

### c) Techné certifications

Material	Hardness	Number	WRAS	ACS	CLP	EN549	FDA positive list	W270	EN681-1	UL94	EN682	USP	3A	BAM oxygen resistance	1935/2004	Cognac alimen- tarity - BNIC	UBA
Coating	/	666126					X					X					
	/	666138	X				X										
	/	66667	X	X	X		X	X							X		
CR	70	334714								X							
EPDM	50	1178022	X														
EPDM PEROXYDE	40	334332			X		X					X					
	50	72732													X		
	60	117031	X		X		X	X	X								X
	60	11774	X		X		X										
	65	334501	X	X			X	X									X
	70	117029	X	X	X		X	X	X			X	X		X		X
	70	117049	X		X		X	X	X								X
	70	117074	X	X				X	X								X
	70	11720					X										X
	70	11743	X	X	X		X	X	X			X	X				X
	70	334137		X			X		X			X	X		X		X
	70	334601			X												X
	70	334701	X	X	X		X	X				X	X		X		X
	75	72743													X		
	80	11714		X	X		X	X					X				
EPDM PEROXYDE METAL DETECTABLE	70	334607A	X												X		
FKM	60	117011				X											
	60	11748				X											
	60	11775				X											
	60	334666					X								X		
	65	007701					X								X		
	70	11700				X											
	70	11750				X											
	70	72733					X								X		
	70	334786					X					X			X		
	80	33466					X					X	X		X	X	
	80	73257				X								X			
	80	73272					X						X		X		
85	87811					X								X			
MVQ	40	334447										X					
	40	72748					X								X		
	50	334729A					X								X		
	50	72747					X								X		
	60	117061	X		X	X	X	X									X
	60	72730					X								X		
	60	72750					X								X		
	60	72751					X								X		
	70	117070			X	X	X	X									X
	70	1178001	X	X				X									X
	70	72729					X								X		
	70	72731					X								X		

Material	Hardness	Number	WRAS	ACS	CLP	EN549	FDA positive list	W270	EN681-1	UL94	EN682	USP	3A	BAM oxygen resistance	1935/2004	Cognac alimenteria - BNIC	UBA
MVQ	70	334368					X					X					
	80	334144					X					X	X		X		
	80	72749					X								X		
MVQ platinum	50	334602					X					X			X		
	80	334536					X					X					
	80	334603					X					X			X		
NBR	60	11703				X											
	60	117062				X											
	60	11761				X											
	70	117017			X												
	70	117020				X					X						
	70	117051	X	X	X	X			X		X						
	70	11713				X											
	70	11723	X		X	X	X	X									X
	70	11788				X											
	70	334012B				X					X						
	70	72752			X												
	80	117107				X											
	80	334075B					X								X		
PTFE	/	95109					X					X					
	/	95143		X						X							
	/	95101	X				X	X		X		X	X		X		X
		23413					X	X				X	X		X		
PTFE METAL DETECTABLE	/	23322				X								X			

Non-exhaustive file – Approvals may change without customer prior agreement or information.

### d) Techné certifications for aeronautical applications

Rubber families	Designation		Range	Techné Group	Creat Material	French aeronautical standards	Possible alternative in replacement	Typical use				Other possible uses	Limitations
	Class	Underclass						Medium		Use T°C			
								Definition	Standards	Long use	Limited use		
1 NR / SBR	-	-	-	-	-	-	-	-	-	-	-	-	-
2 NBR	20	A	5 - 6 7 - 8 9	20A5 => 01.4150.xxxx 20A6 => 01.4160.xxxx 20A7 => 01.4170.xxxx 20A8 => 01.4180.xxxx 20A9 => 01.4190.xxxx	20A5 => 72704 20A6 => 72705 20A7 => 72706 20A8 => 72707	NF L17-120	21A - 21B 26B - 26C 60C - 61D 65C	Mineral based hydraulic fluid and synthesis hydrocarbons	DCSEA 415	-30 / +120°C	-30 / +140°C	- Resistance to other mineral based petroleum fluids : excellent to average depending on the category ; - Resistance to some types of halogenated solvents, to ethylene glycol based liquids : cooling system.	- Poor resistance to atmospheric agents ; - Forbidden use with hydraulic fluids type phosphoric ester (Permanent or temporary immersion, projections, etc.).
		B	5 - 6 7 - 8 9	20B5 => 01.4151.xxxx 20B6 => 01.4161.xxxx 20B7 => 01.4171.xxxx 20B8 => 01.4181.xxxx 20B9 => 01.4191.xxxx	20B5 => 72708 20B6 => 72709 20B7 => 72710 20B8 => 72711					-50 / +100°C	-50 / +120°C		
	21	A	6 - 7 8 - 9	21A6 => 01.4162.xxxx 21A7 => 01.4172.xxxx 21A8 => 01.4182.xxxx 21A9 => 01.4192.xxxx	21A6 => en cours au 15/03/2016 21A7 => 72712	NF L17-121	60C - 61D 63D - 65C 66B	Petroleum fuel Diesters lubricants 100-130 fuel JP1 JP4 Turbine synthetic oil	DCSEA 118 DCSEA 134 AIR 3407 AIR 3514	-20 / +120°C	-20 / +140°C		
		B	4 - 6 8	21B4 => 01.4143.xxxx 21B6 => 01.4163.xxxx 21B8 => 01.4183.xxxx	21B6 => 72713					Petroleum fuel 100-130 fuel JP1 JP4	DCSEA 118 DCSEA 134 AIR 3407		
	23	B	7	23B7 => 01.4174.xxxx	23B7 => 72714	NF L17-123	-	Diesters lubricants	AIR 3514	-50 / +120°C	-50 / +140°C		
	24	B	7	24B7 => 01.4175.xxxx		NF L17-124	21A - 21B 26B - 26C 60C - 61D 65C	Mineral based hydraulic fluid and synthesis hydrocarbons	DCSEA 415	-50 / +120°C	-50 / +140°C		
25	B				Suppressed class								

