

DuPont™ ISCEON® 9 Series

REFRIGERANTS

Product Information Bulletin

DuPont™ ISCEON® MO29

ISCEON® MO29 is an easy-to-use, non-ozone-depleting HFC refrigerant originally designed to replace R-22 in existing direct expansion (DX) water chiller systems. It can also be used in residential and commercial air conditioning (AC) and medium temperature refrigeration systems. ISCEON® MO29 is compatible with traditional and new lubricants, in most cases no change of lubricant type during retrofit is required.

ASHRAE #: Application to be submitted in near future

Applications

- Residential and commercial air conditioning
 - Best choice for DX water chillers
- Medium temperature commercial refrigeration
 - Food service
 - Supermarket display cases
 - Food storage and processing

Benefits

- Provides easy, quick cost-effective retrofits
- Non-ozone-depleting HFC
 - Not subject to phase-out under the Montreal Protocol
- Compatible with AB, MO and POE lubricants
 - In most cases, no change of lubricant type is needed
- Enables continued use of existing equipment
- Non-flammable under ASTM E681-01 test conditions
 - As formulated and worst case leak scenario compositions
- Lower discharge temperature than R-22
 - Likely to prolong compressor life
- Low toxicity (similar to R-22)
- 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).

Broad field experience has shown that ISCEON® MO29 provides similar cooling capacity and energy efficiency to R-22 in most systems, while operating at significantly lower compressor discharge temperature. Actual performance depends on system design and operating conditions.

Discharge Temperature:	°F (°C)
R-22	204°F (96°C)
ISCEON® MO29	159°F (71°C)

Discharge Pressure:	psia (kPa)
R-22	257 (1770)
ISCEON® MO29	269 (1850)

System Conditions:

Condensing Temperature = 110°F (43°C)

Evaporator Temperature = 40°F (4°C)

Cooling Capacity vs. R-22

ISCEON® MO29	*~5% lower
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* Experience indicates many air-to-air cooling systems typically have more capacity than required.

Retrofit Considerations

ISCEON® MO29 is compatible with traditional and new lubricants – mineral oil, alkylbenzene and polyol ester – in most cases no change of lubricant type during retrofit is needed. Oil return is determined by a number of operating and design conditions – in some systems with complex piping configurations, POE may need to be added. Minor equipment modifications (e.g., seal replacement) or expansion device adjustments may be required in some applications. Refer to the ISCEON® MO29 Retrofit Guidelines for details.

Product Composition

Component	Weight %
HFC-134a	31.5
HFC-125	65.1
Isobutane	3.4

For Further Information: (800) 235-7882

www.refrigerants.dupont.com

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