Corporate Data 2019 2

Sustainable growth by providing indispensable materials to society

JSR Corporation (formerly 'Japan Synthetic Rubber Co., Ltd.') was established in 1957 for domestic production of synthetic rubbers. Since then, JSR has continuously expanded its business to emulsions, plastics and other materials for the semiconductor, flat panel display, and optical materials fields by leveraging our proprietary polymer technologies. The development of these advanced materials for the information and electronics fields has served as a gateway to innovative changes to the company's business structure.

In the new mid-term business plan “JSR20i9”, which started in April 2017, we adopted “Enhancing Competitiveness for the future” as a mission. We will focus on earnings drivers and profit expansion in SSBR, semiconductor materials and Life Sciences Business. We will also work on improving productivity and strengthening out competitiveness through digitalization.

JSR Group's Corporate Mission is "Materials Innovation: We create value through materials to enrich society, people and the environment". We will purse the possibilities that materials represent, creating value that will make the world around us a better place to live and work.

The “i” in “JSR20i9” (twenty-nine) emphasizes the “Innovation” to realize Materials Innovation, which is the heart of our corporate mission.

1 GENERAL INFORMATION

Company Name
JSR Corporation

Date of Establishment
December 10, 1957

Location of the HQ
1-9-2, Higashi-Shimbashi, Minato-ku, Tokyo 105-8640, Japan

Major Businesses
- Elastomers
  - Synthetic Rubbers: Synthetic Rubbers such as Styrene-Butadiene Rubber, Polybutadiene Rubber, Ethylene Propylene Rubber, etc. and Compound Products
  - Thermoplastic Elastomers: Thermoplastic Elastomers and Compound Products
  - Emulsions: Paper Coating Lates, Styrene Butadiene Latex, Acrylic Emulsions
  - Performance Chemicals
    - Organic- Inorganic Hybrid Coating Materials, High-Functional Dispersant, Industrial Particles, Thermal Control Materials, Binder materials for Lithium Ion Batteries, etc.
  - Others: Butadiene Monomers, etc.

- Plastics Business
  - ABS, AES, AS, and ASA Resins

- Digital Solution
  - Semiconductors
    - Lithography Materials (Photonics, Multilayer Materials, CMP Materials (Slurries, Cleaning Solution), Packaging Materials, etc.)
  - Display Materials
    - Materials for LCD Panels, other Functional Coating Materials, etc.
  - Edge Computing
    - Heat-Resistant Transparent Resist and Films, High-Performance UV Curable Resins, Stereo-Lithography System, etc.

- Life Sciences
  - Diagnostic Research Reagent Materials, Bio-process Materials, Bioprocess Development, Contract Manufacturing of Biopharmaceuticals, Services to Support Drug Development in Pre-Clinical Phases, etc.

- Other Businesses
  - Lithium Ion Capacitors, etc.

Representative Director
Representative Director and CEO: Eric Johnson

Capital
23,370 million yen (as of March 31, 2019)

Employees
Consolidated: 8,748 Non-consolidated: 2,640 (as of March 31, 2019)
## DIRECTORS (* Officers)

<table>
<thead>
<tr>
<th>Titles</th>
<th>Name &amp; Birthday</th>
<th>Brief biography</th>
</tr>
</thead>
</table>
| Representative Director, CEO and President  | Eric Johnson 1948                | 1984 Joined VLSI Technology, Inc. (U.S.A.)
1988 Joined Nikon Precision, Inc. (U.S.A.)
1999 Director, Nikon Precision Inc.
Sep. 2001 Director, Nikon Precision Inc.
Jun. 2005 President of JSR Micro Inc.
Jun. 2011 Officer, JSR
Jun. 2015 Senior Officer, JSR
Jan. 2017 Managing Officer, General Manager of Life Sciences Div., JSR
Jan. 2019 President, JSR North America Holdings, Inc. (present)
Jan. 2019 President, JSR Life Sciences, LLC
Jun. 2019 Representative Director and CEO of JSR (present) |
| Director and Managing Officer               | Hideki Miyazaki 1950             | Apr. 1980 Joined Nomura Securities Co., Ltd.
Jul. 2005 Joined Japan Tobacco Inc. ("JT")
Jan. 2012 Director and Executive Vice President, JT
Jan. 2018 Director, JT
Mar. 2018 Joined JSR, Advisor
Jun. 2018 Director and Managing Officer (present) |
| Director and Senior Managing Officer        | Koichi Kawasaki 1951             | Apr. 1983 Joined JSR
Jun. 2005 Director, General Manager of Manufacturing & Technology Division
Jun. 2006 Managing Director, General Manager of Electronic Materials Division
Jun. 2008 Senior Managing Director
Apr. 2009 Representative Director and President
Jun. 2019 Representative Director and Chairman (present) |
| Chairman                                    | Mitsuboh Koshikihisa 1952        | Oct. 1981 Joined JSR
Jun. 2005 Senior Officer, General Manager of Electronic Materials Division
Jun. 2006 Managing Director, General Manager of Electronic Materials Division
Jun. 2008 Senior Managing Director
Apr. 2009 Representative Director and President
Jun. 2019 Representative Director and Chairman (present) |
| President and COO                           | Nobuo Kawahashi 1954             | Apr. 1981 Joined JSR
Jun. 2008 Officer, General Manager of Display Material Business Division and New FPD Materials Division
Jun. 2009 Officer, General Manager of Electronic Materials Division
Jun. 2010 Officer and President of JSR Micro Korea Co., Ltd.
Jan. 2011 Senior Officer
Jun. 2016 Director and Managing Officer (CTO)
Jan. 2017 Director and Executive Managing Officer (CTO)
Jan. 2019 Representative Director, President, COO and CTO (present) |
| Chairman                                    | Shiro Sugata 1949                | Nov. 17, 1949
Apr. 1972 Joined USHIO INC.
Jan. 2000 Director, Senior Officer, USHIO INC.
Apr. 2004 Director, Executive Managing Officer, USHIO INC.
Jan. 2004 Representative Director, Executive Managing Officer, USHIO INC.
Mar. 2005 Representative Director and President, USHIO INC.
Oct. 2014 Director and Advisor, USHIO INC.
Jan. 2016 Outside Director, JSR (present)
Jun. 2016 Advisor, USHIO INC.
Jun. 2016 Outside Director, Yokogawa Electric Corporation
Jun. 2017 Corporate Advisor, USHIO INC. |
| Outside Director                            |Yuzuru Matsuda 1948               | Apr. 1977 Joined KYOWA HAKKO KOGYO CO., LTD. ("KHK") (currently Kyowa Hakko Kirin Co., Ltd. ("KHK")
Jan. 2000 Officer, KHK
Jan. 2002 Executive Director, KHK
Jan. 2003 President and Chief Operating Officer, KHK
Oct. 2008 President and Chief Officer, KHK Kirin
Mar. 2012 Senior Advisor, KHK Kirin
Jan. 2012 President of Kato Memorial Bioscience Foundation, a public interest incorporated association
Jan. 2014 Outside Director, KUBOTA Corporation (present)
Jan. 2014 Outside Director, BANDAI NAMCO Holdings Inc.
Jan. 2015 Outside Director, JSR
Jan. 2019 Director Emeritus of Kato Memorial Bioscience Foundation, a public interest incorporated association (present) |
| Outside Director                            | Tadayuki Seki 1949               | Dec. 7, 1949
Apr. 1973 Joined ITCHU Corporation
Jan. 2004 Executive Officer and Chief Financial Officer, Food Company, ITCHU Corporation
Apr. 2007 Managing Executive Officer, General Manager, Finance Division, ITCHU Corporation
Jan. 2009 Representative Director, Managing Director, Chief Officer for Finance, Accounting, Risk Management and CFO, ITCHU Corporation
May 2011 Representative Director, Senior Managing Executive Officer, CFO, ITCHU Corporation
Apr. 2013 Representative Director, Executive Vice President, CFO, ITCHU Corporation
Apr. 2015 Advisor, ITCHU Corporation
May 2016 Outside Director, PARCO CO., LTD. (present)
Jun. 2016 Outside Director, NIPPON VALUA INDUSTRIES LTD.
Apr. 2017 Advisory Member, ITCHU Corporation
Jan. 2017 Outside Director, JSR
Jul. 2017 Outside Audit & Advisory Board Member, Asahi Mutual Life Insurance Company (present) |
| Outside Director                            | Manabu Miyasaka 1950             | Nov. 11, 1950
Apr. 1992 Joined UPU Co., Ltd.
Jan. 1997 Joined Yahoo Japan Corporation
Apr. 2009 Operating Officer, Head of Consumer Business Group
Apr. 2012 Chief Executive Officer, & Operating Officer
Jun. 2012 President & Representative Director
Jun. 2013 Director, SoftBank Corp. (currently SoftBank Group Corp.)
Jan. 2015 President and Representative Director, President Corporate Officer, Chief Executive Officer, Yahoo Japan Corporation
Jan. 2017 Director, SoftBank Corp.
Feb. 2018 Representative Director, Z Corporation Incorporated
Apr. 2018 President and Representative Director, Yahoo Japan Corporation
Apr. 2018 President and Representative Director, Z Corporation Incorporated
Jun. 2018 Chairman of the Board of Directors, Yahoo Japan Corporation
Jun. 2019 Outside Director, JSR |
### 4 Audit & Supervisory Board Member

<table>
<thead>
<tr>
<th>Titles</th>
<th>Name &amp; Birthday</th>
<th>Brief Biography</th>
</tr>
</thead>
</table>
| Standing Audit & Supervisory Board Member | Kumano, Atsushi August 8, 1956 | 1984: Joined JSR  
2005: Officer, General Manager of Display Materials Research Lab  
2007: Senior Officer, General Manager of Research & Development Dept. and General Manager of Tsukuba Research Lab.  
2016: Corporate Auditor (Present) |
| Outside Audit & Supervisory Board Member | Kato, Hisako October 18, 1948 | 1976: Registered as Certified Public Accountant (present)  
1985: Registered as Certified Tax Accountant (present)  
2008: Representative, Hisako Kato Accounting Office (present)  
2014: Outside Audit & Supervisory Board Member (present)  
2014: Outside Audit & Supervisory Board Member of NTT Urban Development Corporation |
| Outside Audit & Supervisory Board Member | Moriwaki, Sumio March 3, 1957 | 1981: Registered as Attorney at Law (Present)  
1981: Joined ISHII LAW OFFICE  
1991: Partner, ISHII LAW OFFICE (Present)  
1999: Professor, The Legal Training and Research Institute of Supreme Court (Attorney’s training in civil laws)  
2007: Guest Professor, The University of Tokyo Faculty of Law and Graduate Schools for Law and Politics  
2015: Committee Chairman, Research Committee of Legal System at Japan Federation of Bar Associations  
2017: Outside Audit & Supervisory, Board Member (Present)  
2017: Outside Director, TOPY INDUSTRIES, LIMITED (Present) |

