

In courtesy of Neri Oxman

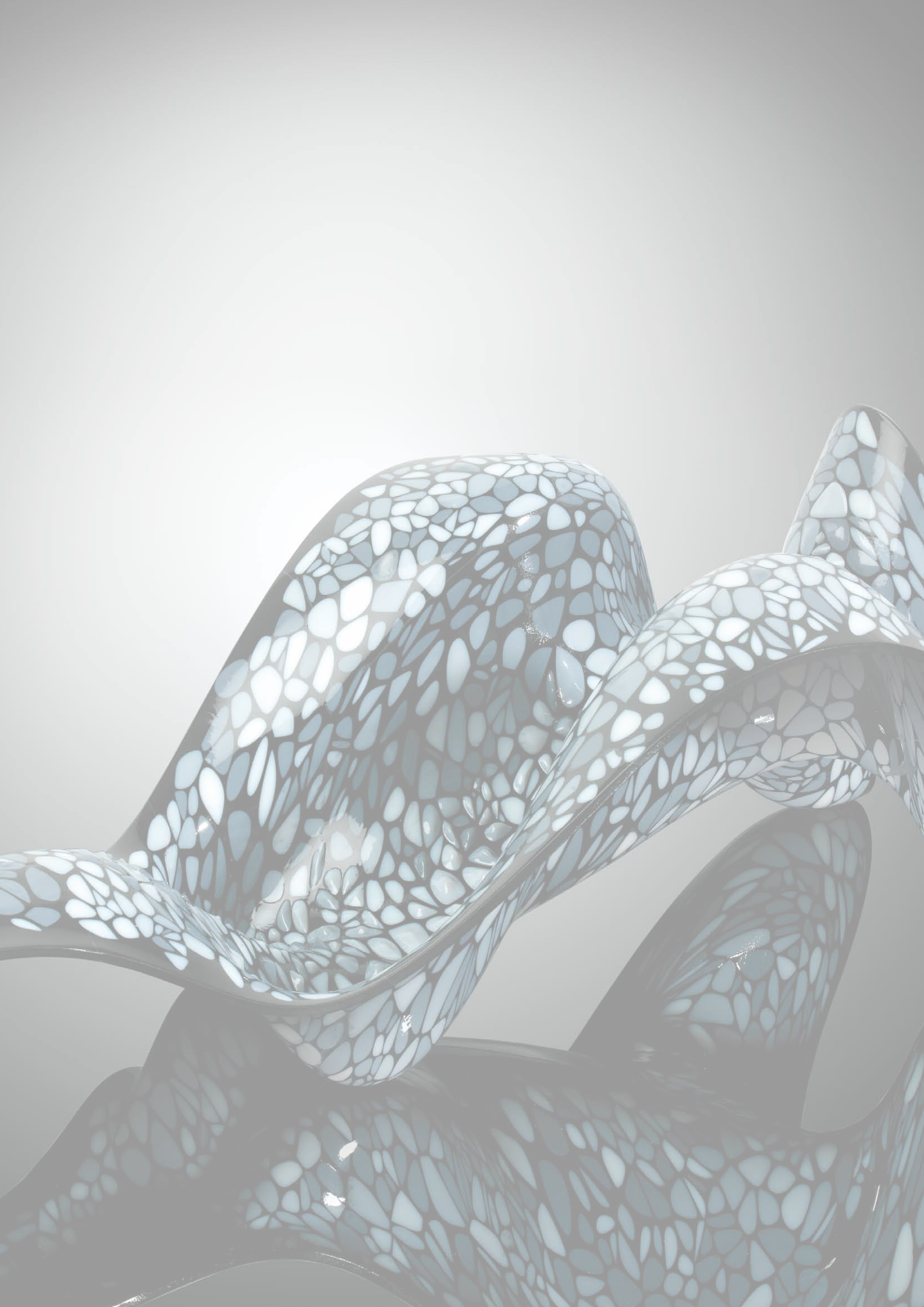
Objet Materials

The Power behind your 3D Printer

With a choice of over 60 materials, including 51 Digital Materials, Objet's 3D printing solutions enable highly realistic visual and functional simulation for Rapid Prototyping purposes.

