

3D PRINT MATERIALS



 **Verbatim**
Technology you can trust

THE KAITEKI COMPANY Mitsubishi Chemical Holdings Group

Engineering Plastics Filaments

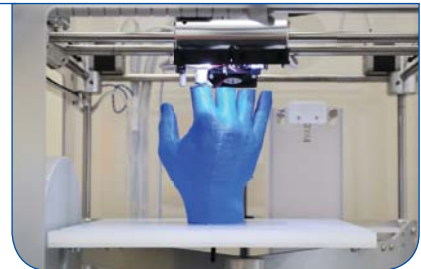
Verbatim is a company familiar to most for its data storage products (CDs, DVDs, Hard Drives, USB Sticks) and more recently LED lighting. It has now entered the 3D printing market with a range of high quality ABS, PLA and special filaments for 3D printers.

The reason behind this diversity is the fact that Verbatim is owned by Mitsubishi Chemical. Mitsubishi has a wealth of expertise in polymer products which is now being utilized to develop high quality engineering plastic filaments for 3D printers.

By combining this R&D strength with Verbatim's extensive global sales and marketing operation, the company is expected to become a leading long-term worldwide supplier to the burgeoning 3D printing industry.

The 3D Printing Revolution

The 3D printing process enables physical objects to be made from three-dimensional models by laying down successive layers of a material in an additive manufacturing process. The industry is currently undergoing a massive transformation and enjoying unprecedented growth with Gartner estimating that it will reach a value of 500 million euros in 2014.

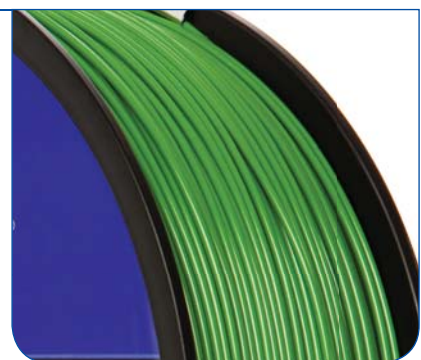


Consumer Demand

Already, a wide range of industries have adopted the technology. Health care is already immersed in 3D printing with dental applications, personalised hip and knee replacements and parts for medical machinery all utilizing 3D printing extensively. The aerospace and automotive industries are also very active printing components using the technology, while the most rapid expansion of 3D printing is believed to come from the consumer market, with small business owners, schools, universities and serious hobbyists adopting it with great enthusiasm.

Japanese Quality

Verbatim's filaments are manufactured from the highest quality materials and produced to extremely tight tolerances to ensure consistent feed and stable printing. For a printed object to be strong and accurately formed it is crucial that the printer knows exactly how much plastic it is pulling through the machine at any given time. The precision of the filament diameter and the roundness of the filament - the closeness of tolerance - is a vital measurement in ensuring reliable printing. In buying from Verbatim, you will benefit from the highest levels of quality control, the hallmark of Japanese manufacturing.



European Sales and Support

With offices close to the key cities of London, Frankfurt, Milan, Paris, Amsterdam, Copenhagen, Johannesburg and Moscow, Verbatim is positioned very well to serve the EUMEA region. It distributes its products from a state-of-the-art central warehouse in Osnabrück, Germany, which has excellent road and rail access ensuring fast and accurate deliveries. It also offers a free of charge hotline support service to maintain and deliver its promise of guaranteed customer satisfaction.



PRIMALLOY™

Verbatim will expand its portfolio of filaments to include exclusive products developed by Mitsubishi Chemical.

The first of these special filaments to be marketed and distributed by Verbatim is PRIMALLOY™. It produces objects with a rubberised feel which will have possible usage for things like hand grips for tools, earphones, goggles, mobile phone cases, automotive parts, and many more.

It is a thermoplastic ester elastomer (TPE) which consists of a crystalline aromatic polyester block (mainly PBT) as the hard segment, and an uncrystalline polyether block (mainly poly-tetramethylene-ether-glycol) as the soft segment.

The features of PRIMALLOY™ include good mechanical strength, oil resistance, chemical resistance, flex fatigue resistance and has excellent heat resistance, as well as hardness stability within a wide temperature range.



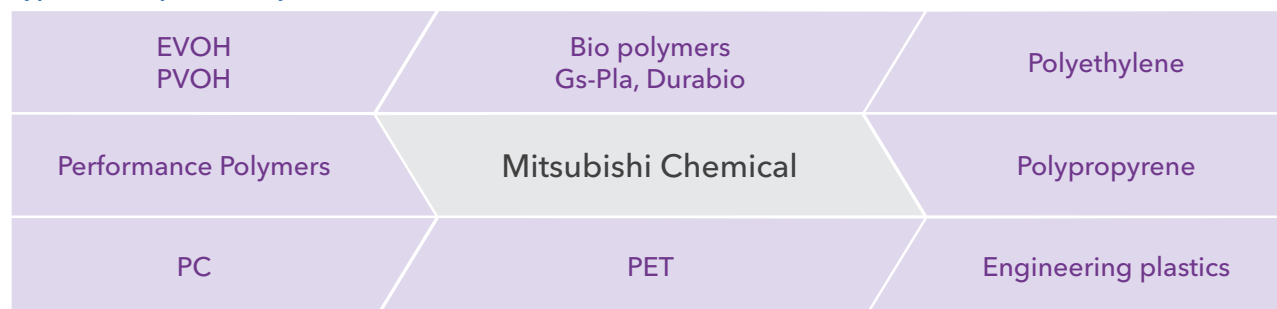
- For use in commonly available fused filament fabrication (FFF) 3D printers. Not recommended for printers with significant distance (e.g. >15 mm) between pinch feeder and hot end.
- Best results obtained with printers having a heated platform and when applying forced air cooling on the object as it builds.



