

## DEFLEXION™ technology from Dow Corning Fact Sheet

### What it is

DEFLEXION™ technology is a unique patent pending impact absorbing performance textile based on silicones that is designed to protect whilst being comfortable and durable for the wearer. DEFLEXION™ technology offers high levels of impact performance without the added bulk and stiffness of traditional padding, and has the advantage of being washable. The DEFLEXION™ textile technology is flexible and in some cases breathable, and can be cut and sewn directly into clothing, eliminating the need to insert uncomfortable padding. Due to the unique stability of silicones DEFLEXION™ technologies function over broad temperature ranges and when wet.

DEFLEXION™ innovative technology is suitable for a multitude of applications in products such as: sports apparel, equipment and footwear, medical devices, personal protective equipment and luggage.

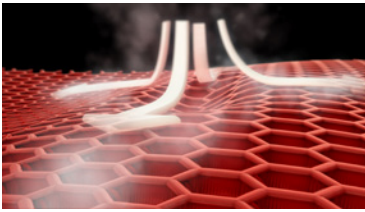
### How it works

Capitalizing on the unique properties of silicones, DEFLEXION™ materials provide impact protection in a

unique textile format. When DEFLEXION™ material is impacted the impact energy is both dissipated across the surface away from the point of contact and absorbed thus reducing the forces transmitted through to the body or to objects. This is a known feature of certain silicone polymers due to their polymeric architecture.

### Technology Details

There are six products in the DEFLEXION™ range. Two S-Range products, namely *Dow Corning® S7-005* and *Dow Corning® S5-004*, and four TP-Range products, namely *Dow Corning® TP3-001*, *Dow Corning® TP3-002*, *Dow Corning® TP8-001* and *Dow Corning® TP8-002*. Products vary in terms of their weight, thickness, feel, degree of breathability and impact performance levels. The S-Range DEFLEXION™ technology is based on spacer textiles impregnated with specially formulated energy absorbing silicone polymers. The open network of the textile makeup allows the materials to be breathable and flexible. The TP-Range DEFLEXION™ technology is also based on energy absorbing silicones delivered in sheet form as a result of careful pairing with a thermoplastic material.



As pictured: The molecules within the silicone-based DEFLEXION™ soft-armor system engage to defend your body or your important gear from destructive collisions by absorbing and dispersing forces across a greater area, lessening their intensity.



### S-Range DEFLEXION™ material



### TP-Range DEFLEXION™ material

The S-Range DEFLEXION™ textiles are carefully optimized to maximize impact protection whilst remaining flexible and breathable.

The TP-Range offers a high level of protection in a thin, flexible and lightweight material. Offering designers freedom in terms of forming and surface effects, the TP-Range is designed to give optimum performance that will be thin, light and flexible for the wearer and perform when wet.

The temperature resistance of silicones means that these impact protection textiles function over broad temperature ranges and when wet. They can be washed repeatedly and are breathable due to the open weave structure which is great news for the wearer.

The material is available in two basic forms — solid and perforated, which is useful in applications where the material is going to be worn close to the body and a degree of breathability is needed.

The S-Range DEFLEXION™ products perform at temperatures from -20°C to +40°C whilst remaining flexible.

The TP-Range is washable and will perform down to low temperatures (-10°C) without getting stiff.

Photos, Page 1 - AV15966, AV14260, AV15972, Page 2 - AV159934, AV15990, AV15349.

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