CERTIFIED REFERENCE MATERIAL LIST

contact@rofafrance.com

COMPAGNY WITH QUALITY SYSTEM CERTIFIED BY DNV ISO 9001

Accreditation n°1 6494 Scope available on www.cofrac.fr

GASOLINE

Only **materials** preceded by the sign * are covered by the accreditation

Test name	Item code	Designation	Product	Value	Bottle Volume	Production lot	Expiration date	The certified value of this CRM can be used with the following test methods :
	Below, Informations to be reported on your order							
Density	* DE-GA-724	Density_746.8 kg/m3_250ml	E10	746.8 kg/m3	250 ml	GA-724	04 2028	ISO 12185, ASTM D 4052, IP 365, ISO 3675, ASTM D 1298, IP 160
Distillation	* DI-GA-724	Distillation_32.2 °C_179.3 °C_250ml	E10	32.2 °C / 179.3 °C	250 ml	GA-724	04 2028	ISO 3405, ASTM D 86, IP 123
Vapour Pressure (DVPE)	* VP-GA-724	Reid Vapour_71.5 kPa_250ml	E10	71.5 kPa	250 ml	GA-724	04 2028	EN 13016-1, ASTM D 5191, ASTM D 4953, IP 394-1, IP 409-1, ASTM D 5482
Aromatic Content	* AC-GA-724	Aromatic Content_29.5 % vol_250ml	E10	29.5 % vol	250 ml	GA-724	04 2028	ISO 22854, ASTM D 1319, ASTM D 6839, ISO 3837, IP 156
Benzene Content	* BE-GA-724	Benzene Content_0.78 % vol_250ml	E10	0.78 % vol	250 ml	GA-724	04 2028	ISO 22854, EN 238, ASTM D 6839, ASTM D 4053
Multitest Hydrocarbon types and oxygenates content	MC-GA-724	Multitest content_250ml	E10	Aromatics : 29.6 % vol Benzène : 0.78 % voll Ethanol : 7.43 % vol Olefins : 11.39 % vol Total Oxygen : 3.30 % m	250 ml	GA-724	04 2028	Aromatics : ISO 22854, ASTM D 1319, ASTM D 6839, ISO 3837, IP 156 Benzène : ISO 22854, EN 238, ASTM D 6839, ASTM D 4053 Ethanol : ISO 22854, ASTM D 6839, EN 1601, EN 13132 Olefins : ISO 22854, ASTM D 6839, EN 15553 Total Oxygen : ISO 22854, ASTM D 6839, EN 1601, EN 13132
Motor Octane Number (Unleaded)	OM-95-413	Motor Octane Number_86.5_1000ml	E10	86.5	1000 ml	95-413	09 2028	ASTM D 2700 / ISO 5163
	OM-98-357	Motor Octane Number_88.3_1000ml	E5	88.3	1000 ml	98-357	03 2027	
Research Octane Number (Unleaded)	OR-95-413	Research Octane Number_97.1_1000ml	E10	97.1	1000 ml	95-413	09 2028	ASTM D 2699 / ISO 5164
	OR-98-357	Research Octane Number_98.3_1000ml	E5	98.3	1000 ml	98-357	03 2027	

