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TB511 PU Topcoat DTM Semi Gloss TB511 / UK

Product Information

Product Description:
TB511 PU Topcoat Binder DTM Semi-gloss is a two component polyurethane topcoat (direct to metal), with the exception of aluminum & galvanized steel substrates. This topcoat contains special pigments which enhances corrosion protection) with a semi-gloss finish, 55 +/-10 GU/60° this is dependent on color and spray technique. For a higher level of anti-corrosion performance, we recommend to use of an epoxy primer first. TB511 is specifically developed for light-industrial use, application properties enable fast operation with good force dry and air-dry capabilities. The standard mixing ratio is 80% Binder, 20% colour toner or optional 70% Binder, 30% colour toner for low opacity colours. All colour toners are chromate and lead free, also providing good UV protection. Air drying is recommended, force-drying will result in a higher gloss finish. Selection of hardener, reducer & color, can affect viscosity, flash-off time and thickness, this will also have an influence on the end gloss result too.

Substrates:	Iron, steel, stainless steel (blasted) cast iron, primed galvanized steel, primed aluminum, glass fiber reinforced plastics (GRP).
Primer options:	FP400/401 or FP440 Epoxy Primer, FP402 Epoxy Primer Zinc rich, FP500/PB500 PU Primer DTM, FP510 HS Surfacer, FP620 1K Wash primer and FP600 Plastic Primer (refer to FP600 TDS for list of recommended plastic substrates).
Other:	Solvent resistant existing ridged paint finishes, cleaned/sanded.
Iron/steel:	Abrasive shot blasting is recommended or dry sanding P80 – P180 with a 5mm orbital sander.
Aluminum:	Because of the wide number of aluminum types we recommend to use primers as described above for the best adhesion and corrosion protection on aluminum before applying this topcoat. For proper preparation of the aluminum substrate follow the steps as described in TI Aluminum. Sanding aluminum recommendations: P80 – P180*
Galvanized:	For proper preparation of the Zinc substrate follow the steps as described in TI Galvanized steel (Sweep blasting is recommended).
Paint finishes:	P180-P320 (check and change abrasive paper regularly to ensure correct sanding grade scratches (Sweep blasting is recommended).
Stainless steel:	Blasting followed by a VIM Epoxy Primer.
Paint finishes:	P280 – P360 (Please, check and change abrasive paper regularly as required).
Cleaning:	Surface must be dry and free from any contamination, eg, oil, grease, release agents and incorrectly used degreasers (if degreasers are used incorrectly they may leave a residue) Use VIM AD690 Solvent degreaser for all substrates and paint finishes as per the Technical Data Sheets.
Surface Preparation:	Abrasive blast to EN ISO 12944, Part 4 (ISO Sa 2.5) with a uniform blast profile of 20 to 50µm For more detailed information go-to TI-Substrate (TI-G-09 in chapter 3 Purple Box) and Pre-treatment or website www.valsparindustrialmix.com.

*In light industrial and CT sectors, many different types of aluminium's are used in manufacture and fabrication. Because of this, good sanding and cleaning is essential to create a sound coating process. Please contact your local technical adviser if unsure of the correct process and or materials.

Material Description: TB511				
Application Method	Minimum DFT µm	Maximum DFT µm	Minimum WFT µm	Maximum WFT µm *
Conventional Spray and airless/airmix	50µm	80µm	70µm	120µm

*Higher thicknesses are possible if given extended flash-off time and drying times.

Additives: optional, AD600 High Build Additive or AD601/AD602 Texture additive fine/coarse (see TDS for AD600/601/602).

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Physical properties

Chemical base	Polyurethane
Density (kg/l)	1,058 (Binder)
Volume solids (%)	54.7%
Weight Solids (%)	63.0%
Flash point	29°C
Pot life (+20°C)	Approx. 1 – 2 hours
Shelf life	Min. 24 month under normal storage conditions and unopened tins
Coverage (m²)	Approx. 8.5m² 40µm (DFT)
Glosslevel	Semi-gloss 55 +/-10 GU/60°
Color	Binder white Transparent
Temperature Stability	Dry Heat up to 140°C
VOC (g/l)	Max. 490g/l see CRS (VOC: 2004/42/IIB(d)420g/l)
Processing temperature	+10°C till max. +40°C, max. Humidity 85%

Application Data

Preparation:

All surfaces must be properly shot blasted or sanded and cleaned. Abrasive blast to EN ISO 12944, part 4 (SA 2½) with a uniform blast profile of 20-50 micron.

