Gift-wrap, Greetings Cards, Point of Sale & Packaging Printing – Bioglitter® Application Guide

EU Regulation 2023/2055 (EU Microplastic Legislation)

Following the amendments to EU Regulation 2023/2055 published on 1 June 2026 (Regulation (EU) 2026/1168), short-life printed decorative products containing glitter, including gift-wrap, greetings cards, point-of-sale materials and certain packaging decorations, with an intended period of use of less than 12 months are now within the scope of the amended fixed-matrix provisions.

From 22 June 2028, synthetic polymer particles used in these products must meet the requirements of the Regulation. Finished products containing non-compliant glitter cannot be placed on the EU market for these applications after the applicable transition period.

Bioglitter® is compliant with EU Regulation 2023/2055 and provides manufacturers with a plant-based alternative to non-compliant glitter, delivering strong sparkle and distinctive effects without relying on the fixed-matrix derogation.

Why Choose Bioglitter®?

- **Fully compliant with EU Regulation 2023/2055** governing synthetic microplastic particles.
- **Made from plants** and designed to biodegrade quickly and safely in natural environments.
- **Patented Bioglitter® technology**, manufactured in Germany exclusively by Sigmund Lindner GmbH.
- **Exceptional sparkle, colour and effect intensity**, providing a premium alternative to non-compliant glitter.
- **Wide choice of effects**, including metallic, holographic, opaque, opalescent and neon finishes.
- **Suitable for gift-wrap, greetings cards, point-of-sale materials and decorative packaging printing** and many other decorative applications.

Selecting a Suitable Printing Process

Glitter particles are substantially larger than conventional printing pigments. They are therefore unsuitable for flexographic (flexo), gravure/rotogravure and offset/lithographic printing systems, where fine anilox cells, ink-transfer systems, plates and narrow clearances can prevent reliable particle transfer or cause blockages and damage.

The principal printing processes suitable for applying Bioglitter® are screen printing, drop-glitter or waterfall/flock application, and thermographic application.

SIGMUND LINDNER GmbH
Headquarter • SiLibeads Plant
Oberwarmensteinacher Str. 38
95485 Warmensteinach, Germany

SiLiglit Plant • Bioglitter Production
Bayreuther Str. 192
95485 Warmensteinach, Germany

USt-IdNr.
V.A.T. Reg.No.
DE 811 196 461

www.bioglitter.com
www.sili.eu

Process	How Bioglitter® Is Applied	Typical Bioglitter® Particle Sizes
Screen / serigraphic printing	Mixed into a compatible screen-printing ink or binder and printed through an appropriately open mesh.	004–008
Drop glitter / waterfall / flock	Dry glitter is sprinkled over a wet printed adhesive or sticky ink; excess is recovered where appropriate.	Typically, up to 008 possibly 015 (0.4mm)
Thermographic process	Dry glitter is blended with thermographic polymer powder, applied to the substrate and heated so the powder melts and fixes the effect.	Application dependent

Screen Printing / Serigraphic Printing

Bioglitter® is mixed into a suitably formulated screen ink or binder. The mesh opening must be comfortably larger than the glitter particle so that particles can pass without bridging. The following ranges are practical starting points; the final mesh depends on thread diameter, open area, stencil thickness, particle shape, ink rheology and the required deposit.

Bioglitter® Size	Approx. Bioglitter® Particle Size	Typical Mesh (T/cm)	Typical Use
004	0.10 mm / 100 µm	43T–48T	Fine screen-printed effects; confirm actual mesh opening.
006	0.15 mm / 150 µm	28T–34T	Flat screen, rotary/stencil screen and fine decorative print.
008	0.20 mm / 200 µm	20T–24T	Bolder flat-screen and rotary/stencil effects.

Mesh-selection rule: check the manufacturer's stated mesh opening, not mesh count alone. A useful starting principle is an opening at least 1.5–2 times the maximum particle dimension. Always trial the complete ink, mesh and stencil combination before production.

Ink Loading and Handling

- Begin at a moderate glitter loading and increase only where the ink transfer, screen release and adhesion remain satisfactory. Typical loading 5-10% by weight.
- Add Bioglitter® shortly before printing and mix gently to avoid damaging the decorative surface.
- Maintain rapid ink turnover on the screen and avoid leaving glitter-containing ink standing for unnecessary periods.
- Confirm drying or curing conditions, adhesion, rub resistance, crease resistance and blocking performance on the intended substrate.

