



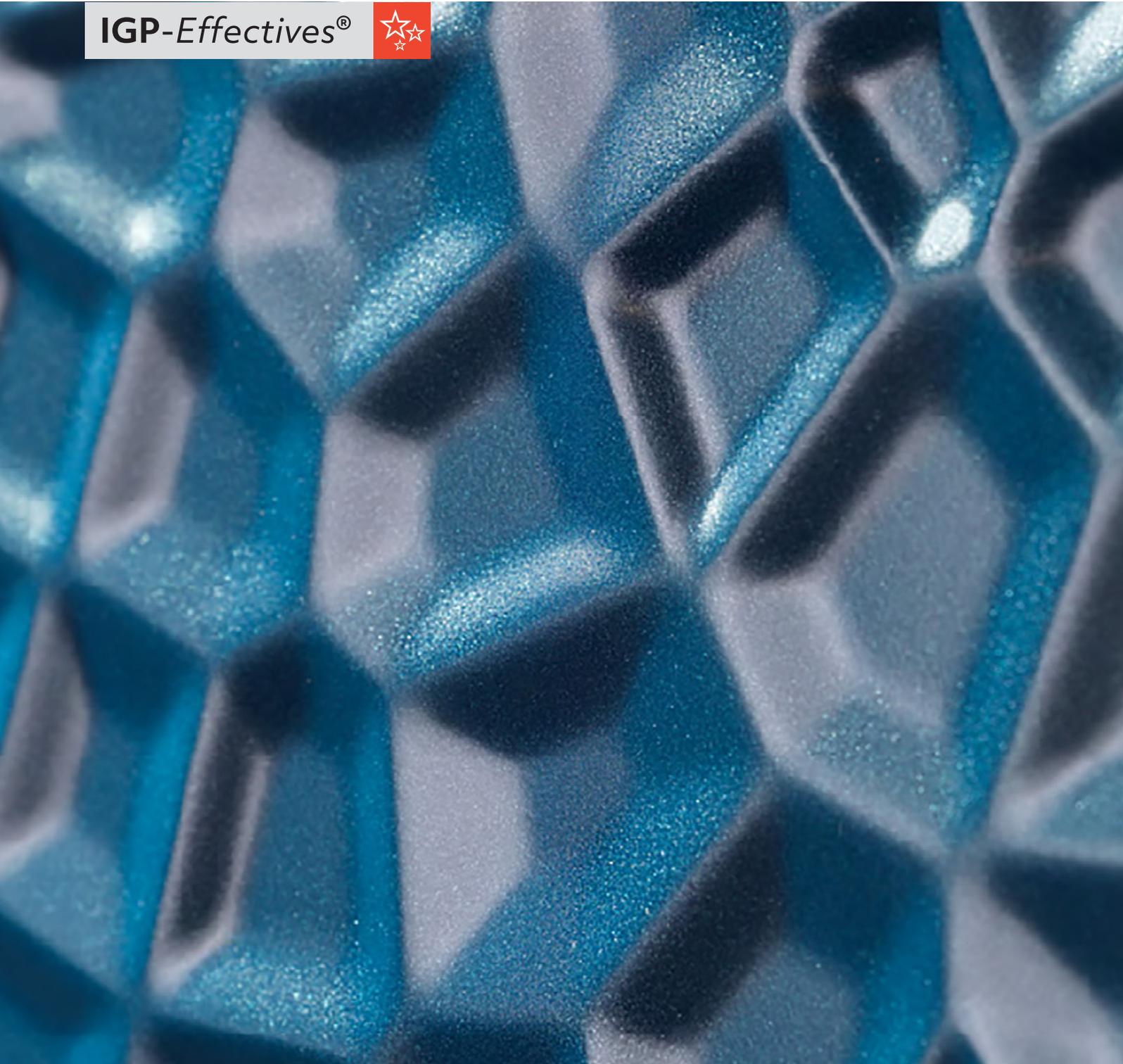
POWDER
COATINGS



NEXT GENERATION SURFACE TECHNOLOGY

IGP-Effectives[®] – cost-effective, sustainable and perfect for the processing of effect powder coating

IGP-Effectives[®]





STREAK-FREE AND HOMOGENEOUS SURFACES

THE CHALLENGE WITH EFFECT COATINGS

The aim when applying effect coatings is always to achieve streak-free and homogeneous surfaces. In the case of effect coatings produced using dry blend and bonding technology, the effect particles are not fully bonded to the powder grains. If the coating is applied in recycling mode, there is a risk of a separation effect.

