

Construction



## **Sika Injection Systems for Concrete & Masonry Structures**



# Sika's Injection Technology

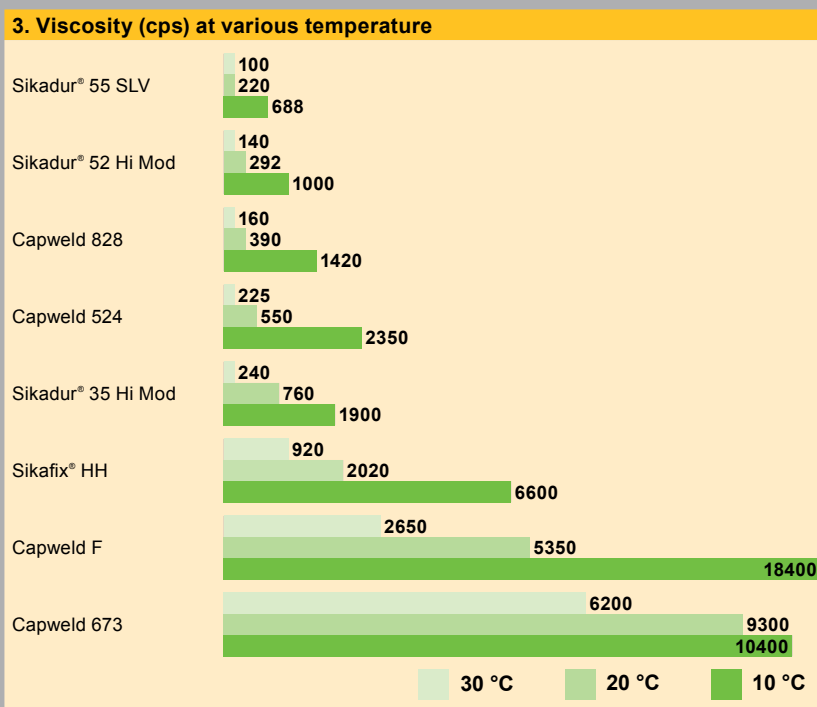
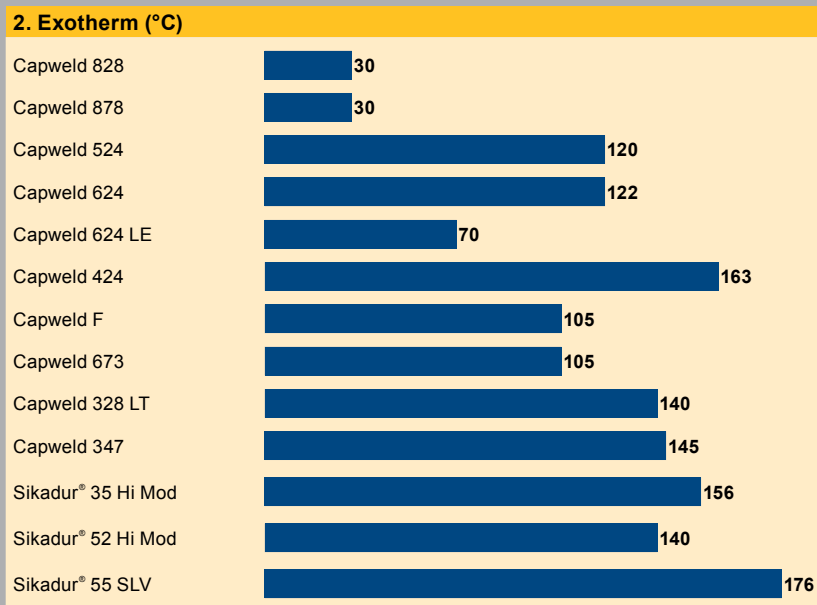
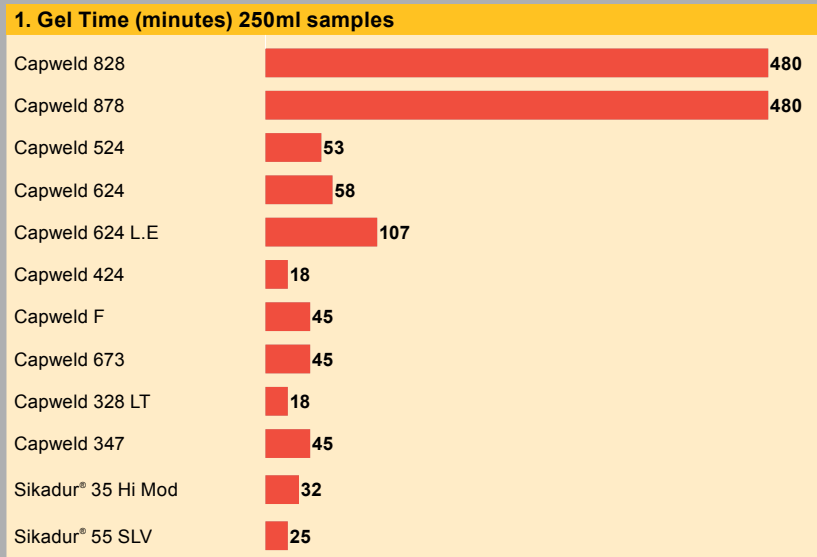
## Construction

