

TECHNICAL DEPARTMENTS

TECHNE LATEST INOVATIVE DEVELOPMENTS



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- 🌀 Bio-based EPDM
- 🌀 T-Coat PA-Biocide
- 🌀 Detectable EPDM / PTFE / FKM
- 🌀 Stretchable PTFE or PK
- 🌀 EPDM “All in One” Food & Water Certifications
- 🌀 FEM Simulation
- 🌀 3D optical Measurement System
- 🌀 Chinese Food Certifications
- 🌀 NBR 70 machinable
- 🌀 FFKM made by Créat
- 🌀 Fragrant coatings

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WRAS
WATER REGULATIONS ADVISORY SCHEME

ATTESTATION DE CONFORMITE SANITAIRE
ACS

W 270
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CERT

标准 [GB 9685]
2008到2016 经历的变化

Biocides

CE 1935/2004

USP
U.S. Pharmacopeial
Convention



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Bio-based EPDM

- EPDM = Ethylene Proylene Diene
3 substances coming form crude oil chemistry
- Techné innovates & proposes under request Bio-based EPDM
 - => implementation of ethylene made from sugar cane ethanol
 - => 100% of ethylene is bio-based
 - => 25% of EPDM compound is then bio-based



<https://www.techne.fr/uk/about/news/147-techne-takes-a-green-color>

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T-Coat PA-Biocide

- Used coating base = Techné T-Coat PA
good sticking & sliding - static use - food contact
- Addition of biocide substance
- Biocide = bactericidal + fungicidal effect



<https://www.techne.fr/uk/about/news/138-techne-innovates-t-coat-pa-biocide>



Detectable EPDM / PTFE / FKM

Material conceived to be detectable by Magnetic or X-Rays detection machines

- EPDM Perox 70 - no.334607A - blue colour - 1935/2004 - ADI free - FDA positive List
- FKM 80 - no.61311 - blue colour - ADI free - FDA positive List
- PTFE - no.23322 - blue colour - 1935/2004 - ADI free - FDA positive List



- Typical use : sealing stainless steel tubes for food industries (very aggressive cleaning systems : CIP clean In Place)
Risk that seal degrades, then small seal parts get detached and may contaminate food

- With Techné detectable materials => you can detect it !!!



- Generally also useful for all other applications where risk of contamination is high



Stretchable PTFE

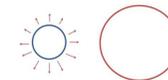
PTFE with a small form memory effect

☉ PTFE is widely known for its advantages : excellent chemical resistance and good sliding abilities

☉ Standard PTFE is only ductile = no form memory effect

Compression 10% for 24h @ 200°C => after release + 30 min = no form recovery

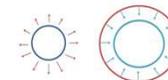
Tension of 10% as for back-up ring assembly => no form recovery =====>



☉ Techné Stretchable PTFE is an improved PTFE material with a small form memory effect

Compression 10% for 24h @ 200°C => after release + 30 min = **15% form recovery !!!!**

Tension of 10% as for back-up ring assembly => **70% form recovery !!!!** =====>



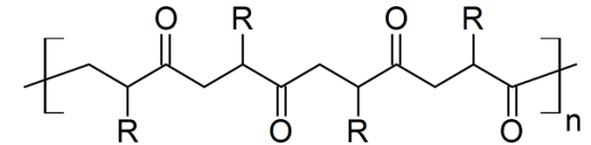
☉ Typical use : hydraulic piston or rod composite seals, energised seals, back-up rings for easier fitting



Polyketone PK

Polyketone PK is a stretchable plastic

- PK has an excellent yield strain (approx. 30%)
- Excellent abrasion resistance
- PK can also be filled with Glass Fibers : standard filling ratio is 15%
- Typical use : piston composite seals for easier fitting and better performance
- Techné innovates : Techné proposes PK material either machined or injected



EPDM All In One

- ⦿ Potable Water : UBA + W270 + ACS + WRAS
- ⦿ Food Contact : FDA + 1935-2004 + 3A
- ⦿ Medical : USP Class VI
- ⦿ Ask for EPDM All In One mat no. 334701 !!!
- ⦿ Excellent combination : comp set / tear strength
- ⦿ No peroxide smell
- ⦿ Low PAH

