

# Encountering icing conditions in controlled airspace

Issued by the Air Accident Investigation Unit of Belgium, section of the FPS Mobility and Transport

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## Addressee(s):

All pilots

## Applicability:

All aircraft

### Safety matter

When encountering icing conditions immediate action is required as performance and controllability can rapidly deteriorate. However, contacting ATC is evenly essential when flying in controlled airspace in order to avoid the risk of a mid-air collision.

### Related incident

This incident was reported by a pilot holding a CPL since 1998 having accumulated 1100 flight hours. The ATIS at EBKI at the moment of the incident was:

- SCT4500
- Visibility 10 km
- The isothermal layer was between FLO60 and 070
- QNH 1012

The pilot report:

*“The problem occurred during a flight from France to EBST.*

*When I was nearing the France-Belgium border, I asked, a little bit late, to Lille radio to descend from FLO80 to FLO60. As I was close to the border, the controller asks me to contact Brussels Control 131.1 for the request.*

*Unfortunately, I made a mistake and I tuned the radio to 131.0 and asked for the authorization. The transmission was quite bad and I did not understand anything. I insisted about my request as I just flew into clouds and the outside temperature was below zero. Getting no answer, I decided to descend without the authorization, as I feared my wings would start to ice up. I descended to FLO60.*

*Eventually, I realized the radio was tuned to the wrong frequency and I selected the correct 131.1. The ATC controller told me I could not continue on FLO60 and transferred me to Brussels Departure on 126.625. I asked ATC to climb or descend, because I was about to enter nasty clouds. The controller allowed me to climb to FLO80, but the wings of my airplane started to be covered by ice and I couldn't climb higher. I called ATC to explain the situation. Finally, the controller authorized me to descend to FLO50.”*

The lessons the pilot drew from the incident:

- I should have checked the frequency after the selection
- I should have announced a PAN PAN
- I should have squawked 7700.



## Safety message

- **Preflight planning:** inform yourself about the forecast **freezing level** and **avoid prolonged flying at or just above it** (subfreezing level).
- **Do not deviate** from an ATC clearance **if not in an immediate emergency**.  
The well-known saying “Aviate, Navigate, Communicate” as order of priorities is only applicable in real emergency situations. As long as a situation has not become an emergency and the airplane is still under control and not on an immediate collision course, one should communicate his/her intentions first in controlled airspace.
- **Be pro-active and list already** the expected, published **frequencies** during your flight preparation.
- When no 2-way communication can be achieved:
  - **cross-check frequency** once again with published one, or
  - **return to previous frequency** as soon as possible (on lower altitude radio contact can be lost very swift), or
  - **try emergency frequency** 121.500
- **Blind transmission** on assigned and/or 121.5 could be good to alert other airspace users about intentions when no 2-way communication can be established.
- When a requested clearance to climb or descend is not immediately received and the situation **becomes urgent**, the pilot shall initiate communications using the urgency call “PAN PAN” (preferably spoken three times).
- If the situation really deteriorates and there’s an **imminent danger**:
  - climb\* or descend immediately to get out of the icing conditions,
  - **declare** an emergency and
  - **squawk\*\* 7700**.

\* in most emergencies climbing is advised, if performance still permits, because of better obstacle/terrain clearance and enhanced communications and radar detection.

\*\* From Belgocontrol: “Usage of transponder codes 7600 (radio failure) and 7700 are good quick reliable means to alert ATC of concerned airspace and below because these transponders are forced on all ATC surveillance screens”.

## More information

- Back in 2015, the European General Aviation Safety Team made a Safety Promotion Leaflet on ‘In flight icing’. It can be found on the EASA website:

<https://www.easa.europa.eu/document-library/general-publications/egast-leaflet-ga-10-flight-icing>

## About this Safety Feedback

This Safety Feedback is intended to diffuse lessons learned and good practices amongst the aviation community. The material is coming both from investigations as per EU Regulation (EU) no. 996/2010 on the investigation and prevention of accidents and incidents in civil aviation and from reports made by pilots, traffic controllers, mechanics, ground handlers, in application of EU Regulation (EU) no. 376/2014. Safety Feedbacks are **de-identified and safety messages have been established with the help of flight instructors, traffic controllers and/or manufacturers**.

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