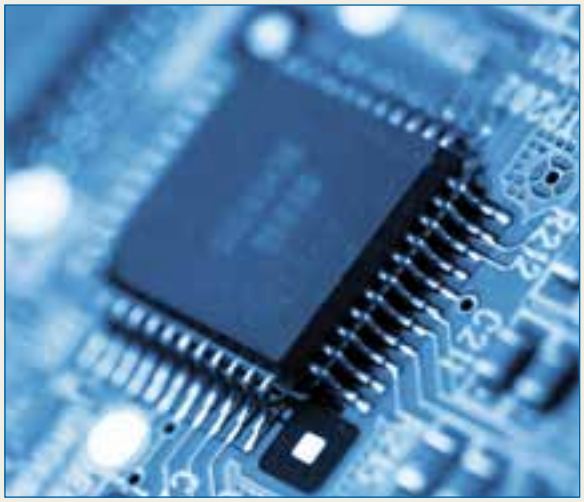
1. COATINGS

Easy installation, cleanliness, low friction, identification, customisation, improved service life and sliding properties are just as important as the sealing itself. In these cases, Techné becomes the best partner with its coatings workshop.

a) T-surf®

Techné T-surf treatment guarantees seals free from any contaminating substances which could damage paint or electronic instruments. They meet the cleanliness and non contamination requirements of the electronic and automotive industry. The original properties of the material – mechanical properties, alimentary, and certifications- are preserved.



✓ T-surf® SW

A thorough cleaning (with water and special detergents) that removes all traces of impurity and greasy substances from the treated parts. Mainly used in industrial applications that requires an enhanced cleanliness.

✓ T-surf® CRW

This treatment is performed in an ISO Class 7 cleanroom. It consists in removing all traces of impurity and greasy substances from the treated parts. It is delivered with a specially adapted double packaging. It is mostly used in food related applications.

Coating preparation

✓ T-surf® UW

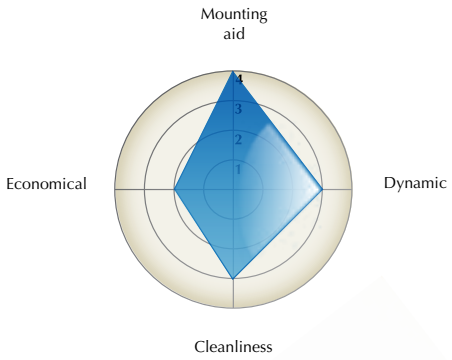
Ultra-sonic washing and packaging is performed in an ISO Class 7 cleanroom. This treatment significantly improves the cleanliness of the products. It is widely used in the food and medical industries.

✓ T-surf® L

This treatment is performed using an ion generator for an in depth decontamination of Techné's rubber parts. It is used on parts that are going to be painted or that will be used in electronic instruments.

b) T-color®

A coloured coating is applied on the part. Before doing so, the surface of the part is activated to ensure a better binding. This coating allows a better identification of the seals while maintaining the original properties of the elastomer. This coating also improves the friction properties of the part. The colour resists to dynamic and mechanical stress. Techné works with RAL and PANTONE colour charts. Try it!



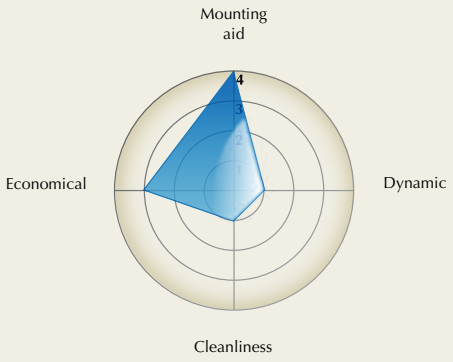
4 : excellent, 3 : good, 2 : average, 1 : bad, 0 : to avoid

✓ T-color® PG

This is a colourable PTFE based surface treatment that forms a dry, yet slippery coating. The chosen colour will help for a quick visual identification. The lubricating substances in the coating will ease the mounting of the seals. The T-color PG also reduces the stick-slip effect. It is therefore perfect for all dynamic applications.

c) T-Lub®

This coating eases the mounting of the parts for a small additional cost. The deposited lubrication agents are not physically linked with the material itself. After time, the coating is less efficient. For all your dynamic applications, chose a T-coat solution.



