

# Approved Retro-reflective Sheeting Materials for Road Signs

Summary:	Audience:
This Technical Direction deals with approved retro-reflective sheeting for use in the manufacture of road signs supplied to Roads & Maritime Services' (RMS) and/or installed on RMS roads.	<ul style="list-style-type: none"> <li>• Asset maintenance staff / contractors</li> <li>• Project management staff / contractors</li> <li>• Procurement staff</li> <li>• Road sign manufacturers</li> <li>• Traffic management staff</li> <li>• Road safety staff</li> </ul>

## Practice / General

All sheeting materials approved by RMS shall meet all requirements of Australian/ New Zealand Standard AS/NZS 1906.1. For material to be approved for use on RMS roads, a test report from an independent approved laboratory showing full conformance to this Australian/New Zealand standard must be provided by the retro-reflective sheeting manufacturer, supplier or registered distributor.

In addition, RMS specifies a new class (Class 1X) beyond those specified in the standard to provide optimum retroreflectivity in certain applications. The requirement for retroreflectivity of Class 1X can be found in RMS QA Spec 3400, with all other requirements to be taken as the same as Class 1W material.

A primary requirement to enable a material to comply with the Australian/New Zealand standard is the need to conduct accelerated outdoor weathering testing from Allunga Exposure Laboratory P/L, near Townsville in Queensland. This creates a time frame of up to 4 years of outdoor weather testing before a material is submitted to RMS for assessment.

RMS recognises that retro-reflective sheeting manufacturers/suppliers are constantly developing new and improved sign materials to enhance performance together with more efficient manufacturing techniques and reduced costs.

To take advantage of the benefits of these newer materials sooner, RMS provides an interim approval for new and derivative materials. Interim approval may be granted by RMS until the full accelerated outdoor weathering testing at Allunga (or a similar facility recognised by RMS) is satisfactorily completed. The material may then be granted full approval.

## Approvals:

Owner:	General Manager, Network Optimisation	Review Date:	October 2016	
Authorised by:	Ken Kanofski, Director Journey Management	Date:	10/10/2013	Page 1   6
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When considering interim approval, RMS will consider a company's:

- history, especially in dealings with RMS
- record for providing materials of proven product quality and performance, and
- ability to supply the product

Interim approval is subject to satisfactory field performance, and may be rescinded at any time at the discretion of RMS.

### Action

All road signs manufactured and/or installed on RMS roads must comprise of approved retro-reflective sheeting material in the attached listing.

### Updates

To ensure that this *Technical Direction* remains current and relevant, minor updates may be made from time to time. This may be done through the Roads & Maritime Services' website using the Traffic & Transport Policies & Guidelines Register which can be found at:

[www.rms.nsw.gov.au/trafficinformation/guidelines/documentregister](http://www.rms.nsw.gov.au/trafficinformation/guidelines/documentregister).

The Register should always be checked prior to using this *Technical Direction*.

**APPROVED RETRO-REFLECTIVE SHEETING MATERIAL**

Colour	Class	3M Scotchlite (3M Australia P/L)	Nikkalite (ASP Group)	Kiwalite (Sakai Australia P/L)	Avery (Avery Dennison P/L)	Oralite (Orafol P/L)
White	1X	Scotchlite <b>4090</b>			Avery <b>T-9500, T11500</b>	
	1	Scotchlite <b>3930</b>	Nikkalite UL 812	Kiwalite 22013, <b>55013</b>	Avery T-5500, T-6500	Oralite <b>5910 (010)</b>
	1(WZ)	Scotchlite <b>4090, 3930</b>	Nikkalite UL 812		Avery T-6500	Oralite 5810 (010)
	2	Scotchlite 3290	Nikkalite 8112	Kiwalite 2013	Avery <b>T-1500</b>	
Yellow	1X	Scotchlite <b>4091</b>			Avery <b>T-9501, T-11501</b>	
	1X/EC	<b>1171 on 4090 1170C on 4090 Digital Durst with 8800UV ink</b>			<b>OL 2001 on T-9500</b>	
	1	Scotchlite <b>3931</b>	Nikkalite UL 804	Kiwalite 22043, <b>55043</b>	Avery T-5501, T-6501	Oralite <b>5910 (020)</b>
	1/EC	<b>1171 on 3930 1170C on 3930 Digital Durst with 8800UV ink</b>		Kiwacal <b>AF-204 on 55013</b>	<b>OL 2001 on T- 5500 / T- 6500</b>	Oralite <b>5061 (020) on 5910 (010)</b>
	1(WZ)	Scotchlite <b>4091, 3931</b>	Nikkalite UL 804		Avery T-5501, T-6501	Oralite 5810 (020)
	2	Scotchlite 3271	Nikkalite 8104	Kiwalite 2043	Avery <b>T-1501</b>	
	2/EC	<b>1171 on 3290</b>			<b>OL 2001 on T-1500</b>	
Red	1X	Scotchlite <b>4092</b>			Avery <b>T-9508, T11508</b>	
	1X/EC	<b>1172 on 4090 1170C on 4090 Digital Durst with 8800UV ink</b>			<b>OL 2008 on T-9500</b>	
	1	Scotchlite <b>3932</b>	Nikkalite UL 805	Kiwalite 22063, <b>55063</b>	Avery T-5508, T-6508	Oralite <b>5910 (030)</b>


