



5 Answers for a Better Environment

Solstice[®] zd Refrigerant

WHO

Honeywell, a technology leader and innovator committed to not only building better products, but also to improving living conditions around the world. Honeywell is a Fortune 100 company that invents and manufactures technologies to address tough challenges linked to global macro-trends such as environment, energy, safety and security.

HOW

Honeywell created Solstice zd, a new molecule that has excellent performance in its intended applications.

WHAT

Solstice zd, part of the award winning Solstice family, leaping ahead of industry standards to maximize energy savings and dramatically reduce environmental impact.

WHEN

Solstice zd is commercially available today.

After extensive testing of the molecule, and through collaboration with leading companies, Solstice zd refrigerant is now ready to help the challenging environmental needs of different industries like centrifugal chillers, organic Rankine cycles and high-temperature heat pumps.

WHY

Honeywell's commitment: the safety of our employees, the quality of our products, being responsible stewards for the protection of the environment, the communities in which we operate and our customers.

Solstice zd is a REACH-registered and U.S. SNAP-approved alternative to R-123 and 245fa designed to make a significant contribution to reductions in global warming:

- GWP=1, non-flammable
- No impact on ozone depletion

Solstice[®] zd: Compliant with Key EU and U.S. Regulations

Solstice zd is not listed in either the EU F-Gas or the EU ODS regulations

- Not considered to be an ozone depleting substance
- Not considered a fluorinated greenhouse gas
- Not subject to use controls
- Not subject to cap & phase down
- Not subject to de-listing by U.S. EPA
- Not subject to separate waste stream treatment under the EU WEEE Directive

Solstice zd is not listed in the RoHS directive



Non Flammable

Solstice zd, due to its higher capacity with efficiency similar to R-123, is a good replacement in centrifugal chillers and other low-pressure applications



Centrifugal Chillers

GWP of 1



Non-ozone-depleting Solstice zd refrigerant has a global warming potential (GWP) of 1 – existing alternative low-pressure refrigerants have GWPs between 850 and 1,300



Solstice zd can provide a lower GWP and higher efficiency when compared to R-245fa in the renewable heat recovery market and in the waste recovery market in both mobile and stationary applications

Industrial applications can potentially benefit from energy savings when using Solstice zd

High temp. Heat Pumps



ORC **Organic Rankine Cycle**