

Adding value to your products - worldwide



SEPTON™, HYBRAR™ and KURARITY™ are Kuraray's trademarks for Thermoplastic elastomers (TPE). They are a special type of synthetic rubber that combine the elastic properties of rubber with the benefits of thermoplastics, so they can be processed into almost any shape. TPEs have a pleasantly soft touch and good wear comfort. They also increase shock absorption. What's more they are recyclable and improve the compatibility of plastics in many industrial applications. Kuraray's TPEs are environmentally sound, free of PVC and do not need additional plasticisers. They are used for an extremely

wide range of applications, including many plastic compounds for everyday products. Examples include toys, toothbrushes, medical tubes, sports equipment, sealants and car tires. And that's not all TPEs from Kuraray can do! More flexible types are used as lubricant additives and base components in adhesives. Kuraray is a leading supplier of TPEs and offers customers more than 30 different types with individual product properties. For further information please contact your local Kuraray office or visit our website www.elastomer.kuraray.com.

Kuraray Co., Ltd.

Ote Center Bldg.
1-1-3, Otemachi Chiyoda-ku
Tokyo 100-8115, Japan
Phone: +81 3 6701 1601
septon@kuraray.com

Kuraray Europe GmbH

Philipp-Reis-Straße 4
65795 Hattersheim am Main
Germany
Phone: +49 69 305 35849
elastomer@kuraray.com

Kuraray America, Inc.

2625 Bay Area Blvd.,
Suite 600, Houston TX 77058
United States of America
Phone: +1-281 283 1711
septon.sales@kuraray.com

Kuraray Trading (Shanghai) Co., Ltd.

Unit 2106, 2 Grand Gateway
3 Hongqiao Road, Xuhui District
Shanghai 200030, China
Phone: +86 21 6407 9182
elastomer_china@kuraray.com

Disclaimer: Precautions should be taken in handling and storage. Please refer to the appropriate Safety Data Sheet for further safety information. In using SEPTON™ and HYBRAR™, please confirm related laws and regulations, and examine its safety and suitability for the application. For medical, health care and food contact applications, please contact your SEPTON™ and HYBRAR™ representative for specific recommendations. SEPTON™ and HYBRAR™ should not be used in any devices or materials intended for implantation in the human body. Nothing contained herein constitutes a license to practice under any patent and it should not be construed as an inducement to infringe any patent and the user is advised to take appropriate steps to be sure that any proposed use of the product will not result in patent infringement.

Exceptional stretch film with firm hold

Enhanced cling and retention with SEPTON™ and HYBRAR™



Advanced Stretch Films with SEPTON™ and HYBRAR™



Kuraray provides polymers that are suitable for dry blending in film extrusion processes. These styrenic block copolymers show maximum softness and elasticity and have excellent compatibility with polyolefins. The main advantage to using SEPTON™ and HYBRAR™ is the ability to obtain film properties that normally cannot be achieved with commodity polyolefin, polyolefin elastomer, or plastomer resins. These enhanced properties include improved retention and impact strength, excellent cling and tack properties, and excellent clarity. Film softness and elongation can also be tailored to meet specific performance requirements.



Food Packaging Film

Key Advantages

- Low retention loss due to high elasticity
- High impact and tear resistance
- High cling and adhesion properties
- Low haze and high clarity
- Lower material concentration needed

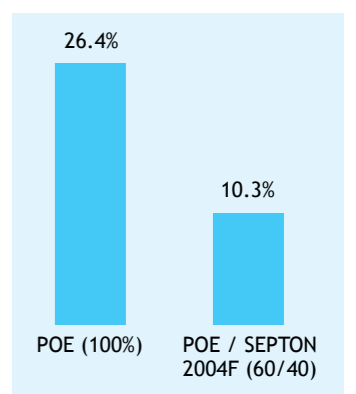
For PE and PP (blown film and cast film), SEPTON™ and HYBRAR™ can be added to modify the stretch characteristics and improve cling properties. Compared to conventional materials such as EVA, POE (Polyolefin Elastomers) and PIB Cling-Masterbatches, SEPTON™ and HYBRAR™ provide enhanced performance while requiring lower concentrations in the commodity polyolefin based formulation which potentially reduces costs. Selected grades are suitable for food contact applications and comply with major international regulations.



Pallet Stretch

SEPTON™ in pallet stretch films significantly increases the elastic properties. By modifying films with SEPTON™ 2004F it is possible to reduce retention loss. E.g. in our investigation, we found that a combination of POE and SEPTON™ 2004F (60%/40%) performs 2.5 times better than POE just by itself. Further optimizing, the total elastomeric content can be reduced to 5-20% in the core layer.

Retention Loss of pure Polymer (Creep Loss at 200%/1 minute) →



	Market Standard	SEPTON™ Optimized
Cling Layer 4-6 µm	LLDPE or RPP Base 20-70% POE (Polyolefin Elastomer)	LLDPE or RPP Base 5-15% SEPTON™ 2063* 0-5% Tackifier Resin*
Core Layer 6-8 µm	LLDPE or RPP 50-100% POE	LLDPE or RPP 5-20% SEPTON™ 2004F
Non-Cling Layer 6-8 µm	LLDPE or RPP	LLDPE or PP

Measured by Kuraray
Cling: For food contact we alternatively recommend HYBRAR™ 7311F

