De-Ice De-Ice Baby: Cold Weather Opsicles

OPSGROUP Team
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In the Northern Hemisphere the winter season is well and truly upon us, which means various extra things to think about – like different procedures, low visibility challenges, cold temperature corrections, where you left the other glove, and of course de-icing!

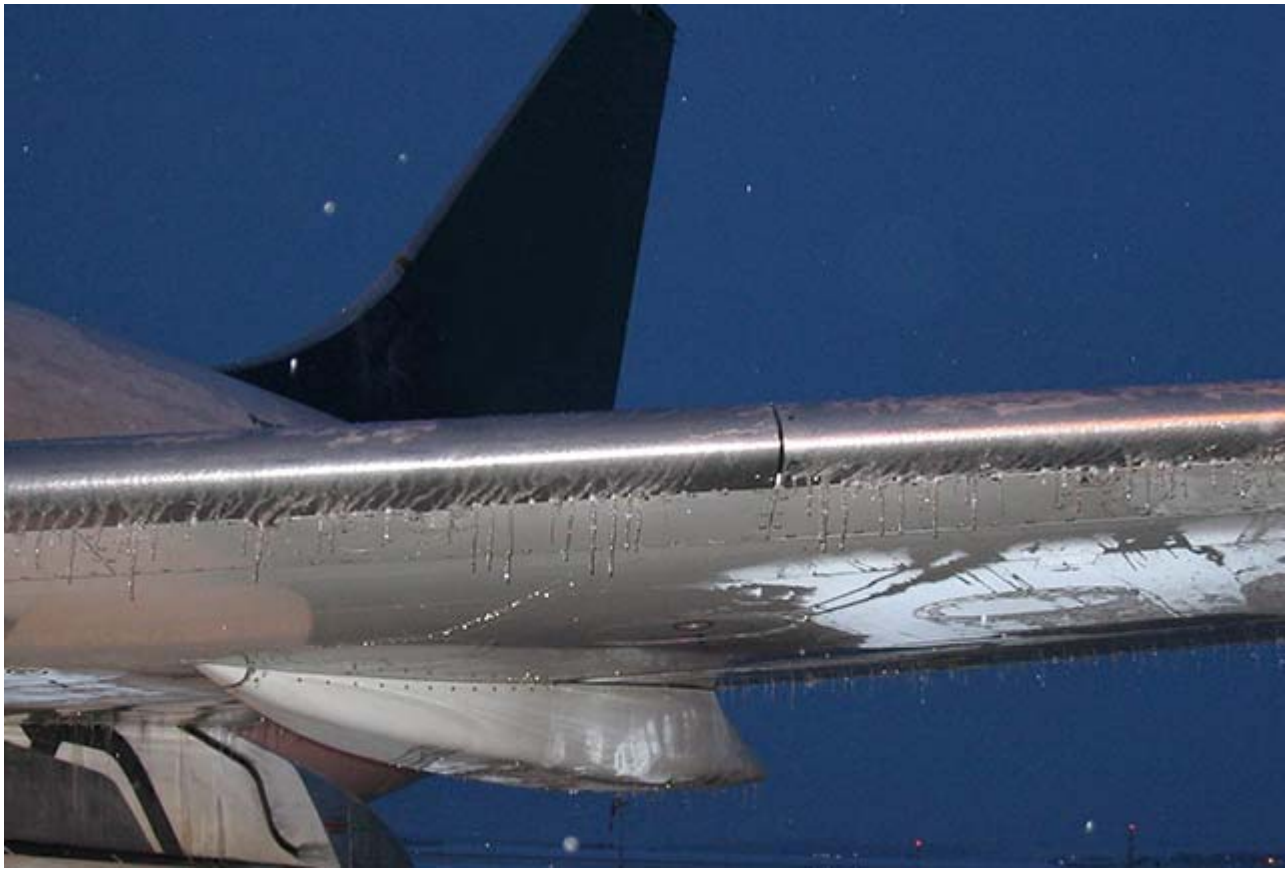
So, to help you out if you aren't so familiar with all things Winter Ops we have put together a little series of **Opsicles –** *Refreshing bits of ops info, just for members.*

Winter Opsicle #1: De-Ice De-Ice Baby

Most operators we've met apply a **"Keep it clean, keep it safe!" policy** meaning *don't risk it; if there is anything on the airplane get it off before you take-off.*

There are some caveats to this – less than **3mm of frost on the underside of the wing** around the fuel tanks is generally acceptable. If you don't have a tiny frost ruler to hand then a general rule of thumb is clear paint markings showing through means it's ok. A light dusting of hoarfrost on the fuselage is also fine (if your manual says so).

The areas where **anything is unacceptable** are your **critical surfaces** – the upper surface of the wings, horizontal stabilisers, leading edge devices… Basically any lift and/or control surface on the aircraft. If you've ever done a Winter Ops Refresher you probably know this statistic off-by-heart but "a *very small amount of roughness, in thickness as low as 0.40mm (1/64in) can disrupt the airflow and lead to severe lift loss…"*



Icicles on leading edge: not good. Frost around fuel take: might be ok.

