EPOXY POLYESTER

Standard Durable Powder Coating System

TDS for GCH5015SG

DESCRIPTION

Genesis GCH5015 SG is presented in the source TDS as an epoxy-polyester powder coating system for prepared architectural aluminum components and other metal substrates. It provides a balance of physical properties, electrostatic application characteristics and resistance to chalking and changes in gloss and colour under sunlight when correctly applied and cured.

USES

- Lighting fixtures, water heaters and home appliances
- Automotive accessories, exercise equipment and power tools
- Display racks, air conditioners and garden equipment
- Prepared aluminum and other metal components stated in the source TDS

ADVANTAGES

- Balanced physical and application properties
- Suitable for manual or automatic electrostatic spray equipment
- Good resistance to dilute acids, alkalis and oils
- Source states resistance to chalking and gloss or colour change
- Available with an 80 +/- 5 gloss level for this product

COMPLIANCE & CERTIFICATIONS

Product family: Source describes an Epoxy Polyester system.
Chemical type: Source property table states EPOXY.
Referenced test methods: ASTM methods stated in this TDS.
Source consistency: Family and chemical description should be confirmed by QC before customer issue.

TYPICAL PROPERTIES

Product family	Epoxy Polyester
Chemical type	Epoxy (source table)
Color	5015
Film thickness	60-80 microns
Gloss @ 60 deg	80 +/- 5
Particle size	Electrostatic spray
Density	1.6 +/- 0.1 g/cm3
Shelf life	12 months
Storage	<25 deg C, dry and cool
Coverage	7-12 m2/kg
VOC	Not stated

CURE PARAMETERS

Substrate / object temperature	Curing time
180 deg C	15-20 minutes
190 deg C	13-18 minutes
200 deg C	10-15 minutes

Object temperature and full cure should be verified according to part geometry and oven conditions.

PERFORMANCE TESTS

Adhesion (D-3359-93)	Pass
Pencil hardness (D-3363-00)	2H
Impact (D-2794-93)	Pass
Flexibility (D-522-93a)	Pass
Salt spray (B-117-97)	Pass, 1000 hrs
Acetic acid salt spray	Pass, <16 mm2 / 10 cm
Constant humidity (D-2247-	Pass
Overbake stability (D-2454-	Very Good

Salt spray result includes no corrosion creep and less than 1/16 inch undercoating after 1000 hours exposure. Constant humidity result includes no corrosion area greater than 1 mm from the scribe.

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SURFACE PREPARATION

For maximum protection, architectural components should be properly cleaned and pretreated before powder coating. Aluminum components should receive a full multi-stage chromate conversion coating or a suitable chrome-free pretreatment to clean and condition the substrate. Detailed advice should be obtained from the pretreatment supplier.

Steel	Zinc phosphate
Zinc coated steel	Zinc phosphate or chromate
Aluminum	Chromate conversion
Final rinse	Normal water

The object should be tested at 20 deg C. Pretreatment quality directly affects coating performance.

APPLICATION METHOD

- Apply by manual or automatic electrostatic spray equipment.
- Unused powder may be reclaimed using suitable equipment and recycled through the coating system.
- Reclaim use should remain subject to normal quality control for colour, finish and contamination.
- Ensure the substrate is clean, dry and properly pretreated before coating.

RECOMMENDED SYSTEM

Substrate prep.	Clean pretreated metal
Powder coating	Genesis GCH5015 SG
Recommended DFT	60-80 microns
Curing	180C/15-20m; 200C/10-15m

SAFETY PRECAUTIONS

- Do not eat, drink or smoke while using the product.
- Avoid breathing dust. Use suitable respiratory protection where ventilation is insufficient.
- Use safety eyewear, protective clothing and suitable industrial gloves.
- Prevent dust concentrations above flammable, explosive or occupational exposure limits.
- Keep away from heat, sparks, open flame and direct sunlight.

STORAGE & SHELF LIFE

- Store in dry and cool conditions below 25 deg C.
- Keep containers closed and protect the powder from heat, moisture and contamination.
- Shelf life is 12 months when stored under the recommended conditions.
- Reseal opened containers carefully before storage.

TRANSPORT & ENVIRONMENTAL INFORMATION

Hazard classification	Refer to MSDS/SDS
Environmental classification	Refer to MSDS/SDS
Ignition temperature	Not stated
Transport	Refer to MSDS/SDS
Drain precaution	Refer to MSDS/SDS

NOTE

The information in this Technical Data Sheet is based on current product data and experience and is not exhaustive. Use for purposes not specifically recommended requires written confirmation from Genesis. Final performance depends on substrate quality, pretreatment, application and curing conditions. Product information may be updated as part of continuous development. Refer to the current MSDS/SDS for safety information.

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