### 5 List of Assigned Business Segment and Position of Director and Officers

<table>
<thead>
<tr>
<th>Titles</th>
<th>Name</th>
<th>Assigned business segment, position</th>
</tr>
</thead>
</table>
| Representative Director, CEO    | Eric Johnson                | North America Business  
President of JSR North America Holdings, Inc. |
| Representative Director, President, COO, and CTO | Nobuo Kawahashi  | Research & Development |
| Representative Director, Chairman of the Board | Mitsuhiro Koishita | PROCUREMENT, LOGISTICS, MANUFACTURING AND TECHNOLOGY, PRODUCT SAFETY & QUALITY ASSURANCE, SAFETY AND ENVIRONMENT AFFAIRS, HUMAN RESOURCES, DIVERSITY DEVELOPMENT |
| Managing Officer                | Hayato Hirano               | Elastomer Business, Plastics Business  
General Manager of Elastomer Div.  
President of Techno-UMG Co., Ltd. |
| Managing Officer                | Katsuya Inoue               | Corporate Planning, Business Planning and Investment, Digital Solutions Business, Emerging Business, Office of the CEO  
General Manager of Corporate Planning Div.  
General Manager of Office of the CEO  
Chairman of JSR Micro (Changsha) Co., Ltd. |
| Managing Officer                | Hideki Miyazaki             | Accounting, Finance, Corporate Communications |
| Managing Officer                | Tadafumi Inoue              | Digital Solutions Business |
| Senior Officer                  | Takao Shintani              | Office of the President, IT Strategy, Business Process Renovation  
General Manager of Office of the President  
General Manager of Office of Business Process Renovation |
| Senior Officer                  | Taisuke Watanabe            | China Business  
Chairman of JSR (Shanghai) Co., Ltd. |
| Senior Officer                  | Kazunori Yamashita          | Elastomer Business (deputy)  
Deputy General Manager of Elastomer Div.  
General Manager of Business Management Dept., Elastomer Products  
Vice President of KEATON JER ELASTOMERS K. K.  
Director of JSR Elastomer Europe GmbH |
| Senior Officer                  | Makoto Doi                  | Legal  
General Manager of Legal Dept. |
| Senior Officer                  | Yoshikazu Yamaguchi        | Display Solution Business  
Representative Director of JSR Micro Korea Co., Ltd. |
| Senior Officer                  | Kazuki Abe                  | President of ELASTOMIX CO., LTD  
President of ELASTOMIX (FOSHAN) CO., LTD.  
The Chief Director of JSR Group Corporate Pension Fund |
| Officer                         | Eiichi Kusuhara             | Executive Vice President of JSR North America Holdings, Inc. |
| Officer                         | Yoichi Misawa               | Edge Computing Business  
General Manager of Edge Computing Div. |
| Officer                         | Mika Nakayama               | General Manager of Intellectual Property Dept. |
| Officer                         | Koichi Sueki                | Yokkaichi Plant  
Yokkaichi Plant Manager |
| Officer                         | Seiji Takahashi             | Manufacturing and Technology (deputy)  
General Manager of SSBR Global Manufacturing & Technology Management Dept. |
| Officer                         | Yasutami Fujii              | General Affairs, Secretariat Office, CSR  
General Manager of General Affairs Dept.  
General Manager of Secretariat Office |
| Officer                         | Mikio Yamashita             | Lithium Ion Capacitors Business  
President of JM Energy Corporation |
| Officer                         | Tim Lowery                  | Life Sciences Business  
General Manager of Life Sciences Div.  
President of JSR Life Sciences, LLC |
| Officer                         | Koichi Hara                 | Executive Vice President of JSR North America Holdings, Inc.  
General Manager of Life Sciences Business Planning Dept. |
| Officer                         | Junichi Takahashi           | Electronic Materials Business  
General Manager of Electronic Materials Div.  
General Manager of Taiwan Branch, Electronic Materials Div. |
| Officer                         | Kenichi Wakiyama            | General Manager of Display Solution Business Div. |
| Officer                         | Ichiko Tachibana            | General Manager of Support Dept., Emerging Business |
| Officer                         | Towa Kimura                 | General Manager of Research & Development |

Corporate Data 2019
1. **STOCKS**

   **Total Numbers** (As of March 31, 2019)
   - Authorized Stocks: 696,061,000
   - Issued Stocks:
     | Type          | Number of Stocks Issued | Stock Exchange |
     |---------------|-------------------------|----------------|
     | Common Stocks | 226,126,145             | Tokyo (First Section) |

2. **DISTRIBUTION OF STOCKS** (As of March 31, 2019)

3. **MAJOR SHAREHOLDERS** (As of March 31, 2019)

### Investments in the Company

<table>
<thead>
<tr>
<th>Name of Shareholder</th>
<th>Number of Shares Held (thousand shares)</th>
<th>Shareholding Ratio (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bridgestone Corporation</td>
<td>22,366</td>
<td>10.15</td>
</tr>
<tr>
<td>The Master Trust Bank of Japan, Ltd. (trust account)</td>
<td>15,811</td>
<td>7.17</td>
</tr>
<tr>
<td>Japan Trustee Services Bank, Ltd. (trust account)</td>
<td>15,017</td>
<td>6.81</td>
</tr>
<tr>
<td>Japan Trustee Services Bank, Ltd. (trust account 9)</td>
<td>7,793</td>
<td>3.54</td>
</tr>
<tr>
<td>BNYMSAMV AS AGENT/CLIENTS LUX UCITS NON TREATY 1</td>
<td>6,524</td>
<td>2.96</td>
</tr>
<tr>
<td>Japan Trustee Services Bank, Ltd. (trust account 5)</td>
<td>3,864</td>
<td>1.75</td>
</tr>
<tr>
<td>Nippon Life Insurance Company</td>
<td>3,717</td>
<td>1.69</td>
</tr>
<tr>
<td>Meiji Yasuda Life Insurance Company</td>
<td>3,631</td>
<td>1.65</td>
</tr>
<tr>
<td>SSBTC CLIENT OMNIBUS ACCOUNT</td>
<td>3,496</td>
<td>1.59</td>
</tr>
<tr>
<td>Mizuho Bank, Ltd.</td>
<td>3,325</td>
<td>1.51</td>
</tr>
<tr>
<td>Total of the above ten major shareholders</td>
<td>85,544</td>
<td>38.82</td>
</tr>
</tbody>
</table>

Notes:
1. The numbers in the columns under “Number of shares held” are rounded to thousands of shares.
2. The shareholding ratio is calculated using 220,431,196 shares (calculated by deducting number of treasury shares (5,694,949 shares) from the total number of issued shares (226,126,145 shares)* and rounded to two decimal places.
3. The company acquired 2,350,900 treasury shares upon resolution of the Board of Directors on July 30, 2018.

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1. **CAPACITY** (As of April 1, 2019, Unit: tons/year)

<table>
<thead>
<tr>
<th></th>
<th>Yokkaichi plant</th>
<th>Chiba plant</th>
<th>Kashima plant</th>
<th>Others</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>SBR (including NBR, HSR)</td>
<td>255,000</td>
<td></td>
<td></td>
<td>255,000</td>
<td></td>
</tr>
<tr>
<td>Latex</td>
<td>120,000</td>
<td></td>
<td></td>
<td>120,000</td>
<td></td>
</tr>
<tr>
<td>BR</td>
<td>72,000</td>
<td></td>
<td></td>
<td>72,000</td>
<td></td>
</tr>
<tr>
<td>Solution SBR, Hydrogenated Polymer</td>
<td>70,000</td>
<td>100,000 (Thailand)*</td>
<td></td>
<td>170,000</td>
<td></td>
</tr>
<tr>
<td>IS</td>
<td>41,000</td>
<td></td>
<td></td>
<td>41,000</td>
<td></td>
</tr>
<tr>
<td>EPDM</td>
<td>36,000</td>
<td>220,000 (Korea)*</td>
<td></td>
<td>256,000</td>
<td></td>
</tr>
<tr>
<td>IR</td>
<td></td>
<td></td>
<td>98,000 (Kawasaki)*</td>
<td>98,000</td>
<td></td>
</tr>
<tr>
<td>H-IR</td>
<td>80,000*</td>
<td></td>
<td></td>
<td>80,000</td>
<td></td>
</tr>
<tr>
<td>RB</td>
<td>24,000</td>
<td></td>
<td></td>
<td>24,000</td>
<td></td>
</tr>
<tr>
<td>ABS resin, AS resin</td>
<td>250,000*</td>
<td>110,000 (Ulize, Otake)*</td>
<td>400,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ARTON</td>
<td>5,000</td>
<td></td>
<td></td>
<td>5,000</td>
<td></td>
</tr>
<tr>
<td>Butadene</td>
<td>148,000</td>
<td>130,000</td>
<td>120,000</td>
<td>398,000</td>
<td></td>
</tr>
<tr>
<td>Isoprene</td>
<td>36,000</td>
<td></td>
<td></td>
<td>36,000</td>
<td></td>
</tr>
<tr>
<td>WSP</td>
<td>1,200</td>
<td></td>
<td></td>
<td>1,200</td>
<td></td>
</tr>
</tbody>
</table>

Notes:
*1 JSR BST Elastomer Co., Ltd.
*2 Kumho Polychem Co., Ltd.
*3 Japan Butyl Co., Ltd.
*4 Techno-UMG Co., Ltd.
### 1. ELASTOMERS