This problem is minimized by the patented **IGP-Effectives®** technology in which the effect particles are fully bonded to the grains. The stable flow characteristics of the conglomerate of powder grains and effect particles and the narrow range of grain sizes ensure that the powder coating can be applied uniformly and efficiently. Streak-free and homogeneous surfaces are the result.

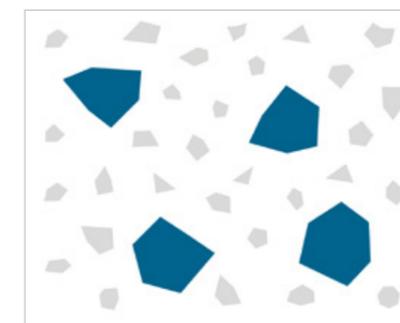
COMPARISON OF THE PROCESS TECHNOLOGIES

The different charging and deposition processes during the application of dry blend and weakly bonded effect powder coatings cause separation of the effect particles from the base powder. This results in inhomogeneous, streaky, and cloudy surfaces.

The innovative **IGP-Effectives®** process technology simplifies the processing of effect powder coatings. The process is extremely stable, produces a homogenous effect, and achieves a maximum powder recovery rate.

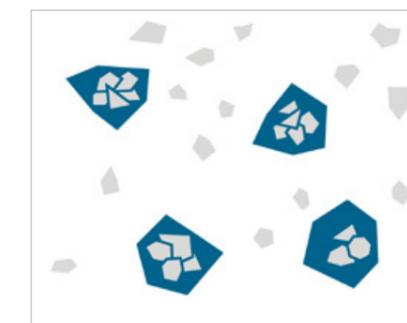
Dry blend mixing

No bonding of the effect particles



Bonding technology

Partial bonding of the effect particles to the powder grain



IGP-Effectives®

Full bonding of the effect particles to the powder grain



■ Effect particle ■ Powder grain (color particle)



EFFECT STABILITY

IGP-Effectives® ensures cloud-free distribution of the effect and optimal consistency of the effect and shade when using different application settings and methods. Even when using different types of system – such as a horizontal and a vertical coating plant – **IGP-Effectives® technology produces** surfaces with an impressively homogeneous shade and effect compared to standard bonding methods.



MATERIAL EFFICIENCY

Compared to standard effect powder coatings, **IGP-Effectives®** enables a high circulation stability because the effect pigments do not separate from the powder coating matrix. The unmatched efficiency of this technology is most apparent in the processing of recycled overspray. Even without the addition of any fresh powder, a cloud-free effect and a uniform shade can still be achieved in recycling mode.



OPTICAL DEPTH

The impressive optical depth provided by **IGP-Effectives®** adds an extra dimension to surfaces. This striking optical depth is a result of the even mixing and direct bonding of the effect particles to the powder grains. Unlike conventional effect powder coatings, the effect pigments lie below the film surface and are less susceptible to the effects of abrasion.

