TECHNICAL TOOLS

*Laboratory Tests and Technical Documentation*

MRK-012-0006rev08

# *WALLSKY-XXX*

Antiskid glittering powders

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# WALLSKY

Antiskid glittering powders

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**1. Product features**

The main feature of *Wallsky* series is the anti-slip property: a special additive is used to get a highly rough surface.
One or more types of metal powders are also added in order to obtain an absolutely unique glittering effect.

**2. Technical information**

- Technical data

| | |
|---|---|
| Powder type | Modified polyester |
| Class resistance | Class 1 (suitable for outdoor use) |
| Yield (surface/mass) | 13,1 $m^2$/Kg |
| Specific weight | 1,27 ± 0,03 g/$cm^3$ |

- Application and curing cycle

Available for both corona charging or tribo.
Curing cycle: 16 minutes at 190°C – 374°F (metal temperature).
Reccomended thickness: 60 microns – yield 13.1 $m^2$/Kg,
70 microns – yield 11.2 $m^2$/Kg,
80 microns – yield 9.8 $m^2$/Kg.

- Mechanical properties

| *Test* | *Standard reference* | *Result* |
|---|---|---|
| Buchholz hardness | ISO 2815 | ok |
| Cross-cut | ISO 2409 | no loss of adhesion; ok |
| Bending | ISO 1519 | no detachment; ok |
| Salt spray | ISO 9227 | corrosion <4 mm; ok |

**3. Variants and special formulations**

There are several variants of the *Wallsky* series. Moreover, some features of this powder can be modified on customer's request. Here are some of the special formulations available:

- polyester or polyurethane (suitable for sublimation);
- transparent;
- textured surface;
- class 2;
- low cross-linking temperature;
- antimicrobial;
- matching RAL colors;
- with different amounts of metal powders to get different surface effects.

**4. Sublimation version**

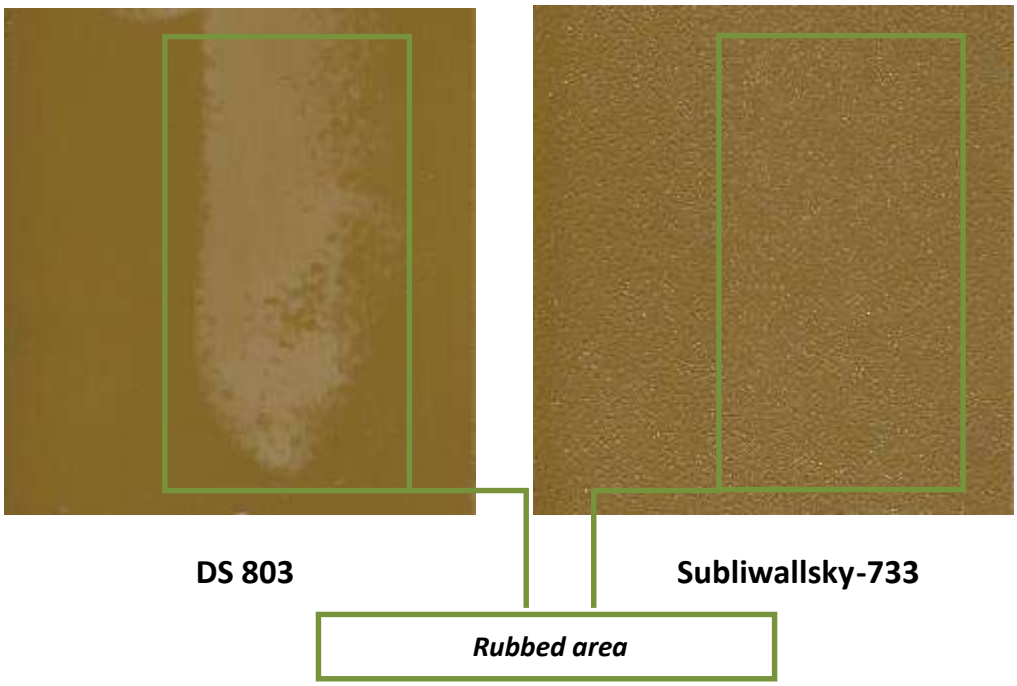
A special version of Wallsky series (*Subliwallsky-XXX*, polyurethane powder) suitable for heat transfer decoration is also available. A special surface thus becomes unique.