So keeping it clean seems like a good rule. Alas, a rule not all follow…

The trouble is, it can get confusing (no, that crew in the video weren't confused, just negligent). But when you are out there, under pressure, managing a bigger and more complex workload, it can quickly get complicated especially when you throw in some **variable weather conditions** to the mix, and some **different mixtures into your HOT calculations.**

So our **Winter Opsicle #1** is a handy guide to help with just that.

What's in them?

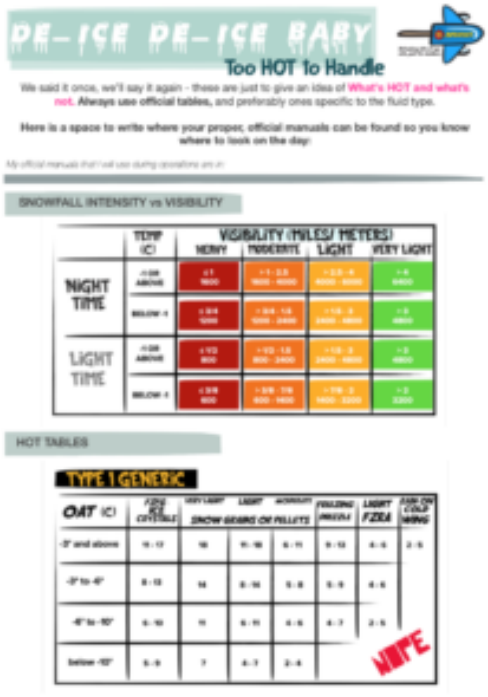
De-Ice De-Ice Baby is looking at de-icing/anti-icing. It comes in three parts, and you can download all, none, just one depending on what you find helpful.

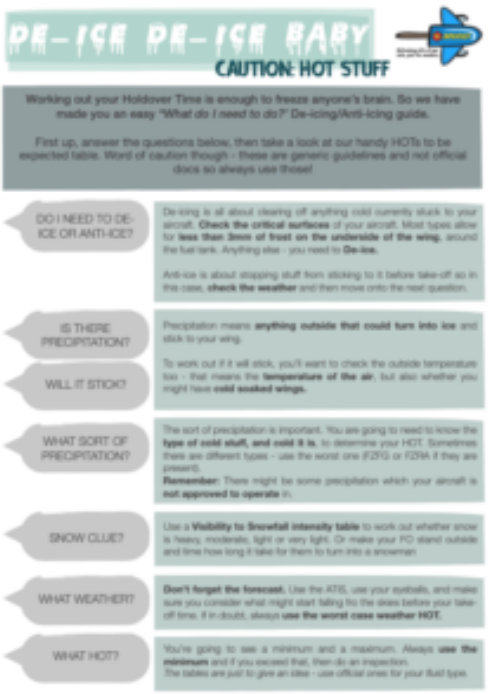
- **A De-Icing Decision Process** checklist – to help you determine whether or not to consider de-icing/anti-icing.
- **Caution: Hot Stuff** – a sort of FAQ on Holdover Times.
- **Too HOT to Handle** – a generic guide on what HOT to expect.

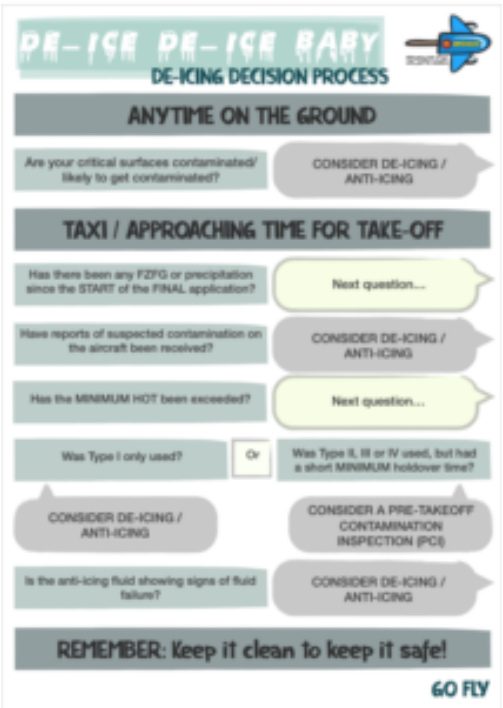
None of these are designed to be used in place of official (and possibly much more accurate) documents and manuals, but we do hope they will provide some refresher info on things to think about during the winter season.

Over the winter season, we'll try and post more so you can **build up your own Winter and Cold**

Weather Ops Pack.







If you're an OPSGROUP member you can click on each thumbnail to head to the Opsicle PDF download page.

Further reading

There is a huge amount of info out there (from more official sources) including:

- This very informative AOPA article on all things ice.
- This FAA Guide for Pilots on de-icing big aircraft.
- This EASA Safety Bulletin on proper de-icing procedures.
- This Airbus Manual on Getting to Grips with Cold Weather Ops.