Rubber families	Designation		Techné Group	Creat Material	French aeronautical standards	Possible alternative in replacement	Typical use				Other possible uses	Limitations				
	Class	Underclass					Range	Medium		Use T°C						
								Definition	Standards	Long use			Limited use			
2 HNBR	26	B	6 - 7 8 - 9	26B6 => 01.4960.xxxx 26B7 => 01.4970.xxxx 26B8 => 01.4980.xxxx 26B9 => 01.4990.xxxx	-	NF L17-126	-	Petroleum fuels	-	-30 / +120°C	-50 / +125°C	- Resistance to other mineral based petroleum fluids : excellent to average depending on the category ; - Resistance to some types of halogenated solvents, to ethylene glycol based liquids : cooling system ; - Improved resistance to atmospheric agents and to peroxide fuels.	- Forbidden use with hydraulic fluids type phosphoric ester (Permanent or temporary immersion, projections, etc.).			
		C	6 - 7 8 - 9	26C6 => 01.4961.xxxx 26C7 => 01.4971.xxxx 26C8 => 01.4981.xxxx 26C9 => 01.4991.xxxx	-	-	-	-	-20 / +150°C	-40 / +175°C	-	-				
3 CR	31	B	3 - 4 5 - 6 7 - 8	31B3 => 01.4430.xxxx 31B4 => 01.4440.xxxx 31B5 => 01.4450.xxxx 31B6 => 01.4460.xxxx 31B7 => 01.4470.xxxx 31B8 => 01.4480.xxxx	31B4 => 72739 31B5 => 72736 31B6 => 72740 31B7 => 72741	NF L17-131	20B - 23B 24B - 50D 52D - 54D 60C - 61D 63D	Atmospheric agent Petroleum fuels Turbine and piston engine oil	AIR 3512 AIR 3560	-40 / +100°C	-40 / +120°C	- Air circuit ; - Resistance to flame propagation : average to excellent ; - Resistance to the different fluids projections	- Poor resistance to fuels and petroleum fluids with weak and average aniline points in case of total immersion.			
				32	A	5 - 7	32A5 => 01.4451.xxxx 32A7 => 01.4471.xxxx	-	NF L17-132	-	Dielectric use	-	-30 / +100°C	-30 / +120°C	-	- Use only dedicated to the typical use
4 EPDM	41	B	6 - 7 8 - 9	41B6 => 01.4560.xxxx 41B7 => 01.4570.xxxx 41B8 => 01.4580.xxxx 41B9 => 01.4590.xxxx	41B8 => 72715	NF L17-241	42B - 44B	Hydraulic fluid Phosphoric ester type	-	-	-55 / +150°C	- Resistance to atmospheric agents ; - Air circuits.	- Poor elasticity limiting the possibilities of using dynamic seals and profiles ; - Forbidden use with petroleum fluids.			
				42	B	5 - 6 7 - 8 9	42B5 => 01.4551.xxxx 42B6 => 01.4561.xxxx 42B7 => 01.4571.xxxx 42B8 => 01.4581.xxxx 42B9 => 01.4591.xxxx	-	NF L17-242	41B	Atmospheric agents Hot air	-	-55 / +125°C	-55 / +160°C	- Resistance to fluid projections, type phosphoric ester.	- Not recommended in immersion in fluids like phosphoric ester (shrinkage risk).
				44	B	7 - 8	44B7 => 01.4572.xxxx 44B8 => 01.4582.xxxx	-	NF L17-144	-	Hydraulic fluid Phosphoric ester type (colored material)	-	-55 / +100°C	-55 / +150°C	- Resistance to atmospheric agents ; - Air circuits.	-
5 VMQ	50	D	4 - 5 6 - 7 8	40D4 => 01.4240.xxxx 50D5 => 01.4250.xxxx 50D6 => 01.4260.xxxx 50D7 => 01.4270.xxxx 50D8 => 01.4280.xxxx	50D5 => 72724 72770 50D6 => 72718 50D7 => 72725	NF L17-250	41B	Atmospheric agents Hot air Dielectric use	-	-55 / +225°C	-55 / +260°C	- Resistance to high aniline point petroleum lubricants up to 150°C ; - Resistance to other petroleum fluids projections ; - Resistance to phosphoric esters projections.	- Poor mechanical characteristics limiting some uses ; - Forbidden use with fuels and petroleum fluids, in low and average aniline point, in case of total immersion.			
				52	D	5	52D5 => 01.4251.xxxx	52D5 => 72719	NF L17-250	-	Atmospheric agents Hot air Good tear resistance	-	-55 / +200°C	-55 / +225°C	- Hot air circuits, cabin access door (except for Class 54) ;	- Average mechanical characteristics, limiting some uses ;
				53	D	5	53D5 => 01.4252.xxxx	53D5 => 72720	NF L17-153	-	Atmospheric agents Hot air Good resistance to the flame propagation	-	-70 / +200°C	-70 / +225°C	- Resistance to high aniline point petroleum lubricants up to 150°C ;	- Forbidden use with fuels and petroleum fluids, in low and average aniline point, in case of total immersion.
				54	D	4 - 5 6 - 7	54D4 => 01.4243.xxxx 54D5 => 01.4253.xxxx 54D6 => 01.4263.xxxx 54D7 => 01.4273.xxxx	-	NF L17-154	-	Atmospheric agents Hot air Dielectric use	-	-55 / +250°C	-55 / +300°C	- Resistance to other petroleum fluids projections ; - Resistance to phosphoric esters projections.	-