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✓ T-Lub® SA

A transparent silicone oil based coating. This USP Class VI alimentary coating has a viscous and shiny appearance. This outstanding lubrication agent reduces the effort of assembly. It is exclusively used as a mounting help.

✓ T-Lub® M

A MoS2 (molybdenum disulfide) based silver coating. This coating is dry and shinny. The solid particles on the surface of the part will considerably reduce mounting efforts. This coating performs well in high temperature and humid environments. The possible migration on the surface in contact also eliminates any sticking phenomenon.

✓ T-Lub® T

A pharmaceutical quality talc-based coating. Talc is an excellent separation agent that avoids parts sticking together. The talc particles fill the interstices of the parts providing a slippery and soft effect. Mainly used to help the assembly, it is an economical solution.

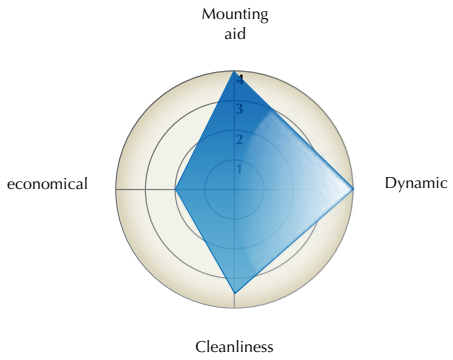
✓ T-Lub® GA

A transparent coating made from PTFE particles. A non-messy and slippery dry film is applied. It allows an easy mounting, thanks to its dry and clean lubrication. It is mainly used as a mounting aid.

Vibratory bowl feeder

d) T-coat®

T-coat® are a half-permanent or permanent lubricating coatings. These coatings are able to meet simple mounting requirements or high stress dynamic applications. The parts will keep all their initial properties but with a lower friction coefficient and a better wear resistance. The stick-slip effect no longer occurs. As for the T-surf® treatment, the T-coat® meet non contamination regulations required in the automotive and electronic industry.



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✓ T-coat® PP

A transparent PTFE based surface coating. This half-permanent coating applied to the part is dry, dull and non-contaminating. It is perfect for production lines. It offers a quick mounting and avoids cuts and tearing. Half-permanent, it prevents sticking (stick-slip effect).

✓ T-coat® PPA

A colourless PTFE-based coating. This half-permanent coating forms a dry film which is non-contaminating and food compatible. It eases mounting thanks to a low friction coefficient. The anti-sticking agent also prevents from stick-slip effects.

✓ T-coat® P

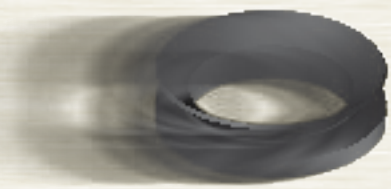
Transparent PTFE based coating. This coating is dry and shiny. Non polluting, it is ideal for automatic high speed mounting. It also prevents assembly defects thanks to the following properties:

- High sliding properties
- Small friction coefficient
- Noise reduction.

The excellent link to the material itself ensures the coating's resistance to both mechanical and dynamic stress.

✓ T-coat® PA

A slightly white PTFE based coating. This dry coating is recommended for food and drinking water applications. The high quality particles used in the coating facilitates the assembly of the parts and reduces frictional forces. This coating prevents sticking and the stick-slip effects in food appliances. This coating is permanent and allows low stress dynamic use. This coating is distinguished by its different certifications: W270, ACS, WRAS, NSF, KTW and FDA.



✓ T-coat® PSN

A transparent PTFE/silicone/graphite based coating. This coating is dry, smooth and shiny. It can be used to help the mounting and also to prevent any stick-slip effects. It allows small and medium dynamic stress.

✓ T-coat® PX

A black PTFE and graphite based coating. This coating is dry, slightly grainy and dull. The high-tech material used in for this coating offers a remarkable wear resistance as well as an excellent friction coefficient. This coating meets the simplest, as well as the strictest requirements:

- No stick-slip effect
- Noise reduction
- Intense dynamic applications
- Increase product life time
- Energy saving.