CLOUD-FREE WITH OPTIMAL CONSISTENCY

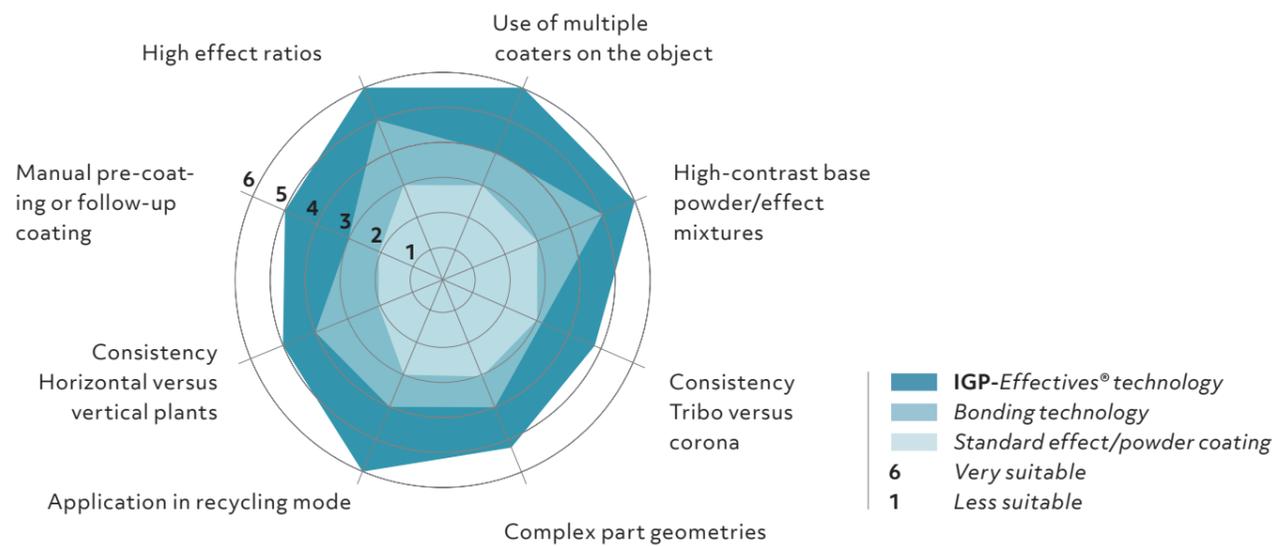
A COMPARISON OF THE REFINEMENT TECHNOLOGIES

IGP-Effectives® ensures cloud-free distribution of the effect and optimal consistency of the effect and shade even when using different application settings and methods.

DOWN TO THE LAST POWDER GRAIN

Whether using electrostatic (corona) or tribo powder application methods, **IGP-Effectives®** achieves a high degree of application efficiency – even with fresh powder. Even without the addition of any fresh powder, a cloud-free effect and a uniform shade can still be achieved in recycling mode. The recyclability of the powder

coating means that it is not necessary to monitor the ratios of recycled and fresh powder during application. **IGP-Effectives®** technology stands for reliability, cost-effectiveness, and sustainability



SURFACE CHANGES DURING THE COATING CYCLE

The powder mixture is subjected to enormous forces when it is extracted from the supply container and transported through the injectors, pumps and hoses. This can cause the effect particles to separate from the powder grains. This problem is minimized by **IGP-Effectives®** because the effect particles are fully bonded to the grains.

| | BONDING TECHNOLOGY | IGP-Effectives® |
|---------------------|--------------------|-----------------|
| Fresh powder | | |
| Recycling 3rd cycle | | |

There is a clear depletion of the effect after the 3rd cycle when using bonding technology.

The appearance of the effect is still identical after the 3rd cycle when using **IGP-Effectives®**.

OVERVIEW

OUTSTANDING BENEFITS THANKS TO IGP-EFFECTIVES®



FOR PLANNERS AND ARCHITECTS

Industrial coating often produces surfaces with a different shade from the approved limiting sample. This cannot happen with **IGP-Effectives®**. This innovative technology ensures that the end result perfectly matches the intended effect shade.



FOR COATING COMPANIES

IGP-Effectives® ensures maximum circulation stability and 100% recyclability, which means the coating can be applied without having to monitor the ratios of recycled and fresh powder. This produces color-stable, streak-free surfaces.



FOR METALWORKING AND FAÇADE CONSTRUCTION COMPANIES

Sometimes, streaky surfaces or different shades on adjacent workpieces only become apparent once the parts have been assembled. **IGP-Effectives®** can resolve this issue for good.