<table>
<thead>
<tr>
<th>Products</th>
<th>Characteristics</th>
<th>Applications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emulsion Styrene-Butadiene Rubber (ESBR)</td>
<td>Features superior tensile and tear strength, aging and abrasion resistance. Also features a molecular structure that is characteristics of “Hot SBR” with superior viscosity and adhesiveness.</td>
<td>Tires, belts, shoes, various industrial products, adhesive tape base materials, etc.</td>
</tr>
<tr>
<td>Solution Styrene-Butadiene Rubber (SSBR)</td>
<td>SBR with characteristic molecular structure. Features superior processability and dynamic properties.</td>
<td>Tires, etc.</td>
</tr>
<tr>
<td>Poly-Butadiene Rubber (BR)</td>
<td>Features superior abrasion resistance, dynamic properties, low temperature performance, and processability.</td>
<td>Tires, belts, golf balls, shoes, various industrial products, etc.</td>
</tr>
<tr>
<td>High-Styrene Rubber (HSR)</td>
<td>High hardness rubber with low specific gravity featuring superior processability, abrasion resistance, and flex resistance.</td>
<td>Hard plates, footwear soles and other athletic products requiring high degree of hardness.</td>
</tr>
<tr>
<td>Poly-Isoprene Rubber (IR)</td>
<td>Molecular structure similar to natural rubber. Features good processability and vulcanization with superior mechanical tensile strength and resilience.</td>
<td>Tires, belts, various industrial products, shoes, adhesives, rubber threads, rubber bands, surgical gloves, balloon catheter, etc.</td>
</tr>
<tr>
<td>Nitrile Rubber (NBR)</td>
<td>Features superior oil, gas and mechanical heat resistance and processability.</td>
<td>Packing, gaskets, oil seals, fuel hoses, Fmren hoses, rubber plates, print rolls, blankets, spinning parts, airplane parts/items, automobile parts, work boots, adhesives, various industrial products, resin modifier/reinforcement agents,etc.</td>
</tr>
<tr>
<td>Polymer Blend (NV/NE)</td>
<td>NV (NBR-PVC) and NE (NBR-EPM/EPDM) bring new characteristics such as superior ozone resistance and superior weatherability by mixing multiple polymers.</td>
<td>Telephone/electricity lines, thermo-resistant belts, automobile parts, window frames, sponges, waterproof sheet, packing, various industrial products, resin modifier/reinforcement agents, etc.</td>
</tr>
<tr>
<td>Ethylene Propylene Rubber (EPM/EPDM)</td>
<td>Superior heat resistance, ozone resistance and weatherability.</td>
<td>Telephoney/electricity lines, thermo-resistant belts, automobile parts, window frames, sponges, waterproof sheet, packing, various industrial products, resin modifier/reinforcement agents, etc.</td>
</tr>
<tr>
<td>Butyl Rubber (IR)</td>
<td>Superior gas impermeability, weatherability, ozone and heat resistance. There is also chlorinated butyl and bromide butyl rubber with fast vulcanization speed.</td>
<td>Tire tubes, tire inner liners, automobile parts, belts, telephone/electricity lines, anti-vibration rubber dampers, various industrial products, gasket of prefilled syringe, medicine stoppers, etc.</td>
</tr>
<tr>
<td>Masterbatches</td>
<td>A range of master batches with SBR, BR, EPDM, and NBR as the base polymer.</td>
<td>Various tires, shoes, belts, hoses, sports goods, industrial products, and extrusion mold products.</td>
</tr>
</tbody>
</table>

### 2. THERMOPLASTIC ELASTOMERS

<table>
<thead>
<tr>
<th>Products</th>
<th>Characteristics</th>
<th>Applications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Syndiotactic 1,2-Poly-Butadiene JSR RB™</td>
<td>Produced only by JSR worldwide. An extremely versatile, general purpose material that features both the hardness of resin and the resilience of rubber.</td>
<td>Films, tubes, various shoe soles, injection molding items, various sponge products, super hard rubber products, rubber, plastic modifiers, medical tubes, etc.</td>
</tr>
<tr>
<td>Hydrogenated Polymer DYNARON™</td>
<td>Hydrogenated polymer with a unique structure developed from JSR’s proprietary synthesis technology.</td>
<td>Various plastic modifiers, compatibilizers, transparent soft films, sheets, tubes, stationaries, daily sundries, car interior materials, adhesive applications, vial bottles, CAPD drain bags, medical drain tubes, etc.</td>
</tr>
</tbody>
</table>

### 3. EMULSIONS

<table>
<thead>
<tr>
<th>Products</th>
<th>Characteristics</th>
<th>Applications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dynamic Vulcanized Type Olefinic Thermoplastic Elastomer (TPV) EXCELINK™</td>
<td>A high performance polymer compound which is produced from JSR special EPDM as a base polymer using the unique compounding technology. The characteristics are high melt flow, high elasticity and low density which can effectively realize energy saving, resource saving, recycling, easy work and cost saving.</td>
<td>Automotive parts, sealing and packing materials, etc.</td>
</tr>
<tr>
<td>Styrene butadiene type thermoplastic elastomer JSR TR</td>
<td>Styrene butadiene based material that has the resilience of vulcanized rubber at room temperature but plasticizes for easy processing at high temperatures.</td>
<td>Various shoe soles, injection molding items, plastic modifiers, asphalt modifiers, binders, adhesives, flexographic printing plate, etc.</td>
</tr>
<tr>
<td>Styrene Isoprene Block copolymer JSR SIS™</td>
<td>Styrene isoprene based material that features the resilience of vulcanized rubber at room temperature but plasticizes for easy processing at high temperatures.</td>
<td>Hot melt adhesives, hot melt binders, antiplogistic thermsdermal patch, medical tube</td>
</tr>
</tbody>
</table>

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**Petrochemical Products**

<table>
<thead>
<tr>
<th>Products</th>
<th>Characteristics</th>
<th>Applications</th>
</tr>
</thead>
<tbody>
<tr>
<td>FUELOCK</td>
<td>Features superior gas barrier properties (gasoline impermeability). Also features oil resistance even in bioethanol-containing gasoline.</td>
<td>Superior gas impermeability, weatherability, ozone resistance, and superior weatherability by mixing multiple polymers.</td>
</tr>
<tr>
<td>JSR RBTM Syndiotactic 1,2-Poly-Butadiene</td>
<td>Versatile, general purpose material that features both the hardness of resin and the resilience of rubber.</td>
<td>Films, tubes, various shoe soles, injection molding items, various sponge products, super hard rubber products, rubber, plastic modifiers, medical tubes, etc.</td>
</tr>
</tbody>
</table>

---

**Dynamic Vulcanized Type Olefinic Thermoplastic Elastomer (TPV) EXCELINK™**

- A high performance polymer compound which is produced from JSR special EPDM as a base polymer using the unique compounding technology. The characteristics are high melt flow, high elasticity and low density which can effectively realize energy saving, resource saving, recycling, easy work and cost saving.

- Various shoe soles, injection molding items, plastic modifiers, asphalt modifiers, binders, adhesives, flexographic printing plate, etc.

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**Styrene Butadiene Type Thermoplastic Elastomer JSR TR**

- Styrene butadiene based material that has the resilience of vulcanized rubber at room temperature but plasticizes for easy processing at high temperatures.

- Various shoe soles, injection molding items, plastic modifiers, asphalt modifiers, binders, adhesives, flexographic printing plate, etc.

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**Styrene Isoprene Block Copolymer JSR SIS™**

- Styrene isoprene based material that features the resilience of vulcanized rubber at room temperature but plasticizes for easy processing at high temperatures.

- Hot melt adhesives, hot melt binders, anti-pollutant thermal dermal patch, medical tube.
4. PLASTICS

<table>
<thead>
<tr>
<th>Products</th>
<th>Characteristics</th>
<th>Applications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highly Cross-linked Particles</td>
<td>Submicron size organic particles with an extremely high degree of crosslinking. In addition to exhibiting high hardness and heat resistance, it has a high affinity with organic materials which inorganic particles do not. In addition to being lightweight with a smooth particle surface, it has high homogeneous particle size distribution, which cannot be obtained by general method for producing resin particles such as dispersion polymerization method or suspension polymerization method.</td>
<td>Resin additives, coating materials, paint additives, agents to prevent film blocking, etc.</td>
</tr>
<tr>
<td>SBR Latex (binder for negative electrodes)</td>
<td>Water-based latex binder used to form electrodes for energy storage devices. Derived from polymer synthesis and morphology control technologies. Features both high binding properties and low resistance. Ensures excellent battery performance including cycle properties.</td>
<td>Lithium-ion batteries, nickel-metal hydride, electric double layer capacitors, lithium ion capacitors, etc.</td>
</tr>
<tr>
<td>Fluorine-acrylic hybrid latex (binder for positive electrodes)</td>
<td>A proprietary hybrid water-based latex binder. Integrated particles are formed by compatibilizing vinylidene fluoride polymers with acrylic polymers at the molecular level. The water-based particles are characterized as having a low environmental impact and running cost compared with conventional solvent-based positive electrode binders (PVDF). The hybrid design ensures high potential resistance, binding properties, and flexibility.</td>
<td>Lithium-ion batteries, nickel-metal hydride, electric double layer capacitors, lithium ion capacitors, etc.</td>
</tr>
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</table>

**Products Manufactured/Sold by: Techno-UMG Co., Ltd.**

<table>
<thead>
<tr>
<th>Products</th>
<th>Characteristics</th>
<th>Applications</th>
</tr>
</thead>
<tbody>
<tr>
<td>AS Resin SANREX™</td>
<td>Binary copolymer of acrylonitrile and styrene. Transparent amorphous resin, featuring superior properties to polystyrene including mechanical strength and chemical resistance.</td>
<td>Office automation equipment parts, containers for cosmetics, cigar lighters, miscellaneous goods, etc.</td>
</tr>
<tr>
<td>ABS Resin TECHNO ABS™ 100-400, 800 Series UMG ABS™</td>
<td>Ternary copolymer of acrylonitrile, butadiene and styrene. Produced in a wide range of grades including high-impact resistant, highly fluid and highly rigid.</td>
<td>Automobile parts, home appliances, office automation equipment, miscellaneous goods, toys, building materials, etc.</td>
</tr>
<tr>
<td>ABS Heat Resistant Grade TECHNO ABS™ 500, 550 Series TECHNO MUHI™ BULKSAM™</td>
<td>Features better heat resistance property comparing to the standard heat resistance grade of ABS resins while maintaining other physical properties.</td>
<td>Automobile interior parts, home appliances, power window switches, heater control panels, etc.</td>
</tr>
<tr>
<td>Flame retardant Resin TECHNO ABS™ 2 F Series UMG ABS™ VW, VD, KD Series</td>
<td>Flame-resistant ABS resin with excellent fluidity, thermal stability, heat resistance, mechanical strength and shock resistance.</td>
<td>Office automation equipment parts, office automation equipment housings, etc.</td>
</tr>
<tr>
<td>AS Resin TECHNO AES™ DIALAC™ E Type</td>
<td>Features superior weatherability and mechanical tensile strength. Is suitable for outdoor use.</td>
<td>Automobile exterior parts, motorcycle parts, construction and agricultural machinery, outer hose cover of air conditioners, building exterior materials, etc.</td>
</tr>
<tr>
<td>ASA Resin TECHNO ASA™ DIALAC™ A Type</td>
<td>Features superior weatherability and mechanical tensile strength. Is suitable for outdoor use.</td>
<td>Automobile exterior parts, motorcycle parts, construction and agricultural machinery, outer hose cover of air conditioners, building exterior materials, etc.</td>
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<tr>
<td>Woodgrain resin / Wood powder resin UMG WOOD™</td>
<td>Wood powder-mixed ABS pellet for extrusion molding woodgrain material. Available with ABS resin for interior and ASA resin for exterior.</td>
<td>Interior and exterior building material parts, interior and exterior furniture, bench, etc.</td>
</tr>
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</table>

