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Minister for Climate and the Environment
Republic of Poland
Paulina Hennig-Kloska
Minister for Infrastructure
Republic of Poland
Dariusz Klimczak
President of the Civil Aviation Authority in Poland
Julian Rotter

REQUEST FOR APPLICATION OF A DEROGATION

I hereby request a derogation under Article 9 'Critical uses of halons' of Regulation (EC) 2024/590 from the prohibition on the use of halon1211 for hand-held fire extinguishers on board aircraft currently equipped with such extinguishers due to the lack of a technically and economically feasible alternative on the market, with a new end date set for the end of 2040.

JUSTIFICATION

The use of hand-held fire extinguishers in ELA1 aircraft on NCO and SPO flights is not required by Regulation (EC) 965/2012, but having such equipment significantly improves the safety of operations.

In addition to the above exemption, regulation NCO.IDE.A.160, 'Hand-held fire extinguishers', for all other aircraft (subject to this regulation) requires at least one hand-held fire extinguisher in the flight deck. The regulations CAT.IDE.A/H.250, NCC.IDE.A/H.205,NCO.IDE.H.160, SPO.IDE.A.180 'Manual fire extinguishers' maintain this requirement or increase it.

In Regulation (EU) 2024/590 of the European Parliament and of the Council of 7 February 2024 on substances that deplete the ozone layer and repealing Regulation (EC) No. 1005/2009 in Annex V in the table in para. 4.2, the end date for the use of halon 'For the protection of cabins and crew compartments' is set at 31.12.2025, but for other airborne purposes an end date of 31.12.2040 is indicated.

This proposal relates to ongoing work to find replacements for Halon 1211 and the currently available fire extinguishing agents that could be used on board aircraft.

Currently available on the market are (was):

- FM-200 - from 01.01.2025 its sale is forbidden according to REGULATION (EU) 2024/573 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 7 February 2024

on fluorinated greenhouse gases, amending Directive (EU) 2019/1937 and repealing Regulation (EU) No 517/2014 - ANNEX IV point (11) (c)

- FE-36 - from 01.01.2025 its sale is forbidden according to REGULATION (EU) 2024/573 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 7 February 2024 on fluorinated greenhouse gases, amending Directive (EU) 2019/1937 and repealing Regulation (EU) No 517/2014 - ANNEX IV point (11) (c)
- Halotron I
- Halotron II
- Halotron BrX (stabilized 2-BTP).

These agents are no match for halons in terms of safety to human health and extinguishing efficiency, requiring a higher volume to achieve a comparable effect in fighting a fire on board an aircraft.

This information is reflected in the material on the PoLand CAA (ULC) website (due to the amendment of Regulation (EC), this in terms of regulations, appears to have been updated) link:

https://ulc.gov.pl/_download/ltt/ciagla_zdolnosc/info_gasnice_halonowe_i_ich_zamienniki.pdf

Fire extinguishing systems for aviation offered on the market using the most advanced 2-BTP agent contain a severe limitation in their specification:

- For a capacity of 2.5 lb. - do not use in confined spaces with a volume of less than 459 ft^3 (12,99 m^3) per extinguisher,
- For a capacity of 3.75 lb. - do not use in enclosed spaces with a volume of less than 896 ft^3 (25,37 m^3) per extinguisher,
- Service life 12 years (non-rechargeable)

Despite the restrictions, the unit purchase cost of approved fire extinguishers with halon replacements is significantly higher than that of fire extinguishers with halon 1211. This results in a considerably lower price/efficiency ratio for the replacements. (Pointing out that these limitations are due, inter alia, to the negative effects of halon replacements on human health).

The average cost of fire extinguishers is as follows:

- Halon 1211 - 2.5 lb - $475.00 in terms of approximately 1,995.00 pln/ extinguisher;

relative to its possible replacements:

- Halotron BrX - 1.92 lb - $1,513.00 converted to approximately 6,354.60 pln/extinguisher;
- Halotron BrX - 3.75 lb - $2,630.00 converted approx. 11,046.00 pln/extinguisher approved for use on commercial aircraft;

(The above prices do not include the cost of transport and customs duties).