- Streak-free and cloud-free surfaces with a uniform effect
- Homogeneous mixing and bonding of the effect particles for impressive optical depth
- Easy processing of the powder coating means it doesn't matter which coating company you choose
- Easy-clean surfaces with low maintenance costs
- The coating process is extremely material-efficient thanks to the repeated recycling of the effect powder, fully in keeping with the concept of sustainable construction materials.
- Maximum application reliability because parameters such as voltage, current, pistol spacing, and coating plant only marginally affect the result
- Homogeneous effect no matter whether the substrate is coated with fresh powder or exclusively with recycled powder
- Exceptional material efficiency and cost-effectiveness due to complete utilization of the recovered overspray
- Significantly fewer rejects and lower correction rates
- Follow-up and manual coating possible with no negative impact on appearance
- The powder coating is ideal for complex part geometries and large component depths
- Maximum processing stability: Even when different coating companies are working on an object, any variations in the shade are extremely small
- The outstanding effect formation guarantees uniform, streak-free, and cloud-free surfaces
- Homogeneous mixing and bonding of the effect particles for impressive optical depth
- The effect surfaces are easy to clean
- Low coating costs thanks to resource-saving utilization of recycled powder

IGP-Effectives®

IGP-HWFclassic
5903U83638F10
Shade: Night Promise
Smooth finish, matte





BENEFITS FOR PLANNERS AND ARCHITECTS

GUARANTEED CONSISTENCY

The influence of different coating factors is significantly reduced with **IGP-Effectives®**. Variations between the shade and the approved limiting sample are a thing of the past. This guarantees that the desired shade is achieved.

COST-EFFECTIVE BENEFITS

- The coating parameters, mounting direction, and coating plant have practically no influence on the shade.
- The outstanding bonding of the effect particles guarantees uniform, streak-free, and cloud-free surfaces.
- The homogeneous mixing of the effect particles creates an impressive optical depth.
- Low maintenance costs because the effect surfaces are easy to clean.
- High material efficiency thanks to the full recycling of the overspray guarantees a sustainable coating process.

Efficiency

IGP-Effectives® is significantly more efficient than standard processes.

The effect powder coating can be recycled multiple times without any loss in color or effect.

This protects the environment and saves resources.

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IGP-Effectives®

IGP-HWF^{classic}
5903U83638F10
Shade: Celtic Alloy
Smooth finish, matte



BENEFITS FOR COATING COMPANIES

EASY APPLICATION WITHOUT LABORIOUS ADJUSTMENTS

IGP-Effectives® technology ensures stable and problem-free processing. The coating is easy to apply because it is no longer necessary to adjust the parameters or tune the pistol motion and spraying distances. Double-sided coating of workpieces without disruptive wrap-around and uncontrolled buildup of the effect coating speeds up the entire process and increases capacity. Efficient recycling of the overspray is still possible without any quality loss even after multiple cycles. This increases the surface coverage by up to 50%.

PROFIT BENEFITS

- Maximum application reliability because parameters such as voltage, current, pistol spacing, and coating plant only have a marginal impact.
- Absolutely homogeneous effect between surfaces coated with recycled powder and those with fresh powder.
- Maximum efficiency and cost-effectiveness through complete utilization of the recycled overspray.
- Significantly fewer rejects and lower correction rates.
- Follow-up and manual coating possible with no negative impact on appearance.
- Also ideal for complex part geometries and large component depths.

Circulation stability

IGP-Effectives® guarantees top circulation stability. 100 percent of the overspray can be recycled. This means there is no need to monitor the coating process. Additional follow-up and manual coating processes also produce outstanding results.



BENEFITS FOR METALWORKING AND FAÇADE CONSTRUCTION COMPANIES

A STABLE EFFECT ON EVERY PROFILE GEOMETRY

For larger construction projects involving multiple suppliers, trades, and coating companies, IGP-Effectives® ensures reliable application processes. Even surfaces that were produced in different plants with divergent coating parameters are guaranteed to look identical after coating. The color-giving effect particles from IGP-Effectives® create a uniform appearance even on difficult profile geometries.