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Product Selection and Colour Stability in Screen Inks

Product Range	Suitability	Formulation Guidance
Deco Bioglitter® SPARKLE V3	Recommended metallic-effect range for incorporation into screen inks.	Offers greater formulation stability than SPARKLE PF and SPARKLE 60.
Deco Bioglitter® PURE V2	Recommended non-metallic range for incorporation into screen inks.	Color, Opal and Opaque effects offer good formulation flexibility.
Deco Bioglitter® SPARKLE PF	Suitable subject to ink compatibility and storage-time control.	Colours may bleed in some formulations. Evaluate Silver or Holo Silver first.

The degree of colour bleed depends on the ink chemistry and the length of time the glitter remains mixed in the ink. For SPARKLE PF, make only the quantity required for the print run and use it promptly. Silver and Holo Silver should be assessed before coloured shades because they provide the clearest initial indication of compatibility.

- **Deco Bioglitter® SPARKLE PF** – brightest metallic effect with high sparkle and coverage.
- **Deco Bioglitter® SPARKLE V3** – stable metallic-effect option vs SPARKLE PF and SPARKL
- **Deco Bioglitter® PURE V2 Color & Opal** – translucent, pearlescent and opalescent non-metallic effects.
- **Deco Bioglitter® PURE V2 Opaque** – solid matte effects, including Black and White.

Note: Deco Bioglitter® SPARKLE 60 (Deco 60) is not available in the particle size required for screen printing

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Drop Glitter / Glitter Waterfall / Flock Process

A sticky ink or adhesive is printed onto the substrate and dry Bioglitter® is sprinkled or cascaded over the wet image. The glitter adheres to the printed area and the excess is removed or recovered. This process avoids holding the glitter in a wet ink for extended periods and is particularly effective for high-sparkle finishes.

Recommended Products

- **Deco Bioglitter® SPARKLE PF and SPARKLE 60** – brightest metallic effects and particularly well suited to dry application.
- **Deco Bioglitter® SPARKLE V3** – robust metallic-effect option.
- **Deco Bioglitter® PURE V2** – distinctive Color, Opal and Opaque non-metallic effects.

Particles up to 008 are commonly used, it's possible to use even large such as 015 (0.4mm), although the maximum practical size depends on the image detail, adhesive deposit, substrate and finishing process. Confirm adhesion, shedding, folding, die-cutting and downstream packing performance.

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Thermographic Process

Dry Bioglitter® is blended with a thermographic polymer powder, deposited onto the printed or adhesive image and heated. The polymer powder melts and fixes the glitter to the substrate, producing a raised decorative finish.

All Deco Bioglitter® product ranges can be evaluated for this process. Because heat transfer varies with powder chemistry, oven design, line speed, deposit weight and substrate, optimise the lowest effective time-temperature combination and check sparkle retention, colour, adhesion and blocking.

Production Trial Checklist

- Confirm compatibility of the ink, adhesive or thermographic powder with the selected Bioglitter® grade.
- Verify print definition, transfer, cure, adhesion and glitter shedding.
- Check folding, creasing, cutting, laminating and packing operations.
- Assess storage stability and colour bleed where glitter is held in a wet ink.
- Validate the finished article under its intended transport, storage and use conditions.

Packaging Options

SiLi offers all Bioglitter® products in bulk packaging from 1 kg to 25 kg. Please discuss grade, particle size, pack format, minimum order quantity and production requirements with your SiLi representative.

Use of the Bioglitter® Logo

Bio·glitter® bioglitter.com

The Bioglitter® name and logo are registered trademarks of Sigmund Lindner GmbH and are recognised throughout the industry as a mark of authentic Bioglitter® technology.

Customers using genuine Bioglitter® products are encouraged to use the official Bioglitter® logo on packaging, websites and marketing materials, subject to approval from Sigmund Lindner GmbH and in accordance with the current Brand Guidelines.

The logo helps distinguish products made with authentic, patented Bioglitter® technology from products described generically as biodegradable glitter. It also supports communication that the glitter used is compliant with EU Regulation 2023/2055.

Please contact your Sigmund Lindner representative to obtain approval, the correct logo files and the latest Brand Guidelines before using the Bioglitter® logo.

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Disclaimer

The information contained in this document is based on our current knowledge of Bioglitter® products together with practical experience in decorative printing and paper-converting processes and is provided for guidance only.

Materials, formulations, equipment and processing conditions vary considerably. Customers are responsible for carrying out their own trials to determine the suitability, performance, safety and regulatory compliance of Bioglitter® in the intended finished product before commercial production.

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