Comply with the Australian Standards for Built-In Components for Masonry Construction A.S. 2699.1:2019 & Masonry Structures A.S. 3700:2018.

COMPLIANCE SUMMARY REPORT / PRODUCT SPECIFICATIONS

CARLRAY VENEER TIES SIDE-FIXED MEDIUM DUTY Z950 R3 RATED
COMPLY TO AS 2699.1:2020 & AS 3700:2018

Manufactured By

Carlray Pty Ltd
448 The Boulevarde
Kirrawee N.S.W. 2232

Product: Code 83894

Type: A
Category of Tie: Veneer - Side Fixed
Classification: Medium Duty
Rated Cavity Width: 50mm
Durability Category: R3 Marine
Fastening Requirements: 3.15 Galv Nail
Product Dimensions: 135mm x 18mm x .75mm

Test Results: Specimens Tested 6

Duty Classification	Mean Strength Kn	
	Tension	Compression
Medium Duty	0.99	0.9

Durability Class	Colour Code	Material
R3	RED	Z950 +

475gms/m² on each surface

Water Transfer Test	Vertical Offset = 0	Vertical Offset = 20mm
Up Position	Pass	Pass

Note: Ties must be installed in the up position, as per image.

Corrosion Zones for Masonry Strip Steel Veneer Ties - Material Z950 Galv		
Durability Class	Surf Coast	Sheltered Coast
R3	1km to 10km	100m to 1km

Note: The closer the construction is located to the sea the higher corrosive environment.

Installation and Spacings Requirements For Masonry Veneer Ties		
450 Stud Walls	600 Stud Walls	Around Openings & Edges
600mm x 450mm	600mm x 600mm	300mm x 300mm

Note: Suitable for timber frames. The correct mortar mix is important to effectivity of strength in masonry construction.

Assessment / Overview

These ties comply, having been independently tested. Carlray manufactures only with materials compliant to corrosivity categories & durability classes specified in the Australian Standard for Built-In Components for Masonry Construction A.S. 2699.1.2020 & Masonry Structures A.S. 3700.2018. Test reports & Material Certificate of Analysis for determining the coating thickness are available on request.

Ph: 02 9542 4888 Email: info@carlray.com.au Web: www.carlray.com.au

INDUSTRIAL GALVANIZERS (NSW)

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Port Kembla, NSW 2505
Telephone: (02) 4275 8888
Facsimile: (02) 4275 8800

QUALITY ASSURANCE CERTIFICATE

To: Carlray Pty Ltd

Email: carlray@ozemail.com

Date: 2/08/2019

Steelwork galvanized through our NSW plants is processed in accordance with the requirements of AS/NZS 4680:2006 and quality system ISO9001:2008. The work described below has had the coating thickness measured using the method described in AS 2331.1.3 - 2001, using a calibrated instrument; the results are attached.

Hot dip galvanized coatings as described by AS/NZS4680 is the process whereby the steel is immersed in a molten bath of zinc after fabrication resulting in a tough thick metallic envelope covering the entire steel surface.

The associated durability of this coating is dependent on the Atmospheric Corrosive Category of the application and reference should be made to AS/NZS2312 for clarification.

Company: Carlray Pty Ltd

Project Name: Ties

Purchase Order:

Factory Order: 80529

Regards

Customer Service
Industrial Galvanizers (NSW)

Certified System
Quality
ISO 9001
SAI GLOBAL

Quality Assurance Checksheet
Industrial Galvanizers

Customer: Carlray
Testing Authority: IG Sydney
Test Method Used: G5 Magnetic Induction
Factory Order: 80529

Date of Issue: 01.08.2019
Test Instrument ID: 774347
Test Instrument Calibration Date: 03.06.19 #2760

	Item (Description) / ID / Batch	Article Thickness (mm)	Local Zinc Coating Thickness in µm (10 Random Readings in 20 sq.cm area)										Avg (µm)	AS 4680 Expected Zinc Thickness (µm) if Article Thickness (mm) is... <8	>8	Outcome Pass (P) Fail (F)
CAL	Coating Thickness Standard Serial #	Foil µm												Average to be within ±1.5% of the standard thickness foil chosen.		
1	Veneer Ties	A	142	116	128	126	122	118	106	90	98	92	113.8	Local Readings (average of 10)		
		B	116	108	90	84	92	124	114	98	92	106	102.4	25	40	
		C	122	96	122	118	106	122	142	136	114	110	118.8	Average Readings (Average of 30)		P
	Navision Reading												112	35	55	
2		A											#DIV/0!	Local Readings (average of 10)		
		B											#DIV/0!	25	40	
		C											#DIV/0!	Average Readings (Average of 30)		
	Navision Reading												#DIV/0!	35	55	
3		A											#DIV/0!	Local Readings (average of 10)		
		B											#DIV/0!	25	40	
		C											#DIV/0!	Average Readings (Average of 30)		
	Navision Reading												#DIV/0!	35	55	
4		A											#DIV/0!	Local Readings (average of 10)		
		B											#DIV/0!	25	40	
		C											#DIV/0!	Average Readings (Average of 30)		
	Navision Reading												#DIV/0!	35	55	

The coating thickness of this galvanized product has been tested according to the requirements of AS4680:2006 (Appendix G) and using methods described in AS2331.1.3-2001.
The local and average coating thickness has been reported. If the 'Outcome' is 'Pass', the zinc thickness complies with the Standard. Retests are marked with an 'R'.

Tested by: Chris Lavopa
Position: Spin Plant Super-Intendent
Date: 01.08.2019
Signature:

Spin Work

RESULTS

Resistance to Water Transfer

Table 1 summarises the results of the resistance to water transfer test. The orientation of the tie has been defined as right-way up when the longitudinal rib stiffnener is in the convex up position as shown in appendix A.

Installation	Displacement (mm)	Result
Right-way up	0	Pass
Right-way up	20	Pass
Upside down	0	Pass
Upside down	20	Fail

Table 1. Results of Resistance to Water Transfer Tests

Strength

Table 2 summarises the strength values obtained.

Specimen Number	Strength (kN)	
	Compression	Tension
1	0.97	0.79
2	0.88	1.04
3	0.83	1.00
4	0.70	1.11
5	1.14	0.96
6	0.89	1.02
Mean	0.90	0.99
Standard Deviation	0.15	0.11
Characteristic Strength	0.66	0.81

Table 2. Summary of Results for Strength Tests