EFFICIENCY BENEFITS

- Also ideal for large projects.
- Only the tiniest color deviations even when different coating companies are involved.
- The outstanding bonding of the effect particles guarantees uniform, streak-free, and cloud-free surfaces.
- Impressive optical depths are possible thanks to the homogeneous mixing of the effect particles.
- The stable effect coating is easy to clean.
- Low coating costs thanks to resource-saving utilization of recycled powder.

Application reliability

IGP-Effectives® creates a visually identical coating on workpieces with different material thicknesses and geometries despite the disparities in their thermal behavior. That makes shade deviation between adjacent workpieces a thing of the past.



EFFICIENCY

ECONOMICALLY ATTRACTIVE AND SUSTAINABLE

The technical and economic benefits of **IGP-Effectives®** are clear to see. The ability to recycle up to 100% of the overspray delivers significant savings and makes coating processes more environmentally friendly than ever before. This is all achieved without negatively impacting the quality of the coating.

EXAMPLE CALCULATION FOR EFFICIENCY IMPROVEMENT

| Coating in recycling mode | | |
|----------------------------------|-------------------------------|------------------|
| | Conventionally bonded product | IGP-Effectives®* |
| Powder output/m ² | 284 g | 284 g |
| AE | 44 % | 44 % |
| Powder on the workpiece | 125 g | 125 g |
| Overspray | 159 g | 159 g |
| Loss in cyclone | 8 g | 8 g |
| RCP/ Fresh powder | 20 % / 80 % | 100 % / 0 % |
| Ratio of recycled powder | 57 g | 151 g |
| Ratio of fresh powder | 227 g | 133 g |
| Powder loss (%) | 36 % | 3 % |
| Powder loss (g) | 102 g | 8 g |
| Improvement in efficiency | | 33 % |

