

You inspire ... we materialize®

Quadrant

Food Grade Materials

Engineering Plastic Stock Shapes
for the Food Industry
compliant to European
Union Regulation (EU) 10/2011



QUADRANT

Certified Plastic Materials for Safe and Cost

Trends in food processing & packaging

The efficiency in production and the quality of products has considerably improved in the food industry in recent years. Newly developed high performance engineering plastics have made significant contribution to this. In modern food production systems, plastic products support essential process steps such as processing, handling, conserving, packing and storing. Consumers already benefit from these improved processes and rightfully expect the highest possible safety standards in the production of food and beverage products. Trends such as global raw material imports, differences in control rules and incomplete legislation negatively influence the quality assurance in these sensitive sectors.

European Union Regulation (EU) 10/2011 enables production safety

Historically, for plastics in direct contact with food products a harmonized European legislation had been valid for about ten years and was implemented nationally by the member states, thus enabling common standards: the Directive 2002/72/EC.

To better monitor the processes in future, European legislation has made changes in the regulations for safety in food production. Since May 2011 these apply to all European Union member states. They replace the Directive 2002/72/EC and are summarised under the new Regulation (EU) 10/2011.

FDA approvals are not affected by the new regulation and remain unchanged.



Quadrant's Food Grade materials provide certification on highest safety level

Addressing to the very high quality and safety standards in the food industry Quadrant has updated its range of Food Grade plastics according to Regulation (EU) 10/2011:

all Food Grade products are processed and handled according to this regulation and to the guidelines of GMP (Good Manufacturing Practice).

Every delivery is accompanied by a Declaration of Compliance with the Order (DCO) - full traceability guaranteed – and a Declaration of Compliance (DoC) according to the Food Regulation (EU) 10/2011.

Customers get a wide selection of products and design possibilities to reach the best possible cost-performance-ratio. Quadrant furthermore provides help for migration calculation.

-effective Production



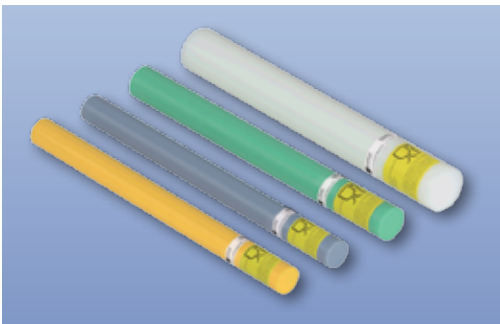
Good Manufacturing Practice (GMP)

Quadrant produces semi-finished stock shapes and manufactures customised finished parts according to the guidelines of GMP.

These guidelines are part of a quality system covering the manufacture and testing of food products.

GMP guidelines guarantee highest quality standards of our Food Grade products.

Complete documentation from choice of raw material to finished parts allows full traceability and supports your own product control efforts.



Declaration of Compliance

Quadrant is constantly developing product and application solutions that help you improve your production performance – today and in future.

Our Food Grade programme fulfils the documentation requirements that are valid since 2016. Every delivery is accompanied by a

Declaration of Compliance according to Regulation (EU) 10/2011

which is a further development of Directive 2002/72/EC for plastic materials in contact with food and includes much stricter test conditions for migration.

Declaration of Compliance with the Order guarantees traceability

The Declaration of Compliance with the Order ensures the uninterrupted traceability of the plastic product from the stock shape back to the raw material used by batch. At Quadrant each production step is reliably tested and documented. This traceability is required by law for modern food processing. Each product is marked with material type, production lot and size. Each delivery comes along with a Declaration of Compliance with the Order according to EN 10204-2.1



TVNAT PL UV1000 50x1Mx2M PLN E



03000110279

Lot 8475105



Customer Benefits

■ **Broadest portfolio of certified Food Grades**

Food processors profit from the broadest portfolio from PE up to PEEK materials and best established know-how in the industry. Quadrant constantly works on innovation of specialised engineering plastics. Our offering contains special developments like Metal Detectable or Antistatic materials and is an ongoing process in close cooperation with our customers.

■ **Product safety through Good Manufacturing Practice (GMP)**

Product safety for you: All shapes and finished parts made from Quadrant Food Grades are produced according to most modern production standards including consistent quality control (GMP).

■ **Declaration of Compliance**

Every delivery is accompanied by a Declaration of Compliance according to latest regulation status. This declaration considerably reduces your own in-house testing time and costs. Quadrant provides the declaration including the complete test conditions.

