MITSUBISHI CHEMICAL

Colacryl® Acrylic Polymers
for Medical Components

KAITEKI Value for Tomorrow

Medical component polymers
for safe, efficient and reliable applications

A growing global population and increasing life expectancy creates new challenges for the medical sector and means that an increasing number of treatments require the use of biocompatible materials to enhance quality of life.

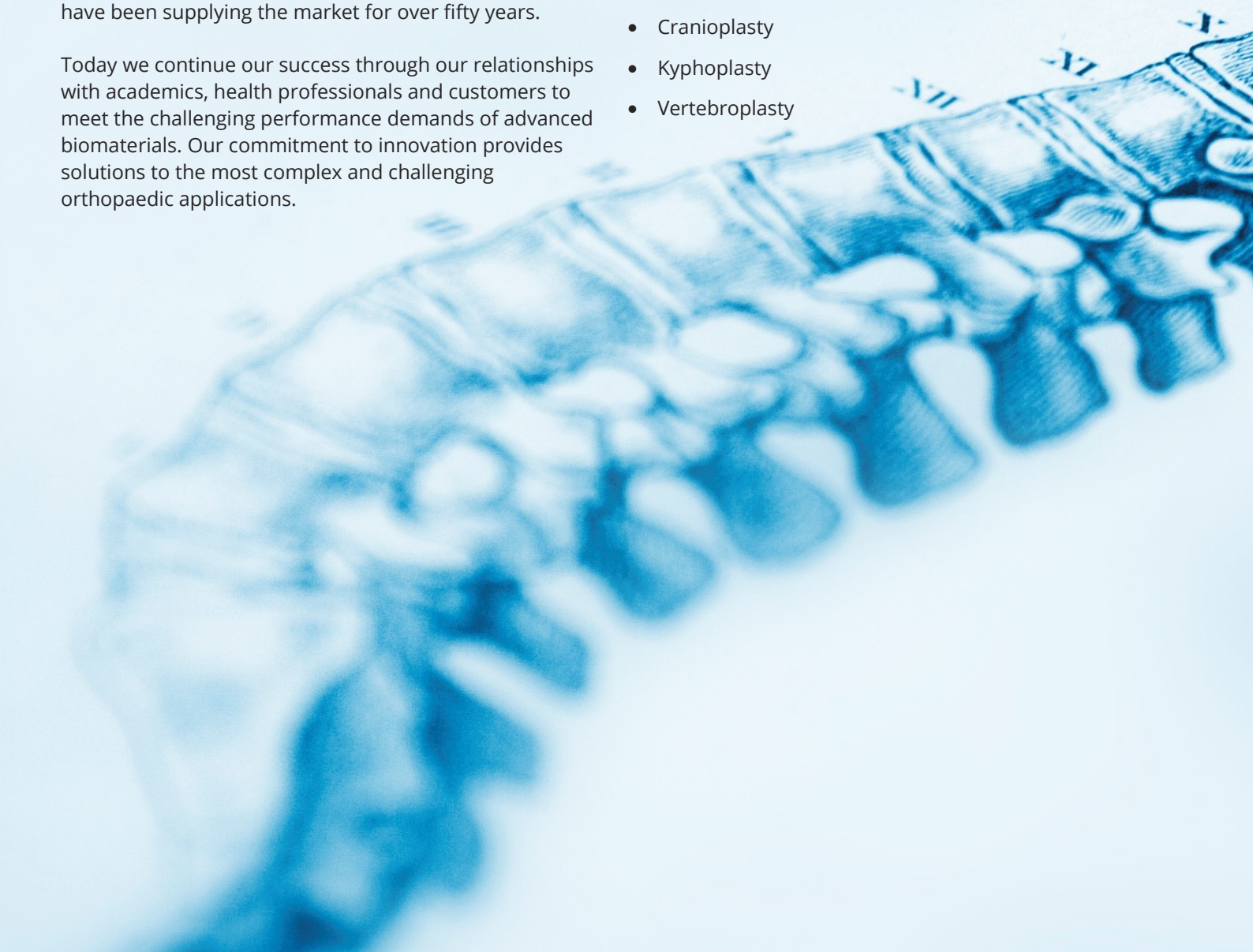
Using our unique experience in refining market-leading dental polymers, we developed materials to successfully cement and secure hip, knee and shoulder joints. We became one of the world's first manufacturers of bespoke speciality polymers for the medical sector and have been supplying the market for over fifty years.

Today we continue our success through our relationships with academics, health professionals and customers to meet the challenging performance demands of advanced biomaterials. Our commitment to innovation provides solutions to the most complex and challenging orthopaedic applications.

Our exclusive experience in the acrylics industry has taught us that our customers can use polymers in many widely differing application areas, each with its own requirements defined by key performance attributes.

We have a long and proven track record of developing innovative solutions for our customers' applications, and our materials provide exceptional advantages for a wide range of surgical devices and techniques, including:

- Arthroplasty
- Cranioplasty
- Kyphoplasty
- Vertebroplasty



Exclusive knowledge and experience ensures that our high-performance materials continue to drive success for our customers, and our materials have a proven record of delivering safe, reliable and practical results across a wide range of musculoskeletal applications.

We have developed our medical range of self-curing Colacryl® acrylic polymers to meet the need for high-strength, radiopaque cements, which offer mechanical performance and low rates of fatigue while maintaining the flexibility of controlled curing times.

As a responsible medical component manufacturer, we are registered to the quality management system standards ISO 9001:2015 and ISO 13485:2016, and we are committed to supporting our customers to meet their obligations to relevant medical devices regulations.

Close monitoring and control of particle size, chemical composition and molecular weight, combined with product traceability and compliance to current chemical regulations (such as REACH) are all factors that contribute to the success of our polymers.

To meet these demands and support medical professionals to provide the most effective treatments, we are constantly evolving and improving our range of Colacryl® acrylic polymers.

Current technology also includes:

- Vertebroplasty bone cement (with high dough viscosity)
- Implantable PMMA for injection moulding.
- Encapsulation of radiopacifier in bone cement.

Depending on volumes we are able to consider development of bespoke bone cement polymers to deliver specific mixing and handling properties.

		Typical Properties			
Typical Products	USP	Particle size	BPO	Reduced Viscosity	Moisture
Colacryl B866/1	Base Polymer—spine	35µ	2.80%	130-155 mL/g	0.5%
Colacryl TS1881	Base Polymer—hip and knee	27-43µ	2.75%	1.2—1.7 dL/g	0.5%
Colacryl TS1713	Used to shorten dough time of base polymer	38-54µ	0.2-0.5%	0.85-1.1 dL/g	0.75%
Colacryl TS1260		36-48µ	0.75%		0.75%
Colacryl TS1836	Used to lengthen set time of base polymer	50-70µ	0.35-0.85%		0.75%

[1] US 8741980 B2 (Hardenable two part acrylic composition)
[2] EP 3052151 B1 (A hardenable multi-part acrylic composition)

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