SubliWallsky-739 decorated with heat-transfer film 2301/02

**5. Abrasion test**

Decoral Lab carried out tests to evaluate the abrasion and wear resistance of this series.
The surface of a panel coated with Subliwallsky-733 was rubbed with sandpaper (600-grit) placing a 1 kg weight on it. The test consisted of 100 abrasion strokes.

The test was also carried out on a panel coated with a standard powder (DS 803) to evaluate its abrasion resistance and compare it with the Wallsky powder.




Weight: 1kg
Sandpaper grit: 600
Number of abrasion strokes: 100

According to test results, after 100 abrasion strokes the surface of the sample coated with Wallsky powder showed almost no change.
On the other hand, the panel coated with standard powder was seriously damaged.

**6. Anti-slip test**

The anti-slip properties of this powder were tested by an external laboratory. According to ***DIN 51130*** standard, the slip resistance is tested by measuring the coefficient of friction of a specific material. The results are classified into five categories, going from R9 to R13.

| TILT ANGLE | DIN 51130 Classification |
|---|---|
| 6° ≤ a ≤ 10° (from 6° to 10°) | **R9** |
| 10° < a ≤ 19° (from 10° to 19°) | **R10** |
| 19° < a ≤ 27° (from 19° to 27°) | **R11** |
| 27° < a ≤ 35° (from 27° to 35°) | **R12** |
| a > 35° (over 35°) | **R13** |

- **R9**: entrance areas and stairs with access from the outside; restaurants and canteens; shops; clinics; hospitals and schools.
- **R10**: shared bathrooms and showers; small commercial kitchens; garages and basements.
- **R11**: rooms for the manufacture of food; medium commercial kitchens; working environments with strong presence of water and mud; laboratories; laundries; hangar.
- **R12**: environments for the production of food rich in fats such as: dairy products; oils and cold cuts; large-scale commercial kitchens; industrial departments working with slippery substances; car parks.
- **R13**: high-fat environments; food processing.

Our tested product, more precisely a sheet coated with white WALLSKY-005, obtained **R12** rating.

CENTRO CERAMICO

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**DIN 51130 (06/2004)- Determination of the anti - slip properties – Workrooms and fields of activities with raised slip danger, walking method – ramp test**

Surface characteristics

- ☐ Smooth
- ☐ Profiled
- ☐ Structured
- ☒ Rough

**OPERATIVE CONDITIONS**

Walking direction

**RESULTS**

| | |
|---|---|
| Average total acceptance angle: | **31.9°** |
| Movement area ($cm^3/dm^2$): | **---** |

**CLASSIFICATION (BGR 181- 10/2003)**

| | |
|---|---|
| Group of anti - slip properties: | **R12** |
| Movement area evaluation group: | **---** |

Pietro Bruzzi
Technical verification

Prof. Maria Chiara Bignozzi
Director

### 7. Application results

Thickness

In order to obtain the rough surface typical of this series and, at the same time, the right coverage, it is recommended to keep the *thickness of the powder coat* within a certain range:

| THICKNESS [micron] | Effect | Result |
|---|---|---|
| <60 | Cloud effect, not uniform surface |  |
| 60-100 | Rough and uniform surface |  |
| >100 | Smooth surface |  |

Voltage

Another important factor to consider when applying the powder is the *voltage*, so that the powder can easily and uniformly adhere to the surface to be coated:

| VOLTAGE [kV] | Powder adhesion | Result |
|---|---|---|
| <35 | Difficult and not uniform |  |
| 35-50 | Difficult, it requires more powder |  |
| >50 | Easy and uniform |  |

### 8. Possible applications

The series is particularly suited to the coating of handles, shelves and technical furniture, floor tiles (low foot traffic) and all the surfaces where the particular rough anti-slip feature represents an added value.

Dedicated marketing materials:

- MRK-005-0042R3

- MRK-005-0340

Marchi di qualità registrati di Decoral System:


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