**Recycled resource resin ECO PELLET™**

<table>
<thead>
<tr>
<th>Products</th>
<th>Characteristics</th>
<th>Applications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recycled resource resin ECO PELLET™</td>
<td>Closed-loop recycled material, which uses discharged plastics such as ABS, PC, PET, PA as a raw materials.</td>
<td>Office furniture, IT Equipment, etc.</td>
</tr>
<tr>
<td>ABS/PC Alloy EXCELLO™ CK, CKF, CW Series UMG ALLOY™ ALPHALOY™ MPC Series</td>
<td>Polymer alloy that contains polycarbonate and styrene resins. There is the “CK Series” with superior heat resistant, “CW and CA Series” featuring superior balanced weatherability, heat resistance and fluidity, and the “CKF Series” self-extinguishing series with superior mold processability, heat resistance, chemical resistance and mechanical properties.</td>
<td>Automobile interior parts (switch, lever parts), mechanical tools, motorcycle parts, home appliances, etc.</td>
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<tr>
<td>ABS/PC Alloy EXCELLO™ AK Series ALPHALOY™ MPA Series</td>
<td>Polymer alloy that contains polycarbonate and styrene resins. Excellent oil resistance and fatigue properties. With While keeping excellent surface appearance, large heat resistance and mechanical strength can be maintained.</td>
<td>Automobile interior parts (switch, lever parts), mechanical tools, motorcycle parts, home appliances, etc.</td>
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<tr>
<td>ABS/PBT Alloy EXCELLO™ TK Series</td>
<td>A polymer alloy that contains polybutylene terephthalate (PBT) and styrene resins. Excellent chemical resistance and flowability, it also has high resistance to chemical cracks caused by chemicals.</td>
<td>Automobile interior parts, electronics parts, home appliances, household goods, etc.</td>
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<td>Anti-Squeak Material HUSHILLOY™</td>
<td>Styrene-based special thermoplastic resin that makes it possible to reduce the squeaking noise generated from the joints of plastic parts.</td>
<td>Automobile interior parts, electronics parts, home appliances, household goods, etc.</td>
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<tr>
<td>Highly Colorable Material VIVILLOY</td>
<td>Highly pigment material for paintless applications. The elimination of the painting process contributes to lower costs overall and helps to reduce environmental impact.</td>
<td>Automobile exterior parts (door mirror, spoiler, radiator grill), building materials, parts, etc.</td>
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<tr>
<td>Plating Material PLATZON</td>
<td>Material with excellent plating adhesion and excellent balance of heat resistance, moldability and impact resistance. These materials maximize productivity during the production process and help to reduce environmental impacts by improving plating yields.</td>
<td>Plating decoration parts for automobile interior and exterior (radiator grill, emblem, interior decoration parts), mobile phone, other resin plating products</td>
</tr>
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</table>
1. SEMICONDUCTOR MATERIALS

**Lithography Materials**
- DUV Photoresists: Lineup of high resolution DUV photoresists.
- EUV™ Series, g/i line Photoresists, PRS™ Series: Line of photoresists that cover a wide range of critical and non-critical applications. Furthermore, we handle immersion topcoat materials and hard mask materials for refined processing to meet customer needs.

**Process Materials**
- CMP Shires: Includes slurries for Ca applications, which improve planarization and surface finish of FEOL applications.
- CMP Cleaning Solutions: Includes post Cu-CMP cleaner and post FEOL CMP cleaner, which enable low defect and low damage to the finished surface.

**Photore sist for Lift off process**
- LUMILON® LP Series: Film thickness can be 100μm, has superior aspect ratio imaging and high resistant to electromigration solutions. Photore sist used to make solder bump, Ca pillar, Au bump or redistributionlayer.

**Low Dielectric Constant & Low Dissipation Insulation Materials**
- JSR ELPAC™ THB Series: Provides insulation materials with low-dielectric constant and low-dissipation properties, which are required for high frequency printed circuit board to realize low transmission loss in high speed 5G communication.

**Organic Insulation Materials**
- MOSH™ Series, Photosensitive Insulation Materials: Suitable as materials for WL-CSP (Water Level Chip Size Package) and SiP (System in Package) redistribution layers, spin-on photosensitive insulation materials, and organic passivation layers for semiconductor devices.

**Resin modifiers of IC mold board**
- Carboxylated NBR: Carboxylated cross-linked NBR. An ocean (resin) vs. island (rubber) structure is formed through minute dispersion in thermocuring resin, and thereby improving various properties of the thermocuring resin.

**Resin modifiers of print circuit board insulation adhesive layers**
- Glycidyl modified NBR: Glycidyl modified cross-linked NBR. An ocean (resin) vs. island (rubber) structure is formed through minute dispersion in thermocuring resin, and thereby improving various properties of the thermocuring resin.

**For Low Electrolytic Corrosion Resist**
- NBR: Binder modifier material to bind PBs ensuring minimal ionic impurities in electric and electronic parts. Modifiers of flexible print circuit board adhesive layer

**Display Materials**

**LUMILON® Series**
- Photoresist for Lift off process and Redistribution Layers: Suitable to create 2μm size through holes. Features superior heat resistance and highly permeable patterns.

**Photostabilizers**
- Resin modifiers of IC mold board

**OLED Display Materials**
- Touch Panel Materials: Suitable to create 2μm size through holes. Features superior heat resistance and highly permeable patterns.

**3. EDGE COMPUTING MATERIALS**

**Heat Resistant Transparent Resin**
- ATRON™: Superior optical properties, heat resistance, chemical resistance, mold processability and film adhesivity. Also provides low specific gravity, transparent engineering plastic.

**Water-resistant material and anticorrosive material for automobiles**
- UV-curable resin used for formation of automobile parts such as water-resistant and anticorrosive parts of harness and connectors which enables rapid and robust formation.

**Stereo-lithography System**
- Extracts 3D images from CAD files in less than 10 minutes. Then harvests the UV-curable resin, by drawing that layer by layer. With the opto-functional system, each layer is hardened one by one and the accumulation of layers results in a dimensional image. There is good design freedom and allows for rapid 3D modeling.
LIFE SCIENCES PRODUCTS

Products | Characteristics | Applications
--- | --- | ---
Latex Particles | IMMUTEX™ is a polyisoprene latex particle for agglutination test. | Immunoassay, reagents
Magnetic Particles | Magnetic particles suitable for immunoassay system such as separating and/or purifying proteins, cells, and nucleic acids with different surface chemistry, depending on applications. | High purity bioseparation reagents (protein separation, nucleic acid separation, cell separation), immunoassay reagents
Blocking Reagent | A blocking agent composed of 100% chemically synthesized polymers that eliminates the safety, quality and purity issues of biological blocking reagents. | Non-adherent surface polymer
Oligotex™-dT30 Super | Oligotex™ is a latex particle coated with oligo (dT) 30 for purifying poly (A) mRNA. | mRNA separation and purification
ExoCap™ | A kit that includes magnetic particles coupled with antibodies that recognize exosome surfaces, which enables simple and high purity isolation of exosome from serum, plasma and cell culture supernatants. | Exosome isolation
Fundamental research of IVD
Protein A Affinity Resin | Novel protein A resin for advanced purification in downstream processing of antibodies manufacturing. Besides an outstanding high capacity, Amsphere™ A3 has an overall improved process robustness, flow characteristics, optimized impurity removal, productivity and resin lifetime. | Manufacturing of Biopharmaceuticals

OTHER PRODUCTS

Products | Characteristics | Applications
--- | --- | ---
Lithium Ion Capacitor | Capacitor with high voltage, energy and power density, safety and long product life. Suitable for applications that require conserving energy, balancing electricity and more. | Voltage sag mitigation systems, uninterruptible power supply, back-up power supply, forklifts, industrial machinery, transportation (automotive, train, tram), medical devices, wind turbines, solar cells, etc.
Lithium Ion Capacitor | The same properties as lithium ion capacitor cells but in a more rugged form factor making it ideal for use in transportation applications. | <Manufactured/Sold by> JM Energy Corporation

R&D AND INTELLECTUAL PROPERTY ORGANIZATION

(As of June 18, 2019)

Products | Characteristics | Applications
--- | --- | ---
Performance Polymer Research Laboratories | Polymer Materials Lab. | Rubber for tires, specialty rubbers, functional elastomers, thermoplastic elastomers, etc.
Display Solution Research Laboratories | Performance Chemicals Lab. | Latex for paper coating, functional emulsions, etc.
Fine Electronic Materials Research Laboratories | Active Solution Materials Lab. | Alignment film and organic insulation material for array and cell for LCDs, etc.
Process Materials Lab. | Display Solution Materials Lab. | Materials for color filter of LCDs, etc.
Fine Chemistry Process Lab. | Advanced Solution Research Lab. | Novel panel design and materials for display, etc.
Materials Informatics (MI) Initiative | Lithography Materials Lab. | Thick photoresists, photosensitive insulation materials for LSI etc.
R&D Administration Dept. | Lithography Solution Lab. | CMP materials ( slurries, cleaning solutions), etc.
Yokkaichi Research Center | Mobile Solution Materials Lab. | Advanced Materials Research Laboratories | Battery-related materials & technologies, innovative new materials, high performance resins, pipeline research, etc.
Edge Computing Research Laboratories | Edge Device Materials Lab. | Materials development for advanced mobile devices
Material Characterization & Analysis Lab. | High Performance Film Technical Dept. | Technological development for precision processing. Converting products on optical films, etc.
Fine Chemical Process Lab. | Fine Chemical Research Laboratories | Development of manufacturing processes and engineering of fine chemicals, medical materials and other new businesses
Materials Informatics (MI) Initiative | Manufacturing of Biopharmaceuticals | Applying MI to accelerate the discovery and design of new materials
R&D administration in Yokkaichi area

Tuskaichi Research Laboratories | R&D strategic initiatives and administration
Research & Development Dept. | Industry-academia-medicine collaboration for next generation medical services and for longevity and a healthy society.
Research Planning Dept. | R&D strategic initiatives
Intelligent Property Dept. | Business related to intellectual property rights

CONTRIBUTION OF PATENTS

(Fiscal Year: 2012.3 - 2018.3)

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*1 Includes Elastomers and Plastics Businesses
*2 Includes Digital Solutions and Life Sciences Businesses
### TECHNOLOGY TRANSFER

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<tr>
<th>Date of Contract Effectuation</th>
<th>Technology</th>
<th>Licensor's Country</th>
<th>Licensee's Country</th>
<th>Licensee's Name</th>
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### TECHNOLOGY INTRODUCTION

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<td>Reliability Industries</td>
</tr>
<tr>
<td>January 31, 2004</td>
<td>BD</td>
<td>U.S.A.</td>
<td>IPCL (currently Reliance Industries)</td>
<td></td>
</tr>
<tr>
<td>September 27, 2004</td>
<td>BR</td>
<td>India</td>
<td>BUTADENOL Klapuy a.s.</td>
<td></td>
</tr>
<tr>
<td>June 4, 2007</td>
<td>BD</td>
<td>Czech</td>
<td>JSR BST Elastomer Co., Ltd.</td>
<td></td>
</tr>
<tr>
<td>April 16, 2008</td>
<td>SBR</td>
<td>Korea</td>
<td>KKP</td>
<td>Improvement</td>
</tr>
<tr>
<td>April 16, 2008</td>
<td>SBR</td>
<td>Korea</td>
<td>KKP</td>
<td>Improvement</td>
</tr>
<tr>
<td>June 16, 2009</td>
<td>Isoprene</td>
<td>Taiwan</td>
<td>Formosa Petrochemical Corporation</td>
<td></td>
</tr>
<tr>
<td>June 22, 2011</td>
<td>BR</td>
<td>India</td>
<td>Reliance Industries</td>
<td></td>
</tr>
<tr>
<td>September 8, 2011</td>
<td>SBR</td>
<td>Thailand</td>
<td>JSR BST Elastomer Co., Ltd.</td>
<td></td>
</tr>
<tr>
<td>April 13, 2012</td>
<td>Latex reactors intermediates China</td>
<td>J and W Beijing Biotech Co., Ltd.</td>
<td></td>
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</tr>
<tr>
<td>March 13, 2013</td>
<td>SBR</td>
<td>Thailand</td>
<td>JSR BST Elastomer Co., Ltd.</td>
<td></td>
</tr>
<tr>
<td>December 11, 2013</td>
<td>Isoprene</td>
<td>Korea</td>
<td>Yoschoon CCC Co., Ltd.</td>
<td></td>
</tr>
<tr>
<td>December 19, 2013</td>
<td>Isoprene</td>
<td>Korea</td>
<td>Lotte Chemical Corporation</td>
<td></td>
</tr>
<tr>
<td>March 25, 2014</td>
<td>SBR</td>
<td>Hungary</td>
<td>JSR MOL Synthetic Rubber Ltd.</td>
<td></td>
</tr>
<tr>
<td>June 19, 2015</td>
<td>BD</td>
<td>Korea</td>
<td>Yoschoon CCC Co., Ltd.</td>
<td></td>
</tr>
</tbody>
</table>

Note: Parenthesis indicate succession of license/licensor status.
Company History

1957
December : In accordance with the special measures law passed by the Japanese government to commence domestic production of synthetic rubber, Japan Synthetic Rubber Co., Ltd. (currently JSR Corporation) was established with a total capital of 642.5 million. The president was Shojiro Ishibashi.

1960
April : Operations began at the Yokkaichi Plant, with production and sales of Butadiene, SBR and SB Latex. The Osaka Branch was opened.

1961
September : JSR TOYO SHOJI CO., LTD. (currently JSR Trading Co., Ltd.) was established.

1962
June : The Nagoya Branch was opened.

1963
January : A carbon masterbatch plant was completed within the Yokkaichi Plant and production began.

July : Sales of paper coating latex (PCL) began.

October : Emulsion Technology Co., Ltd. was established.

1964
August : JSR ELASTOMIX CO., LTD. (currently JSR ELASTOMIX CO., LTD.) was established.

October : JSR advanced into the field of synthetic resin and production of ABS resin began within the Yokkaichi Plant.

November : Sales of NBR began. A BR plant was completed within the Yokkaichi Plant.

1965
February : Sales of BR began.

May : President Ishibashi became Chairman, and Vice-President Taro Matsuda was promoted to President.

1967
February : Japan Butyl Co., Ltd. was established in a joint venture with ESSE.

May : Sales of ROADEN® (asphalt pavement reinforcement) began.

November : From the shares of JSR owned by the government, one hundred thousand were conveyed to the public in competitive bidding.

1968
April : The Chiba Plant was completed, and production of butadiene began.

July : The European Office was opened.

March : Sales of IR began.

1969
April : The government’s plans to bring an end to the special measures law was formally approved, and on the same day promulgation enforcement ensued and JSR became a purely publicly-owned company. The BR plant was completed within the Chiba Plant, and production commenced.

1970
1971
September : Sales of EPDM began.

January : The Kashima Plant was completed and production of butadiene and SBR began.

May : Production of waterproof HALOCAT™ began.

June : An isoprene plant was completed within the Kashima Plant.

December : Sales of IR began.

1972
November : An IR production plant was completed at the Chiba Plant, and production began.

1973
April : Sales of acrylic emulsion began.

May : President Kawasaki became Chairman, and Vice-President Shinnosuke Kitamoto was promoted to President.

December : The Head Office was moved from Kyobashi to Tsukiji, both in Tokyo’s Chuo-ku.

1974
June : Sales of BR began.

1975
May : Sales of AS resin began.

1976
August : JSR LOGISTICS CO., LTD. (currently JEY-TRANS CO., LTD.) was established.

September : Sales of asphalt and spray emulsion began.

1979
April : Sales of CIB™ (negative photoresist) began.

1980
November : Sales of NBR began. A BR plant was completed within the Yokkaichi Plant.

1981
November : Sales of NBR began. A BR plant was completed within the Yokkaichi Plant.

1982
January : Childcare leave and healthcare leave systems were introduced.

May : DYNAFLOW™ began.

1983
July : Sales of SBR began.

1984
April : Sales of Mighty Series (structural adhesive), DESOLITETM (optical fiber coating materials), SBS (thermoplastic elastomer), KRATON JSR ELASTOMERS K.K. (currently KRATON JSR ELASTOMERS K.K.) was established.

1985
January : A new research building was completed at the Yokkaichi Plant.

May : Sales of AS resin began.

July : Entered into a joint venture with Desote, currently DSM Desotech.

1986
June : President Katsumoto became Chairman, and Vice-President Hisashi Yoshimitsu was promoted to President.

1987
April : Entered into a joint venture with Shell (Japan), the SHELL JSR ELASTOMERS K.K. (currently KRATON JSR ELASTOMERS K.K.) was established.

1988
March : Sales of OPTER™/AL (alignment films) and OPTER™/SS (protective coatings) began.

April : Started the Saturday/Sunday 2-day weekend holiday and flex-time system.

May : Tskuba Research Laboratories was officially opened.

June : Tatsuo Asakura was promoted from Senior Managing Director to President.

1989
October : Japan’s first plant specializing in TR (thermoplastic elastomer) production, SHELL JSR ELASTOMERS K.K. (currently KRATON JSR ELASTOMERS K.K.) was completed at the Kashima Plant. As a second site for resin sales and technology transfer to southeast Asia, JSR Plastics Hong Kong Co., Ltd. (currently TECHNO POLYMER HONG KONG CO., LTD.) was established.

November : Sales began for newly developed PCRs and ICs inspection systems.

1990
January : Customer service contract was signed with UCB (Belgium) to supply photoresists in Europe and North America.

February : A joint venture contract was signed with UCB to supply photoresists in Europe and North America.

September : Registration certification of ISO9002 was obtained for the Semiconductor and Display materials of the Yokkaichi Plant.

June : A photore sist manufacturing subsidiary, JSR Electronics Kusu Co., Ltd. was established.

1991
October : Sales of DYNAFLOW™ began.

November : Sales of an epoxy-type, photo-curing resin having high accuracy and high performance for photofabrication (stereolithography) models began.

1992
January : Closure of research and development systems was introduced.

May : DYNAFLO™ (a new hydrog enated polymer) and DYNA RON ALLOY (the thermoplastic elastomer using this polymer), were developed and sales began.

1993
January : A new research building was completed at the Yokkaichi Plant site.

June : President Akasaka became Chairman, and Managing Director, Eiichi Matsumoto became President.

1994
February : Obtained Registration Certification of International Quality Assurance Standard for synthetic resins and NBR produced in the Yokkaichi Plant.

December : The Shanghai Office (China) was opened.

March : Sales of OPTER™/CR (pigment dispersed resists) for LCDs color filters entered the market.

April : Capital investment was made in PINDUSTRY (Thailand) to conduct local production of CMB.

1995
April : JSR THAILAND Co., Ltd. (formerly TECHNO POLYMER THAILAND CO., LTD.) a subsidiary sales company for synthetic resin, was established in Bangkok (Thailand). The European Office was opened.

July : A statement was made by the president of JSR on how JSR Corp. will cope with Responsible Care. A Management Policy regarding Safety, Environment, Quality, and Product Safety was formulated, and a Responsible Care Promotion Headquarters was established.

1996
August : A synthetic resin sales subsidiary, Techno Polymer (Shanghai) Co., Ltd. (China) was founded.

September : Registration certification of ISO9002 was obtained for the Semiconductor and Display materials of the Yokkaichi Plant.

1997
March : Construction was completed for a photore sist plant (Sunnyvale, California U.S.) of JSR MICROELECTRONICS, INC.

September : An ARTON™ mass-production plant was completed at the Chiba Plant.

Chiba Plant obtained the Registration Certification of ISO9002.

1998
February : In order to expand the Semiconductor and Display materials business, the Yokkaichi Plant was expanded to produce new products.

March : Sales of OPTER™/AL (alignment films) and OPTER™/SS (protective coatings) began.

April : Incorporated the SHAPE (Shanghai) Co., Ltd. in China.

1999
February : In order to expand the Semiconductor and Display materials business, the Yokkaichi Plant was expanded to produce new products.

March : Sales of OPTER™/AL (alignment films) and OPTER™/SS (protective coatings) began.

April : Incorporated the SHAPE (Shanghai) Co., Ltd. in China.
Display business in Taiwan, The Taiwan Office was opened. Photore sist production plant of JSR Electronics Kyushu Co., Ltd. was completed.

December: Changed Corporate name to “JSR Corporation” 2003

Kashima Plant obtained the Registration Certification of ISO9002.

1998 March : Obtained Registration Certification of International standards related to environmental control and auditing ISO14001 for the Yokkaichi Plant

1999 February : High functional product group for liquid crystal display materials such as Negative Photoretist for LCD spacer which realize high resolution and high contrast in LCD panels was newly added.

May : Kashima Plant obtained the Registration Certification of ISO14001.

2000 March : A new masterbatch company ELASTOMIX (THAILAND) CO., LTD. was established in Thailand

April : imec (Belgium) officially adopted JSR ArF resist as a standard for processing 0.13μm lines for the next generation semiconductors.

August : A new environmental accounting system is introduced.

2001 March : JSR established dual production with second plant to manufacture DESOLITE, a coating material for optical fibers.

June : President Matsumoto became Chairman and Vice president Yoshinori Yoshida became the new President.

October : Launch of “JSR EXCELINK™”, a new sophisti cated offliner-based thermal elastomer.

2002 October : Corporate name alignment for three semiconductor materials subsidiaries: JSR Microelectronics (U.S.) changed to JSR Micro, Inc., JSR ELECTRONICS N.V. (Belgium) changed to JSR Micro N.V. and JSR Electronics Kyushu Co., Ltd. changed to JSR Micro Kyushu Co., Ltd.

November : Completed new plant facilities for semiconductor materials in Belgium.

December : Completed new plant facilities for CMP polishing pads at the Yokkaichi Plant.

2003 May : Relocated the Head Office to HAMARIKYU Parkside Place, 6-10 Tsukiji 5-chome, Chuo-ku, Tokyo, Japan.

June : A CSR committee was established to execute Corporate Social Responsibility reporting and compliance.

Consignment production of SSBR by Dow Rubber was launched.

December : A production plant for ARTONTM film for optical use was completed on the Yokkaichi Plant premise.

January : Stock trading unit was reduced from 1,000 to 100 shares.

April : JSR group company “NICHIGO SHOJI CO., LTD.” changed name to “JSR Trading Co., Ltd.”.

May : Construction of a CMP (Chemical Mechanical Planarization) applications laboratory at JSR Micro, Inc. was completed.

June : Achieved “zero waste” at all plants as a first for the petrochemical industry.

July : JSR group company “Nichigo Engineering Co., Ltd.” changed name to “JSR ENGINEERING CO., LTD.”.

October : JSR Micro Korea Co., Ltd. (plant for production of LCD materials) was completed and started commercial production.

April : JSR developed a photocatalytic coating material with long-term durability using an organic/inorganic hybrid technology and launched the DYNACERA® product lineup.

August : Completed the 2nd phase of construction for the production plant for display materials (JSR Micro Korea Co., Ltd.) in South Korea and full operations began.

November : Increased production capacity for Solution Polymerization Styrene-Butadiene Rubber (SSBR).

January : Completed construction of new clean room facilities at the Yokkaichi research center.

February : Together with IBM, JSR advanced the viability of immersion lithography by demonstrating sub-30nm patterning with ArF lithography systems.

March : Completed construction of precision machining pilot facilities at the Yokkaichi plant.

October : Received the Best Supplier Award for ArF resist for next generation memory from Samsung Electronics.

March : Completed the Precision Process Research Center.

May : JSR announced the "FY2006 The Society of Photo Science, Japan Prize" for developing a fuel cell electrolyte membrane.

June : Endorsed capacity rights agreement with Dow Europe GmbH to receive Solution Polymerization Styrene-Butadiene Rubber (SSBR).

August : Established "JM Energy Corporation" as a joint-venture for lithium ion capacitor businesses.

November : Completed phase II construction of JSR Micro Taiwan Co., Ltd.

December : Completed the Precision Process Research Laboratories in the Yokkaichi district.

JSR and IBM endorsee a joint-development agreement for R&D of next generation semiconductor processes.

March : Developed “Freezing materials” as new semiconductor lithography materials.

November : JM Energy completed construction of the world’s first commercial production plant of lithium ion capacitors.

January : Relocated the Head office to Shidome Sumitomo Bldg., 1-9-2 Higashihirashibashi, Minato-ku, Tokyo.

March : Start of commercial production of Solution Polymerization Styrene-Butadiene Rubber (SSBR).

Joint-venture Techno Polymer Co., Ltd. becomes a 100% subsidiary.

April : President Yoshida was promoted to Chairman and Executive Managing Director.

Koshiba was promoted to President.

September : Liquid crystal display materials capacity increased (JSR Micro Kyushu).

November : Advanced high performance materials plant at the Yokkaichi Plant put into operation.

January : Received The Chemical Society of Japan's 58th Award for Technical Development.

March : Established “JSR (Shanghai) CO., Ltd.” Developed “LUMILON™”, a LED-related performance materials.

Expanded group “Research Center of Advanced Materials”, a research center operated with Kindai University.

April : Installation of a large-scale, natural gas-fired turbine cogeneration system at the Yokkaichi Plant.

May : Announcement of increasing production capacity of SSBR (solution polymerization styrene-butadiene rubber) and DYNARON (hydrogenated polymer).

October : D-MEC launched DESOLITE SCR™780, a stereolithography resin with excellent mechanical properties and high transparency. “With chemistry, we can...”, the history book of JSR’s first 50 years, received an award for the Japan Business History Institute, Japan Butyl Co. Ltd. completed Butyl Rubber capacity expansion at Kawasaki Plant.

Launched new polyolactic acid-based bioplastic BIOLLOY™.

November : E-TEC urethane adhesive was used in high-performance racing cars.

July : A new R&D facility for LCD materials began operations at JSR Micro Korea Co., Ltd. Developed CALGRIP, a latent heat storage material enhancing temperature control performance.

November : Expanded Green Energy/Smart Technology Practice by Signing a Joint Development Agreement with Capstone Metering LLC.

JSR Shanghai established sales bases in Beijing and Shenzhen, China.

December : Completed increase of manufacturing capacity of Solution Polymerization Styrene-Butadiene Rubber (SSBR).

JM Electronics Kyushu Co., Ltd. completed construction of manufacturing plant, evaluation building and safety assessment laboratory for flat prismatic type lithium ion capactors.
2011


December: JSR established a joint venture, JSR Micro (Changshu) Co., Ltd., to manufacture display materials in China.

February: JSR jointly acquired KBI Biopharma, Inc., a contract developer and manufacturer of biopharmaceuticals in the United States.

March : JM Energy's new lithium ion capacitor commercial plant was completed.

JSR Receives Supplier Continuous Quality Improvement (SCQI) Award from Intel Corporation.

Increased our shareholding in MBL.

JSR reached an agreement with Keio University to jointly establish and operate the JSR/Keio University Medical and Chemical Innovation Center (JKiC), a joint research institute to be positioned as a base for industry-academia-medicine cooperation.

April : ELASTOMIX Co., Ltd. doubles the carbon masterbatch (CMB) production capacity of ELASTOMIX Foshan Co., Ltd. in China.

June : D-MEC Ltd. begins to sell a stereolithography 3-D printer that achieves the largest-size reproduction in Japan.

JSR and JSR Life Sciences started selling ExoCap™ Kit optimized for serum, plasma and cell culture.

October : MBL becomes a consolidated subsidiary of JSR.

JSR and JSR Life Sciences developed Amisphere™ A3, a next generation protein A chromatography resin.

December: JSR, IBM Japan, Ltd. and Senju Metal Industry Co., Ltd. jointly develop Injection Molded Solder (IMS), for 300mm wafers, which is a technology to form bumps for high density semiconductor packagings.

February: JSR and imec established a new company “EUV Resist Manufacturing and Qualification Center N.V.” for the production and qualification of EUV photoresist.

March : JSR Receives Supplier Continuous Quality Improvement (SCQI) Award from Intel Corporation.

JSR is selected for the FY 2015 Nadeshiko Brands by the Ministry of Economy, Trade and Industry and the Tokyo Stock Exchange.

Received The Chemical Society of Japan's 64th Award for Technical Development.

May : Reached an agreement with UBE Industries and Mitsubishi Rayon Co., Ltd. (Mitsubishi Chemical Corporation) to begin negotiations for the merger of subsidiaries in the ABS resin business.

August : Transferred OPSTAR™ business to ARAKWA CHEMICAL INDUSTRIES, LTD., Developed a 3D printed prosthetic leg with ANA and SHC Design.

September: Made a strategic investment in US startup, Carbon, Inc. with innovative 3D printing technology.

October : ELASTOMIX Co., Ltd. decided to establish a new carbon masterbatch company in Mexico.

March : EUV resist manufacturing facility was completed at the EUV Resist Manufacturing & Qualification Center N.V. (Belgium).

Received Intel’s Prestigious Supplier Continuous Quality Improvement Award.

May : Expanded Amisphere™ A3 Production Capacity KBI Biopharma, Inc. expanded manufacturing capabilities.

June : Agreed to acquire Swiss pioneering cell line developer Selexis SA

July : Ranked on the ESG Indexes FTSE Blossom Japan Index and MSCI Japan Empowering Women Index.

Agreed to acquire medical 3D software maker LEXI Co., Ltd.

November: JSR, Keio University held opening ceremony for the JSR-Keio University Medical and Chemical Innovation Center (JKiC).

January : Selected to the Morningstar Socially Responsible Investment Index (MS-SRI).

February: Completed a new research building at the Yokkaichi Plant.

Recognized for second consecutive year as a 2018 Excellent Health and Productivity Management Organization (White500).

March : Received Intel’s Preferred Quality Supplier Award.

April : Established Techno-UMG Co., Ltd. as an integrated ABS resin business.

Started operations of JSR Elastomer India Private Limited, a new subsidiary in India.

May : Agreed to collaborate with Oxford Performance Materials, Inc. in the fields of medical and dental applications.

Completed acquisition of Crown Bioscience International.

September: Started operations of JSR Trading Vietnam
JSR’s Network in the World

JSR Group is building its business activities on a global scale through its 41 overseas business sites.

Globalization of JSR Group

JSR’s Network in Japan

The JSR network in Japan consists of the parent company, together with key manufacturing sites, research facilities and 21 JSR Group companies.