■ **Material selection and application consulting**

Customers benefit from Quadrant's international partner network that helps OEMs select the right material for their application. Our application advice considers the individual type of food that gets into contact with the plastic parts.

Consulting is based on temperature and food contact time of your individual application.

■ **Migration calculation support**

Migration = Out-leaching of substances from solid contact material into the food stuff.

Product safety on all stock shapes: The independent, external laboratory INTERTEK has tested the migration values of all Quadrant Food Grades. These tests were performed according to regulation (EU) 10/2011. Their results are stated in our Declaration of Compliance. Your own calculation of the migration value in your individual application becomes very easy with the help of these pre-tested values.

The migration tests on our Food Grades include testing per OML and SML guidelines:

OML = Overall Migration Limit: measures the inertness of a material

SML = Specific Migration Limit: proves the toxicological evaluation of individual substances

Quadrant, however, can only offer calculation support and give material recommendations. The final choice of material used in a specific application is the customer's own responsibility.

■ **Stock Availability**

We offer a wide range of standard and sub-standard formats, most of them available from stock. Please consult us for further details.

More than 30 Quadrant Food Grade Products – More than 30 options for your successful production process

Quadrant EPP Stock Shape	Base Polymer	DoC 1935/2004 acc. to (EU) 10/2011 Food Grade (1)	FDA compliant (2)
Ketron® 1000 PEEK natural	PEEK	+	+
Ketron® 1000 PEEK black	PEEK	+	+
Ketron® TX PEEK blue	PEEK	+	+
Ketron® MD PEEK blue	PEEK	+	+
Techtron® 1000 PPS natural	PPS	NT	+
Techtron® HPV PPS blue	PPS	+	+
Quadrant® PPSU black	PPSU	+	+
Quadrant® 1000 PSU natural	PSU	NT	+
Duratron® U1000 PEI natural	PEI	NT	+
Fluorosint® 207 white	PTFE	-	+
Fluorosint® HPV tan	PTFE	NT	+
Ertacetal® C LQ natural	POM-C	+	+
Ertalon® 6 SA natural	PA 6	+	+
Ertalon® 66 SA natural	PA 66	+	+
Ertalon® 6 PLA natural / blue	PA 6	+ / +	+ / +
Nylatron® MD blue	PA 6	+	+
Ertacetal® C natural / blue / black	POM-C	+ / + / +	+ / + / +
Ertacetal® C - other colours	POM-C	NT	+
Acetron® MD blue	POM-C	+	+
Ertalyte® natural / black	PET	+ / +	+ / +
Ertalyte® TX pale grey	PET	+	+
TIVAR® 1000 natural / blue 7020 / green 3010 / green 3060 / red 2030 / yellow 6030	PE-UHMW	+ / + / + / + / + / +	+ / + / + / + / + / +
TIVAR® 1000 antistatic black	PE-UHMW	+	-
TIVAR® DS yellow	PE-UHMW	+	+
TIVAR® Cestidur, grey	PE-UHMW	+	+
TIVAR® H.O.T. white	PE-UHMW	+	+
TIVAR® CleanStat black	PE-UHMW	+	+
TIVAR® 1000 ASTL black	PE-UHMW	+	-
TIVAR® 1000 EC black	PE-UHMW	+	+
TIVAR® MD blue	PE-UHMW	+	+
TIVAR® OilFilled grey	PE-UHMW	NT	+
TIVAR® CleanStat White	PE-UHMW	-	+
TIVAR® HPV blue	PE-UHMW	+	+
Quadrant® PE 500 natural / blue 7020 / green 3060 / red 2025 / yellow 6030	PE-HMW	+ / + / IT / + / +	+ / + / + / + / +

+ Complies with the requirements of the regulations.

- Does not comply with the requirements of the regulations.