Product Details

55501	Verbatim Primalloy 2.85mm 500g - White
55502	Verbatim Primalloy 1.75mm 500g - White
Diameter accuracy	2.90 mm ± 0.05 mm 1.75 mm ± 0.05 mm
Process temperature	210 - 235 °C
Material Net Weight	500 g
Filament Length	70 m (2.85mm thickness) 190 m (1.75mm thickness)
Density	1.08 - 1.10 g/cm ³
Tensile Yield (JIS K 7113)	14 MPa
Elongation (JIS K 7113)	990 %
Melting Point	175 to 195 °C
Melt Flow Index @ 230 °C, 21.1N	45 g/(10 minutes)
Durometer Hardness D (JIS K 6253)	33
Material Grade	MCC TPE-334

Typical examples of Polymer Products from Mitsubishi Chemical



Verbatim - Denmark, Norway, Sweden, Finland & IcelandTobaksvejen 25, 2860 Søborg, **Denmark**

T: +45 7022 6323 / F: +45 4590 7088

E: info.nordic@verbatim-europe.com

Verbatim - France and PortugalImmeuble Hermes, 20 rue Jacques Daguerre, 92565 Rueil-Malmaison Cedex, **France**

T: +33 (0) 1 47 16 94 20 / F: +33 (0) 1 47 16 15 00

E: info.france@verbatim-europe.com /

E: infomideastafrica@verbatim-europe.com

Verbatim - Germany, Austria & Switzerland, Central/East EuropeDüsseldorfer Str. 13, D - 65760 Eschborn, **Germany**

T: +49 (0) 6196 900 10 / F: +49 (0) 6196 900 120

E: info.germany@verbatim-europe.com /

E: info.central-east@verbatim-europe.com

<http://facebook.com/VerbatimDeutschland>**Verbatim - Italy, Cyprus, Greece & Malta**Via Roma 108 , 20060 Cassina de' Pecchi MI, **Italy**

T: +39 02 9530 1115 / F: +39 02 9530 0449

E: info.italy@verbatim-europe.com

<http://facebook.com/VerbatimItalia>**Московское представительство,****Verbatim – Russia, Commonwealth of Independent States**

Бизнес центр Golden Gate,

бульвар Энтузиастов, 2 109544

Москва

T: +7 (495) 213 1980

F: +7 (495) 213 1978

E: info.east@verbatim-europe.com

www.facebook.com/VerbatimRussia**Verbatim - The Netherlands, Belgium & Luxembourg**Laan van Zuid Hoorn 14, 2289 DE Rijswijk, **The Netherlands**

T: +31 (0)70 336 76 00 / F: +31 (0)70 336 76 11

E: info.nl@verbatim-europe.com

Verbatim - Africa, Middle East & TurkeyFirst Floor, Building 4, Pinewood Office Park, 33 Riley Road, Woodmead, **South Africa**

T: +27 (0) 11 253 4940 / F: +27 (0)11 234 3626

E: info.sa@verbatim-europe.com

<http://www.facebook.com/VerbatimSouthAfrica><http://www.facebook.com/VerbatimTurkiye>**Verbatim - United Kingdom, Ireland & Israel**

(EMEA Head Office)

Prestige House, 23-26 High Street, Egham, Surrey TW20 9DU,

United Kingdom

T: +44 (0) 1784 439 781 / F: +44 (0) 1784 471 337

E: info.uk@verbatim-europe.com

<http://facebook.com/VerbatimEurope>**www.verbatim.com**

- EUROPE/ MIDDLE EAST/ AFRICA: Verbatim Ltd, Prestige House, 23- 26 High Street, Egham, Surrey, TW20 9DU, UK
- AMERICAS: USA Verbatim Americas LLC, Charlotte, NC
- AUSTRALIA/ NEW ZEALAND: Verbatim Australia Pty Ltd, Unit 6, 450 Princes Highway, Noble Park, Victoria, 3174 Australia
Tel: +61 3 9790 8999 Fax:+61 3 9790 8955 Email:support@verbatim.com.au

銷售公司：香港威寶有限公司

公司地址：香港九龍尖沙咀東部加連威老道92號幸福中心1101-02室

銷售公司：台灣威寶國際貿易股份有限公司

公司地址：臺北市基隆路二段166號4樓

聯絡電話：02-23771698

銷售公司：威宝国际贸易(深圳)有限公司

公司地址：深圳市福田区泰然九路海松大厦B栋1406室

*“VERBATIM” and  logo are the trademarks of Mitsubishi Kagaku Media Co., Ltd. registered in EU and other countries.Created March 2015
68828-110/GB/500/0315www.verbatim.com **Verbatim**[®]
Technology you can trust**THE KAITEKI COMPANY** Mitsubishi Chemical Holdings Group