

## Compound **GPlast™ 639 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/cm <sup>3</sup>	2.35
COMPRESSION SET VALUE IN AIR 25% STRAIN – 24HRS @ 240°C	ISO 815	%	33.1

### Description

This black material has been specifically developed for use with aggressive cleaning agents, steam-in-place (SIP) procedures and clean-in-place (CIP) procedures. This material does not contain any Animal Derived Ingredients (ADI's).

This material is tested to the following standards:

- FDA 21 CFR 177.2600 (e) & (f)
- FDA 21 CFR 177.2400 (d1) & (d2).

Do not use any GPlast™ grade with molten alkali metals. Service Temperatures: -15°C (+5°F) to +230°C (+446°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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**Extraction Results:**

Property	Typical Values	Tolerance	Test Standard
<b>Extraction test results to 21 CFR 177.2600 in distilled water</b>			
7Hour Extraction (mg/inch <sup>2</sup> )	0.04	≤20.0	21 CFR 177.2600 (e)
2Hour Extraction (mg/inch <sup>2</sup> )	<0.01	≤1.0	21 CFR 177.2600 (e)

<b>Extraction test results to 21 CFR 177.2600 in n-hexane</b>			
7Hour Extraction (mg/inch <sup>2</sup> )	0.14	≤175	21 CFR 177.2600 (f)
2Hour Extraction (mg/inch <sup>2</sup> )	0.05	≤4	21 CFR 177.2600 (f)

<b>Extraction test results to 21 CFR 177.2400 in distilled water</b>			
2Hour Extraction (mg/dm <sup>2</sup> ) - Total Extractives	0.00	≤3.1	21 CFR 177.2400 (d1)
2Hour Extraction (mg/dm <sup>2</sup> ) - Fluoride Extractives	0.01	≤0.47	21 CFR 177.2400 (d2)

<b>Extraction test results to 21 CFR 177.2400 in 50% ethanol</b>			
2Hour Extraction (mg/dm <sup>2</sup> ) - Total Extractives	0.00	≤3.1	21 CFR 177.2400 (d1)
2Hour Extraction (mg/dm <sup>2</sup> ) - Fluoride Extractives	0.01	≤0.47	21 CFR 177.2400 (d2)

<b>Extraction test results to 21 CFR 177.2400 in n-heptane</b>			
2Hour Extraction (mg/dm <sup>2</sup> ) - Total Extractives	1.22	≤3.1	21 CFR 177.2400 (d1)
2Hour Extraction (mg/dm <sup>2</sup> ) - Fluoride Extractives	0.00	≤0.47	21 CFR 177.2400 (d2)



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***Additional Declarations:***

**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

**Restricted Ingredients:**

The above material supplied by Gapi Ltd does not contain the following substances, nor has any of the below substances been intentionally added into the compound:

- Melamine
- Phthalates
- Bisphenol A
- Latex