Objet's materials are capable of simulating properties ranging from varying grades of rubber all the way to clear transparent glass and engineering plastics combining high toughness and high temperature resistance.

Using Objet's materials, designers, manufacturers and engineers can create highly accurate, finely detailed models and parts to answer the Rapid Prototyping needs of virtually any industry.



Create Flawless Models with Objet Materials

Meeting your Precise Application Requirements

Objet provides a wide variety of materials offering transparent, colored, opaque, flexible, rigid, high temperature and high toughness properties. These materials are designed to answer the visual and verificational requirements of designers and engineers in every industry.

Unrivalled productivity

Based upon proprietary, acrylic-based photopolymer technology, Objet's materials produce fully-cured models that can be handled immediately after printing, with no need for lengthy post-processing.

Models and parts made from Objet materials feature smooth surfaces and fine details. They can readily absorb paint and can be easily machined, drilled, chrome-plated, glued or used as a mold.

Ease of use

Objet Support material, used in combination with any Objet material, enables the design and production of models with an unlimited array of complex geometries, including overhangs and undercuts. With no hard edges to scrape or chemical baths to use, the gel-like support is easily and quickly removed with a water-jet.

Environment

Objet materials are environmentally safe, being REACH compliant. They are delivered in fully sealed 1kg, 2kg or 3.6kg cartridges that are simple to use, change over and replace.


Your Choice of up to 51 Digital Materials!

The Objet Connex™ 3D printing system offers users the unique ability to fabricate as many as 51 different Digital Materials, with up to 14 different materials within any single printed part.

Digital Materials are composite materials created by simultaneously jetting two different Objet materials. The two are combined in specific concentrations and structures to provide unique mechanical properties and to provide a closer look, feel and function of the desired end-product.

- Simulate rubber – Print a whole range of different Shore A values including Shore 27, 40, 50, 60, 70, 85 and 95, to simulate various elastomers and rubber products.
- Simulate toughness – Print various rigid materials ranging from standard plastics to the toughness and temperature resistance of ABS or engineering-plastics.
- Create shades and patterns – Print various shades of rigid opaque materials and mix transparent and rigid opaque materials to create dots, grids and patterns.

Objet Digital Materials™



- **Black Rubber like material**
 - Elongation at break 47.7%
 - Shore A 61
- DM_1
 - **Rigid**
 - Izod Impact 25.8 J/m
 - Color: Gray40
- **White Rigid material**
 - Izod Impact 24.1 J/m
 - Tensile Strength 49.8 MPa
- DM_3
 - **Rigid**
 - Izod Impact 34.6 J/m
 - Color: Gray60
- DM_2
 - **Flexible**
 - Elongation at break 41.6%
 - Shore A 85
 - Color: Black

All part based on digital combinations of Objet materials.

Objet Material Families

Simulating Engineering Plastics

High Temperature

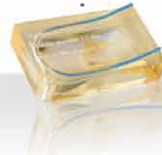


ABS-like

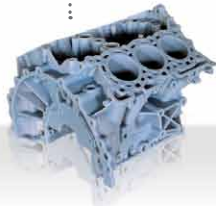


Simulating Standard Plastics

Transparent



Rigid opaque



Polypropylene-like



Rubber-like



Medical*



* See the Objet website & medical brochure for more information on materials for medical, hearing aids, dental and biocompatible applications.

** These materials have received 4 medical approvals: Cytotoxicity, Irritation, Sensitization and USP Plastic Class VI. It is the responsibility of the device manufacturer to determine the suitability of all the component parts and materials used in its finished products.

Simulate Standard Plastics – Transparent

Objet FullCure720™ is Objet's original multi-purpose transparent material for standard plastics simulation.

Objet VeroClear™ is a rigid, colorless material featuring great dimensional stability for general purpose, fine detail model building and visual simulation of transparent thermoplastic such as PMMA.