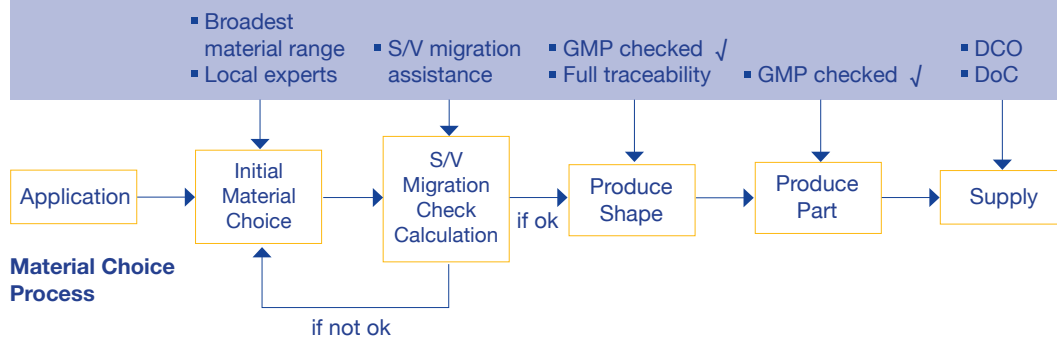
NT Has not been tested according to the requirements of the regulations.

IT Tests according to the requirements of the regulations are on-going

[1] Food Grade: Quadrant's European new "Food Grade" designated products comply with the requirements mentioned in the Regulation [EC] No 1935/2004 and the Regulation (EU) 10/2011. Further our "Food Grade" products are manufactured according to Good Manufacturing Practice [GMP] as set out in Regulation [EC] No 2023/2006.

[2] This column gives the compliance of the raw materials used for the manufacture of the Quadrant EPP Stock Shapes with respect to their composition as set out in the United States of America (FDA) for plastic materials and articles intended to come into contact with foodstuffs.

Quadrant support at all stages:



www.quadrantplastics.com
Quadrant Engineering Plastic Products Worldwide

Europe

Quadrant EPP Europe N.V.
 Galgenveldstraat 12
 8700 Tielt, Belgium
 T +32[0] 51 42 35 11
 F +32[0] 51 42 33 10
contact@qplas.com

North America

Quadrant EPP USA, Inc.
 2120 Fairmont Avenue
 PO Box 14235 - Reading, PA 19612-4235
 T 800 366 0300 | +1 610 320 6600
 F 800 366 0301 | +1 610 320 6638
americas.epp@qplas.com

Asia-Pacific

Quadrant EPP Asia Pacific Ltd
 60 Ha Mei San Tsuen, Ping Shan
 Yuen Long - NT Hong Kong
 T +852 24702683
 F +852 24789966
asia.epp@qplas.com

Belgium | Brazil | China | France | Germany | Hong Kong | Hungary | India | Italy | Japan | Korea | Mexico | Poland
 South Africa | Switzerland | The Netherlands | United Kingdom | United States of America

This brochure and any data and specifications presented here or on our website shall provide promotional and general information about the Engineering Plastic Products (the „Products“) manufactured and offered by Quadrant Engineering Plastic Products („Quadrant“) and shall serve as a preliminary guide. All data and descriptions relating to the Products are of a general informational nature only. Neither this brochure nor any data and specifications presented on our website shall create or be implied to create any legal or contractual obligation. This brochure and any data or specifications herein do not create expressly or by implication any legal, contractual or warranty obligation whatsoever. No warranty of any kind, either express or implied, is made as to the information contained in these pages, including, but not limited to, all warranties provided for by Louisiana law, any implied warranty of merchantability, of fitness for a particular purpose, and any warranty against hidden defects or redhibitory defects or vices. No information in this brochure creates any express or implied warranty that the goods described here in shall conform to any description herein. Quadrant sells the products described herein solely to sophisticated users and not to consumers, and Quadrant assumes no responsibility that any goods described herein will be fit for any particular purpose for which a Quadrant customer may determine to purchase such goods, except and to the sole extent otherwise provided in a separate written contract.

Any illustration of the possible fields of application of the Products shall merely demonstrate the potential of these Products, but any such description does not constitute any kind of covenant or warranty whatsoever. Irrespective of any tests that Quadrant may have carried out with respect to any Product, Quadrant does not possess expertise in evaluating the suitability of its materials or Products for use in specific applications or products manufactured or offered by the customer respectively. It thus remains the customer's sole responsibility to test and assess the suitability and compatibility of Quadrant's Products for its intended applications, processes and uses, and to choose those Products that according to its assessment meet the requirements applicable to the specific use of the finished product. The customer undertakes all liability in respect of the application, processing or use of the aforementioned information or product, or any consequence thereof, and shall verify its quality and other properties.

Acetron®, Duratron®, Ertacetal®, Ertalon®, Ertalyte®, Fluorosint®, Ketron®, Nylatron®, Quadrant®, Techtron®, TIVAR® are registered trademarks of the Quadrant Group.

Distributed by: