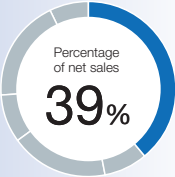

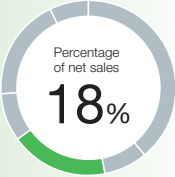
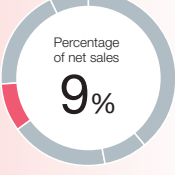
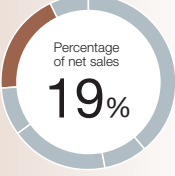
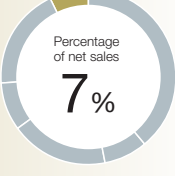


# Business Overview

Segment name	Medium-Term Management Plan / Strategies for Each Business		Review of the Medium-Term Management Plan
<b>Vinyl Acetate</b> 	PVA resin	<ul style="list-style-type: none"> <li>Shift to high-value-added products</li> <li>Optimally manage global production operations</li> </ul>	<ul style="list-style-type: none"> <li>Further increased the ratio of high-value-added products and propelled global optimizations in the supply chain</li> <li>Strengthened the development of environmentally friendly applications, such as improving the water resistance of paper straws and adding barrier properties to paper packaging materials</li> </ul>
	Optical-use PVA film	<ul style="list-style-type: none"> <li>Expand and maintain a high market share in line with increasing demand for LCDs</li> <li>Add new functions and enhance workability to satisfy the latest market and customer needs</li> </ul>	<ul style="list-style-type: none"> <li>Expanded production capabilities at the Kurashiki Plant in response to rising demand for wide films in larger LCDs, and began production</li> </ul>
	Water-soluble PVA film	<ul style="list-style-type: none"> <li>Execute the timely expansion of production facilities in step with growth in operations</li> <li>Allocate development resources to new industrial applications</li> </ul>	<ul style="list-style-type: none"> <li>Increased production capabilities in the United States in response to higher demand for unit dose detergent</li> <li>Promoted development activities for new uses, including unit dose for pharmaceuticals, cosmetics, and food</li> </ul>
	PVB film	<ul style="list-style-type: none"> <li>Bolster the development and sale of highly functional films for automobiles</li> <li>Expand sales of high-strength films for construction</li> </ul>	<ul style="list-style-type: none"> <li>Expanded production and sales of highly functional film on a global basis</li> <li>Began production in Czechia to meet the strong demand for ionoplast interlayers SentryGlas™ for construction</li> </ul>
	EVAL™	<ul style="list-style-type: none"> <li>Create new demand in emerging countries and boost sales</li> <li>Expand EVAL™-related operations to help reduce food wastage</li> </ul>	<ul style="list-style-type: none"> <li>Continued to cultivate demand in emerging countries and expanded sales</li> <li>Proposed extension of expiry dates using EVAL™ for food and retail industries with an aim of expanding business</li> </ul>
<b>Isoprene</b> 	Isoprene chemicals	<ul style="list-style-type: none"> <li>Pursue expansion of one-of-a-kind products</li> <li>Commercialize new isoprene-based chemicals</li> </ul>	<ul style="list-style-type: none"> <li>Maintained stable sales of one-of-a-kind products, such as MMB and MPD</li> </ul>
	Elastomer	<ul style="list-style-type: none"> <li>Build a more sophisticated product portfolio by enhancing their functionalities</li> <li>Expand global sales of liquid rubber</li> </ul>	<ul style="list-style-type: none"> <li>As environmental awareness grew, marketing for SEPTON™ BIO-series gained momentum</li> <li>Expanded the adoption of liquid rubber by tire manufacturers</li> </ul>
	GENESTAR™	<ul style="list-style-type: none"> <li>Expand the range of products for automotive applications, such as components for on-board electronics</li> <li>Develop new polymers</li> </ul>	<ul style="list-style-type: none"> <li>Opened an office in Detroit in the United States and increased the number of sales staff in Europe to meet the global demand for automotive applications, such as components for on-board electronics</li> <li>Developed a new polyamide resin with functionality</li> </ul>
<b>Functional Materials</b> 	Methacrylic	<ul style="list-style-type: none"> <li>Expand the sales of newly developed products, such as emulsion polymerized resin and multi-layered substrates</li> <li>Bolster sales of highly functional grades of optical-use resin</li> </ul>	<ul style="list-style-type: none"> <li>Continued to steadily increase the adoption of multi-layered substrates, mainly for automotive applications, and completed the launch of a new emulsion polymerization line for flexible material</li> <li>Bolstered sales of highly functional grades of optical film</li> </ul>
	Medical	<ul style="list-style-type: none"> <li>Expand sales of CAD/CAM products (e.g., zirconia blocks)</li> <li>Upgrade communication of information to users (dentists and dental technicians)</li> </ul>	<ul style="list-style-type: none"> <li>Expanded sales of zirconia blocks mainly in North America and launched new cement products for use in conjunction with CAD/CAM products</li> <li>Promoted communication of information through seminars and video distribution</li> </ul>
	Carbon materials	<ul style="list-style-type: none"> <li>Swiftly achieve synergy via collaboration with Calgon Carbon Corporation</li> <li>Expand the range of products for automobile canisters</li> <li>Expand the sales of products for battery applications (capacitors and lithium-ion batteries)</li> </ul>	<ul style="list-style-type: none"> <li>Moved forward with the integration by streamlining sales bases that overlap with Calgon Carbon Corporation and consolidating production sites for activated carbon from bituminous coal, among other activities</li> <li>Established a new production line at Calgon Carbon Corporation for applications in automobile canisters and achieved progress in global market development</li> </ul>
<b>Fibers and Textiles</b> 	CLARINO™	<ul style="list-style-type: none"> <li>Roll out products targeting luxury brands</li> <li>Achieve full-scale entry into the automobile interior market</li> </ul>	<ul style="list-style-type: none"> <li>Achieved progress with adoption by luxury brands, and increased the sales volume</li> <li>Promoted customer evaluation of automobile interior applications to win orders</li> </ul>
	Fiber materials	<ul style="list-style-type: none"> <li>Promote the VIP project for KURALON™</li> <li>Expand the VECTRAN™ business</li> </ul>	<ul style="list-style-type: none"> <li>Expanded the adoption of KURALON™ for industrial filaments due to full-scale operations of mass-production facilities with revolutionary production process VIPs</li> <li>Achieved progress in expanding high-value-added applications of VECTRAN™</li> </ul>
	Lifestyle materials	<ul style="list-style-type: none"> <li>Expand sales of new meltblown nonwoven fabrics</li> <li>Accelerate expansion into Southeast Asia</li> </ul>	<ul style="list-style-type: none"> <li>Grew sales of high-value-added products in the meltblown nonwoven fabric business</li> <li>Promoted overseas expansion of high-value-added products, such as nonwoven fabrics for face mask and molded plastic hook fasteners MAGILOCK™</li> </ul>
<b>Trading</b> 		<ul style="list-style-type: none"> <li>Increase the scale of business in Asia</li> </ul>	<ul style="list-style-type: none"> <li>Achieved progress in strengthening integrated production covering everything from raw materials to products, as well as progress in creating high value added in Vietnam</li> </ul>
		<ul style="list-style-type: none"> <li>Expand revenue in the fibers and textiles business</li> </ul>	
		<ul style="list-style-type: none"> <li>Strengthen initiatives with leading customers</li> </ul>	<ul style="list-style-type: none"> <li>Recorded progress with the development of customers and applications for resin and synthetic products mainly in Asia</li> </ul>
		<ul style="list-style-type: none"> <li>Launch new businesses</li> </ul>	
<b>Others</b> 		<ul style="list-style-type: none"> <li>Accelerate market cultivation of products from new businesses</li> </ul>	<ul style="list-style-type: none"> <li>Decided to introduce pre-mass production facilities for flexible copper clad laminates VECSTAR™ FCCL in anticipation of market expansion for high-speed communication devices</li> </ul>
			<ul style="list-style-type: none"> <li>Expanded the adoption of polishing pads for semiconductors, mainly within Japan</li> </ul>

