PARAGON
AM Technologies

Texturing for 3D Printed Parts

Bringing life to design

PARAGON
Rapid Technologies

PARAGON-RT

About us

Your low- to mid-volume production partner

Paragon Rapid Technologies provides world-class support throughout the product development cycle, from innovation to manufacturing.

Operating through three core business brands, Paragon AM Technologies, Paragon Rapid Technologies and Paragon CNC Technologies, we are a market-leading one-stop-shop for rapid prototypes and on-demand, low- to mid-volume production parts. Our outstanding technical expertise and process knowledge help us provide manufacturing support of the highest quality to the aerospace, defence, automotive and transport, medical, consumer, industrial, architectural, entertainment and energy industries.

Additive Manufacturing

The advancement of 3D printing technologies and materials has enabled the development of custom devices and volume manufacture of products with cost and time efficiencies previously unimagined.

Paragon has one of the largest fleets of polymer additive manufacturing machines in the UK, with four Carbon M2 printers, two HP MJF printers and three digital SLS printers. This is complemented by our three NEO 800 printers which are ideal for finely detailed, large prototypes and master patterns.


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hp
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What is texturing?

Additive manufacturing (3D printing for end use parts) enables the application of textures to the surfaces of parts at the design phase, without compromising the part.

Texturing can be applied to any geometry, and offers a number of advantages, for example:

- Cost savings through eradication of moulding requirements
- Better surface aesthetics:
    - 99% of layering is covered up through texturing
    - More ornate texturing may appeal to those seeking to offer high end products
- Better functional ability, e.g. improved grip or acoustic capability

Top Right: Texture applied to CAD file

Bottom Right: Resulting textured MJF print

Paragon AM Technologies Texture Service:

Paragon Rapid Technologies offers a portfolio of standard textures, enabling customers to take advantage of this unique additive manufacturing capability. Simply choose your texture and stipulate which faces require the application. Our design engineers will do the rest.

With few exceptions, almost any texture design can be applied to your CAD data. If you don't see your preferred texture in our portfolio, we're happy to apply one of yours. We simply need a 'grey scale' image of your design.

Textures can be applied to MJF, DLS, SLS and SLA parts with ease. For SLA and DLS parts, however, you do need to consider applying textures to 'A' surfaces that might contain support structures. Please talk your options through with our project engineers if you have further questions.

Left: Texture applied to CAD file

Right: Resulting textured SLA print (painted)

Application considerations

Applying textures can take as little as 30 minutes or in excess of 6 hours, depending upon the complexity of the part. When considering including texturing, please note:

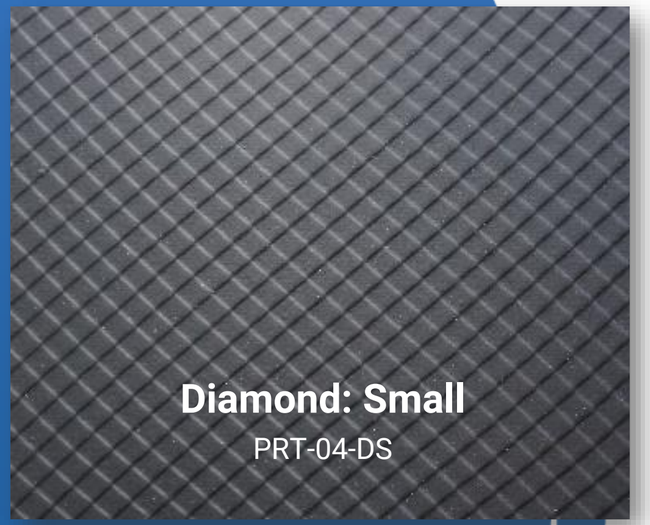
- If you wish to use your own texture, the grey scale image you supply needs to be of good quality
- Should multiple textures be required, or a texture needs to start and finish at a particular point, sharp edges are required to separate the faces
- Simple flat surfaces are the easiest surfaces to apply textures
- Simple spark textures, or textures that don’t contain a set pattern are easier to apply
- Textures containing set patterns, such as hexagonal or circular patterns, are difficult to apply to curved surfaces. This is due to loss of their set pattern/dimensions around tight curves. This will be more noticeable on larger set patterns

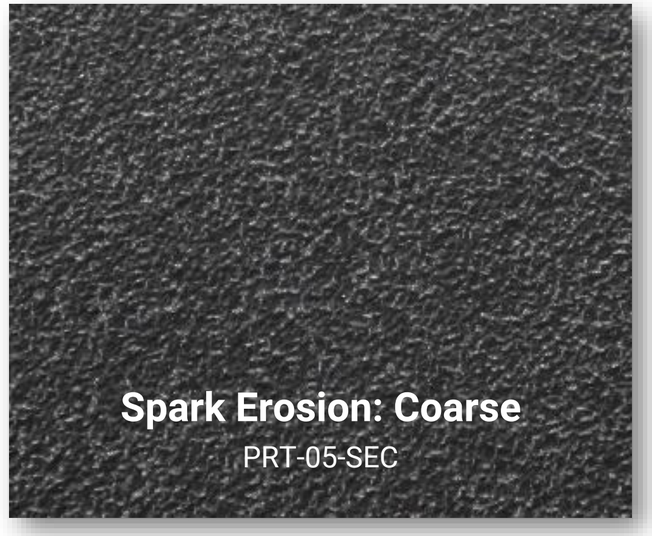
Right: Textures applied to CAD file

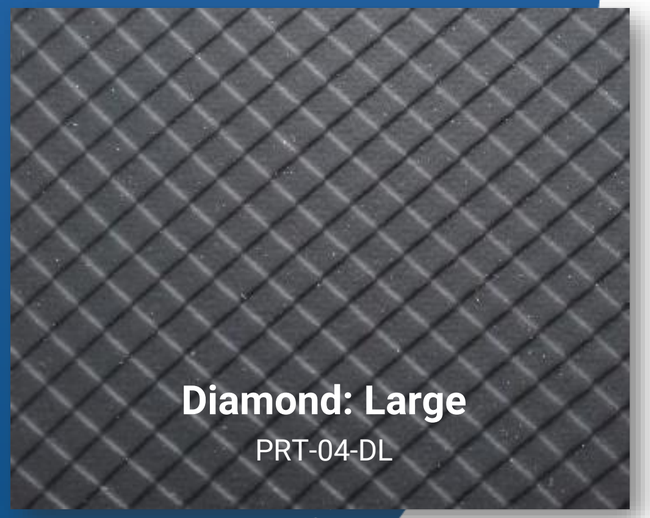
Left: Resulting textured MJF prints

Our Texturing Portfolio

Our Texturing Portfolio







More textures available on demand.
Alternatively, you can supply your own CAD.
Please ensure the CAD is of suitable quality.

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Paragon AM Technologies is the additive manufacturing division of Paragon Rapid Technologies Ltd.

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