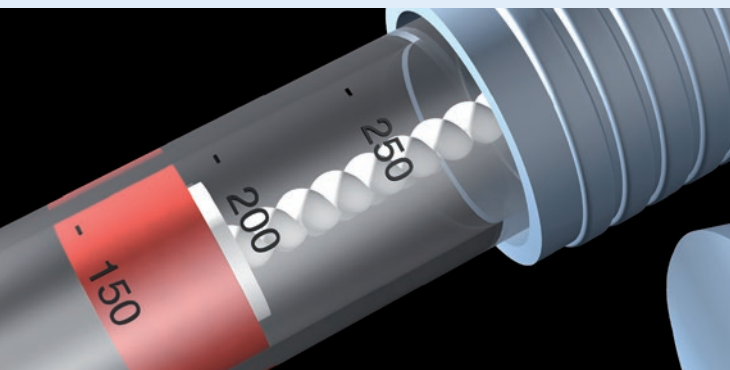
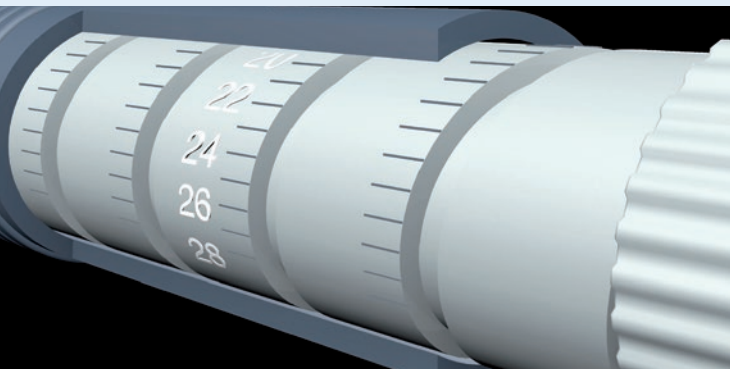


## Examples of typical applications



# 한국엔지니어링플라스틱(주) KOREA ENGINEERING PLASTICS CO.,LTD.

### Disclaimer

Although the information and recommendations set forth herein are presented in good faith and believed to be correct, we recommend that persons receiving information must make their own determination as to its suitability to their purposes prior to use. The information is based on natural colored products only through relevant test methods and conditions. It is the obligation of the customer to determine whether a particular material and part design is suitable for a particular application. The customer is responsible for evaluating the performance of all parts containing plastics prior to their commercialization.

KOREA ENGINEERING PLASTICS CO., LTD. assumes no warranty or liability of, express or imply, as to the accuracy or completeness thereof, or any other nature regarding designs, products, or information may be used without infringing the intellectual property rights of others. Further, the data furnished by KEP are not intended to replace any testing required to determine a suitability of any application and set a specification limit for design..

### Notification to user

DO NOT USE KEPITAL IN MEDICAL APPLICATION FOR ANY CASE OF IMPLANTATION IN HUMAN BODY OR CONTACT WITH BODY TISSUE OR BLOOD. KOREA ENGINEERING PLASTICS CO., LTD.

ASSUMES NO WARRANTY OR LIABILITY OF KEPITAL FOR CONFORMANCES OF USP CLASS 6 OR ISO 10993-5 BUT PROVIDE CONFORMANCES BASED ON THE TEST RESULT FROM 3RD PARTY INSTITUTION. KOREA ENGINEERING PLASTICS CO., LTD HOLDS NO WARRANTY OR LIABILITY OF SUITABILITY OF PARTICULAR APPLICATIONS WITH CONFORMANCES OF KEPITAL TO FOOD OR PHARMACEUTICALS INFORMED TO USER.

