#### THE NEXT GENERATION OF COMMERCIAL ARCHITECTURE:

# SILICONE SOLUTIONS

**DESIGN FREEDOM THROUGH HIGH-PERFORMANCE FACADES** 

## THE RISE OF

**COMMERCIAL INFRASTRUCTURE** 

THE GLOBAL CONSTRUCTION INDUSTRY IS EXPECTED TO GROW AT A 5.5% RATE THROUGH 2021.1

THE DEMAND FOR SILICONE IN NORTH AMERICA IS PROJECTED TO GROW 6.8% BY VOLUME **BETWEEN 2015 AND 2020.**<sup>2</sup>





### **BUILDING FROM THE OUTSIDE, IN**

Typical cost of the commercial building envelope is up to 35% of total building cost.3

> Proper facade design is one of the most important architectural elements for:

OPTIMAL ENERGY EFFICIENCY | AIRFLOW NATURAL LIGHTING | LIFECYCLE COST SAVINGS





Designed for highly-transparent, modern glass facades, DOWSIL™ Silicone Structural Glazing (SSG) and Weatherproofing Systems help create long-lasting building envelopes that address top trends for happy, healthy and secure living and work spaces

#### 100 MILLION+TONS OF CO<sub>2</sub> **COULD BE SAVED ANNUALLY**

if all the buildings in Europe were fitted with advanced energy saving glass.4

Imagine the possibilities if buildings worldwide were outfitted with energy saving glass.

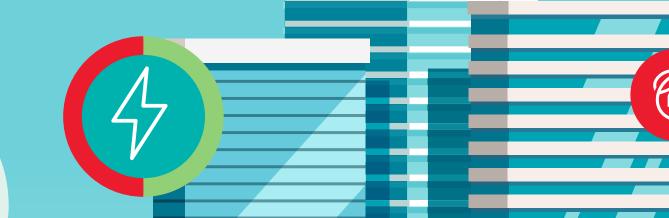








SAVE **TONS**  $CO_2$ 



#### **ENERGY EFFICIENCY**

Silicones are in nearly every facet of an energy efficient building including:

INSULATION | FACADES LOW-VOC PROTECTIVE COATINGS SMART WINDOWS | LIGHTING

#### **SOUND PROTECTION**

Reliable and proven silicones help to effectively insulate against noise and actively control sound loads through specialty glass.

#### **FIRE PROTECTION**

Specialty silicones meet stringent European standards to protect occupants and building fabric from fire.

#### **MORE** THAN **50%** of Dow projects are tied to sustainability to address issues like energy production and urbanization.<sup>5</sup> Silicone technologies go hand-in-hand with smart engineering for efficient structural glazing and help reduce a building's heating and cooling needs.



#### LIFE-CYCLE COST SAVINGS

DOWSIL<sup>TM</sup> silicone sealants outlast organic sealants by three times in the same application. LOWER MAINTENANCE COSTS | LOWER LIFETIME OWNERSHIP COSTS | HELP KEEP ROI ON TRACK

### 50+ YEARS OF PROVEN PERFORMANCE

**DID YOU KNOW?** 

Dow pioneered DOWSIL™ SG as a revolutionary technology in the 1960s. Buildings constructed with DOWSIL™ silicones have an anticipated service life exceeding 50 years, as tested by:

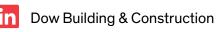
> The European Technical Approval Guideline (ETAG) 002 Federal Institute for Materials Research and Testing (BAM) in Germany

consumer.dow.com/50Plus



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<sup>2</sup> http://www.marketsandmarkets.com/PressReleases/silicone.asp



#### SOURCES

1 http://www.businesswire.com/news/home/20160919005979/en/Global-Construction-Industry-Growth-5.5-Trends-Forecast

<sup>3</sup> http://greenbuildingelements.com/2014/03/25/guest-post-importance-facade-engineering/ 4 http://www.glassforeurope.com/en/issues/faq.php <sup>5</sup> http://www.building.com.hk/forum/20161114bJ10.pdf



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