



## Game Changers

### Bolshoy Ice Dome Blends Technology and Russian Tradition



#### **PROJECT**

Bolshoy Ice Dome, the main venue for ice hockey competition at the Sochi 2014 Olympic Winter Games

#### **CHALLENGE**

Build one of the world's most iconic ice hockey arenas, combining high-performance ice surfaces with a unique spectator experience

#### **COMPETITIVE EDGE**

DOWCAL™ Heat Transfer Fluids help provide energy efficiency and exceptional system performance and reliability for the arena's ice surfaces

#### **DOW SOLUTION**

Apply Dow technologies and products to create and maintain a state-of-the-art playing field for Olympic athletes and a world-class ambience for the fans

Of all the venues for the Sochi 2014 Olympic Winter Games, the Bolshoy Ice Dome is sure to be one of the most impressive – reflecting Russia's cultural tradition while also welcoming the world to a modern, elaborate performance complex.

Dow worked closely with project partner Mostovik to provide a number of products and solutions to this remarkable facility, including heat transfer fluids for ice creation and maintenance.

Among the most significant contributions are DOWCAL™ Heat Transfer Fluids, which are used to create and maintain the arena's high-performance ice surfaces for world-class ice hockey competition and training. The heat transfer fluids are also being used in the air conditioning system to offer reliable, steady temperature control. In both applications, the heat transfer fluids

from Dow help control operating and maintenance costs. In addition, DOWCAL Heat Transfer Fluids have a longer service life compared to competitors' products.

Several other Dow solutions are incorporated throughout the Bolshoy Ice Dome as well, from floor to ceiling, including:

- WALOCEL™ products were used in the concrete mixture for the flooring beneath the ice, contributing to greater workability during application.
- Industrial coatings from Dow were applied to the building's metal structural components, offering enhanced durability and protection from corrosion.
- ENDURANCE™ family of semiconductive and insulation materials, offering reliability and long service life to power cables.

- SPECFLEX™ Polyurethane Systems were used to produce the seats for VIP guests, contributing to aesthetics, comfort and durability.

During the Games, the Bolshoy Ice Dome will serve as the main venue for ice hockey, with seating capacity for 12,000 spectators. Its innovative design is based

on the image of a frozen drop, while the Bolshoy name is meant to evoke the traditions of Russian culture and arts. After the Games, the venue will serve as a multi-sport and entertainment complex for the public, hosting ice hockey tournaments, figure skating events and training, concerts and much more.

### Game-Changing Solutions

Dow products used in the Bolshoy Ice Dome can change the game for a wide range of applications and needs. Learn more about the many uses of other Dow products used in the Bolshoy Ice Dome at [www.dow.com/olympicpartnership](http://www.dow.com/olympicpartnership).

#### DOWCAL™ Heat Transfer Fluids

- Offer high levels of thermal performance and protection
- Offer economical, high-quality options for a wide range of applications and operating temperatures
- Protect against corrosion

#### Dow Construction Additives

- Enable excellent adhesion and improved performance
- Enhance flow, open time and workability

#### Anticorrosion Coatings

- Exhibit excellent adhesion and film integrity in order to offer superior protection from corrosion and environmental conditions like moisture and UV light

#### ENDURANCE™ Power Cable Compounds

- Enable high-quality cable performance
- Offer reliability and long service life

#### SPECFLEX™ Polyurethane Systems

- Enable aesthetics, comfort and durability in seating applications
- Are available in VOC-free formulations
- Feature fire behavior in compliance with MVSS 302 and UNI CT 225 industry standards

### Did You Know?

Beyond ice arenas and air conditioning, heat transfer fluids from Dow are used in a diverse range of applications, from everyday products to highly specialized technologies.

- Spectator Seating
- Architectural Coating Additives
- Pharmaceutical Production
- DOWLEX™ Polyethylene Resins

### To Learn More

For more information about heat transfer fluids from Dow, go to [www.dowheattransfer.com](http://www.dowheattransfer.com). Learn more about ENDURANCE™ compounds at [www.dow.com/inside/presscenter/fact\\_sheet/endurance.htm](http://www.dow.com/inside/presscenter/fact_sheet/endurance.htm) and SPECFLEX™ polyurethane systems at <http://www.dow.com/pusystems/product/specflex.htm>.

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