### KEP Headquarter

119, Mapo-daero, Mapo gu,  
Seoul, 121-720 Korea  
Phone: +82 2 707-6840-8  
Telefax: +82 2 714-9235  
sales@kepital.com  
service@kepital.com  
www.kepital.com

### KEP Europe GmbH

Rheingastr. 190-196  
65203 Wiesbaden, Germany  
Phone: +49 (0)611 / 962 - 7381  
Telefax: +49 (0)611 / 962 - 9077  
sales@kep-europe.com  
service@kep-europe.com  
www.kep-europe.com

### KEP Americas, LLC

106 North Denton Tap Road Suite  
210-202, Coppell, TX 75019, USA  
Phone: +1 888 KEPITAL  
Telefax: +1 888 537-3291  
sales@kepamericas.com  
service@kepamericas.com  
www.kepital.us

### KEP China

A1905, HongQiao Shanghai  
Plaza, 100 Zunyi Road,  
Shanghai, China  
Phone: +86 21 6237-1972  
Telefax +82 21 6237-1803  
sales@kep-china.com  
service@kep-china.com

ACETAL COPOLYMER

# KEPITAL®



## KEPITAL® MX Series Solutions for component of medical device

FL-EU-10/12

## KEPITAL® MX series for medical application

As the life expectancy increases, more people concern about the health and are interested in the healthcare devices. It is also affected by the phenomenon that more people become exposed to so-called lifestyle diseases such as diabetes, asthma, respiratory disease and so on. This leads more demands for the insulin pen, blood glucose measuring kit, nasal spray, inhaler and so on. Those healthcare applications require every single components to be reliable in terms of the quality and the regulatory affairs.

KEPITAL® MX series is a newly positioned POM copolymer for healthcare and medical applications by KOREA ENGINEERING PLASTICS CO., LTD. (hereinafter referred to as KEP) in order to live up to those customers' increasing needs. This could be realized based on intensive experience which KEP has had so far from the material selection up to the processing optimization in the medical business.

As with any industry, KEP distinguishes itself by providing customized support in the medical industry. Besides the compliances to the food contact regulatory requirements in Europe and US market, MX series passed the biocompatibility test. In addition, production of MX series under stringent quality guideline and tightly controlled process makes itself pure and reliable.

### Key features of KEPITAL® MX series

- Consistency of product quality
- Quality assurance under tight and extensive inspection
- Long-term product availability

## Compliance to regulatory affairs

- Biocompatibility (USP Class 6, ISO 10993-5)
- Food contact compliance
- Drug Master File(DMF)
- General regulations for restricted substances  
“Substance of Very High Concern under REACH EC 1907/2006”  
“EU Decision 2001/2/EC : TSE, BSE, Animal origin”

## Key properties of MX Series

- High stiffness and rigidity with good resilience
- Low tendency to creep and fatigue
- Excellent long-term dimensional stability
- High resistance to chemicals
- Good sliding performance

Property	Test method	Unit	KEPITAL® MX20BT01	KEPITAL® MX25BT01	KEPITAL® MX30BT01
<b>Physical properties</b>					
Density	ISO 1183	g/cm <sup>3</sup>	1.41	1.41	1.41
Melt flow rate	ISO 1133	g/10 min	9	13	27
Water absorption saturated in water at 23 °C	ISO 62	%	0.6	0.6	0.6
<b>Mechanical properties</b>					
Tensile modulus	ISO 527	MPa	2700	2750	2650
Tensile stress at yield	ISO 527	MPa	64	65	63
Strain at yield	ISO 527	%	9	9	8
Nominal strain at break	ISO 527	%	32	30	22
Charpy notched impact strength	ISO 179	kJ/m <sup>2</sup>	6.5	6.0	5.0
<b>Thermal properties</b>					
HDT A (1,80 MPA)	ISO 75	°C	100	100	98
Vicat softening temperature (50 N)	ISO 306	°C	150	150	150
Coefficient of linear thermal expansion, longitudinal (23-55 °C)	ISO 1359	x 10 <sup>5</sup> / °C	12	12	12
<b>Food compliance</b>					
European food contact regulation			yes	yes	yes
US FDA Regulation			yes	yes	yes
<b>Biocompatibility study</b>					
USP class 6			yes	yes	yes
Cytotoxicity	ISO 10993-5		yes	yes	yes
Drug Master File (DMF)			yes	yes	yes