

# VITRETHANE 644



## Two Pack Polyurethane Anti Graffiti Coating

Technical Data Sheet Number 055

PRODUCT DESCRIPTION	A & I Coatings <b>VITRETHANE 644</b> is a two pack premium quality high performance polyurethane based on reactive acrylic crosslinked with aliphatic isocyanates at room temperature or under low bake conditions. V644 has been formulated with a high standard of weathering resistance and pigmented using the most durable pigments available to exhibit excellent chemical and graffiti resistance and very good exterior durability.				
USES & BENEFITS	<ul style="list-style-type: none"> <li>In-factory painting of building cladding and fascias where anti graffiti properties are called for</li> <li>Tunnel linings</li> </ul>		<ul style="list-style-type: none"> <li>Graffiti resistant coatings both coloured and clear</li> </ul>		
	<u>Benefits</u> <ol style="list-style-type: none"> <li>Excellent weathering performance</li> <li>Excellent application properties</li> <li>Excellent chemical resistance</li> </ol>	<u>Limitations</u> <ol style="list-style-type: none"> <li>For on site applications, all adjacent sensitive surfaces need to be carefully covered to avoid overspray damage</li> <li>Recoating must be done with great care to ensure adhesion, due to the anti graffiti properties of the coating</li> </ol>			
PHYSICAL PROPERTIES	Vehicle Type	Acrylic polyol			
	Hardener	Isocyanate			
	Mixing Ratio	3:1 (Pack A : Pack B) by Volume			
	Pot Life	6 hours at 20°C			
	Finish	Satin			
	Theoretical Coverage	8.7m <sup>2</sup> /Litre/50 microns theoretical			
	Volume Solids	44%			
	Recommended DFT	50µm to 100µm dry film thickness depending on performance considerations			
	Primer Required	Yes, dependant on substrate			
	Usual No. of Coats	1 double header coat. If left too long first coat will need to be sanded thoroughly			
	Colour	Unlimited colour range			
	Pigmentation	Titanium Dioxide or other pigments			
Product Weight	1.02 – 1.30Kg/Litre				
ENGINEERING DATA	Abrasion Resistance	Excellent resistance to scrubbing and sand abrasion			
	Flexibility	Permanent flexibility - adequate for any normal substrate movement			
	Bacterial Resistance	Excellent			
	Chemical Resistance	Excellent resistance to a wide range of organic and inorganic acids			
	Graffiti Resistance	Excellent, most graffiti damage removed simply with cleanser			
	Dry Heat Resistance	Good			
	Solvent Resistance	Excellent resistance to solvents, petrol and oils			
	Salt Spray Resistance Durability	Excellent			
CURING DATA	Substrate Temp.(°C)	Dust Free	Touch Dry	Dry to Handle	Full Cure
	15 °C				
	25 °C	30 Min	45 Min	2 Hrs	7 Days
	35 °C				
	Note	Hard enough to handle overnight but progressively cures over 7 days			