Simulate Transparent Shades and Patterns Selected Digital Materials –

Combining Objet FullCure720™ and Objet VeroBlack™ enables the creation of different artistic patterns, (Objet DM_dots_7513 and DM_grid_7523), while using Objet FullCure720™ with Objet TangoBlack™ enables the creation of various transparent shades.

Ideal for:

- Form and fit testing of clear or see-through parts
- Glass, eye-wear, lighting covers and light-cases
- Visualization of liquid flow
- Color dyeing
- Medical applications
- Artistic and exhibition modeling



Simulate Standard Plastics – Rigid & Opaque

The Objet Vero family of rigid opaque materials includes Objet VeroWhitePlus™, Objet VeroGray™, Objet VeroBlue™ and Objet VeroBlack™.

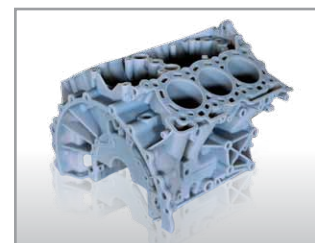
Combining dimensional stability and high-detail visualization, the Objet Vero family is intended for standard plastics simulation and model creations that closely resemble the 'look' of the end product.

Simulate Rigid, Opaque Shades Selected Digital Materials –

Combining Objet VeroWhitePlus™ and Objet TangoBlackPlus™.

Ideal for:

- Wide range of fit and form testing
- Moving parts and assembled parts
- Exhibition and sales & marketing models
- Assembly of electronic components
- Objet VeroBlue™ is ideal for silicon molding



Simulate Standard Plastics – Polypropylene

Objet DurusWhite™ material is ideal for a broad range of applications that require the appearance, flexibility, strength and toughness of Polypropylene. Properties include Izod notched impact of 44 J/m, elongation at break of 44% and flexural modulus of 1026 MPa.

Simulate Polypropylene with Improved Thermal Resistance Selected Digital Materials –

Combining Objet DurusWhite™ with Objet VeroWhitePlus™ or

Objet VeroGray™, Objet VeroBlue™ or Objet FullCure720™.

Ideal for:

- Reusable containers and packaging
- Flexible, snap-fit applications and living hinges
- Toys, battery cases, laboratory equipment, loudspeakers and automotive components



Simulate Standard Plastics – Rubber

The Objet Tango family of rubber-like materials includes Objet TangoGray™, Objet TangoBlack™, ObjetTangoPlus™ and Objet TangoBlackPlus™. The family offers various levels of elastomer characteristics: Shore scale A hardness, elongation at break, tear resistance and tensile strength that make it suitable for a range of applications requiring non-slip or soft surfaces on consumer electronics, medical devices and automotive interiors.

Simulate 6 Different Shore Values

Selected Digital Materials –

Combining – Objet TangoBlackPlus™ or ObjetTangoPlus™ and Objet VeroWhitePlus™ to simulate 6 levels of different Shore Scale A values from Shore 40 to Shore 95, with increasing tensile strength and tear resistance.

Additional Shore values can be created by combining other Objet Tango and Objet Vero materials.

Ideal for:

- Exhibition and communication models
- Rubber surrounds and over-molding
- Soft-touch coatings and non-slip surfaces
- Knobs, grips, pulls, handles, gaskets, seals, hoses, footwear



Simulate Engineering Plastics – High Temperature*

Objet High Temperature material (RGD525) has exceptional dimensional stability for thermal function testing of static 3-D models.

The material has a heat deflection temperature (HDT) of 63–67 °C (145-153 °F) upon removal from the printer which can be increased to 75-80 °C (167- 176 °F) after thermal post treatment in a programmable oven.



Ideal for:

- Form, fit and thermal functional testing of static parts
- High-definition parts requiring excellent surface quality
- Exhibition modeling under strong lighting conditions
- Post-processing including painting, gluing, or metallization processes
- Models in transit
- Taps, pipes and household appliances
- Hot air and hot water testing

Simulate Engineering Plastics – ABS*

Objet ABS-like digital material (RGD5160 – DM) is fabricated from FullCure®515 and FullCure®535. It is designed to simulate ABS engineering plastics by combining high-temperature resistances with high toughness. Objet ABS-like digital material is suitable for any simulated parts that require high-impact resistance and shock-absorption.

