



## **OXYHIN SDN. BHD.** (393471-X)

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### **TECHNICAL DATA SHEET**

#### **OXYPLAST TR177 TRIBO EPOXY - POLYESTER POWDER COATING**

OXYPLAST TR177 is a special epoxy-polyester powder with lower reactivity providing high flow-out finishes. The outstanding decorative and protective properties of TR177 are utilized in a wide range of indoor applications. It is formulated with enhanced tribo-chargeability characteristic.

#### **APPLICATION**

It is specially formulated as an anticorrosion primer for aluminium auto rims.

#### **APPLICATION SCHEDULE**

May be applied by electrostatic spraying using classic devices, which can provide a negative tension of 60 - 80 kV, as well as tribomatic spraying devices. The powder is cured in a suitable convection or infra-red oven.

Curing : 10 min at 180°C

Optimum film thickness : 60 - 80 µm

#### **SUBSTRATE AND PRE-TREATMENT**

In order to obtain optimal anti corrosion properties, it is advised to apply a chemical pretreatment prior to powder coating application.

Ferrous metals (cold-rolled steel, cast iron etc.)	: Iron or zinc phosphatation
Zinc surfaces (galvanised steel, zinc alloy)	: Chromate treatment
Aluminium alloys	: Chromate treatment (DIN 50939)

#### **PROPERTIES OF THE POWDER**

Specific gravity (DIN 55990/3) : 1.40 – 1.75

Particle size distribution  
(Laser Particle Size Analyser)

% above 100 µm	: Less than 5
% above 32 µm	: 50 – 65
Average particle size, µm	: 38 – 48



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### PROPERTIES OF THE COATING

#### a. Physical and Mechanical

The following are properties typical of TR177 determined on 0.5mm gauge degreased galvanised steel :

Film thickness (ISO 2178)	: 60 - 80 $\mu$ m
Gloss (ISO 2813, 60°)	: 75 $\pm$ 5%
Flow out	: good
Adhesion (ISO 2409- 2 mm spacing)	: GT = 0
Pencil hardness (ASTM D3363-Staedtler Lumograph)	: H
Buchholz hardness (DIN 53153)	: 90 - 110
Conical mandrel (ISO 6860)	: No cracking at 4mm
Direct impact (ASTM D2794 - 0.625 in. diameter ball)	: 65kg.cm
Reverse impact (ASTM D2794 - 0.625 in. diameter ball)	: 65kg.cm

#### b. Salt Spray Resistance

According to ASTM B 117-73 on,

Chromated aluminium, 1000 hrs	: no blistering or loss of adhesion
Zinc phosphated steel, 1000 hrs	: 6 mm undercutting
Iron phosphated steel, 1000 hrs	: 10 mm undercutting

### STORAGE

At temperatures  $\leq 25^{\circ}\text{C}$  dry condition and humidity  $< 60\%$ , TR177 powders may be stored for up to 6 months without affecting their free - flowing properties. The coating thus obtained will still have optimal characteristics.

All the information given in this Data Sheet is the results of our research work and experience. It is given in good faith and with every belief in its accuracy but cannot be considered as a formal warranty. In accordance with OXYPLAST policy of product development, this specification is subject to change without notice.