Material Characteristics	Relevance of Characteristics	Advantages of Characteristics
<b>Low Viscosity</b>	<ul style="list-style-type: none"> <li>▶ Allows for greater penetration of fine and deep cracks.</li> <li>▶ Lower viscosity resins generate lesser injection pressures and avoid substrate damage.</li> </ul>	<ul style="list-style-type: none"> <li>▶ Versatility, responding to a wide variety of site needs.</li> <li>▶ Accommodates a wide range of injection methods and equipment to satisfy differing conditions.</li> <li>▶ Accommodates manual, gravity-fed techniques in horizontal cracks or defects.</li> </ul>
<b>Higher Thixotropy</b>	<ul style="list-style-type: none"> <li>▶ Allows wider cracks to be injected effectively and efficiently.</li> <li>▶ Minimizes exothermic heat which can otherwise cause cracking.</li> <li>▶ Limits loss of resin in "blind cracks".</li> </ul>	<ul style="list-style-type: none"> <li>▶ The amount of low viscosity material required to fill wide cracks is such that the use of resins with greater thixotropy is more efficient.</li> <li>▶ A range of thixotropy values makes it possible to accommodate more porous substrates by filling cracks or defects and not the substrate.</li> </ul>
<b>Expansion Qualities</b>	<ul style="list-style-type: none"> <li>▶ Improves sealing due to 'self injecting' effect of resin.</li> <li>▶ Achieves complete filling of cracks and voids.</li> <li>▶ Resin expansion lowers resin consumption.</li> </ul>	<ul style="list-style-type: none"> <li>▶ Variable rate of expansion to suit particulars of cracks and conditions.</li> <li>▶ Product stability with no shrinkage.</li> <li>▶ Fast rates of expansion required to cut-off leaks and work against hydrostatic water pressure.</li> <li>▶ Slow rates of expansion needed for greater control.</li> </ul>
<b>Reaction Times</b>	<ul style="list-style-type: none"> <li>▶ Varying times allows reaction to occur when required.</li> <li>▶ Short reaction times prevent delays and washout</li> <li>▶ Long reaction times permit return to initially filled cracks or voids to top up.</li> </ul>	<ul style="list-style-type: none"> <li>▶ Accommodates the need for slower reaction times in dry cracks and faster times in wet conditions.</li> <li>▶ Meets the need for longer reaction times for larger cracks and voids, allowing for homogenous repairs.</li> </ul>
<b>Pot Life</b>	<ul style="list-style-type: none"> <li>▶ Long pot-life allows premixing and injection with single component pumps.</li> <li>▶ Shorter pot-life means quicker turn-around time and increased productivity.</li> </ul>	<ul style="list-style-type: none"> <li>▶ Variable pot-life satisfies the needs of different product applications and maximises effectiveness and economy.</li> <li>▶ Long pot-life allows for premixing and use of product for up to 8 hours -- to cater for difficult or scattered cracks.</li> </ul>