- JSR Corporation Head Office
- JSR Corporation Nagoya Branch
- JSR Corporation Yokkaichi Plant and Research Laboratories
- JSR Corporation Chiba Plant
- JSR Corporation Kashima Plant
- JSR Corporation Tsukuba Research Laboratories
- JSR-Kio University Medical and Chemical Innovation Center
- JSR Trading Co., Ltd.
- Emulsion Technology Co., Ltd.
- JSR Logistics & Customer Center Co., Ltd.
- JSR ENGINEERING CO., LTD.
- JSR Business Services Co., Ltd.
- 2-MIC LTD.
- JSR Micro Kyushu Co., Ltd.
- Techno-UMG Co., Ltd.
- JM Energy Corporation
- ELASTOMIX CO., LTD.
- JAPAN COLORING CO., LTD.
- Japan Rulyl Co., Ltd.
- JAPAN FINE COATINGS Co., Ltd.
- KRAOTON JSR ELASTOMERS K. K.
- JSR Life Sciences Corporation
- JN System Partners Co., Ltd.
- MEDICAL & BIOLOGICAL LABORATORIES CO., LTD.
- JEY-TRANS CO., LTD.
- CMIC JSR Biologics Co., Ltd.
- LED Co., Ltd.
- Soko Trading Co., Ltd.
### Main Group Enterprises

#### Network in the World

<table>
<thead>
<tr>
<th>No.</th>
<th>Company Name</th>
<th>Address</th>
<th>Telephone</th>
<th>Facsimile</th>
<th>Representative</th>
<th>Capital</th>
<th>JSR Ownership (%)</th>
<th>Purpose of Enterprise</th>
<th>Date of Establishment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>JSR Micro N.V.</td>
<td>Technologiefalan 8, B-3001, Leuven, Belgium</td>
<td>32-16-832-832</td>
<td>32-16-832-839</td>
<td>Bart Dendack</td>
<td>EUR11,155,000</td>
<td>100</td>
<td>Production and sales of semiconductor materials and life sciences related materials</td>
<td>Feb. 20, 1990</td>
</tr>
<tr>
<td>2</td>
<td>EUV Resist Manufacturing &amp; Qualification Center N.V.</td>
<td>Technologiefalan 8, B-3001, Leuven, Belgium</td>
<td>32-16-832-832</td>
<td>32-16-832-839</td>
<td>Bart Dendack</td>
<td>Nondisclosure</td>
<td>69.4</td>
<td>Production of EUV photoresists for semiconductor</td>
<td>Dec. 18, 2015</td>
</tr>
<tr>
<td>3</td>
<td>JSR Elastomer Europe GmbH</td>
<td>An Zeestraße 8, 40547 Duesseldorf, Germany</td>
<td>49-211-730-669-0</td>
<td>49-211-730-669-20</td>
<td>Keisuke Miyoshi</td>
<td>EUR25,000</td>
<td>100</td>
<td>Sales agency of products such as synthetic rubbers</td>
<td>Apr. 27, 2016</td>
</tr>
<tr>
<td>4</td>
<td>JSR MOL Synthetic Rubber Ltd.</td>
<td>Október huszadhatmakota utca 18., Budapest, Hungary</td>
<td>–</td>
<td>–</td>
<td>Takatoshi Nagatomo</td>
<td>EUR100,017,500</td>
<td>51</td>
<td>Sales and manufacturing of solution polymerization styrene-butadiene rubber</td>
<td>Mar. 25, 2014</td>
</tr>
<tr>
<td>6</td>
<td>Techno-UMG Europe GmbH</td>
<td>Berliner Allee 29, 40212 Düsseldorf, Germany</td>
<td>49-0-211-54235720</td>
<td>–</td>
<td>Chaki Okabe</td>
<td>EUR350,000</td>
<td>51</td>
<td>Sales and technical services of synthetic resin in Europe</td>
<td>Apr. 3, 2018</td>
</tr>
<tr>
<td>7</td>
<td>JSR &amp; W Beijing Biotech Co., Ltd.</td>
<td>No.31 LiMe Life Science Park Road, Chaping District, Beijing 102206, China</td>
<td>86-10-5982-8900</td>
<td>–</td>
<td>Fan jingian</td>
<td>RMB40,000,000</td>
<td>60</td>
<td>Development, manufacturing and sale of latex reagents intermediates and chemiluminescent reagents intermediates</td>
<td>Feb. 8, 2012</td>
</tr>
<tr>
<td>8</td>
<td>Tianjin Kuo Cheng Rubber Industry Co., Ltd.</td>
<td>No28, Jiinhai Road, Jinghai Economic Development Area, Tianjin, China</td>
<td>86-22-5979-2025</td>
<td>86-22-5979-2029</td>
<td>Lin Kang Chi</td>
<td>RMB2,600,000</td>
<td>50</td>
<td>Compounding of crude rubber and sales of compounding products</td>
<td>Dec. 6, 1995</td>
</tr>
<tr>
<td>9</td>
<td>MBL Beijing Biotech Co., Ltd.*</td>
<td>Room 1606, Xuyuan International Tower, 1 Zhichun Road, Haidian District, 100191 Beijing, China</td>
<td>86-10-8289-9503</td>
<td>86-10-8289-9076</td>
<td>Tamao Kaku</td>
<td>RMB12,000,000</td>
<td>50.4</td>
<td>Sales of in-vitro diagnostic reagents, basic research reagents, IVD reagent materials and biosupport materials. Sales and contract manufacturing of gene diagnostic materials and DNA, RNA products</td>
<td>Apr. 13, 2005</td>
</tr>
<tr>
<td>10</td>
<td>Kumho Polychem Co., Ltd.</td>
<td>8F, East Wing, Signature Tower #100, Cheonggyechoen-ro, Jung-gu, Seoul 100-230, Korea</td>
<td>82-2-6961-3876</td>
<td>82-2-6961-3812</td>
<td>Takeshi Sugimoto</td>
<td>WON21,500,000</td>
<td>50</td>
<td>Production and sales of ethylene propylene rubber</td>
<td>Jun. 5, 1985</td>
</tr>
<tr>
<td>11</td>
<td>JSR Micro Korea Co., Ltd.</td>
<td>97, Gwahakmun-pyeong 4-e, Oksan-myeon, Hungdong-gu, Cheongju-si, Chungcheongbuk-do, 28212 Korea</td>
<td>82-43-219-3333</td>
<td>82-43-219-3396</td>
<td>David Sanming Park, Yoshikaka Yamaguchi</td>
<td>WON2,000,000,000</td>
<td>100</td>
<td>Design, development, production and sale of display materials</td>
<td>Jan. 28, 2003</td>
</tr>
<tr>
<td>12</td>
<td>JSR Electronic Materials Korea Co., Ltd.</td>
<td>Sansan-hun HIPLEX A-610,240, Pyonyeok-ro,Bundang-gu,Seongnam-si,Gyeonggi-do 1495, Korea</td>
<td>82-31-698-4420</td>
<td>82-31-698-4421</td>
<td>David Sanming Park, Jumichi Katakahi</td>
<td>WON100,000,000</td>
<td>40</td>
<td>Sales agency of products such as semiconductor materials</td>
<td>Sep. 30, 2014</td>
</tr>
<tr>
<td>13</td>
<td>JSR Elastomer Korea Co., Ltd.</td>
<td>Gwanghwamun Bldg. 15th Floor, 149 Sejong-daero, Jongno-gu, Seoul 110-730, Korea</td>
<td>82-2-399-2731</td>
<td>82-2-399-2730</td>
<td>Yosuke Tanaka</td>
<td>WON300,000,000</td>
<td>100</td>
<td>Sales agency of products such as synthetic rubbers</td>
<td>Apr. 22, 2015</td>
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<tr>
<td>14</td>
<td>JSR Trading (Shanghai) Co., Ltd.*</td>
<td>Room 605 SMEG PLAZA 1386 Hongqiao Road, Shanghai 200051</td>
<td>86-21-6295-3340</td>
<td>86-21-6295-3345</td>
<td>Shinichi Takiguchi</td>
<td>US$200,000</td>
<td>100</td>
<td>Exports and imports, purchase and sales of the following: various chemicals, machinery, equipment, distribution materials</td>
<td>Jan. 10, 2003</td>
</tr>
<tr>
<td>15</td>
<td>JSR (Shanghai) Co., Ltd.</td>
<td>Room 606 SMEG PLAZA 1386 Hongqiao Road, Shanghai 200051</td>
<td>86-21-6278-7600</td>
<td>86-21-6278-7604</td>
<td>Truoyoshi Watanabe</td>
<td>US$200,000</td>
<td>100</td>
<td>Sales agency of products such as synthetic rubbers, semiconductor materials, LCD materials and performance chemicals</td>
<td>Mar 19, 2010</td>
</tr>
<tr>
<td>18</td>
<td>Techno-UMG Guangzhou Co., Ltd.*</td>
<td>Room44104, China Shine Plaza, 3-15 Linhe xi Road, Guangzhou, China 510075</td>
<td>86-20-3810-3655</td>
<td>86-20-3810-3657</td>
<td>Tomomichi Mikami</td>
<td>US$300,000</td>
<td>51</td>
<td>Sales and technical services of synthetic resin in Guangzhou and neighboring regions</td>
<td>Feb. 26, 2008</td>
</tr>
<tr>
<td>19</td>
<td>ELASTOMIX (FOSHAN) CO., LTD.*</td>
<td>Sansa Industrial Park, Foshan, Guangdong, P.R.C.</td>
<td>86-757-873-80386</td>
<td>86-757-873-80387</td>
<td>Kazuichi Abe</td>
<td>US$5,500,000</td>
<td>100</td>
<td>Compounding of crude rubber and sales of compounded products</td>
<td>Mar. 10, 2005</td>
</tr>
<tr>
<td>20</td>
<td>JSR Micro (Changsha) Co., Ltd.</td>
<td>No.101, Changshun Rd. , Riveride Industrial Park, Changsha Economic Development Zone, Jiangsu Province, China</td>
<td>86-512-5264-8000</td>
<td>–</td>
<td>Katuya Inoue</td>
<td>US$33,000,000</td>
<td>51</td>
<td>Production of display materials</td>
<td>May 19, 2015</td>
</tr>
<tr>
<td>21</td>
<td>Techno-UMG Hong Kong Co., Ltd.*</td>
<td>Room 1406-07, 14/F, Tower 2, Admiralty Centre, No.18 Harcourt Road, Hong Kong</td>
<td>852-2521-7622</td>
<td>852-2523-4915</td>
<td>Louis C.S. Lo</td>
<td>US$320,000</td>
<td>51</td>
<td>Sales and technical services of synthetic resin in Hong Kong and neighboring regions</td>
<td>Oct. 20, 1989</td>
</tr>
<tr>
<td>22</td>
<td>JSR Micro Taiwan Co., Ltd.</td>
<td>No.51, Keel 1st Rd., Hweite Town, Yulin County 632, Central Taiwan Science Park Hweite Park, Taiwan, R.O.C.</td>
<td>886-5-632-3000</td>
<td>886-5-632-3275</td>
<td>Hiroaki Nemioto</td>
<td>NTS200,000,000</td>
<td>100</td>
<td>Design, development, production and sale of display materials</td>
<td>Mar. 16, 2005</td>
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</tbody>
</table>