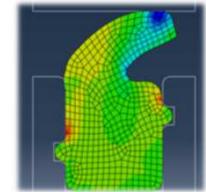
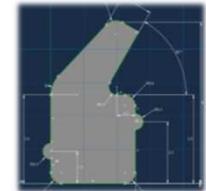


<https://www.techne.fr/uk/about/news/103-the-laquo-334701-all-in-one-by-techne-raquo-a-unique-solution-for-you-tomorrow-rsquo-s-applications>



FEM Simulation

- Techné innovates and invests in high end FEM Simulation Software : Abaqus
- Techné also invested in characterization of some high runner materials
Characterization = Determination of mathematical laws representing the material mechanical behaviour
- Mostly for hyperelasticity calculations but also possible for viscoelasticity



<https://www.techne.fr/uk/about/news/93-techne-is-equipped-with-a-numerical-simulation-tool-abaqus>

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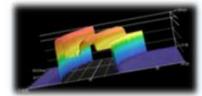
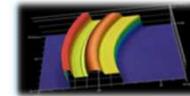
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3D optical Measurement System

- Techné innovates and invests in high end optical Measurement System
- Unique in France !!!
Even not officially distributed on French soil by Keyence
Unfindable on Keyence France web-site
Only distributed in few countries : Germany - Switzerland - USA - Canada - China and few others
6 months discussions so that Keyence Japan accept to sell it in France to Techné only



<https://www.techne.fr/uk/about/news/143-techne-further-increases-its-control-tool-with-keyence-vr-3200>



Chinese Food Certification

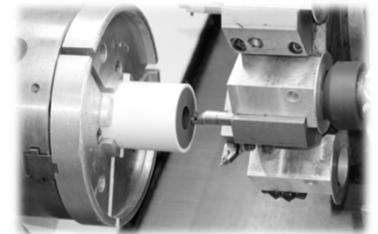
China has 2 standards for Food Contact Products and Materials

- GB 4806.11-2016 for the polymer + GB 9685-2016 for the additive substances
- Principle = Migration tests & limits of migration
- Very few international rubber seals manufacturers have this certification
- Techné innovates and announces 2 materials certified for Chinese Food
These are 2 of the Techné standard Food Contact Materials
MVQ 80 Translucid no.334144
NBR 80 Blue no.334075C



NBR 70 machinable

- 70 IRHD is the most standard rubber hardness
- In standard 70 IRHD cannot be machined as rubber is too soft and bends under cutting tool
- 70 IRHD is appropriate for a large range of applications (except high pressures)
- Techné innovates and proposes a NBR 73 Sh A



<https://www.techne.fr/uk/about/news/148-cnc-machined-parts-always-more-elastic>

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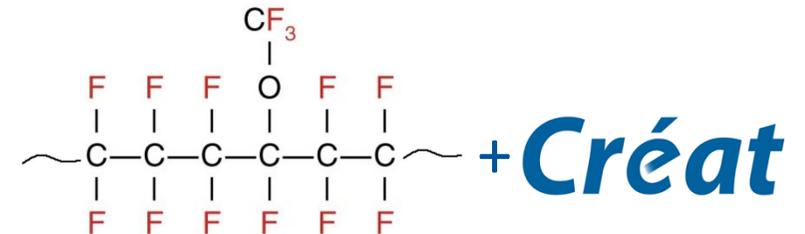


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FFKM by Techné

Perfluoroelastomer FFKM is the ultimate high end rubber material

- Fully fluorinated elastomer
- Very high Temperatures
- Almost universal chemical compatibility
 - Even resistance to acids and strong bases !
 - Even resistance to MEK (ultra aggressive cleaning substances) !
- Excellent impermeability
- Techné innovates : FFKM available & mouldable @ Créat



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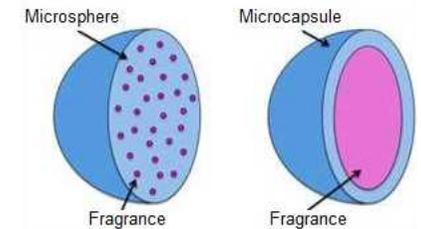
Fragrant Coatings

- Used coating base = Techné T-Color
good sticking & sliding - static use
- Addition of microcapsules filled with chemical fragrance
- Flavouring again when rubbed
- Different tastes possible
 - Mint
 - Strawberry
 - Raspberry
 - Coco
 - Many others



T-Color®

+



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