✓ T-coat® SPH

A translucent silicone based coating. This coating is dry, smooth and mat. It can be used to help the mounting and to prevent any stick-slip effect. It allows small and medium dynamic stress. This coating has been developed for the medical and pharmaceutical industry (coating of silicone parts).

✓ T-coat® LN

A PPXn based translucent coating. This coating is dry, smooth and mat. It can be used to help the mounting and to prevent any stick-slip effect. It allows small and medium dynamic stress.

e) Summary table

		T-surf®	T-Lub® SA	T-Lub® M	T-Lub® T	T-Lub® GA
Look	Base	No added layer on the treated material	PTFE	Silicon	Talc	PTFE
	Colour		Transparent	Silver	White	Satin
	Appearence		Greasy Glossy Smooth	Dry Glossy Smooth	Dry Powde-red	Dry Smooth
	Thickness (about)		5 µm	5 µm	5 µm	5-10 µm
Properties	Temperature (°C)[1]		-40 to 200°C	-180 to 250°C	-180 to 250°C	-40 to 120°C
	Labs-free[1,3]	yes	no	no	no	yes
	Certifications [1,2]	Certifications of the treated material		FDA		
Uses	Improvement of Static COF (Coefficient of Friction) [4]	No added layer on the treated material				
	Anti-stick-slip					
	Improvement of dynamic COF (Coefficient of Friction) [4]					
	Automatic assembly (separation of the parts)		■■□□ □□□□	■■□□ □□□□	■■□□ □□□□	■■■□ □□□□
	Reduction of static assembly force [4]		-60%	-50%	-20%	-60%
	Easy assembly		■■■■ ■□□□	■■■■ ■□□□	■■■□ □□□□	■■■■ ■□□□
	Reduction of dynamic force [4]					
	Lifetime duration		□□□□ □□□□	■□□□ □□□□	■□□□ □□□□	■■□□ □□□□
	Elongation resistance		> 150%			

1 Depends on the used material.
2 Will probably change depending on the applicable laws.
3 Certified without plasticizers or silicone.
4 Average of the measurements taken on the Techné approved test assembly. Gain % compared to parts without coatings. Can change depending on mating materials, tightening & applications.
5 Techné can supply a T-coat PX with an even better high temperature.

T-Coat®								T-Color®
PP	**PPA**	**P**	**PA**	**PSN**	**PX**	**SPH**	**LN**	**PG**
PTFE	PTFE	PTFE	PTFE	Graphite / Silicon	PTFE	Silicon	PPXn	PTFE
Translucent	Translucent	Translucent	White layer	Black layer	Black	Translucent	Translucent	acc. custmer choice
Dry Mat Smooth	Dry Bright Smooth	Dry Bright Smooth	Dry Smooth	Dry Bright Smooth	Dry Bright Rough	Dry Mat Smooth	Dry Mat Smooth	Dry Bright Smooth
5-10 µm	5-10 µm	10-20 µm	10-20 µm	10-25 µm	10-25 µm	3-15 µm	0,3-3 µm	10-30 µm
-40 to 120°C	-180 to 250°C	-40 to 150°C	-40 to 200°C	-40 to 150°C	-40 to 150°C	-40 to 260°C	-40 to 80°C	-40 to 150°C
yes	yes	yes	no	no	yes	no	yes	yes
	FDA - 1935 /2004		FDA - 1935/2004 - UBA - W270 - NSF H1 - ACS - WRAS			FDA - USP VI - ISO10993	FDA - USP VI - ISO10993	
-40%	-40%	-50%	-50%	-50%	-70%	-50%	-70%	-40%
								
-40%	-40%	-50%	-50%	-50%	-70%	-50%	-70%	-40%
								
-10%	-10%	-30%	-30%	-70%	-60%	-30%	-30%	-20%
								
-20%	-20%	-60%	-60%	-80%	-80%	-40%	-50%	-50%
								
> 150%								

This information is on a guidance basis only. Do not tend simultaneously to the limit of all the properties of the material. Not all the Techné treatments are presented here. Techné offers more specific treatments on customer demand.