

INTRODUCTION

The INMOULD Original graphic is a printed 9mil (230 micron), micro-porous polyolefin, coated with pressure sensitive adhesive. It is designed specifically for rotational moulded products, both indoor and outdoor applications. INMOULD Original can be printed in both spot or CMYK process featuring brilliant opacity due to the natural white base substrate. These graphics are applied to hot or cold mould surfaces and become fully moulded into the product during the moulding process.

APPLICATIONS AND FEATURES

- Excellent outdoor durability
- Fastest application time
- Extremely Flexible
- Excellent chemical and abrasion resistance
- Opaque and bright colours
- Superior colour matching ability
- Metallic and conductive capabilities
- Suited for PE, PP, Nylon and a wide range of polyolefins
- Cold or hot mould applications
- UV Protective Coats

COMPATIBLE ADHESIVES

BL Standard – for smaller mouldings (A4 size or bigger) requires minimal cleaning

BH Standard –for clear cut design and where maximum adhesion is required

PTAC™ – Peel off adhesive system requiring zero cleaning. Includes 0.5mil carrier

DESIGN TERMINOLOGY

Clear-cut – where product shows through graphic by way of removing parts i.e. centre of letters. Transfer application tape is recommended for this type design

Solid - graphic is supplied as one piece

SURFACE FINISH

Matte - Ensures a smooth finish offering no sheen as it absorbs light. This finish will hide imperfections in plastic surfaces such as porosity or mould damage. Recommended for indoor applications only which are less prone to dust and/or where mould damage is evident.

Satin - A silky smooth finish providing a plastic-like result therefore is proven to be our most popular finish. Satin reflects light more than matte thus offering more vibrant colours. Also featuring greater abrasion resistance and will not appear to degrade to same degree as matte. Recommended for any outdoor or indoor applications, especially where brand is to be kept subtle and look less 'sticker like'

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Gloss - This finish is highly reflective, with darker colours mirror-like therefore print colours featuring gloss will be intensely vibrant. Gloss is proven to be the most durable, abrasion and solvent resistant finish. This finish most ideal for all outdoor environments. Gloss will magnify any imperfections on the mould, so a carefully prepared mould surface is critical to ensure satisfactory results. The graphic while permanently moulded in or on will appear sticker-like. Recommended for harsh outdoor environments and classy products where graphic requires extra 'pop' and vibrancy.

In Summary - Our most popular finish for all graphics is Satin which is why since January 2015 we phased all Matte finish graphics and replaced them with Satin due to the unparalleled advantages.

PERFORMANCE & PHYSICAL DATA

Property	Test Method	Typical Value
Thickness	Micrometre	8mil (203 micron)
Natural Appearance	NA	Opaque White
Shelf Life	Free from moisture, temperature and direct sunlight	Unlimited
Application Temperature	On polished steel or aluminium mould surface	Standard 0-90°C (32-194°F) PTAC 0-40°C (32-104°F)
Outdoor Life	Weatherometer ENG0111 Procedure S – QUV test	2000 hrs unchanged 5000 hours no fade
Adhesion	Adhesive peel force from polished S/Steel	BL – 21 oz/in BH – 27 oz/in PTAC – 22 oz/in
Suitable Substrates	Rotational, injection and blow moulding	PE, PP, PVC, PC, PU, PET, ABS, Nylon
Adhesion to plastics	ASTM Test Method D-3359-76 and DIN Standard No. 53159 on MDPE	5 – None

GENERAL APPLICATION

INMOULD Original is a long-time favourite due to;

- It's compatibility to a wide range of substrates
- Ability to print both with screen and digital processes
- Choice of adhesives for various applications
- Flexible nature on a wide range of mould surfaces
- Application to typical mould temperatures
- Ease of handling
- Unlimited shelf life in temperate climates
- Bright and opaque finish

Print quality and DPI is unmatched by other systems and available surface finishes include satin, gloss and spot-gloss offering a design advantage from a marketing perspective.