<b>Resin Flexibility</b>	<ul style="list-style-type: none"> <li>▶ Makes it possible to accommodate limited crack movement.</li> <li>▶ Avoids rigidity in circumstances where a seal or structural integrity is essential across a temperature gradient.</li> </ul>	<ul style="list-style-type: none"> <li>▶ Accommodates the need for long term flexibility without embrittlement.</li> <li>▶ Makes it possible to seal cracks without debonding from crack walls or splitting within the resin itself.</li> <li>▶ Makes it possible to achieve flexible structural repairs using resins.</li> </ul>
<b>Adhesion/ Bond</b>	<ul style="list-style-type: none"> <li>▶ Allows for structural stitching/bonding of crack walls.</li> <li>▶ Provides a proven civil engineering repair technique.</li> </ul>	<ul style="list-style-type: none"> <li>▶ Meets requirements for excellent adhesion to multiple types of substrate.</li> <li>▶ Makes it possible to realize full and positive bond at contact surfaces.</li> <li>▶ Makes it possible to prevent shrinkage or delamination at crack or void walls.</li> </ul>
<b>Durability/ Permanence</b>	<ul style="list-style-type: none"> <li>▶ Increases service life of the repaired structure.</li> <li>▶ Reduces influences of aging and weathering.</li> <li>▶ Provides a permanent repair.</li> </ul>	<ul style="list-style-type: none"> <li>▶ Dimensional stability with no shrinkage or gapping.</li> <li>▶ Immediate and long-lasting performance characteristics.</li> <li>▶ Maintenance of physical properties to provide permanent solution.</li> </ul>
<b>Resistance Values</b>	<ul style="list-style-type: none"> <li>▶ High resistance to aggressive chemicals and gasses</li> <li>▶ Resistant to high temperatures (85 °C / 185 °F)</li> <li>▶ High resistance to environmental and atmospheric factors including weathering, UV and exposure to water.</li> </ul>	<ul style="list-style-type: none"> <li>▶ Injection products with high chemical and gas resistance defend against reinforcement corrosion.</li> <li>▶ Resins with high temperature resistance withstand elevated temperatures and remain intact.</li> <li>▶ High resistance injection materials are suitable for external use and exposure to elements which may degrade resins.</li> </ul>
<b>Environmental Suitability</b>	<ul style="list-style-type: none"> <li>▶ Allows injection work to be undertaken in ecologically-sensitive areas.</li> <li>▶ Non-toxic/non hazardous resins eliminate potential for perilous installations.</li> </ul>	<ul style="list-style-type: none"> <li>▶ Solvent or VOC-free systems contribute to Green Building, LEED or environmental-led restoration.</li> <li>▶ Provides acceptability for contact with ground water without potential for contamination.</li> <li>▶ Offers substances compatible with potable water contact or for use in food production areas.</li> </ul>

