Series 59 NEON Colors

POWDER COATING FOR EXTERIOR APPLICATIONS (NOT FACADE)
2-COAT-SYSTEM, CLEAR TOP COAT IS REQUIRED
BASE: POLYESTER, BUT ONLY LIMITED UV- AND WEATHER-RESISTANT

Applications

- Sports items
- Bicycles

Product details

Packaging	In original boxes of 20 kg each as well as in minipacks of 2.5 kg each
Density (ISO 8130-2)	1.2 - 1.7 g/cm³ depending on the shade
Theoretical coverage	with 60 µm film thickness: 9.8 - 13.8 m²/kg depending on density (see most recent edition of data sheet no. 1072)
Shelf life	Use until: see date on product label; dry below 25°C, protect against the influence of direct heat

(In the case of customer-specific blanket orders or storage agreements, which are stored for a long period of time, the shelf life date is calculated from the date of production.)

Properties

- High luminosity
- Good flow
- good storage stability

Finish | Colors

Base-Coat Neon
59/20616 NEON yellow
59/25199 NEON orange
59/25202 NEON bright orange
59/30733 NEON pink
59/50676 NEON green
59/50689 NEON bright green

Top-Coat Clear
16/00059 clear flat matte
40/00003 clear glossy

Pre-treatment

The following overview matrix shows the current methods depending on different substrates and applications.
Please consider the suitability of the respective powder coating series for a desired application according to our data in this data sheet

	Aluminum		Galvanized Steel			Steel		
Degreasing	○		○			○		
[1] Chromating	○	○	○	○	○			
[2] Pre-anodization	○	○						
[2] Chrome-free	○	○	○	○				
Iron phosphating						○		
Zinc phosphating			○	○	○	○	○	○
Blasting						○	○	○
[3] Sweeping			○	○	○			
	I	A	I	A	S	I	A	S[4]

Applications: I = interior; A = exterior; S = steel construction

1) acc. to DIN 50939
2) acc. to the GSB quality and testing provisions. This pre-treatment model must be tested by a suitability test using a boiling test and subsequent cross-cut and adhesive tape tear.
3) Only for workpieces with zinc coatings > 45 µm
4) for the 2-coat system TIGER Shield

Information

2-coat application (= base-coat neon with clear top-coat 16/00059 dull-matte or 40/00003 glossy
Recommended min. film thickness of Neon Base Coat: 70-90 µm, Top-Coat: 60-80 µm.
Labels: The suitability for the intended use must be checked by the customer.
Please note in part the significant color change of the base coat caused by the overcoating.
Due to the increased film thickness, the mechanical properties (drilling, milling, cutting) are reduced.
The clear top coat improves the weather resistance, but the system is still **only conditionally UV- and weather-resistant**.
Higher color and effect changes between production batches can be expected, which may even be increased when using a 2-coat application.

Clear and transparent coatings
When changing the color, the coating system must be thoroughly cleaned. We also recommend a longer oven ventilation period as slight discolorations of parallel or subsequently baked color shades cannot be excluded.

Product data sheet

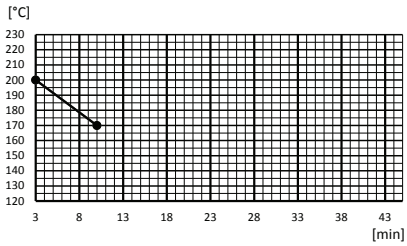
Different material stresses between substrate versus coating can lead to stress cracks in the powder coating layer in non-pigmented coatings (e.g. clear); in order to minimize this risk, we recommend curing the clear or transparent top coat only in the upper temperature range in accordance with the curing conditions.
Effect and color differences between laboratory sampling and actual production must be expected.

Curing conditions 2-coat system

(Product temperature vs. curing time)

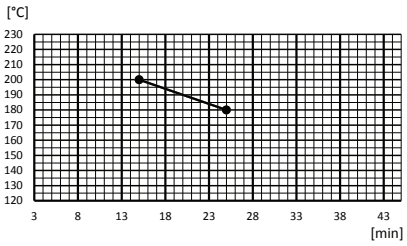
In the case of a 2-coat system, we recommend gelling (= fusing of the base coat, unless otherwise specified, without complete curing, different geometries for parts, and metal thicknesses must be observed). Gelling involves achieving the required substrate temperature and therefore a deliberate undercuring, which guarantees an improved adhesion between layers when the subsequent topcoat is applied and fully cured. It also saves time and money. The second coat must be allowed to cure in accordance with product data sheet (complete curing). During the pre-gelling and curing of the powder coating in directly heated gas ovens, a reduction of the adhesion between base and top coat can occur. However, the exact curing conditions (curing time and temperature) must be determined individually depending on the application and the coating line. Check continuously for intercoat-adhesion!
Directly heated gas ovens can also have a negative impact on intercoat adhesion.

Base-Coat NEON (gelling model)



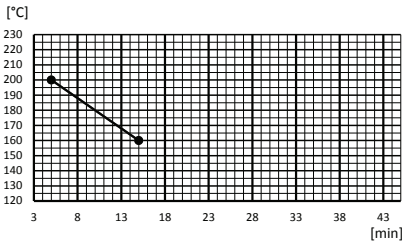
Product temperature	min. curing time
200°C	3 minutes
170°C	10 minutes

Top-coat clear top-coat 16/00059



Product temperature	min. curing time
200°C	15 minutes
180°C	25 minutes

Top-coat clear glossy 40/00003



Product temperature	min. curing time
200°C	5 minutes
160°C	15 minutes

Please observe curing parameters closely since mechanical properties will develop before full cross-linking! Always use the same curing values for a shade, as different curing times or temperatures can lead to differences in shades. In addition, a consistent film thickness must be ensured.

Test results

Tested on a 0.7 mm thick, chromated aluminum sheet based on tests performed under laboratory conditions at full curing time. These results may differ from the actual product performance due to product-specific parameters such as degree of gloss, color tone, effect, surface and concrete processing and usage influences.

Test method	Test	Serie 59 Base Coat Neon
ISO 2360	**Film thickness recommended**	70-90 µm
ISO 2409	**Crosscut test/ adhesion** 1 mm cutting distance	0
ISO 1519	**Mandrel bend test** Cracking of coating	≤ 10 mm
ISO 1520	**Cupping test** Cracking of coating	≥ 3 mm permitted
ASTM D 2794	**Ball Impact Test** Cracking of coating	20 inch/pound permitted
ISO 6270−1	**Determination of resistance to humidity** 500 h	delamination around scribe max. 1 mm
ISO 9227	**Salt spray test** 500 h	delamination around scribe max. 1 mm

When used as a 2-coat system, a decrease in the mechanical values is to be expected as a result of the increase in the layer thickness. Due to the reduced mechanical properties, the usability must be checked for the respective application. Different material tensions between substrate versus coating may cause tension cracks in the powder coating layer with non-pigmented coatings (e.g. clear). Joint sealing compounds and other auxiliary materials such as glazing aids, lubricants, drilling and cutting lubricants etc., which come into contact with coated surfaces, must be pH-neutral and free of paint-damaging substances. Prior to coating, a suitability test at the applicator is therefore highly recommended.

Processing instructions

The guidelines for application (datasheet 1213) must be strictly observed. The Product Data Sheets, Technical fact Sheets and the guidelines for application in their latest version, available as a download at www.tiger-coatings.com.

Disclaimer

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certified according to
EN ISO 9001 / 14001

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