

**Compound GPlast™ 639 FDA Black (U1)**  
**POLYMER TYPE: Perfluoroelastomer FFKM80 (+/-5°)**

## Physical Properties

Property	Test Method	Units	Typical Values
COLOUR			Black
HARDNESS	ISO 48	°IRHD	79
TENSILE STRENGTH	ISO 37	MPa	12.6
MODULUS @ 100%	ISO 37	MPa	7.88
ELONGATION @ BREAK	ISO 37	%	174
TEAR STRENGTH	ISO 34	N/mm	21.6
SPECIFIC GRAVITY	ISO 2781	g/cm3	2.35
COMPRESSION SET VALUE IN AIR 25% STRAIN – 24HRS @ 240°C	ISO 815	%	33.1

## Description

This material provides excellent temperature resistance up to +230°C (+446°F) and has similar chemical resistance to that of PTFE but with elastomeric properties comparable to standard fluorocarbon rubbers. This material is tested to requirements of FDA21 CFR 177.2600 (e & f) for use with aqueous and fatty foods. Along with all our GPlast™ range, this grade is suitable for use in a wide range of applications where other polymers are not suitable. Do not use any GPlast™ grade with molten alkali metals. Service Temperatures +230°C (+446°F) to -18°C (+0°F).

## Chemical Resistance

1. Suitable, little or no effect. 2. Minor to moderate effect, not maximum resistance. 3. Moderate to severe effect – may be useful in some limited applications. 4. Unsuitable and not recommended – severe effect.

Chemical Group	Rating	Chemical Group	Rating
Aromatics / Aliphatic Oils	1	Ethers	1
Acids	2	Ethylene	1
Alkalis	1	Esters	1
Alcohols	1	Ketones	1
Aldehydes	1	Propylene Oxide	1
Amines	1	Steam/Hot Water	1
Amines >70°C	2	Strong Oxidisers	1

More detailed information available on request.

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**FDA Statement:**

The above material supplied by Gapi Ltd has been formulated and tested to comply with the requirements of FDA 21 CFR 177.2600e & f for repeat use in contact with aqueous and fatty foods.

The above material also complies with the requirements of EU directive REGULATION (EC) No 1935/2004 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 27 October 2004

*Exceptions:*

*Article 3 (1) (C) bring about a deterioration in the organoleptic characteristics thereof.*

*Since the final conditions of use are outside of Gapi Ltd control we cannot test for deterioration in the organoleptic characteristics.*

**Extraction Test results for GPlast 639FDA in Distilled Water:**

Extractables (mg/inch <sup>2</sup> )		
Material Ref:	7Hour Extraction	2Hour Extraction
GPlast 639FDA	0.04	0.00
<b>FDA Specification</b>	<b>20</b>	<b>1</b>

**Extraction Test results for GPlast 639FDA in N-Hexane:**

Extractables (mg/inch <sup>2</sup> )		
Material Ref:	7Hour Extraction	2Hour Extraction
GPlast 639FDA	0.14	0.05
<b>FDA Specification</b>	<b>175</b>	<b>4</b>

**Compound **GPlast™** 639 FDA Black (Ux)****POLYMER TYPE: Perfluoroelastomer FFKM80 (+/-5°)****ADI Statement:**

The above material supplied by Gapi Ltd has been manufactured wholly from synthetic materials and does not contain any raw materials produced from substances derived from animal origin.

The manufacturing process does not use any ingredient of animal origin, nor does the product come into contact with animal products during storage and transportation. Therefore the above materials can be considered BSE/TSE Free.

BSE – Bovine Spongiform Encephalopathy

TSE – Transmissible Spongiform Encephalopathy

**Melamine and Phthalate free statement:**

The above material supplied by Gapi Ltd does not contain Melamine or Phthalates, nor has any Melamine or Phthalates been intentionally added into the compound.