JET AVIATION Fuel

Only **materials** preceded by the sign * are covered by the accreditation

Test name	Item code	Designation	Product	Value	Bottle Volume	Production lot	Expiration date	The certified value of this CRM can be used with the following test methods :
	Below, Informations to be reported on your order							
Density	* DE-KR-071	Density_803.2kg/m3_250ml	JET A1	803.2 kg/m3	250 ml	KR-071	08 2027	ASTM D 4052, ISO 12185, IP 365, ASTM D 1298, ISO 3675, IP 160
Freezing Point	* FR-KR-071	Freezing Point_-58.8°C_250ml	JET A1	- 58.8 °C	250 ml	KR-071	08 2027	ASTM D 5972 / IP 435, ASTM D 7153 / IP 529, ASTM D 7154 / IP 528, ASTM D 2386 / IP 16, ISO 3013
Distillation	* DI-KR-071	Distillation_158.8_250.5°C_250ml	JET A1	158.8°C / 250.5°C	250 ml	KR-071	08 2027	ASTM D 86, ISO 3405, IP 123, ASTM D 2887 / IP 406, ASTM D 7344, ASTM D 7345 / IP 596, DIN 51751
Sulphur of Mercaptans	* SM-KR-071	Sulphur Mercaptans_16.50mg/kg_250ml	JET A1	16.50 mg/kg	250 ml	KR-071	08 2027	ASTM D 3227 / IP 342, ISO 3012
Acidity	* AD-KR-071	Acidity_0.0054mg/g KOH_250ml	JET A1	0.0054 mg/g KOH	250 ml	KR-071	08 2027	ASTM D 3242 / IP 354
Abel Flash Point	* AB-KR-071	Abel Flash Point_48.1°C_250ml	JET A1	48.1 °C	250 ml	KR-071	08 2027	IP 170, EN ISO 13736, NFM 07011
Smoke Point	* SP-KR-071	Smoke Point_23.4mm_250ml	JET A1	23.4 mm	250 ml	KR-071	08 2027	ASTM D 1322 / IP 598, ISO 3014
Kinematic Viscosity -20°C	* VI-KR-071	Kinematic Viscosity_20°C_4.052mm2/s_250ml	JET A1	4.052 mm²/s	250 ml	KR-071	08 2027	ASTM D 445 / IP 71-1, ISO 3104, ASTM D 7042, ASTM D 7945
TAG Flash Point	FT-KR-071	TAG Flash Point_49.2°C_250ml	JET A1	49.2 °C	250 ml	KR-071	08 2027	ASTM D 56
FIA Aromatics	* FI-KR-071	FIA Aromatics_16.40%_250ml	JET A1	16.40 % Vol	250 ml	KR-071	08 2027	ASTM D 1319, IP 156, ISO 3837, EN NF 15553
Gum Content	GU-KR-071	Gum content_0,4mg/100ml_250ml	JET A1	0,4 mg/100ml	250 ml	KR-071	08 2027	ASTM D 381, ISO 6246, IP 540
Aniline Point	AP-KR-564	Aniline Point_58.5°C_250ml	JET A1	58.5 °C	250 ml	KR-564	05 2028	ASTM D 611 / IP 2-91, ISO 2592
Reference Fuel Smoke Point	SET-A	Fuel smoke point_14.7 to 42.8mm_7x25ml	MIX	14.7 up to 42,8 mm	7x25ml	N/A	N/A	ASTM D 1322 Reference Fuels Table
	SM-Mix 1	Fuel smoke point_14.7mm_4x25ml	MIX	14.7 mm	4x25ml	N/A	N/A	ASTM D 1322 Reference Fuels Table
	SM-Mix 2	Fuel smoke point_20.2mm_4x25ml	MIX	20.2 mm	4x25ml	N/A	N/A	ASTM D 1322 Reference Fuels Table
	SM-Mix 3	Fuel smoke point_22.7mm_4x25ml	MIX	22.7 mm	4x25ml	N/A	N/A	ASTM D 1322 Reference Fuels Table
	SM-Mix 4	Fuel smoke point_25.8mm_4x25ml	MIX	25.8 mm	4x25ml	N/A	N/A	ASTM D 1322 Reference Fuels Table
	SM-Mix 5	Fuel smoke point_30.2mm_4x25ml	MIX	30.2 mm	4x25ml	N/A	N/A	ASTM D 1322 Reference Fuels Table
	SM-Mix 6	Fuel smoke point_35.4mm_4x25ml	MIX	35.4 mm	4x25ml	N/A	N/A	ASTM D 1322 Reference Fuels Table
	SM-Mix 7	Fuel smoke point_42.8mm_4x25ml	MIX	42.8 mm	4x25ml	N/A	N/A	ASTM D 1322 Reference Fuels Table

