RAPID PROTOTYPING RESINS

SYNTHENE PRF 100

INNOVATION AND QUALITY IN VACUUM CASTING



PRF100 CASTING MATERIAL
FOODGRADE PROTOTYPING RESIN

» Fully tested and certified
» Clear, transparent and colorable
» For prototypes and industrial parts

SYNTHENE IS A COMPANY CERTIFIED BY

ISO 9001
BUREAU VERITAS Certification

SYNTHENE 2022-11-10 001 EN

RAPID PROTOTYPING RESINS

SYNTHENE PRF 100 *truly foodgrade*

INNOVATION AND QUALITY IN VACUUM CASTING







RICH VARIETY OF CONTACT

» Suitable for various types of food :
  › dry, greasy and humid aliments
  › clear, cloudy and alcoholic beverages

» For temporary, repeated and long contact

UNIQUE TRANSPARENCY

» Food compliance is associated with superior transparency to offer a highly singular material

» This great clarity also presents a neutral basis for color researching

ADOPTED BY THE INDUSTRY

» PRF100's characteristics have convinced food-processing and pharmaceutical industries

» The raw materials have been carefully selected to meet the requirements of food contact guaranty

CERTIFIED BY AN INDEPENDANT LABORATORY

» Like the FDA, a compliance to the 10/ 2011 EU regulation involves a mandatory migration test to ensure a complete safety management

» The compliance of the PRF100 with EU regulations has been analyzed and validated by an institute specialized in Quality, Health, Safety and Environment

TECHNICAL INFORMATION[1]

MATERIAL PROPERTIES

Hardness	(Shore A/ D)	82D
Counter type of		ABS
Mix viscosity at 25°C	(mPa · s)	400
Colour of the cured material		clear transp.
Colourability[2]		
Heat deflection temperature	(°C)	70
Glass transition temp. (Tg)	(°C)	75
Flexural modulus	(MPa)	2000
Maximum flexural strength	(MPa)	71
Tensile modulus	(MPa)	2200
Maximum tensile strength	(MPa)	47
Elongation at break	%	14
Impact resistance	(kJ · m^{-2})	102

APPLICATION DATA

Mixing ratio	by weight	100 : 130
Pot life by 25°C	(min)	13
Demoulding time (short cycle)	(hours)	2h @ 70 °C + 2h @ 100 °C
Maximum casting thickness	(mm)	10
Mould life in silicone[3]	(nb of cast.)	20

1 The exact data are available in our TDS. The thermal and mechanical properties have been tested under specific conditions of curing and post-curing

2 The food compatibility of a pigmented product must be revalidated, under the responsibility of the user

3 Silicone mould life: according to our experience, depending on the mould geometry, surface, demoulding time, kind of silicone, etc.











SAFE FOR DRY FOODS [4]

Cereals, flour, dry pasta, biscuits, dry fruits, herbs, spices, pills ...



SAFE FOR CLEAR BEVERAGES [4]

Water, clear fruit juice, lemonade, soft drinks, syrup ...



SAFE FOR FATS [4]

Olive oil, meat, fish, seafood, eggs, chocolate, cheese, seasoning in oily medium ...



SAFE FOR CLOUDY DRINKS [4]

Liquid chocolate, beverages containing pulp like juices, nectars and soft drinks ...



SAFE FOR FRESH FOODS [4]

Fresh fruits and vegetables, unpeeled, peeled or cut ...



SAFE FOR ALCOHOLIC DRINKS [4]

Alcoholic beverages of an alcoholic strength up to 50 % vol., liqueurs containing cream ...

4 As certified by WESSLING Laboratories according to EU regulation 10/2011 and 1935/2004 article 3 decree 2007/766

IN ACCORDANCE WITH

Food contact	10/ 2011 1935/ 2004 article 3 decree 2007/ 766
REACH	EC Regulation 1907/ 2006
RoHS	Directive EU 2011/ 65, 2015/ 863 & 2017/ 2102
End-of-life vehicle directive	2000/ 53/ CE
WEEE Directive	2002/ 96/ CE
Directive related to cosmetic products	2000/ 11/ CE







RAPID PROTOTYPING RANGE

The PRF100 is an oustanding material in Synthene's range. Synthene also offers you a complete range of rapid prototyping resins. This goes from classic 'all-round use' ABS-like materials, UV-stable water-clear resins to any hardness of elastomers.

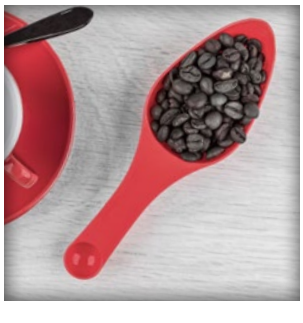


ABOUT SYNTHENE

The innovative chemical company, located in France, was founded in 1958. Synthene provides specific formulation and high quality industrial solutions. Synthene places a particular emphasis on offering high-performance products, with cautiously selected raw materials from trustworthy manufacturers.

All Synthene Prototyping resins meet the current requirements of REACH.





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