Segment name	Net sales (Millions of yen)	Operating income (Millions of yen)																
<p><b>Vinyl Acetate</b></p> <p>In this business, we manufacture and sell PVA resin, which features water solubility and adhesive properties, PVA film, which can be applied to LCDs and is also used for unit dose detergents and so on; PVB film used as an interlayer for laminated glass; and EVAL™, which has an excellent gas barrier property.</p>	<table border="1"> <tr><th>Year</th><th>Net sales (Millions of yen)</th></tr> <tr><td>2017</td><td>266,894</td></tr> <tr><td>2018</td><td>279,379</td></tr> <tr><td>2019</td><td>266,105</td></tr> </table>	Year	Net sales (Millions of yen)	2017	266,894	2018	279,379	2019	266,105	<table border="1"> <tr><th>Year</th><th>Operating income (Millions of yen)</th></tr> <tr><td>2017</td><td>61,619</td></tr> <tr><td>2018</td><td>54,739</td></tr> <tr><td>2019</td><td>47,368</td></tr> </table>	Year	Operating income (Millions of yen)	2017	61,619	2018	54,739	2019	47,368
Year	Net sales (Millions of yen)																	
2017	266,894																	
2018	279,379																	
2019	266,105																	
Year	Operating income (Millions of yen)																	
2017	61,619																	
2018	54,739																	
2019	47,368																	
<p><b>Isoprene</b></p> <p>In this business, we manufacture and sell synthetic isoprene chemical products; and SEPTON™, a thermoplastic elastomer that is a derivative of synthetic isoprene chemical products; as well as GENESTAR™, a new polyamide resin with excellent heat resistance.</p>	<table border="1"> <tr><th>Year</th><th>Net sales (Millions of yen)</th></tr> <tr><td>2017</td><td>56,366</td></tr> <tr><td>2018</td><td>57,207</td></tr> <tr><td>2019</td><td>53,276</td></tr> </table>	Year	Net sales (Millions of yen)	2017	56,366	2018	57,207	2019	53,276	<table border="1"> <tr><th>Year</th><th>Operating income (Millions of yen)</th></tr> <tr><td>2017</td><td>9,010</td></tr> <tr><td>2018</td><td>7,272</td></tr> <tr><td>2019</td><td>4,232</td></tr> </table>	Year	Operating income (Millions of yen)	2017	9,010	2018	7,272	2019	4,232
Year	Net sales (Millions of yen)																	
2017	56,366																	
2018	57,207																	
2019	53,276																	
Year	Operating income (Millions of yen)																	
2017	9,010																	
2018	7,272																	
2019	4,232																	
<p><b>Functional Materials</b></p> <p>In this business, we manufacture and sell methacrylate resin, which boasts excellent weather resistance; dental materials which enable repairs that closely resemble natural teeth; activated carbon, whose adsorption properties are used to purify water and air; equipment for water treatment; and others.</p>	<table border="1"> <tr><th>Year</th><th>Net sales (Millions of yen)</th></tr> <tr><td>2017</td><td>55,199</td></tr> <tr><td>2018</td><td>131,533</td></tr> <tr><td>2019</td><td>125,982</td></tr> </table>	Year	Net sales (Millions of yen)	2017	55,199	2018	131,533	2019	125,982	<table border="1"> <tr><th>Year</th><th>Operating income (Millions of yen)</th></tr> <tr><td>2017</td><td>6,665</td></tr> <tr><td>2018</td><td>4,396</td></tr> <tr><td>2019</td><td>3,836</td></tr> </table>	Year	Operating income (Millions of yen)	2017	6,665	2018	4,396	2019	3,836
Year	Net sales (Millions of yen)																	
2017	55,199																	
2018	131,533																	
2019	125,982																	
Year	Operating income (Millions of yen)																	
2017	6,665																	
2018	4,396																	
2019	3,836																	
<p><b>Fibers and Textiles</b></p> <p>In this business, we manufacture and sell CLARINO™, a man-made leather with a structure and functionality as elaborate as natural leather; vinylon fiber, used in reinforcement materials for concrete and automotive-related components; KURAFLEX™ nonwoven fabric, used for lifestyle products and industrial materials; and MAGIC TAPE™ hook-and-loop fasteners.</p>	<table border="1"> <tr><th>Year</th><th>Net sales (Millions of yen)</th></tr> <tr><td>2017</td><td>66,369</td></tr> <tr><td>2018</td><td>64,716</td></tr> <tr><td>2019</td><td>64,513</td></tr> </table>	Year	Net sales (Millions of yen)	2017	66,369	2018	64,716	2019	64,513	<table border="1"> <tr><th>Year</th><th>Operating income (Millions of yen)</th></tr> <tr><td>2017</td><td>7,551</td></tr> <tr><td>2018</td><td>6,279</td></tr> <tr><td>2019</td><td>5,654</td></tr> </table>	Year	Operating income (Millions of yen)	2017	7,551	2018	6,279	2019	5,654
Year	Net sales (Millions of yen)																	
2017	66,369																	
2018	64,716																	
2019	64,513																	
Year	Operating income (Millions of yen)																	
2017	7,551																	
2018	6,279																	
2019	5,654																	
<p><b>Trading</b></p> <p>In this business, we manufacture and sell polyester and other fiber and textile products, as well as sell the Kuraray Group's products in Japan and other parts of Asia.</p>	<table border="1"> <tr><th>Year</th><th>Net sales (Millions of yen)</th></tr> <tr><td>2017</td><td>131,734</td></tr> <tr><td>2018</td><td>138,848</td></tr> <tr><td>2019</td><td>130,911</td></tr> </table>	Year	Net sales (Millions of yen)	2017	131,734	2018	138,848	2019	130,911	<table border="1"> <tr><th>Year</th><th>Operating income (Millions of yen)</th></tr> <tr><td>2017</td><td>3,924</td></tr> <tr><td>2018</td><td>4,215</td></tr> <tr><td>2019</td><td>4,224</td></tr> </table>	Year	Operating income (Millions of yen)	2017	3,924	2018	4,215	2019	4,224
Year	Net sales (Millions of yen)																	
2017	131,734																	
2018	138,848																	
2019	130,911																	
Year	Operating income (Millions of yen)																	
2017	3,924																	
2018	4,215																	
2019	4,224																	
<p><b>Others</b></p> <p>In this business, we manufacture and sell highly functional membranes and systems used in water treatment, and conduct the engineering business, as well as manufacture and sell VECSTAR™, a liquid crystalline polymer film used mainly for flexible circuit boards.</p>	<table border="1"> <tr><th>Year</th><th>Net sales (Millions of yen)</th></tr> <tr><td>2017</td><td>51,399</td></tr> <tr><td>2018</td><td>58,025</td></tr> <tr><td>2019</td><td>51,128</td></tr> </table>	Year	Net sales (Millions of yen)	2017	51,399	2018	58,025	2019	51,128	<table border="1"> <tr><th>Year</th><th>Operating income (Millions of yen)</th></tr> <tr><td>2017</td><td>3,022</td></tr> <tr><td>2018</td><td>1,178</td></tr> <tr><td>2019</td><td>649</td></tr> </table>	Year	Operating income (Millions of yen)	2017	3,022	2018	1,178	2019	649
Year	Net sales (Millions of yen)																	
2017	51,399																	
2018	58,025																	
2019	51,128																	
Year	Operating income (Millions of yen)																	
2017	3,022																	
2018	1,178																	
2019	649																	