The table above features a comprehensive range of resin injection products, including products from Cappar Limited, who were recently acquired by Sika Canada

Sika's Injection Solutions		
Low Viscosity		Medium Viscosity
<ul style="list-style-type: none"> <li>▶ SikaFix® PU LV</li> <li>▶ Sikadur® 55SLV</li> <li>▶ Sikadur® 52</li> <li>▶ CapWeld 828</li> </ul>		<ul style="list-style-type: none"> <li>▶ SikaFix® PU</li> <li>▶ Sikadur® 35</li> <li>▶ CapWeld 524</li> </ul>
<ul style="list-style-type: none"> <li>▶ Cappar® 673 (UW)</li> <li>▶ Cappar® 878</li> </ul>		
<ul style="list-style-type: none"> <li>▶ SikaFix® PU</li> <li>▶ SikaFix® PU LV</li> <li>▶ SikaFix® HH (PW)</li> <li>▶ SikaFix® HH LV (PW)</li> </ul>		
<ul style="list-style-type: none"> <li>▶ SikaFix® PU</li> <li>▶ SikaFix® HH (PW)</li> </ul>		
Long Pot Life		Very Long Pot Life
<ul style="list-style-type: none"> <li>▶ SikaFix® PU</li> <li>▶ SikaFix® HH</li> <li>▶ CapWeld 524/624//673</li> </ul>		<ul style="list-style-type: none"> <li>▶ CapWeld 828</li> <li>▶ CapWeld 878</li> </ul>
<ul style="list-style-type: none"> <li>▶ SikaFix® PU</li> <li>▶ CapWeld F</li> </ul>		
<ul style="list-style-type: none"> <li>▶ SikaFix® PU /PU LV</li> <li>▶ Sikadur® 32/35/52/55SLV</li> <li>▶ CapWeld 524/624/673/828/878</li> </ul>		
▶ All Sika® injection products		
Chemical Resistance		High Temperature Resistance
<ul style="list-style-type: none"> <li>▶ Sikadur® 32/35/52/55SLV</li> <li>▶ CapWeld 524/624/673/828/878</li> </ul>		▶ CapWeld 347
<ul style="list-style-type: none"> <li>▶ SikaFix® PU</li> <li>▶ SikaFix® HH</li> <li>▶ Sikadur® 32/35/52/55SLV</li> <li>▶ CapWeld 524/624/673/828/878</li> </ul>		

a Inc. These products continue to be marketed under their original trade names.



# Sika® Injection Systems for Concrete & Masonry Structures



## Sika: Your local partner... with global expertise

Sika Canada Inc., as a member of the Sika Group, is a wholly-owned subsidiary of Sika AG, based in Baar, Switzerland. The international group supplies specialty chemicals and products worldwide and is a leader in the production and processing of materials for the construction industry. The Sika Group has subsidiaries in more than 71 countries and employs over 12,000 people.

Recognized as a leader in the development of value-added products, Sika is committed to continuously renewing and improving its products, systems and procedures. This commitment is an on-going one with all manufacturing facilities around the world having earned ISO 9001:2000 Certification.

Sika Canada's Pointe Claire manufacturing facility is additionally certified ISO 14001:2004, Environmental Management Systems, demonstrating its leadership in the protection of the environment as well as the protection of buildings and structures.

Sika products have become a benchmark for high quality in concrete restoration systems, grouts, structural strengthening systems, joint sealants, moisture protection, surface hardeners, industrial and architectural flooring.

## Also available from Sika



Les renseignements et, notamment, les recommandations touchant l'application et l'utilisation ultime des produits Sika sont communiqués de bonne foi, sur la base des connaissances et de l'expérience actuelles de Sika, et concernent les produits entreposés, maniés et appliqués dans des conditions normales, dans le délai d'utilisation prescrit. Dans la pratique, les matériaux, les substrats et les conditions réelles du site peuvent varier de manière substantielle. Par conséquent, Sika n'offre aucune garantie quant à la qualité marchande ou à la convenance à un usage particulier et décline toute responsabilité relativement aux renseignements, aux recommandations et aux conseils fournis. Les droits exclusifs des tiers doivent être respectés. Sika accepte toutes les commandes sous réserve de ses modalités de paiement et de livraison courantes. Les utilisateurs doivent toujours consulter la plus récente version de la fiche technique du produit qu'ils peuvent obtenir sur demande ou en consultant notre site Internet à [www.sika.ca](http://www.sika.ca).

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