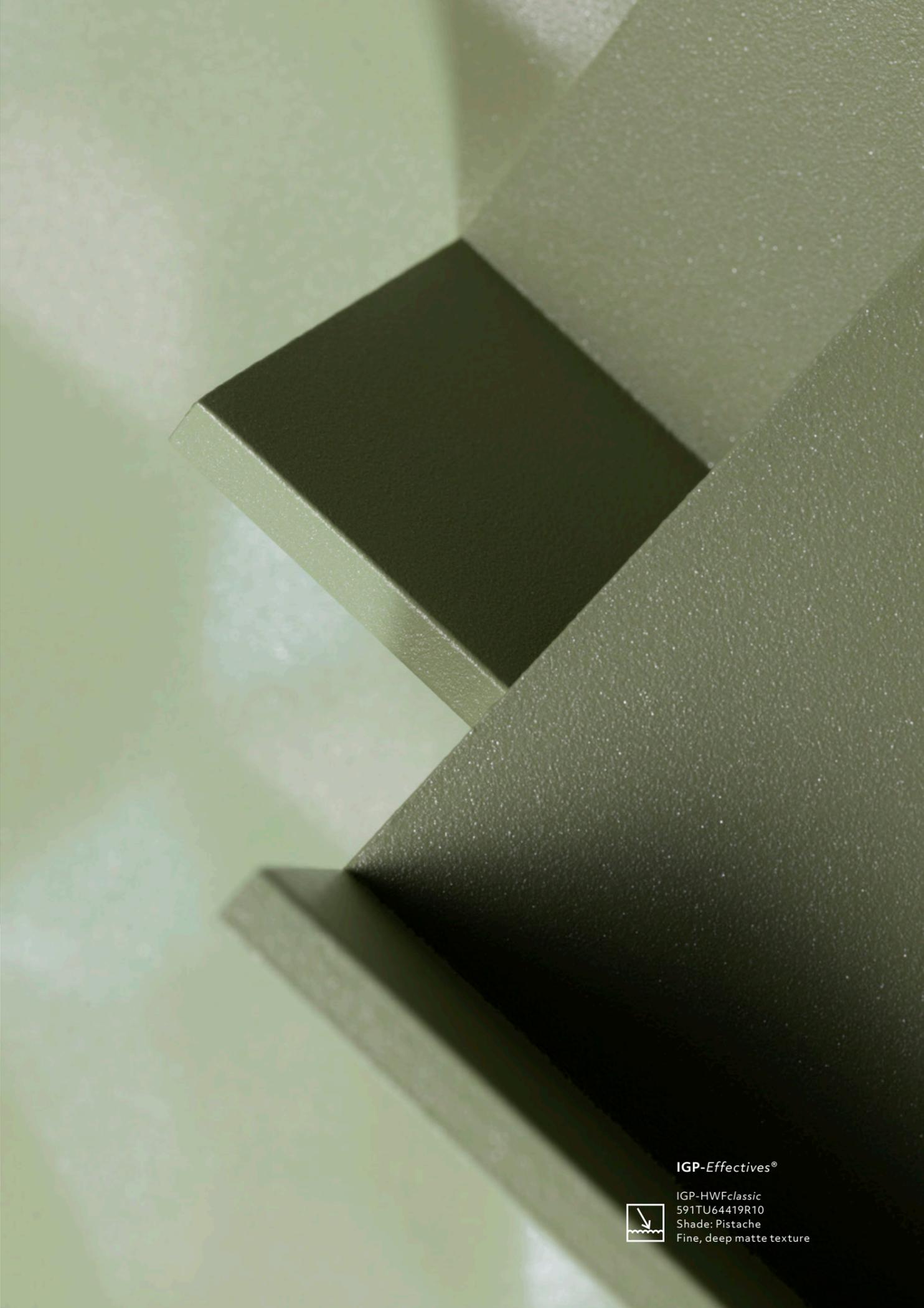
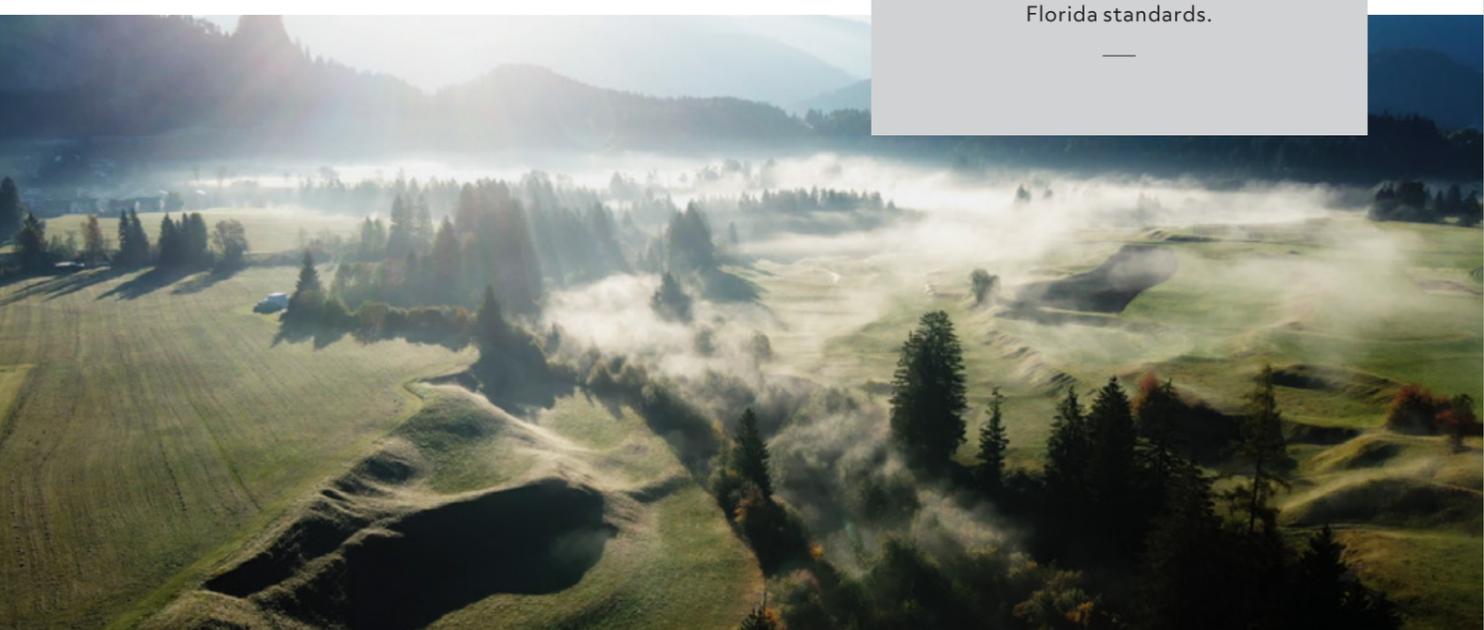
* Up to 100% RCP is possible depending on the object to be coated and the plant configuration.

