

Categorization of effect powder coatings

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A DOLD GROUP Company

Categorization of effect powder coatings

The various effect powder coatings have different requirements regarding processing. To aid fault-free processing, the different processing conditions for IGP-Pulvertechnik effect powder coatings are divided into five categories (1–5 stars).

We provide you with information on the process requirements and processing tips according to the categorization of each article. You can find further details of application parameters as well as information on recycling in the applicable processing instruction. The category of your powder coating as well as the corresponding processing instruction are printed on the label of the box or big bag.

Fundamental Information

The parameters and recycling rates recommended in the IGP processing instructions are guideline values. For each individual order, the coating company must check them and adjust them if necessary.

As the coating plant type and parameters set have a significant impact on the effect shade achieved, we urgently recommend performing a suitability test with the facility before the start of processing.

To ensure a consistent ratio and composition of effect mixtures, it is advisable to start the coating process with a mixture of fresh and recycled powder.

This ratio should be maintained during the entire coating process.

Do not exceed the maximum recycling share defined in the applicable processing instruction.

The coating company is responsible for regular inspection of output goods to ensure compliance with the released shade.

Note

The darker an effect powder, the higher the effect proportion and the finer the effect agent, the more challenging the processing.

IGP effect categories

5-STAR*****

- Effect agents are bound with powder grain to a large extent (IGP-Effectives® technology)
- 90% recyclability of the overspray
- Can easily be applied to all geometrical forms
- Manual and automatic coating possible without extra effort

4-STAR****

- Effect agents are bound to the powder grain in Premium Bond method
- As a rule, a recycling share of max. 30% (according to PI) is possible
- Powder coatings with slight fluctuations in the effect agent content and deviating effect alignment can be applied largely homogeneously to all geometrical shapes
- Manual and automatic coating possible

3-STAR***

- Small differences in the average effect agent content are visible to a slight extent
- Changes to the alignment of the effect pigments are visible to a slight extent
- Recycling possible to a limited extent (according to PI)
- We recommend producing limiting samples to determine the recycling share
- We recommend producing a pilot series if a coating order is to be carried out on different facilities
- Avoid manual coating if possible.

2-STAR**

- Small differences in the effect agent content can lead to a different color impression.
- Changes in the effect particle alignment can lead to a different color impression.
- Recycling is possible to a limited extent (according to PI). It is essential to produce limiting samples in order to determine the recycling share.
- If a coating order is to be processed on different facilities, it is essential to produce a pilot series.
- Manual coating not recommended

1-STAR*

- Small differences in the average effect agent content lead to different color impression.
- Changes in the alignment of the effect particles lead to different color impression.
- Recycling is only possible in individual cases. It is essential to produce limiting samples in order to determine the share of recycled material.
- Avoid using different facilities for one order.
- Only automatic coating

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Overview of the IGP effect categories and process descriptions

The various effect powder coatings have different requirements regarding processing. To aid fault-free processing, the different processing conditions for IGP-Pulvertechnik effect powder coatings are divided into five categories (1–5 stars).

Process description	5-star category	4-star category	3-star category	2-star category	1-star category
Documentation parameters	Documentation recommended	Documentation recommended	Documentation recommended	Detailed documentation	Detailed documentation
Pilot/pre-series mock-up	Pre-series not necessary	Pre-series not necessary	Pre-series not necessary	Pre-series / mock-up and release process	Pre-series / mock-up and release process
Limiting sample	Not necessary	Not necessary	Limiting sample recommended	Produce limiting sample	Produce limiting sample
Different facilities	Different facilities possible	Different facilities possible at minimum extra cost/effort	Different facilities possible depending on inspection / adjustment	Different facilities possible depending on inspection / adjustment	Different facilities not possible
Recycling mode	Recycling 90%	Recycling acc. to PI	Recycling acc. to PI	Recycling acc. to PI	No recycling
Coating type	Manual or automatic coating	Manual coating possible at minimum extra cost/effort	Avoid manual coating	Fully automatic coating	Fully automatic coating
Product recommendation	-	-	-	-	Change to bonding product