CERTIFIED REFERENCE MATERIAL LIST

contact@rofafrance.com

COMPAGNY WITH QUALITY SYSTEM CERTIFIED BY DNV ISO 9001

Accreditation n°1 6494 Scope available on www.cofrac.fr

DIESEL

Only **materials** preceded by the sign * are covered by the accreditation

Test name	Item code	Designation	Product	Value	Bottle Volume	Production lot	Expiration date	The certified value of this CRM can be used with the following test methods :
	Below, Informations to be reported on your order							
Density	* DE-GO-597	Density_833.0kg/m3_250ml	B7	833.0 kg/m3	250 ml	GO-597	06 2028	ISO 12185, ASTM D 4052, IP 365, ASTM D 1298, IP 160, ISO 3675
Cloud Point	* CP-GO-301	Cloud Point_-0.3°C_250ml	FOD	- 0.3 °C	250 ml	GO-301	02 2030	ASTM D 2500, ISO 3015 / EN 23015, IP 219, ISO 22995, ASTM D 5771, ASTM D 5773 / IP 446, ASTM D 7693
	* CP-GO-597	Cloud Point_-4.4°C_250ml	B7	- 4.4 °C	250 ml	GO-597	06 2028	ASTM D 2500, ISO 3015, ISO 22995, ASTM D 5771, ASTM D 5772, ASTM D 5773 / IP 446
	* CP-GO-666	Cloud Point_-6.6°C_250ml	B7	- 6.6 °C	250 ml	GO-666	03 2029	ASTM D 2500, ISO 3015, ISO 22995, ASTM D 5771, ASTM D 5772, ASTM D 5773 / IP 446
CFPP - Cold Filter Plugging Point	* CF-GO-301	CFPP_-14.3°C_250ml	FOD	- 14.3 °C	250 ml	GO-301	02 2030	ASTM D 6371, EN 116
	* CF-GO-597	CFPP_-19.4°C_250ml	B7	- 19.4 °C	250 ml	GO-597	06 2028	ASTM D 6371, EN 116
	* CF-GO-666	CFPP_-27.8°C_250ml	B7	- 27.8 °C	250 ml	GO-666	03 2029	ASTM D 6371, EN 116
Pour Point	* PP-GO-597	Pour Point_-21.3°C_250ml	B7	- 21.3 °C	250 ml	GO-597	06 2028	ASTM D 97, ISO 3016, IP 15, NF T60-105 , ASTM D 5950, ASTM D 6892, ASTM D 5985
	* PP-GO-666	Pour Point_-30.4°C_250ml	B7	- 30.4 °C	250 ml	GO-666	03 2029	ASTM D 97, ISO 3016, IP 15, NF T60-105 , ASTM D 5950, ASTM D 6892, ASTM D 5985
Distillation	* DI-GO-597	Distillation_161.4_362.2°C_250ml	B7	161.4 °C / 362.2 °C	250 ml	GO-597	06 2028	ASTM D 86, ISO 3405, IP 123, DIN 51751, ASTM D 2887 / IP 406, ISO 3924, ASTM D 7344, ASTM D 7345 / IP 596, EN 17306
Pensky Martens Flash Point	* PM-GO-301	Pensky Martens_56°C_250ml	FOD	56.0 °C	250 ml	GO-301	02 2030	ASTM D 93, ISO 2719, IP 34, NFT 60103, ASTM D 3828, ASTM D 7094
	* PM-GO-962	Pensky Martens_61.6°C_250ml	B7	61.6 °C	250 ml	GO-962	05 2030	ASTM D 93, ISO 2719, IP 34, NFT 60103, ASTM D 3828, ASTM D 7094
Kinematic Viscosity +20°C	* VI20-GO-597	Kinematic Viscosity +20°C_3.785mm2/s_250ml	B7	3.785 mm²/s	250 ml	GO-597	06 2028	ASTM D 445 / IP 71, ISO 3104, ASTM D 7945, EN 16896, ISO 23581, ASTM D 7042
Kinematic Viscosity +40°C	* VI40-GO-597	Kinematic Viscosity +40°C_2.488mm2/s_250ml	B7	2.488 mm²/s	250 ml	GO-597	06 2028	ASTM D 445 / IP 71, ISO 3104, ASTM D 7945, EN 16896, ISO 23581, ASTM D 7042
Sulphur Content	* SU-GO-597	Sulphur Content_8.4mg/kg_250ml	B7	8.4 mg/kg	250 ml	GO-597	06 2028	ASTM D 5453, ISO 20846, ASTM D 2622, ISO 20884, ISO 13032
Cetane Number	CN-GO-311	Cetane Number_53.1_1000ml	B7	53.1	1000 ml	GO-311	07 2030	ASTM D 613 / ISO 5165, EN 16715, IP 41, DIN 51773
FAME Content	FA-GO-919	FAME Content_3.42%_250ml	B5	3.42 % Volume	250 ml	GO-919	10 2026	EN 14078 - ASTM D 7371
	* FA-GO-597	FAME Content_6.19%_250ml	B7	6.19 % Volume	250 ml	GO-597	06 2028	
	FA-GO-999	FAME Content_97.94%_250ml	B100	97.94 % Volume	250 ml	GO-999	10 2026	EN 14103

