

SAFETY INFORMATION NOTICE

SUBJECT: FUEL SYSTEM

Recommendation on the usage of Kathon FP1.5 Biocide by DuPont



AIRCRAFT CONCERNED	Version(s)	
	Civil	Military
EC120	B	–
AS350	B, BA, BB, B1, B2, B3, D	L1
AS550	–	A2, C2, C3, U2
AS355	E, F, F1, F2, N, NP	–
AS555	–	AF, AN, SN, UF, UN, (AP)
EC130	B4, T2	–
SA365 / AS365	C, C1, C2, C3, N, N1, N2, N3	F, Fs, Fi, K, K2
AS565	–	MA, MB, SA, SB, UB, MBe
SA366	G1	GA
EC155	B, B1	–
SA330	J	Ba, L, Jm, S1, Sm
SA341	G	B, C, D, E, F, H
SA342	J	L, L1, M, M1, Ma
ALOUETTE II	313B, 3130, 318B, 318C, 3180	–
ALOUETTE III	316B, 316C, 3160, 319B	–
LAMA	315B	–
EC225	LP	–
EC725	–	AP
AS332	C, C1, L, L1, L2	B, B1, F1, M, M1
AS532	–	A2, U2, AC, AL, SC, UE, UL
EC175	B	–
(EC339)	–	(KUH/Surion)
BO105	C (C23, CB, CB-4, CB-5), D (DB, DBS, DB-4, DBS-4, DBS-5), S (CS, CBS, CBS-4, CBS-5), LS A-3	CBS-5 KLH, E-4
MBB-BK117	A-1, A-3, A-4, B-1, B-2, C-1, C-2, C-2e, D-2, D-2m	D-2m
EC135	T1, T2, T2+, T3, P1, P2, P2+, P3, EC635 T1, EC635 T2+, EC635 T3, EC635 P2+, EC635 P3, T3H, P3H, EC635 T3H, EC635 P3H	–

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With this Safety Information Notice Airbus Helicopters informs operators about potential issues related to KATHON™ FP1.5 (hereinafter referred to as *Kathon*) biocide and about precautions to be taken when using this biocide.

1. Background

Airbus Helicopters is aware of recent operational events and ongoing investigations related to the use of *Kathon* biocide affecting Aircraft from other airframe manufacturers.

In March 2020, DuPont as manufacturer of *Kathon* released a letter requesting the "immediate and permanent halt to use of KATHON™ FP 1.5 BIOCIDES for all aviation applications".

EASA issued SIB 2020-06 [1] recommending that aircraft and engine TC holders ensure that adequate manuals, instructions and maintenance procedures are in place to ensure the appropriate use of the biocide and to reflect the latest fuel and additives approvals. It also recommends to ensure consistency of aircraft and engine documentation regarding (any) biocide usage and to include detailed application and easily understandable biocide dosage instructions.

FAA issued SAIB NE-20-04 [2] with similar recommendations.

2. Important Notice

Airbus Helicopters reminds all operators to strictly follow the following documentation:

- engine-specific documentation (engine maintenance manual)
- additional guidance material provided by the engine manufacturer (e.g. Service Letters).

The given instructions and limitations for biocides therein have to be respected, in particular the maximum allowable biocide concentration for engine operation.

For further information about the impact on engine operation do not hesitate to contact the engine manufacturer.

3. Biocide usage

The maintenance procedures for microbiological contamination and the instructions for usage of biocides of Airbus Helicopters are given in the following three sections of the Standard Practices Manual (MTC):

- MTC 20-08-06-401 [3]
- MTC 20-08-06-402 [4]
- MTC 20-08-06-403 [5]

Airbus Helicopters does **not** forbid the treatment of the helicopter fuel system with *Kathon* in general. However, **before** engine operation, the operator has to ensure that the concentration of biocide in the fuel tanks is not greater than the maximum concentration allowed by the engine manufacturer. If no biocide is allowed for the engine, the biocide treated fuel has to be replaced by clean fuel **before** engine operation. Airbus Helicopters has reviewed the procedures for biocide usage (MTC 20-08-06-401 [3] and MTC 20-08-06-403 [5]) and will revise them to introduce improvements resulting from the EASA and FAA recommendations. The main changes are as follows:

Pre-mixing of a fuel batch with biocides at higher concentrations as specified for shock treatment (refer to Table 1: 100 ppm for *Kathon* | 270 ppm for Biobor) in accordance with the MTC is **forbidden** from now on. This is to avoid solubility issues which were reported at higher concentrations.

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Airbus Helicopters **only allows** the following two methods for biocide treatment of the fuel system:

- direct injection during refueling with a metered injection rig at a maximum concentration of 100 ppm for *Kathon* or 270 ppm for Biobor
- pre-mixing of the fuel with the biocide outside of the helicopter at a maximum concentration of 100 ppm for *Kathon* or 270 ppm for Biobor.

Other application methods like direct adding of pure biocide into the helicopter fuel tank are strictly **forbidden**. For clarification, Table 1 compares parts per million [ppm] with the corresponding mixing ratio [ml/L].

	KATHON FP1.5	BIOBOR JF
Maximum concentration (shock treatment)	100 ppm* (by volume)	270 ppm* (by weight)
	0.100 ml/L	0.199 ml/L **
* parts per million ** based on a minimum density Jet A-1 fuel (0.775 kg/L) and a density of 1.05 kg/L for Biobor (see FAA SAIB NE-20-04 [2])		

Table 1

If biocides are unavailable or cannot be used on the helicopter, the following alternatives are recommended:

- for storage/parking which normally requires preventive biocide treatment, it is recommended to perform regular water drainage once a week and regular microbiological checks in accordance with MTC 20-08-06-401 [3]
- for microbiological contamination treatment, the contamination will have to be cleaned manually in the tanks in accordance with MTC 20-08-06-402 [4] for removal of the microbiological particles instead of a biocide treatment.

Operators with concerns about the recent or forthcoming application of a maintenance procedure involving the usage of *Kathon* should contact Airbus Helicopters Customer Service.

Reference documents:

- [1] EASA SIB 2020-06 Use of DuPont KATHON™ FP 1.5 BIOCIDES
- [2] FAA SAIB NE-20-04 Engine Fuel – Jet Fuel Biocide Additive
- [3] MTC 20-08-06-401 Maintenance actions to prevent, monitor and eradicate microbiological contamination of fuel system
- [4] MTC 20-08-06-402 Fuel circuit manual cleaning procedure
- [5] MTC 20-08-06-403 Use of biocide products