Dry sanding

Steel: P80-P180
Solvent resistant existing ridged paint finishes: P240-P320

Aluminum & Galvanized pre-primed only (see Technical Information- Substrate and Pre Treatment and or primer Technical Data Sheet)

Cleaning:

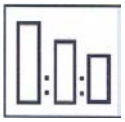
AD690 Solvent Degreaser
Surface must be dry and free from any contamination, e.g., oil, grease…

Handling:

Color preparation:
1. Stir binder until homogeneous
2. Add colour toners
3. Mix mechanically (paint shaker/ mechanical stirrer)

Before use/spraying:
1. Mix mechanically (paint shaker/ mechanical)
2. Add activator and reducer
3. Stir this mixture well with a mixing stick or a (pneumatic) stirrer

Mixing ratio with Color Toner: (By volume)	TB511 PU Topcoat **Binder** DTM Semi-gloss	80 parts	70 parts
	CT Range of VIM Color Toners	20 parts or	30 parts
For mixing machine users:	For mixing formula's see VIM CRS	(By weight)	



Mix stick:	Use the Mixing stick **M3 5:1** (74-203 = 5:1/6:1) or **M6 Universal cm-stick** (74-206 standard) / **M7** (74-207 large)	
Mixing ratio with Activator and Reducer: (By volume)	TB511 PU **Topcoat** DTM Semi-gloss AU500 PU Activator RS603 Universal Reducer Fast or RS605 Universal Reducer Medium or RS607 Universal Reducer Slow or RS609 Universal Reducer Ultra Slow	5 parts 1 part add 10 – 25%
Faster process of drying:	AA600 Accelerator (after activator and reducer has been added)	+ max. 3%

Viscosity:
20 – 26 sec. (DIN4/20°C)

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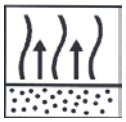
	**Gravity or Suction Feed:** Nozzle set Spray gun "High pressure" Spray gun "Reduce pressure" HVLP (Air cap pressure) Airless/Airmix Pressure Pot	 1.4 – 1.8 mm 3.0 – 4.5 bar (42 – 65 psi) 1.5 – 2.5 bar (21 – 36 psi) 0.7 bar (10 psi) maximum Not recommended 1.0 – 1.5mm	
	**Application:** **Film Thickness:** (recommended 50 – 80µm)	**Option 1:** ½ coat followed by 1 full coat 40 – 60µm (DFT)	**Option 2:** ½ coat followed by 2 full coats 60 – 80µm (DFT)
	**Between coats at 20°C:** **Before baking at 20°C:**	5 minutes 10 minutes	5 – 10 minutes 10 minutes
	**Clean up:** (Check the local regulations!)	RS605/607/609 Universal Reducer or Gun cleaner (solvent)	
	**Air–dry at 20°C:** **Dust Free:** **Dry to assembly:** **Dry:**	Without AA600 Accelerator 2 – 3 hours 6 – 9 hours 24 hours	With AA600 Accelerator 1 – 2 hours 3 – 5 hours Overnight
	Force–dry:	30 – 40 minutes (60°C – 70°C object temperature)	
	**Short wave IR–drying:**	15 – 20 minutes, see advice IR manufacturer for distance (The panel must not exceed 90°C)	
	**Use suitable respiratory protection (air fed respirator strongly recommended).**		
	**Precautions:** During application all health and safety measures referring to the use and handling of coating materials are to be observed, e. g. existing regulations issued by the trade associations in the Chemical Industry. For Health and Safety information please refer the Material Safety Datasheet (MSDS). Information also available on our webpage: www.valsparindustrialmix.com		
	Note: The products listed are intended only for the professional user and for professional use. All recommendations given in writing on the use of our products to customers to customers or users are not binding and do not give reasons for secondary obligations resulting from the bill of sale. Every care is taken to ensure that the technical information provided is accurate and up to date according to the present state of knowledge in science and our experience. These recommendations do not, however, exempt the customer from autonomously checking whether our products are suitable for the intend purpose. The durability of the coating system largely depends on the thorough preparation of the surface. Furthermore our uniform terms of delivery and payment are applicable.		
	With the publication of this Technical Data Sheet all previous versions regarding this product are no longer valid.		