LUBRICANT

Only **materials** preceded by the sign * are covered by the accreditation

Test name	Item code	Designation	Product	Value	Bottle Volume	Production lot	Expiration date	The certified value of this CRM can be used with the following test methods :
	Below, Informations to be reported on your order							
Density	DE-LU-180	Density_848.2 kg/m3_250ml	LU	848.2 kg/m3	250 ml	LU-180	07 2030	ISO 12185 / ASTM D 4052 / IP 365
Cleveland Flash Point	FC-LU-180	Cleveland Flash point_238°C_250ml	LU	238 °C	250 ml	LU-180	07 2030	ASTM D 92 / ISO 2592 / IP 36 / NF T60-118
Pensky Martens Flash Point-**Procedure A**	PMA-LU-180	Pensky Martens_Procedure A_214°C_250ml	LU	214 °C	250 ml	LU-180	07 2030	ASTM D 93 (proc A and B) / ISO 2719 / IP34 / EN 22719 / NF T 60103
Pensky Martens Flash Point-**Procedure B**	PMB-LU-180	Pensky Martens_Procedure B_212°C_250ml	LU	212°C	250 ml	LU-180	07 2030	ASTM D 93 (proc A and B) / ISO 2719 / IP34 / EN 22719 / NF T 60103
Pour Point	PP-LU-180	Pour Point_-14,3°C_250ml	LU	-14,3 °C	250 ml	LU-180	07 2030	ISO 3016 / ASTM D 97 / ASTM D 5950 / ASTM D 5949 /NF T 60-105 / IP15 / NF T 60105/ ISO 3015
Total Sulfur Content	SU-LU-180	Total Sulfur Content_525 mg/kg_250ml	LU	525 mg/kg	250 ml	LU-180	07 2030	ASTM D 4294, ASTM D 2622 / ISO 14596 /ISO 8754 /IP 336 / P 432
Kinematic Viscosity at +40°C	VI40-LU-180	Kinematic Viscosity +40°C_28,88mm2/s_250ml	LU	28,88 mm²/s	250 ml	LU-180	07 2030	ASTM D 445 / ASTM D 7042/ ISO 3104 / IP 71 / NF T60-100/ASTM D 4624 / IP 370 / DIN 51398
Kinematic Viscosity at +100°C	VI100-LU-180	Kinematic Viscosity +100°C_5.38mm2/s_250ml	LU	5.38 mm²/s	250 ml	LU-180	07 2030	ASTM D 445 / ASTM D 7042/ ISO 3104 / IP 71 / NF T60-100/ASTM D 4624 / IP 370 / DIN 51398
Total Acid number	TAN-LU-180	Total Acid number_< 0.05 mgKOH/g_250ml	LU	< 0.05 mgKOH/g	250 ml	LU-180	07 2030	ASTM D 664 / ISO 6619/ IP 177
Total Base number	TBN-LU-180	Total Base number_< 0.05 mgKOH/g_250ml	LU	< 0.05 mgKOH/g	250 ml	LU-180	07 2030	ASTM D 2896 / ISO 3771ASTM D 2896 / ISO 3771 / IP 276