Explanation:
Effect powder DB 703; density 1.66 kg/l, coating thickness 80 µm
AE = Application efficiency
RCP = Recycled powder



SUSTAINABLE MEANS CAREFUL HANDLING OF RESOURCES

The fact that **IGP-Effectives®** powder coatings can be recycled at a rate of 100% makes them sustainable and better for the environment. They are free of solvents and do not contain any toxic or environmentally hazardous substances. **IGP-Effectives®** powder coatings are also highly durable and stand out for long service life. They meet Qualicoat and GSB Florida standards.



IGP-Effectives®

IGP-HWFclassic
591TU64419R10
Shade: Pistache
Fine, deep matte texture



ENDLESS POSSIBILITIES FOR SURFACE DESIGN

IGP-Effectives® powder coatings are the next generation of effect surfaces. They make every object stand out in daylight with its own identity and brilliance.

THINKING IN NEW WAYS

Because IGP-Effectives® powder coatings are easy to process, cost-effective and environmentally friendly, they allow you to think in new ways and develop completely new design ideas for surfaces.

The coated surfaces are highly weather-proof and ideal for use in architecture and design.



COLLECTION OF 40 COLORS

The current IGP-Effectives® collection comprises 40 unique effect shades. Colors with names such as Night Promise, Mermaid, Purple Dust, Shooting Star, and Celtic Alloy fire the imagination and spark new ideas.

IGP can also develop and produce customized shades for larger projects.

Gallery 59

Immerse yourself in the effectively eye-catching world of IGP-Effectives® and let yourself be inspired.



IGP-DURA®one

56

Area of application: Standard weather-proof quality, Qualicoat class 1 or GSB Florida 1

Surface characteristics

| | | |
|--|---|---|
| 5603U Smooth finish, matte, Effectives technology | 5607U Smooth finish, silk gloss, Effectives technology | 561MU Fine texture, matte, Effectives technology |
|--|---|---|

IGP-HWFclassic

59

Area of application: Highly weather-proof quality, Qualicoat class 2 or GSB Florida 3

Surface characteristics

| | | |
|--|---|--|
| 5903U Smooth finish, matte, Effectives technology | 5907U Smooth finish, silk gloss, Effectives technology | 591TU Fine texture, deep matte, Effectives technology |
|--|---|--|

IGP-DURA®xal

42

Area of application: Highly weather-proof architectural products, Qualicoat class 2 or GSB Florida 3

Surface characteristics

| |
|---|
| 4201U Smooth finish, deep matte, Effectives technology |
|---|

IGP-HWFsuperior

57

Area of application: Highly weather-proof PLUS or GSB Florida 5

Surface characteristics

| | | |
|--|---|--|
| 5703U Smooth finish, matte, Effectives technology | 5707U Smooth finish, silk gloss, Effectives technology | 571TU Fine texture, deep matte, Effectives technology |
|--|---|--|





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