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<th>Date of Establishment</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>JSR BST Elastomer Co., Ltd. *</td>
<td>175 Sathorn City Tower 10th F.L., South Sathorn Road, Bangkok 10120 Thailand</td>
<td>66-2679-6644</td>
<td>66-2679-6650</td>
<td>Itti Rittaporn</td>
<td>BTH5,220,000,000</td>
<td>51</td>
<td>Sales and manufacturing of solution polymerization styrene-butadiene rubber</td>
<td>Jun. 28, 2011</td>
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<tr>
<td>2</td>
<td>Techno-UMG Asia Co., Ltd.</td>
<td>968, 28th Floor, U-Chatung Foundation Building Rama 4 Road, Silom, Bangkok, 10500 Thailand</td>
<td>66-2-636-7569</td>
<td>66-2-636-7576</td>
<td>Kuku Ohana</td>
<td>THB12,000,000,000</td>
<td>51</td>
<td>Sales and technical services of synthetic resin in ASEAN region</td>
<td>Apr. 5, 2012</td>
</tr>
<tr>
<td>5</td>
<td>JSR Trading Bangkok Co., Ltd.</td>
<td>163 Thai Samut Bldg., 17th Floor, Room 17C, Sarawongse Road, Sariyawongse, Bangkok, 10500, Thailand</td>
<td>66-2-236-7291</td>
<td>66-2-236-7294</td>
<td>Shusichi Ishikawa</td>
<td>BT19,000,000,000</td>
<td>100</td>
<td>Export, purchase and sale of various chemicals and distribution materials. Purchase and wholesale of various equipment</td>
<td>Dec. 6, 2011</td>
</tr>
<tr>
<td>6</td>
<td>JSR Elastomer India Private Limited *</td>
<td>Unit 506, Vatika City Point, MG Road, Gurgaon, Haryana-122002, India</td>
<td>91-124-4867530</td>
<td>91-124-4867560</td>
<td>Kensaku Mitamura</td>
<td>INR15,000,000,000</td>
<td>100</td>
<td>Sales agent for synthetic rubbers and other elastomer products</td>
<td>Dec. 20, 2017</td>
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<tr>
<td>7</td>
<td>JSR Trading Vietnam Co., Ltd.</td>
<td>51733, Skyline Service Office, Prime Centre Building, 53 Quang Trung Street, Hai Ba Trung District, Hanoi, Vietnam</td>
<td>84-24-7300-0772</td>
<td>84-24-3943-7208</td>
<td>Fuminori Tsuibo</td>
<td>VND20,798,000,000,000</td>
<td>100</td>
<td>Export, import and sales of synthetic rubber and steel container and market development</td>
<td>July 25, 2018</td>
</tr>
<tr>
<td>9</td>
<td>JSR Elastomer America, Inc.</td>
<td>5300 DuPont Circle, Building 16, Suite D, Milford, OH 45150 U.S.A</td>
<td>1-513-421-6166</td>
<td>1-513-421-6148</td>
<td>Toshiyuki Fujisawa</td>
<td>US$1,200,000,000,000</td>
<td>100</td>
<td>Sales of synthetic rubber</td>
<td>Apr. 1, 1970</td>
</tr>
<tr>
<td>11</td>
<td>KBI Biopharma, Inc.</td>
<td>1101 Hamlin Road Durham, NC 27704, USA</td>
<td>1-919-479-9998</td>
<td>1-919-620-7786</td>
<td>Timothy M. Kelly</td>
<td>US$49,168,000,000</td>
<td>90</td>
<td>Biopharmaceutical contract development and manufacturing services</td>
<td>Dec. 31, 2001</td>
</tr>
<tr>
<td>12</td>
<td>MBL International Corporation *</td>
<td>15A Constitution Way Woburn, MA 01801, USA</td>
<td>1-888-205-5499</td>
<td>–</td>
<td>Nalini Murdter</td>
<td>US$10,590,000,000</td>
<td>75.7</td>
<td>Development, manufacturing and sales of solutions-based products for both life science research and clinical diagnostics</td>
<td>Nov. 19, 1993</td>
</tr>
<tr>
<td>13</td>
<td>JSRT México S.A. de C.V.</td>
<td>Rio San Lorenzo No.519, Parque Tecnológico Industrial del Río, Irapuato, GTO, Mexico</td>
<td>52-462-607-4929</td>
<td>–</td>
<td>Yukihiro Yusa</td>
<td>MXXS109,257,000,000</td>
<td>100</td>
<td>Sales of synthetic rubber, steel box, materials and market development</td>
<td>Jan. 6, 2017</td>
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<tr>
<td>14</td>
<td>ELASTOMIX MEXICO, S.A. de C.V. *</td>
<td>Rio San Lorenzo No.519, Parque Tecnológico Industrial del Río, Irapuato, Gto, 38100, Mexico</td>
<td>52-462-607-4990</td>
<td>52-462-607-4911</td>
<td>Kimihiko Matsuura</td>
<td>MXN5,140,000,000</td>
<td>98.5</td>
<td>Compounding of crude rubber and sales of compounding products</td>
<td>Feb. 17, 2017</td>
</tr>
<tr>
<td>15</td>
<td>Crown Bioscience International</td>
<td>16550 West Bernardo Drive Building 5, Suite 525 San Diego, CA 92127</td>
<td>1-858-622-2900</td>
<td>–</td>
<td>Jean Pierre Wery</td>
<td>US$44,800,000,000</td>
<td>100</td>
<td>Efficacy testing services for candidates of drugs against oncology, inflammation, cardiovascular and metabolic disease and development of antibodies for these diseases</td>
<td>Apr. 25, 2006</td>
</tr>
<tr>
<td>16</td>
<td>JSR North America Holdings Inc.</td>
<td>1280 North Mathilda Avenue, Sunnyvale, CA 94089, USA</td>
<td>1-408-543-8800</td>
<td>1-408-543-8872</td>
<td>Eric Johnson</td>
<td>US$29,891,710,000</td>
<td>100</td>
<td>Management and oversight of JSR Micro, Inc. and JSR Life Sciences, LLC’s global operation</td>
<td>Jan. 1, 2019</td>
</tr>
<tr>
<td>17</td>
<td>JSR Life Sciences, LLC</td>
<td>1280 North Mathilda Avenue, Sunnyvale, CA 94089, USA</td>
<td>1-408-543-8800</td>
<td>1-408-543-8872</td>
<td>Tim Lowery</td>
<td>US$4,133,272,000</td>
<td>100</td>
<td>JSR Life Sciences global business headquarters and distribution of life sciences products in the US market</td>
<td>Jan. 1, 2019</td>
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</tbody>
</table>

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## Network in Japan

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<tr>
<td>JSR Trading Co., Ltd.</td>
<td>1-9-2 Higashi-Shinbashì, Minato-ku, Tokyo, 105-0021, Japan</td>
<td>81-3-6218-3802</td>
<td>81-3-6218-3815</td>
<td>Shinji Sakamoto</td>
<td>¥480,000,000</td>
<td>100</td>
<td>Exports, imports, purchase and sale of various chemicals, machinery, equipment, distribution materials, daily supplies, foodstuff, real estate, and more</td>
<td>Sep. 1, 1961</td>
</tr>
<tr>
<td>Emulsion Technology Co., Ltd.</td>
<td>1-4-16 Ohuta, Yokkaichi, Mie, 510-0875, Japan</td>
<td>81-59-345-0022</td>
<td>81-59-347-2593</td>
<td>Osamu Ishikawa</td>
<td>¥168,000,000</td>
<td>100</td>
<td>Compounding and sales of crude latex</td>
<td>Oct. 19, 1963</td>
</tr>
<tr>
<td>JSR Logistics &amp; Customer Center Co., Ltd.</td>
<td>100 Kawajiri-cho, Yokkaichi, Mie 510-8552, Japan</td>
<td>81-59-336-6652</td>
<td>81-59-346-8249</td>
<td>Kazuhiro Nishihara</td>
<td>¥10,000,000</td>
<td>100</td>
<td>Customer service agent and logistics management</td>
<td>Apr. 1, 2014</td>
</tr>
<tr>
<td>JSR ENGINEERING CO., LTD.</td>
<td>1-9-2 Higashi-Shinbashì, Minato-ku, Tokyo, 105-0021, Japan</td>
<td>81-3-6218-3771</td>
<td>81-3-6218-3770</td>
<td>Junichiro Okita</td>
<td>¥10,000,000</td>
<td>100</td>
<td>Human resources, payroll calculation, welfare, general affairs</td>
<td>Nov. 12, 1984</td>
</tr>
<tr>
<td>D-MEC Ltd.</td>
<td>1-9-2 Higashi-Shinbashì, Minato-ku, Tokyo, 105-0021, Japan</td>
<td>81-3-6218-3582</td>
<td>81-3-6218-3590</td>
<td>Hideaki Kumazawa</td>
<td>¥65,000,000</td>
<td>100</td>
<td>3D model generation, analysis by CAE and sales of solid modeling system and optically-hardened resins</td>
<td>Feb. 28, 1990</td>
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<td>JSR Trading Co., Ltd.</td>
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<td>Shinji Sakamoto</td>
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<td>JSR Micro Kyushu Co., Ltd.</td>
<td>1580-1 Kamiizumi, Kuboizumi-cho oaza, Saga, 849-0902, Japan</td>
<td>81-952-98-3001</td>
<td>81-952-98-3855</td>
<td>Michinori Nishihara</td>
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<td>Michinori Nishihara</td>
<td>¥300,000,000</td>
<td>100</td>
<td>Production of semiconductor and display materials</td>
<td>Jan. 5, 1996</td>
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JSR Corporation

Head Office
Shiodome Sumitomo Bldg.
1-9-2 Higashi-Shimbashi, Minato-ku, Tokyo
105-8640 Japan
TEL. 81-3-6218-3500
FAX. 81-3-6218-3682

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3-38-12 Meieki, Nakamura-ku, Nagoya-shi, Aichi
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TEL. 81-52-533-2260
FAX. 81-52-586-0261

Yokkaichi Plant
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510-8552 Japan
TEL. 81-59-345-8000
FAX. 81-59-345-8111

Chiba Plant
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299-0108 Japan
TEL. 81-436-62-4161
FAX. 81-436-62-1946

Kashima Plant
34-1, Towada, Kamisu-shi, Ibaraki
314-0102 Japan
TEL. 81-299-96-2511
FAX. 81-299-96-5695

Yokkaichi Research Center
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510-8552 Japan
TEL. 81-59-345-8084
FAX. 81-59-345-8118

Tsukuba Research Laboratories
25, Miyukigaoka, Tsukuba-shi, Ibaraki
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TEL. 81-29-856-1001
FAX. 81-29-856-1003

JSR-Keio University Medical and Chemical Innovation Center
25, Shinanomachi, Shinjuku-ku, Tokyo
160-8582 Japan
TEL. 81-3-6274-8602
FAX. 81-3-6274-8649

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17F-C1, No.8, Zhicang S. Rd., Jhubei City,
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FAX. 886-3-657-6642

http://www.jsr.co.jp/jsr_e