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Red	1/EC	<b>1172 on 3930</b> <b>1170C on 3930 Digital</b> <b>Durst with 8800UV ink</b>		Kiwacal <b>FF-106 on 22013</b> Kiwacal <b>AF-204 on 55013</b>	<b>OL 2008 on T- 5500 / T- 6500</b>	Oralite <b>5061 (030) on 5910 (010)</b>
	1(WZ)					Oralite 5810 (030)
	2	Scotchlite 3272	Nikkalite 8105	Kiwalite 2063	Avery <b>T-1508</b>	
	2/EC	<b>1172 on 3290</b>			<b>OL 2008 on T-1500</b>	
Std Green	1X					
	1X/EC	<b>1176 on 4090</b> <b>1170C on 4090 Digital</b> <b>Durst with 8800UV ink</b>			<b>OL 2027 on T-9500</b>	
	1		Nikkalite UL 828	Kiwalite 22273	Avery <b>T-5527, T-6527</b>	Oralite 5910 (060)
	1/EC	<b>1176 on 3930</b> <b>1170C on 3930 Digital</b> <b>Durst with 8800UV ink</b>		Kiwacal <b>FF-117 on 22013</b> Kiwacal <b>FF-117 on 55013</b>	<b>OL 2027 on T- 5500 / T- 6500</b>	Oralite <b>5061 (060) on 5910 (010)</b>
	2	Scotchlite 3226				
	2/EC	<b>1176 on 3290</b>			<b>OL 2027 on T-1500</b>	
Blue	1X	Scotchlite <b>4095</b>			Avery <b>T-9505, T11505</b>	
	1X/EC	<b>1175 on 4090</b> <b>1170C on 4090 Digital</b> <b>Durst with 8800UV ink</b>			<b>OL 2005 on T-9500</b>	
	1	Scotchlite <b>3935</b>	Nikkalite UL 806	Kiwalite 22083, <b>55083</b>	Avery <b>T-5505, T-6505</b>	Oralite <b>5910 (050)</b>

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Blue	1/EC	<b>1175 on 3930</b> <b>1170C on 3930 Digital</b> <b>Durst with 8800UV ink</b>		Kiwacal <b>FF-108 on 22013</b> Kiwacal <b>AF-208 on 55013</b>	<b>OL 2005 on T- 5500 / T- 6500</b>	Oralite <b>5061 (050) on 5910 (010)</b>
	1(WZ)					Oralite 5810 (050)
	2	Scotchlite 3275	Nikkalite 8106	Kiwalite 2083	Avery T-1505	
	2/EC	<b>1175 on 3290</b>			<b>OL 2005 on T-1500</b>	
Brown	1X					
	1X/EC	<b>1179 on 4090</b> <b>1170C on 4090 Digital</b> <b>Durst with 8800UV ink</b>			<b>OL 2009 on T-9500</b>	
	1		Nikkalite UL 809	Kiwalite 22193	Avery <b>T-5509, T-6509</b>	Oralite <b>5910 (080)</b>
	1/EC	<b>1179 on 3930</b> <b>1170C on 3930 Digital</b> <b>Durst with 8800UV ink</b>		Kiwacal <b>FF-119 on 22013</b> Kiwacal <b>AF-219 on 55013</b>	<b>OL 2009 on T- 5500 / T- 6500</b>	Oralite <b>5061 (080) on 5910 (010)</b>
	2	Scotchlite 3279	Nikkalite 8109	Kiwalite 2193	Avery T-1509	
	2/EC	<b>1179 on 3290</b>			<b>OL 2009 on T-1500</b>	
Fluoro Orange	1X	Scotchlite <b>4084</b>			Avery <b>W-9514, W-11514</b>	
	1			Kiwalite <b>55153</b>		
	1(WZ)			Kiwalite <b>55153</b>		
Fluoro Yellow/Green	1X	Scotchlite <b>4083</b>			Avery <b>T-9513, W-11513</b>	
	1			Kiwalite <b>55033</b>		

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Fluoro Yellow	1X	Scotchlite <i>4081</i>			Avery <i>T-9511, W-11511</i>	
<p><i>Letters in black italic = interim approved</i>       = not approved</p>						