

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		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		
1 NR / SBR	-	-	-	-	-	-	-	-	-	-	-	-			
2 NBR	20	A	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	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	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	21B4 => 01.4143.xxxx 21B6 => 01.4163.xxxx 21B8 => 01.4183.xxxx	21B6 => 72713					-40 / +100°C	-20 / +140°C					
	23	B	7	23B7 => 01.4174.xxxx	23B7 => 72714	NF L17-123	-	Dieters 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										

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	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) ; - Resistance to high aniline point petroleum lubricants up to 150°C ;	- Average mechanical characteristics, limiting some uses ; - Forbidden use with fuels and petroleum fluids, in low and average aniline point, in case of total immersion.
				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 other petroleum fluids projections ; - Resistance to phosphoric esters projections.	-
				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	-	-

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.