Objet ABS-like material has a high impact resistance of 65-80J/m (1.22-1.5 ft lb/inch) and a heat deflection temperature (HDT) of 58-68 °C (136–154 °F) upon removal from the printer. A higher HDT of 82-95 °C (179–203 °F) can be achieved after thermal post treatment in a programmable oven using different temperature profiles.

Ideal for:

- Functional prototypes
- Snap-fit parts for high or low temperature usage
- Electrical parts, casings, mobile telephone casings
- Engine parts and covers



Objet Family of 3D Printing Systems

Objet's advanced 3D printers enable the fast and efficient production of prototypes featuring superior surface quality and ultra-high resolution, down to 16 micron layers.

When combined with Objet's range of over 60 materials, Objet's 3D printing systems represent the most practical rapid prototyping solution available - with unmatched versatility for designers, engineers and manufacturers in virtually any industry.

Objet has thousands of customers including many of the relevant Fortune 100 companies.

Objet systems are in use by world leaders in many industries, such as consumer goods, consumer electronics, defense, automotive, dental, education, architecture, medical & medical devices, hearing aids, animation & entertainment, industrial machinery, jewellery, sporting goods, toys, service bureaus.

Objet Eden Family



Objet Desktop Family



Objet Connex Family

Our Awards



CNBC European Business Magazine Names Objet Among Europe's 25 Most Creative Companies 2010



Plastol 2009 award for recognition of outstanding product: Alaris30



Material of the Year 2009 Honorable Mentions



2008 RedTech USA Emerging Technologies Award For Objet Connex500



Red Dot Design Awards 2008 for Objet Connex500



Frost & Sullivan Award for Product Innovation 2008



Desktop Engineering 2008 for Objet technology



Desktop Engineering 2007 for Digital Materials



NASA Tech Brief 2007 for Objet Connex500



EuroMold Gold Award 2007 for Objet Connex500



Frost & Sullivan 2007 for superior performance in rapid prototyping industry.



Desktop Engineering 2006 for Objet Eden500V

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* For existing customers: operating this material requires the installation of an upgrade kit to Objet 3D Printer. To order contact your Objet Regional Customer Support Manager.

Objet Geometries Ltd. ("Objet") does not guarantee the final release and availability of materials, products and/or features referred to herein. Materials will be released subject to Objet's sole discretion. Not all released materials are currently available for all platforms/systems. Objet will update its website further as releases become available and/or compatible with specific platforms/systems.

ABOUT OBJET GEOMETRIES

Objet Geometries Ltd., the innovation leader in 3D printing for rapid prototyping and additive manufacturing, provides 3D printing systems that enable manufacturers and industrial designers to reduce cost of product development and dramatically shorten time-to-market of new products.

Objet's ultra-thin-layer, high-resolution 3D printing systems and materials utilize PolyJet™ polymer jetting technology, to print ultra-thin 16-micron layers. The market-proven Objet Eden™ line of 3D Printing Systems and the Objet24 and Objet30 Desktop 3D printers are based on Objet's patented office-friendly PolyJet™ Technology. The Objet Connex™ family is based on Objet's PolyJet Matrix Technology, which jets multiple model materials simultaneously and creates

composite Digital Materials™ on the fly. All Objet systems use Objet's FullCure® materials to create accurate, clean, smooth, and highly detailed 3D parts.

Objet systems are in use by world leaders in many industries, such as Education, Medical / Medical Devices & Dental, Consumer Electronics, Automotive, toys, consumer goods, and footwear industries in North America, Europe, Asia, Australia, and Japan.

Founded in 1998, Objet serves its growing worldwide customer base through offices in USA, Mexico, Europe, Japan, China and Hong Kong, and a global network of distribution partners. Objet owns more than 50 patents and patent pending inventions. For more information, visit us at www.objet.com.

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