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TYPICAL APPLICATION PROCESS

INMOULD Original graphics are supplied on an easy-release backing sheet required for easy-peel and placement on mould surface. It is advisable to apply additional pressure using a soft roller or squeegee to activate the pressure-sensitive adhesive ensuring maximum adhesion. Once moulded, the graphic appears flush with the product surface. The clear coat offers excellent resistance to water, solvents, abrasion and UV exposure. See our more detailed guides and videos for more information.

SPECIAL CONSIDERATIONS

- If your design requires clear-cut detail, application tape may be required to assist placement on mould.
- Release agents, additional adhesives and residues on mould surface may affect adhesion and finish.
- Warming moulds may improve adhesion and preloading but warming the mould and allowing it to cool again may negatively affect the adhesion.
- A textured mould may require a light sand to smooth the area to improve the adhesion.
- Application using hard surfaced tool, such as a burnishing pad, may affect the adhesion and damage the micro-porous graphic properties.
- Trapped air bubbles between the graphic and the mould will also result in an unsightly finish.
- Larger mouldings may cause graphic erosion so consider placement in unexposed area, reducing rotation speed, creating recess for placement or protective coatings such a surface enhancer.
- When using PTAC™, best results are achieved on a polished surface and when mould temperatures do not exceed 40°C (104°F).

For more troubleshooting refer to our PCPA (Problems Caused and Preventative Actions). The user is responsible for determining whether the graphic is fit for the purpose or suitable for the users' application. PSI Brand cannot guarantee the longevity of your graphic unless recommended processes are strictly adhered to.

OUR GUARANTEE

If a product supplied by PSI Brand does not meet your satisfaction, we promise a 'refund or replace it' guarantee, so there's no risk to try!

PRE-PRODUCTION TESTS

It is strongly recommended that graphics are tested prior to production. Mould surfaces can vary due to different coatings and textures. Graphics kept in poor storage conditions will also vary in performance (due to aging) causing poor adhesion to the mould.

Ensuring the mould is free from release agent, powder, residue and harsh textures such as shot-peened will improve the results. More tips for trouble-shooting in our PCPA.

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OUTDOOR USE

Accelerated weather tests have been conducted on graphics in QUV and Xenon Weatherometers. Under these conditions INMOULD Original graphics withstood any significant surface damage up to 2000 hours. Accelerated weathering tests cannot be specifically related to actual outdoor performance, but it is considered that 2000 hours of exposure approximately equates to up to 5 years' outdoor exposure in temperate climates.

COLOUR OPTIONS

INMOULD Original graphics are extremely user-friendly when it comes to colour matching due to the opaque, natural white base substrate. We use the PANTONE matching system so please quote PMS Matching numbers to ensure closest match. Alternatively, ship a colour correct sample to us for matching.

Half-tones and CMYK colour process are possible with INMOULD Original, featuring up to 85dpi, this equates to approx. 170dpi. This allows us to print full photographic images if required. See examples on our website www.psibrand.com.

Metallic, phosphorescent, conductive and thermochromic additives also available on special request.

SAFETY AND HANDLING

Refer to MSDS for safety, handling and waste disposal. In summary INMOULD Original graphics are non-hazardous, fully recyclable moulded and fully comply with CPSIA, ROHS and REACH standards and regulations.

The information and recommendations contained in this Technical Data Sheet, as well as technical advice otherwise given by representatives of our Company, whether verbally or in writing, are based on our present knowledge and believed to be accurate. However, no guarantee regarding their accuracy is given as we cannot cover or anticipate every possible application of our products and because manufacturing methods, moulds, surfaces, moulding materials and other tools or additives vary. For the same reason our products are sold without warranty and on condition that users shall make their own tests to satisfy themselves that they will meet fully their requirements. Our policy of continuous product improvement might make some of the information contained in this Technical Data Sheet out of date and users are requested to ensure that they follow current recommendations.