
 BS 5609 Section Two – continued

TEST METHOD – Section Two, Part 4.2.2 – Adhesion After 48 Hours			
Application	Measurement	Specification	RESULTS
Labels applied to aluminum test plates prepared according to Appendix B, using a 2 kg (4.4 lb) rubber coated roller according to Appendix A3.	180° peel adhesion at 300 mm/minute (11.8 in/minute) in accordance with Appendix D. Average adhesion and percentage of readings above specification recorded.	80% of readings not less than 12.5 N/25mm (45.4 oz/in)	Readings not Less Than 12.5 N/25mm (45.4 oz/in) PASS
			100%
			Mean Adhesion
			19.6 N/25mm (71.2 oz/in)

TEST METHOD – Section Two, Part 4.2.3 – Adhesion After Artificial Weathering				
Application	Weathering	Measurement	Specification	RESULTS
Labels applied to aluminum test plates prepared according to Appendix B, using a 2 kg (4.4 lb) rubber coated roller according to Appendix A3.	Samples exposed to laboratory artificial weathering in accordance with Appendix E.	180° peel adhesion at 300 mm/minute (11.8 in/minute) in accordance with Appendix D. Average adhesion and percentage of readings above specification recorded.	80% of readings not less than 12.5 N/25mm (45.4 oz/in)	Readings not Less Than 12.5 N/25mm (45.4 oz/in) PASS
				100%
				Mean Adhesion
				19.0 N/25mm (69.0 oz/in)

TEST METHOD – Section Two, Part 4.2.4 – Adhesion After Temperature Cycling				
Application	Temperature Cycling	Measurement	Specification	RESULTS
Labels applied to aluminum test plates prepared according to Appendix B, using a 2 kg (4.4 lb) rubber coated roller according to Appendix A3.	Samples submitted to temperature cycling in accordance with Appendix F.	180° peel adhesion at 300 mm/minute (11.8 in/minute) in accordance with Appendix D. Average adhesion and percentage of readings above specification recorded.	80% of readings not less than 12.5 N/25mm (45.4 oz/in)	Readings not Less Than 12.5 N/25mm (45.4 oz/in) PASS
				100%
				Mean Adhesion
				20.1 N/25mm (73.0 oz/in)

Product: FLEXcon DRUMcal™ PE-380-FWM T/C-354 V-344DL LABEL BASE MATERIAL
BS 5609 Section Two – continued

TEST METHOD – Section Two, Part 4.2.5 – Color Fastness of Base Material				
Weathering	Color Fastness	Hue	Specification	RESULTS
Tests carried out on samples exposed for 14 weeks at marine half tide site for Part 4.1.	Grey scale measurements according to Appendix G.	Visual Assessment	Color fastness rating not less than 2 compared with unweathered specimen.	Color Fastness <i>PASS</i>
				3
				Hue <i>PASS</i>
				Remained recognizable as original hue.

TESTED BY: Adhesive Technical Services Ltd., P.O. Box 51, Botany Way, Beacon Hill Industrial Estate. Purfleet, Essex RM 16 1SY Telephone: 01708 867355 Fax: 01708 869804

Product: FLEXcon DRUMcal™ V310F WHITE TC-274 V-224 73 RB/FR TO
BS 5609 Section Two

CONCLUSIONS: FLEXcon label base materials reference “Drumcal V310 F WHITE TC-274 V-224 74 RB/FR

TEST METHOD – Section Two, Part 4.1 – Marine Performance Test			
Marine Exposure	Adhesion	Specification	RESULTS
13 weeks exposure on south facing aluminum panel at Adhesive Technical Services’ half tide site, on the Essex coast, Tests carried out according to BS 5609 Appendix C. Labels applied according to BS 5609 Appendix A1, to panels prepared according to Appendix B	180° peel adhesion at 300mm/minute according to BS 5609 Appendix D. Average adhesion and percentages of readings above specification recorded.	80% of readings not less than 10 N/25mm	Readings not Less Than 10 N/25mm (36.3 oz/in) <i>PASS</i>
			100%
			Mean Adhesion
			Approximately 37 N/25mm