APPLICATION DATA	Mixing	Pack A to be mixed thoroughly with Pack B (Hardener).																												
	Application	Air atomisation, airless, air assisted airless, HVLP (A & I Coatings Technical staff can assist in this area). Brush and roller are only suitable for small areas.																												
	Cleaning	Vitrethane 107 or V111 Medium Thinners.																												
	Thinning	Thin 5 to10% by volume with V107 Fast Thinners or V111 Medium Thinners.																												
	Typical Specification	<table border="1"> <thead> <tr> <th colspan="4">Rural &amp; Light Industrial Environment:</th> </tr> <tr> <th>Substrate</th> <th>Surface Preparation</th> <th colspan="2">Specification</th> </tr> </thead> <tbody> <tr> <td>Zincalume Cladding</td> <td>Cleanse to AS1627.1</td> <td>Vitrethane 440 Vitrethane 644</td> <td>30 microns <u>70 microns</u> Total 100 mic</td> </tr> <tr> <td>Colourbond Cladding</td> <td>Cleanse to AS1627.1</td> <td>Vitrethane 644</td> <td><u>50 microns</u> Total 50 mic</td> </tr> <tr> <td>C.F.C. Compressed Fibrous Cement</td> <td>Sand/brush down</td> <td>Vitrethane 555 Vitrethane 644</td> <td>100 microns <u>70 microns</u> Total 170 mic</td> </tr> <tr> <td>Mild Steel</td> <td>Abrasive blast clean to AS1627.4 Class 2½</td> <td>Vitrethane 580 Vitrethane 644</td> <td>100 microns <u>70 microns</u> Total 170 mic</td> </tr> <tr> <td>Galvanised Steel &amp; Aluminium</td> <td>Abrade by appropriate means clean to AS1627.1.</td> <td>Vitrethane 440 Vitrethane 644</td> <td>30 microns <u>70 microns</u> Total 100 mic</td> </tr> </tbody> </table> <p>NOTE: XRW Colour bond requires special primer.</p>		Rural & Light Industrial Environment:				Substrate	Surface Preparation	Specification		Zincalume Cladding	Cleanse to AS1627.1	Vitrethane 440 Vitrethane 644	30 microns <u>70 microns</u> Total 100 mic	Colourbond Cladding	Cleanse to AS1627.1	Vitrethane 644	<u>50 microns</u> Total 50 mic	C.F.C. Compressed Fibrous Cement	Sand/brush down	Vitrethane 555 Vitrethane 644	100 microns <u>70 microns</u> Total 170 mic	Mild Steel	Abrasive blast clean to AS1627.4 Class 2½	Vitrethane 580 Vitrethane 644	100 microns <u>70 microns</u> Total 170 mic	Galvanised Steel & Aluminium	Abrade by appropriate means clean to AS1627.1.	Vitrethane 440 Vitrethane 644
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SURFACE PREPARATION	All Surfaces	All surfaces to be structurally sound and free of contamination, particularly salt deposits. Loose or flaking paint must be removed by abrasive blast cleaning, power tool cleaning or sanding. Oil, grease, dirt etc. must be removed with detergent and water blasting in accordance with AS 1627.1.																												
	Aluminium, galvanised steel & Zincalume	Remove oil and grease with mild detergent or with solvent to AS 1627.1. Slightly roughen the surface by sanding or light whip blasting with a non-metallic abrasive.																												
	Steel	Degrease the surfaces and remove all weld spatter and flux. Grind sharp edges and corners. For best results abrasive blast clean to specified/recommended AS 1627-1 to 10 class Sa 2.5. Apply A & I Coatings VITRETHANE 580 Primer to specification. Please consult A & I Coatings Technical team for particular specifications.																												
	CFC & Cementitious Board	All surfaces to be structurally sound and free of contamination, particularly salt deposits. Loose or flaking paint must be removed by 180 grit sandpaper with orbital sanding to achieve smooth uniform surfaces, providing a sound mechanical key profile for the topcoat to adhere to. Ensure surface is dry and free of all sand, dust, oil, grease and moisture before application of primer – Vitrethane 555 or similar.																												

WORK STOPPAGES	General	Do not allow material to remain in hoses, gun or spray equipment. Thoroughly flush all equipment with A & I Coatings recommended cleaner. Once units of paint have been mixed they should not be resealed and it is advised that after prolonged stoppages work recommences with freshly mixed units.
	Clean Up	Clean all equipment after use with A & I Coatings recommended cleaner. It is good work practice to periodically flush out spray equipment during the course of the working day. Frequency of cleaning will depend upon amount sprayed, temperature and elapsed time, including and delays.
PACKING & STORAGE	Packing	Available in 4L or 20L packs. For availability of other sizes, contact A & I Coatings.
	Storage	12 months if stored in sealed containers away from heat and moisture. Subject to re-inspection thereafter.
HEALTH & SAFETY	All applicable statutory regulations must be observed in the application of this product. Users must first read the Material Safety Data Sheet for Vitrethane 643. Users should familiarise themselves with all the safety aspects of the product prior to usage. Please ensure the current Technical Data Sheet is consulted prior to specification or application of A & I Coatings products. If the surface intended to be painted differs from the specification, please consult the A & I Coatings Technical team on 1800 819 585.	

All surplus materials and empty containers should be disposed of in accordance with appropriate regional regulations/legislation. Note: The figures quoted for pot life and drying/curing times are not definitive. They are dependent on onsite conditions, such as volume of material mixed, ambient and substrate temperatures, weather and ventilation. **DISCLAIMER** Since the use and application of this product is beyond our control, we cannot be held responsible for product field performance. The information presented above is the result of our considerable experience with this product but is not to be construed as a performance warranty. For additional information, phone our Customer Service Centre on 1800 819 585.

May 2019 - THIS DATA SHEET SUPERSEDES THOSE PREVIOUSLY ISSUED.