# Safety Information Bulletin

## Aerodromes

**SIB No.: 2018-01**

**Issued: 09 January 2018**

**Subject:** **Information on Materials Used for Runway and Taxiway De/Anti-Icing**

**Ref. Publications:**
Regulation (EU) 139/2014, ADR.OPS.A.005 – Aerodrome Data & ADR.OPS.A.015 – Coordination between aerodrome operators and providers of aeronautical information services.

EASA SIB 2008-19R2 dated 23 April 2013.

**Applicability:**
Aerodrome Operators, Competent Authorities for Aerodromes.

**Description:**
The use of low-weight carbon brakes in modern aircraft since the 1980s and the concurrent switch to more environmental friendly alkali-organic salts for runway de/anti-icing may cause an undesired effect on the aircraft.

During winter operations, the aircraft's carbon brakes and open wheel well/bay are exposed to alkali-organic salt runway de/anti-icing substances during taxi, take-off and landing. A slush mixture of snow and alkali-organic salt de/anti-icing substances could freeze onto the landing gear and inside the wheel well/bay. After landing gear retraction, the frozen slush deposits begin to melt. The resulting liquid flows into the core of the carbon brake, further contaminating the carbon discs. The presence of the alkali-organic salt creates a catalytic condition lowering the temperature oxidation of the carbon, resulting in structural deterioration of the carbon disc material and reducing the service life and long-term efficiency of the brakes. This leads to a concern that may have safety consequences.

Aircraft operators should have information on the de/anti-icing substances used at the aerodromes they operate to and from, in order to assess the exposure of their aircraft to these substances and adjust their maintenance program.

To assist airplane operators in tracking airplane exposure to alkali-organic runway de/anti-icing substances for preventative maintenance planning purposes, information on the type of the substances used on runways and taxiways should be provided. The information could be disseminated either through SNOWTAM, when a SNOWTAM is issued, or published in the Aeronautical Information Publication (AIP). The information, when disseminated through

SNOWTAM should be displayed in Field T of the SNOWTAM, or inserted in the remarks column of AD 2.7 when published in the AIP, using the following abbreviations/words for the runway de/anti-icing generic fluids and solid materials:

- KAC for potassium acetate fluids
- KFOR for potassium formate fluids
- GAC for glycerine acetate fluids
- NAFO for sodium formate solids
- NAAC for sodium acetate solids
- EG for ethylene glycol fluids
- PG for propylene glycol fluids
- UREA
- SAND

The recommended wording should be as follows:

***RWY [designator] DE-ICED/ANTI-ICED [delete as appropriate] WITH KAC/KFOR/GAC/NAFO/NAAC/EG/PG/UREA/SAND [choose as appropriate]***

At this time, the safety concern described in this SIB is not considered to be an unsafe condition that would warrant Safety Directive (SD) action according to Regulation (EU) No 139/2014, ADR.AR.A.040

## Recommendation(s):

EASA recommends operators of aerodromes, that regularly conduct de/anti-icing operations of the aircraft movement area(s), to publish information on the generic fluids and/or solid materials they are using, in a SNOWTAM, when it is issued, or to insert such information in the remarks column of part AD 2.7 of the AIP, using the above-mentioned phraseology and abbreviations.

## Contact(s):

For further information contact the EASA Safety Information Section, Certification Directorate.
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