**KURARAY POVAL™, ELVANOL™ (PVA resin)**



Paper/fiber processing agents, adhesives, stabilizer for polyvinyl chloride polymerization and others

**TROSIFOL™ (PVB film and Ionoplast interlayer)**



Interlayer film for safety glass

**Optical-use PVA film**



Polarizers for LCDs and others

**Water-soluble PVA film**



Unit dose detergents and others

**EVAL™ (EVOH resin)**



Food packaging, automotive fuel tanks, stain-resistant wallpaper, vacuum insulation panels, and others

**PLANTIC™ (Bio-based gas barrier material)**



Food packaging materials

**Isoprene chemicals**



Cleaner, aroma chemical and cosmetic ingredients, pharmaceutical and agricultural intermediates, and others  
\* One-of-a-kind products derived from synthetic isoprene (MMB, MPD, etc.)

**SEPTON™ (Thermoplastic elastomer)**



Substitute for rubber, automobile parts, electronic parts, stationery, toys, sporting goods, and others

**Liquid rubber**



Additive agent for automobile tires and others

**KURARITY™ (Acrylic thermoplastic elastomer)**



Adhesives, molding materials and others

**GENESTAR™ (Highly heat-resistant polyamide resin)**



Electronic parts of smartphones and personal computers, LED reflector applications, automobile parts, and others

**Methacrylic resin**



Light guide plates for LCDs, automobile parts, signboards, construction materials, and others

**Dental materials**



Various organic and inorganic dental materials

**Activated carbon**



Water purification, wastewater treatment, capacitor electrode materials, and others

**CLARINO™ (Man-made leather)**



Men's and women's shoes, bags, athletic footwear, inflatable sports balls, and others

**KURALON™ (PVA fiber)**



Reinforcing material for cement and concrete, automotive brake hoses, and others

**KURAFLEX™ (Nonwoven fabrics)**



Daily goods, industrial products (wipers, filtration media, automobile applications), and others

**MAGIC TAPE™ (Hook-and-loop fastener)**



Clothing, sporting goods, industrial materials, and others

**VECTRAN™ (High-strength polyarylate fiber)**



Aerospace, composites, electronic components, ropes, sporting goods, and others

**Polyester long filament**

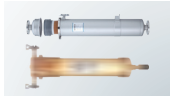


Yarn and fabric for clothing and materials, sportswear, uniforms, and others

**Kuraray Group's products**

A wide range of high-performance products and processed products of the Kuraray Group

**Aqua business**



Water purification, wastewater treatment, ballast water management system, and others

**VECSTAR™ (Liquid crystalline polymer film)**



High-speed signal transmission flexible printed circuit boards and others