6 Fluororubbers

Rubber families	Designation		Range	Techné Group	Creat Material	French aeronautical standards	Possible alternative in replacement	Typical use				Other possible uses	Limitations
	Class	Underclass						Medium		Use T°C			
								Definition	Standards	Long use	Limited use		
FKM	60	C	7 - 9	60C7 => 01.4370.xxxx 60C8 => 01.4390.xxxx	60C7 => 72716	NF L17-260	66B	Petroleum fluids, hydraulic fluids, lubricants, fuels, etc. Diester lubricants	AIR 3514	-20 / +200°C	-20 / +260°C	- Resistance to atmospheric agents, to hot air ; - Resistance to very different fluids ; - Dielectric uses.	- Forbidden use with hydraulic fluids like phosphoric ester (permanent or temporary immersion, projections, etc.) ; - Poor elasticity at temperatures lower than +20°C limiting some uses.
FMVQ	61	D	6 - 7 - 8	61D6 => 01.4264.xxxx 61D7 => 01.4274.xxxx 61D8 => 01.4284.xxxx	61D6 => 72721 61D8 => 72722	NF L17-261		Petroleum fluids, hydraulic fluids, lubricants, fuels, etc.	-	-55 / +180°C	-55 / +200°C	- Resistance to atmospheric agents, to hot air ; - Good to average resistance to petroleum fluids depending on the fluid.	- Poor mechanical characteristics limiting some uses ; - Forbidden use with hydraulic fluids like phosphoric ester (permanent or temporary immersion, projections, etc.) .
Halocarbons	62	A	6	62A6 => 01.4265.xxxx	-	NF L17-164	-	Smoking red nitric acid	-	-10 / +50°C	-10 / +120°C	-	- Use only dedicated to the typical use.
FMVQ	63	D	6	63D6 => 01.4266.xxxx	63D6 => 72723	NF L17-163	66B	Petroleum fluids, hydraulic fluids, lubricants, fuels, etc. Good tear resistance	-	-55 / +150°C	-55 / +200°C	- Resistance to atmospheric agents, to hot air ; - Good to average resistance to petroleum fluids depending on the fluid.	- Average mechanical characteristics, limiting some uses ; - Forbidden use with hydraulic fluids like phosphoric ester (permanent or temporary immersion, projections, etc.) .
FKM	64	C	6 - 8	64C6 => 01.4361.xxxx 64C8 => 01.4381.xxxx	64C8 => 72717	NF L17-164	-	Petroleum fluids, hydraulic fluids, lubricants, fuels, etc. Diester lubricants	AIR 3514	-20 / +230°C	-20 / +260°C	- Resistance to atmospheric agents, to hot air ; - Resistance to very different fluids ; - Dielectric uses ; - Improved creep resistance compared to Class 60°C.	- Forbidden use with hydraulic fluids like phosphoric ester (permanent or temporary immersion, projections, etc.) ; - Poor elasticity at temperatures lower than +20°C limiting some uses.
	65	C	8	65C8 => 01.4382.xxxx	-	NF L17-165	-	Improved resistance to diester lubricants	AIR 3514	-10 / +230°C	-10 / +260°C	-	- Forbidden use with hydraulic fluids like phosphoric ester (permanent or temporary immersion, projections, etc.) ; - Poor elasticity at temperatures lower than +10°C limiting some uses.
	66	B	7 - 8	66B7 => 01.4373.xxxx 66B8 => 01.4383.xxxx	-	NF L17-166	-	Very good resistance to cold in petroleum and hydraulic fluids, fuels etc	-	-30 / +220°C	-35 / +250°C	- Heat and hydrocarbons resistance ; - Resistance to very different fluids.	-
FFKM	67	C	7	-	-	NF L17-167	-	Excellent resistance to heat and high temperature engine oils	-	+5 / +300°C	0 / +320°C	- Exceptional resistance to very different fluids.	- Low temperatures.