Inflight icing is a unique and dynamic hazard, constantly changing with altitude and location. Adding yet another variable, each individual airplane can be affected differently by the same general area of inflight icing - all based on the airplane's specific design and the airspeed at the time ice was encountered.

**WHAT ARE "KNOWN ICING CONDITIONS"?**

1. Any flight conditions where you’d expect the possibility of ice forming or adhering to the aircraft based on all available preflight information. Although there are many factors that influence the potential for inflight icing, it’s often best to remain cautious when assessing reported and forecast icing conditions. Inflight icing isn’t unique to flights through instrument meteorological conditions (IMC), you can experience inflight icing even when flying in visual meteorological conditions (VMC).

2. The presence of precipitation and/or (IMC) along your route of flight is your cue, your trigger, for taking a more careful and deliberate look at the inflight risk of bumping into icing conditions.

Freezing Temperatures + Sufficient Moisture

Reported or Forecasted
Check for TKS Anti-Ice System POH Supplement (Chapter 8)  
"Approved for Flight into Known Icing (FIKI)"

Placard on the Bolster Panel

Two TKS Fluid Tanks

Porous Panel on the Vertical Stabilizer

Windshield Spray Nozzles

Bolster Panel Switches

Minimum Dispatch Quantity = 5 gallons

Preflight Inspection Complete

Pilot Qualification and Training
Pilot-in-command must successfully complete the Cirrus Icing Awareness Course within 24 months before flight into Forecast or Known Icing Conditions.

Duration (w/5 gallons)

<table>
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<th>Norm</th>
<th>High</th>
<th>Max</th>
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<tr>
<td></td>
<td>90 minutes</td>
<td>45 minutes</td>
<td>22.5 minutes</td>
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(TKS Fluid = 9.2 pounds/gallon)

Duration (FULL)

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<tr>
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<th>Norm</th>
<th>High</th>
<th>Max</th>
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<tbody>
<tr>
<td></td>
<td>150 minutes</td>
<td>75 minutes</td>
<td>37.5 minutes</td>
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LAUNCH YOUR ICING AWARENESS TRAINING AT - WWW.CIRRUSAPPROACH.COM
When inflight icing conditions are anticipated, the best tactic is to use your TKS anti-ice system EARLY and OFTEN. Turn the system ON a few minutes prior to entering icing conditions to get the protective fluid flowing over the critical surfaces.

**Cockpit Cues**
- Pilot Reports (PIREPs)
- OAT + Visible Moisture
- PITOT HEAT REQD CAS Message
- XM ICNG Overlay
- XM FRZ LVL Overlay
- XM Infared (IR) Satellite Overlay
- XM Cloud Top Overlay
- XM NEXRAD Overlay

**PIREP CONSIDERATIONS...**

**When was the PIREP made?**
Icing conditions can change rapidly.

**What type of aircraft made the report?**
Accumulation rate varies greatly from one aircraft type to another.

**No PIREP, no ice?**
Maybe it wasn’t reported, or perhaps nobody has flown through the area recently.
CLEAR
Glossy, clear, or translucent
Slow freezing

MIXED
Characteristics of both CLEAR and RIME ice

RIME
Rough, opaque ice
Instantaneously freezes trapping air
How long does TKS fluid last?

Each manufacturer is different so check the product data sheet or certificate of analysis for the specific TKS fluid you’ve purchased. **Typical shelf life ranges between 24 - 36 months.**

VENT - CLEAR OF OBSTRUCTIONS

Each TKS fluid tank is vented through a NACA-style duct on the bottom of the wing, just outboard of the tank.

LIMITATIONS

**AIRSPEEDS:**
- Minimum airspeed for flight into known icing - **95 KIAS**
- Minimum airspeed while holding - **120 KIAS**
- Maximum airspeed in icing conditions - **177 KIAS (204 KTAS)**

**MINIMUM TEMPERATURE:** **-30 degrees F (-34 degrees C)**

**FLAPS:** **50%** when in ice, or w/ ice on the airplane

**WIND SHLD:** **Don’t Use** w/in **30 SECONDS** of landing

- Fully wet-out the TKS system every **30 DAYS**
- **24-month PIC Icing Awareness Course COMPLETE**

HOW TO CLEAN

- Warm water
- Mild soap
- Lint-free cloth
- Green scouring pad for tough spots (always cleaning “up-and-down” w/the metal grain - never side-to-side)
- Operating the system while cleaning helps to push-out stubborn debris