The use of modern fire extinguishers to replace halon 1211 can have serious consequences for people in the area of the fire, as they will be exposed to a number of additional hazards

due to the negative life and health effects of the new extinguishing agent, which have a much lower extinguishing efficiency or additionally leave a large amount of debris (powder).
As a result, it is possible that, because no replacement fire extinguishing agent equivalent to Halon 1211 has been developed, aircraft owners/operators who previously had Halon 1211 fire extinguishers will abandon any fire extinguishing agent on board (GA aviation - ELA1).

The use of an economically justifiable replacement in the form of Halotron 1 is not reflected in the effectiveness of this agent in relation to Halon 1211, as confirmed by expert opinions in this area.

The purchase of an EASA-approved Halotron BrX replacement, which is 3 or 6 times more expensive, makes the economic side of this solution far from satisfactory. To this must be added an additional cost of about 500.00 pln associated with the disposal of the currently used Haloton 1211.

It is not insignificant that the substitutes are not national products or from EU Member States. This will result in a negative impact on the intra-EU economy.

For more information, visit the website of the leading manufacturer of fire extinguishers for aviation:

https://www.h3raviation.com/collections/halotron-brx-fire-extinguishers/products/347ts-3-75-lb-halotron-brx-fire-extinguisher

The application of Article 9 of Regulation (EC) 2024/590, in the context of the Montreal Protocol and the environmental risks associated with the use or discontinuation of halons, requires consideration. Currently, halon is no longer produced and its use is limited to recycled recovery. At the same time, official European publications on the state of the ozone hole indicate that:

'When it comes to the identification of drivers of ozone depletion, the complex interaction of chemical and meteorological factors makes it difficult to attribute ozone hole evolution to a single individual component. One aspect is the strength of the polar vortex.'

https://www.eea.europa.eu/en/topics/in-depth/climate-change-mitigation-reducingemissions/current-state-of-the-ozonelayer#:~:text=In%20late%202023%2C%20the%20ozone,and%202020%20closing%2027%20December

The status of the ozone hole has remained relatively stable over the past few years, with projections indicating its complete recovery by the middle of this century.

This should be contrasted with the current use of halon in aviation, where it is stored in a controlled manner in fire extinguishers on board aircraft and in aircraft fire extinguishing systems certified in accordance with CS-25. For the last of these applications, the end of use is set at 31 December 2040.

Australian Government briefing materials produced by the Department of Climate Change, Energy, Environment and Water indicate that work is currently underway to develop efficient methods of converting halon resources into environmentally safe products.It is worth noting

that these materials mention the potential to process approximately 3 tonnes of halon per day. That is, the quantities referred to are far in excess of those used in civil aviation.

https://www.dcceew.gov.au/environment/protection/ozone/halon/waste-halon-usefulplastics#:~:text=Halons%2C%20which%20were%20widely%20used,carbon%20dioxide%20(CO2)

Currently on board aircraft registered in Poland, both commercial and GA, there are fire extinguishers containing halon 1211. From the information obtained by the https://dlapilota.pl portal, it appears that a large number of aircraft belonging to carriers are equipped with cabin halon 1211 extinguishers as well as such extinguishers are located in GA aircraft on average containing 1,135 kg of halon 1211 each. However, each of the halon extinguishers currently protecting aircraft may have a different expiry date.

This will result in the possible use of extended end dates resulting in an even and natural deactivation, where a criterion of expiry dates for extinguishers can be applied, rather than a single overall limitation on their use per day. This will also allow for a suitable and high-quality replacement to be found for Halon 1211, if necessary.

Otherwise, in extreme cases, there may even be an increase in the use of fire extinguishers containing halon 1211 just before the end date currently set, in order to avoid the cost of disposing of it - transferring it to halon banks - compared with the high cost of replacements.

With almost a year to resolve this issue, I am asking on my own behalf and on behalf of the aviation community to request the competent authorities of the Member States to apply to the Commission (EU) for a derogation until 31 december 2040 for the end date set out in Annex V, table, point 4.2, i.e. 31 december 2025 of Regulation (EC) 2024/590.

With sincerest regards,

Hubert Dominik Massalski
+48 602 264 022

KTL AOPA Poland
(qualified signatures)