



Worth doing, worth Dulux.



POWDER & INDUSTRIAL COATINGS

Dulux Alphatec[®] plus

TGIC Free Polyester Powder Coating			
Product Code:		961 Line	
Specification Met:		Meets requirements of Qualicoat Class I.	
Description			
Alphatec [®] Plus is tough thermosetting polyester powder coating with decorative and durability characteristics, suitable for interior and exterior product applications combined with excellent overall performance.			
Features		Benefits	
Colour Chart colours		Readily available colour range	
Tough, one coat finish		Hard wearing/serviceable finish	
Interior/exterior applications		Suitable for most environments	
Low cure/high transfer efficiency		Reduced application costs	
No solvents or emissions		Less waste and pollution to the environment	
TGIC free		Reduced risk to health	
Uses			
Alphatec [®] Plus polyesters have a multitude of uses over various substrates including steel and aluminium. Examples include: bicycles, garden tools, lawn mowers, architectural finishes and automotive components.			
Performance Guide			
Weather	Good resistance to weathering. Suitable for outdoor applications.	Salt Spray	Good. < 3mm adhesion loss at scribe after 250 hours salt spray on pre-treated steel, 1000 hours on pre-treated aluminium.
Heat	Good resistance to 120°C continuous service conditions	Humidity	Good resistance to 38°C/100% humidity for 1000 hours on pre-treated aluminium.
Acid	Resistant to spills of dilute acid. Avoid contact.	Abrasion	Very good resistance to abrasion
Alkali	Resistant to spills of dilute alkali. Avoid contact.	Pencil Hardness	Min H
		Knoops Hardness	Average 15
Flexibility	Excellent < or = 160 inch/lb	Cross Hatch Adhesion	No removal
Chemical Resistance			
Mortar	Resistant	White Spirits	Resistant
Ethanol	Resistant	Xylene	Slight softening/limit contact
Methyl Ethyl Ketone	Softens/avoid contact	Ethyl Acetate	Softens/avoid contact
Product Guide			
Colour	A wide range of stock ex Aust.	Specific gravity	1.3 - 1.7 @ colour

Alphatec® Plus

Gloss Level	25 - 98% at 60°, as required	Shelf life	12 months when stored below 25°C/dry conditions
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Application Data

Application Method	Electrostatic spray.		
Clean Up	Dust or vacuum loose powder. Avoid use of compressed air.		
Cure Schedule	Metal Temperature (°C)	Time (minutes)	
	210	4	
	200	5	
	180	8	
Cured Film Thickness	Recommended:	80 µm	
	Range:	50 – 120 µm	

Note: Light colours may require a higher minimum film build for optimum coverage and colour consistency.

Theoretical spreading rate at recommended film thickness

A coverage rate of 8 - 10m²/kg corresponds to 80µm cured film thickness assuming no loss. Practical spreading rates will vary due to such factors as method and conditions of application and surface profile and texture.

Application Guide

Surface Preparation

Surfaces should be prepared according to appropriate standards such as AS/NZS4506, AS3715-2002, BS6496, BS6497 (available from Standards Australia or Standards New Zealand offices).

All surfaces should be degreased and pre-treated for optimal performance. Suitable pre-treatment includes:

Aluminium	Yellow chromate or green chromate/phosphate	(refer AS3715-2002 and/or BS6496)
Ferrous metals	Abrasive blast(SA 2.5)/Zincshield™ powder primer, or Zinc phosphate or Iron phosphate	(refer Zincshield™ Data Sheet) (refer BS6497)
Zinc Coated Steels (eg. galvanising)	Zinc Phosphate or chromate	(refer BS6497)
Stainless Steel	Suitable metal blast. Recommended maximum blast profile of 25µm	

Application Procedure and Equipment

1a)	For fluidised bed, ensure uniform fluidisation of powder. Fluidised powder should resemble "simmering liquid". Aged or compacted powder may require pre-conditioning for several minutes to fluidise evenly.
1b)	For box feeders, ensure probe is fully inserted in powder and operated as per manufacturer's recommendations.
2.	Apply by electrostatic spray.
3.	Cure as per recommendations outlined above.
	Care should be exercised when stoving temperatures are in excess of 220°C as these high temperatures may affect the appearance and film integrity of the finish.
4.	Test for cure of the coating by contact with a drop of Corsol PGMA (available from Dulux Powder Coatings) for 30 seconds. Surface should be wiped dry and immediately checked for softening. Only slight surface softening should occur.

Care and Maintenance

As a general rule, cleaning of externally located powder coating surfaces must take place every six months. Where salts/pollutants are more prevalent such as seaside and industrial areas, a cleaning program should be carried out more frequently.

THREE STEPS TO CLEANING POWDER COATED SURFACES

1. Remove loose deposits with a wet sponge (avoid scratching the surface by dry dusting).
2. Using a soft clean cloth and a mild detergent in warm water, clean the powder coating to remove dust, salt or other deposits.
3. Always rinse after cleaning with fresh water to remove any remaining detergent.

Alphatec® Plus

WARNING: In some cases, strong solvents recommended for thinning various types of paints and also for cleaning up mastics/sealants are harmful to the extended life of the powder coated surface. These solvents should not be used for cleaning purposes. If paint splashes or sealants/mastics need to be removed then the following solvents can be used safely: Methylated Spirits, Ethyl Alcohol, Isopropanol

Health and Safety

The MSDS is an integral part of using this product as it contains information on the potential health effect of exposure, personal protective equipment needed and other relevant SH&E information.

For detailed information, refer to product label and the current Chemical Data Sheet (No. 13960120) available through Sales and Customer Service Offices.

Phone: Australia:-	13 24 99	New Zealand:-	09 441 8244.
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Precautions and Limitations

- Some strong, bold colours may not meet performance criteria for weathering (colour change), refer to Dulux Powder Coatings before specifying.
- As a result of possible wide application variations and stoving conditions, some products and colours may show variation between Dulux Powder Coatings prepared samples and production applied material. Therefore, it is the applicator and/or their customer's responsibility to ensure the product conforms to their requirements.
- For optimum performance ensure recommended dry film thickness is obtained.
- Not recommended for use in highly corrosive environments such as severe marine or industrial locations.
- Not recommended for components which are exposed to constant temperatures exceeding 120°C.
- When using sealants or screen printing the surface preparation is paramount to achieve good adhesion (see your Dulux technical representative for recommendations).
- Alphatec® Plus is not recommended for use on Thermal Break materials.

Transport and Storage

Sizes:	2.5 and 20 kg	Flashpoint:	N/A
Weight:	2.5 kg and 20 kg	UN:	N/A
Dangerous Goods Class:	N/A	Package Group:	N/A
Shipment Name:	Not dangerous goods. No special transport requirements.		
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