

# DuPont™ ISCEON® 9 Series

## REFRIGERANTS

### Product Information Bulletin

## DuPont™ ISCEON® 39TC®

ISCEON® 39TC® is an easy-to-use, non-ozone-depleting HFC retrofit refrigerant for R-12 in centrifugal chillers.

**Note:** Prior to retrofitting equipment to ISCEON® 39TC®, contact your DuPont representative.

**ASHRAE #:** R-423A

### Applications

- Centrifugal chillers designed for R-12

### Benefits

- Provides easy, quick cost-effective retrofits
- Non-ozone-depleting HFC
  - Not subject to phase-out under the Montreal Protocol
- Avoids expensive engineering changes to existing chiller equipment
- Enables continued use of existing equipment
- Non-flammable. ASHRAE safety classification: A1 (same as R-12 and R-134a)
- US EPA SNAP accepted
- Low temperature glide: 1°F (0.5°C)
- Lower discharge temperature than R-12
  - Likely to prolong compressor life
- Low toxicity (similar to R-12 and R-134a)
- Can be topped off during service without removing the entire refrigerant charge



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## Expected Performance After Retrofit

(Based on field experience, calorimeter testing and thermodynamic property data).

ISCEON® 39TC® provides similar cooling capacity and energy efficiency to R-12 in most systems, while operating at significantly lower compressor discharge temperature and the same discharge pressure. Actual performance depends on system design and operating conditions.

<b>Discharge Temperature:</b>	<b>°F (°C)</b>
R-12	174°F (79°C)
ISCEON® 39TC®	154°F (68°C)

<b>Discharge Pressure:</b>	<b>psia (kPa)</b>
R-12	161 (1110)
ISCEON® 39TC®	161 (1110)

### *System Conditions:*

Condensing Temperature = 110°F (43°C)

Evaporator Temperature = 40°F (4°C)

## Cooling Capacity vs. R-12

ISCEON® 39TC®	0–5% lower
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## Retrofit Considerations

For most systems, only one lubricant change to POE during retrofit is required. ISCEON 39TC® tolerates high residual levels of mineral oil in POE and, therefore, no system flushing is required after changing the original lubricant to POE. Typically, major engineering changes are not required for successful retrofit. Refer to the ISCEON® 39TC® Retrofit Guidelines for details.

## Product Composition

<b>Component</b>	<b>Weight %</b>
HFC-134a	52.5
HFC-227ea	47.5

**For Further Information: (800) 235-7882**

[www.refrigerants.dupont.com](http://www.refrigerants.dupont.com)

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