Product Data Sheet

# 3M™ Dyneon™
## Fluoroplastic THVP 2030GZ

### Product Description

3M™ Dyneon™ Fluoroplastic THVP 2030GZ is a fluorothermoplastic containing fluorinated monomers. Due to its excellent flexibility and transparency, this material qualifies for applications such as peristaltic tubing and fibre cladding. It is also well-suited for demanding applications where temperature-, chemical- and flame-resistance are high priorities.

### Special Features

- Most flexible grade of THV
- Processing profile allows co-processing with olefinic plastics and hydrocarbon elastomers and acrylics
- E-beam crosslinkable
- Highest transparency of the THV grades
- Bondable to itself and other substrates
- Low flammability
- Low processing temperature
- Excellent weatherability

| Properties | Test method | Unit | Value* |
|---|---|---|---|
| Melting Point | DIN EN ISO 12086 | °C | 130 |
| Glass Transition (Tg) | ASTM D 4591 | °C | 7 |
| Melt Flow Index | DIN EN ISO 1133 | g/10 min | 25 |
| Specific Gravity | DIN EN ISO 12086 | g/cm³ | 1.98 |
| Tensile at Break | DIN EN ISO 527-1 | MPa | 23 |
| Elongation at Break | DIN EN ISO 527-1 | % | 535 |
| Flexural Modulus | ASTM D 790 | MPa | 32 |
| Refractive Index | ASTM D 542 | $n_D$ | 1.35 |
| UV-Vis; Total Luminous Transmission (240 µm film) | ASTM E 903: 300 nm | % | 94 |
| | ASTM E 903: 600 nm | % | 95,3 |
| MIT Flex Life | 1kg, 200µm film | Cycles | > 1 x 10^6 |

* typical values, data not for specification purposes

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## Typical Properties

3M™ Dyneon™ Fluoroplastic THVP 2030GZ is processed at low temperatures, but exhibits a slightly higher melt point and end use temperature capability than THV 221GZ. This product exhibits excellent weatherability and good anti-soiling properties.

## Typical Applications

3M™ Dyneon™ Fluoroplastic THVP 2030GZ is ideal for applications that require the food-, temperature-, chemical- and flame-resistance of a fluoropolymer but need excellent flexibility or transparency. Typical applications are those requiring optimal optical transparency, such as fibre cladding, tubes and films, or those requiring excellent flexibility and spring-back such as peristaltic pump tubing and seals.

## Processing Recommendations

The processing recommendations depend on a variety of factors and it is best advised to contact a technical service person before embarking on extrusion trials. However, one can use the following as a starting point for the extrusion of THVP 2030GZ.

Cooling on the feed throat of the extruder to maintain a temperature of 20 – 40 °C, Zone 1 140 °C, Zone 2 210 °C, Zone 3 220 °C, the die and other tooling around 225 °C. Typical processing temperatures for injection moulding are around 220 – 240 °C for the nozzle temperature and 50 – 100 °C for the mould. A screen pack of 1000 µm / 500 µm / 200 µm is recommended. Corrosion resistant equipment and an air exhausting system are highly recommended for safe processing.

## Storage and Handling

3M™ Dyneon™ Fluoroplastic THVP 2030GZ has an unlimited shelf life provided it is stored in a clean, dry place. THVP 2030GZ is hydrophobic and generally does not require drying before processing unless high humidity conditions create surface moisture adsorption.

## Safety Instructions

Follow the normal precautions observed with all fluorothermoplastic materials.

Please consult the Material Safety Data Sheet and Product Label for information regarding the safe handling of the material. By following all precautions and safety measures, processing these products poses no known health risks. General handling/processing precautions include: 1) Process only in well-ventilated areas. 2) Do not smoke in areas contaminated with powder/residue from these products. 3) Avoid eye contact. 4) If skin comes into contact with these products during handling, wash with soap and water afterwards. 5) Avoid contact with hot fluoropolymer.

Potential hazards, including release of toxic vapours, can arise if processing occurs under excessively high temperature conditions. Vapour extractor units should be installed above processing equipment. When cleaning processing equipment, do not burn off any of this product with a naked flame or in a furnace.

## Delivery Form

3M™ Dyneon™ Fluoroplastic THVP 2030GZ is delivered in pellet form.

Packaging sizes are:

- 50 kg cardboard box, containing two PE-bags each with 25 kg content
- 600 kg big bag

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## Important Notice

All information set forth herein is based on our present state of knowledge and is intended to provide general notes regarding products and their uses. It should not therefore be construed as a guarantee of specific properties of the products described or their suitability for a particular application. Because conditions of product use are outside Dyneon's control and vary widely, user must evaluate and determine whether a Dyneon product will be suitable for user's intended application before using it.

The quality of our products is warranted under our General Terms and Conditions of Sale as now are or hereafter may be in force.
Technical information, test data, and advice provided by Dyneon personnel are based on information and tests we believe are reliable and are intended for persons with knowledge and technical skills sufficient to analyze test types and conditions, and to handle and use raw polymers and related compounding ingredients.

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General recommendations on health and safety in processing, on work hygiene and on measures to be taken in the event of accident are detailed in our material safety data sheets.

You will find further notes on the safe handling of fluoropolymers in the brochure "Guide for the safe handling of Fluoropolymers Resins" (download link) by PlasticsEurope, Box 3, B-1160 Brussels, Tel. +32 (2) 676 17 32.

You can also download it with your smartphone using the QR code below.


**Customer Service**

Europe
Phone: 00 800 396 366 27
Fax: 00 800 396 366 39
Italy
Phone: 800 7 910 18
Fax: 800 7 810 19
USA
Phone : +1 800 810 8499
Fax : +1 800 635 8061

**Technical Service Fluoroplastics**

Dyneon GmbH
3M Advanced Materials Division
Industrieparkstraße 1
84508 Burgkirchen
Germany
Phone: +49 8679 7 4709
Fax : +49 8679 7 5037

**Technical Service Fluoroelastomers & Polymer Processing Additives**

3M Belgium N.V.
3M Advanced Materials Division
Canadastraat 11,
Haven 1005
2070 Zwijndrecht
Belgium
Phone: +32 3 250 7868
Fax: +32 3 250 7905

**Technical Service PTFE Compounds**

Dyneon B.V.
3M Advanced Materials Division
Tunnelweg 95
6468 EJ Kerkrade
The Netherlands
Phone: +31 45 567 9600
Fax: +31 45 567 9619

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Web Site: www.dyneon.eu



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