Zeon Chemicals Singapore Pte. Ltd. (ZCS)

**Company Profile**

**Business Description**
Manufacture and sales of synthetic rubber, primarily for fuel-efficient tires
- S-SBR: Solution-polymerized styrene butadiene rubber
- Terminal modified butadiene rubber

Established in 2010, Zeon Chemicals Singapore began full production of S-SBR for fuel-efficient tires on Jurong Island, Singapore, in April 2014. ZCS began a second production line in April 2016, and ships products to countries in Asia, Europe, and around the world.

**Location**
Jurong Island, Singapore

No. of Employees
As of March 31, 2018: 103
Hiring in FY 2017: 11

**Company Policy (Executive Message)**

In March 2016, we completed our second production line to double our production capacity. As a producer and supplier of high-performance rubber needed to make fuel-efficient tires, which are one way to help address progressively worsening climate change, we will double our contributions to society along with our doubled capacity. In FY 2017, we modified our facilities so as to be able to produce new products that meet customer needs. Our operations staff have finished training on new product production at Zeon Corporation’s Tokuyama Plant, and, having confirmed that we are able to undertake production of these new products properly according to the designs, we are beginning to supply these new products, and other products, to markets all over the world. In today’s era, when tires are expected to provide ever higher levels of performance, the potential applications for Zeon’s fuel economy enhancing tire rubber are growing steadily.

**Safety Initiatives**

**Policy**
We decide the action items to achieve our goals of zero lost-time accidents and zero serious safety abnormalities.
Specific Initiatives
1. Monthly safety patrols
2. Systematic acquisition of qualifications by employees
3. Periodic trainings using safety videos
4. Regular checks of safety indicators decided by each department

Environmental Impact Reductions

Policy
Our environmental policy is established as part of the HSE Policy*

*HSE Policy
Health, safety, and environment policy

Specific Initiatives
Water resources are a particular problem in Singapore with its limited land area. In order to use water, which is such a precious resource, more efficiently, we are continuing to implement measures to reduce our industrial water consumption intensity. In FY 2017, we successfully improved our efficiency by 7% year on year. Our energy consumption and CO₂ emissions have increased in line with the increase in our production capacity, but we are continuing to take steps to improve our energy efficiency.

Environmental Data
* "0" indicates less than 0.5 tons, and "0.0" indicates less than 0.05 tons

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Industrial waste</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Amount generated before compacting (tons)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Amount sent to landfills (tons)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Water resource consumption (1,000 m³)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(industrial water + groundwater + waterworks)</td>
<td>312</td>
<td>402</td>
<td>417</td>
<td>458</td>
</tr>
<tr>
<td>CO₂ emissions (tons)</td>
<td>39,180</td>
<td>43,533</td>
<td>56,400</td>
<td>67,221</td>
</tr>
<tr>
<td>Energy consumption (crude oil equivalent, kL)</td>
<td>17,575</td>
<td>19,227</td>
<td>24,911</td>
<td>29,680</td>
</tr>
</tbody>
</table>

Relationship with Employees

Policy
Human resources are assets vital to the success of our business, and we will solidify our business foundation by accurately and fairly conducting activities related to recruitment, placement, training, evaluation, and treatment of employees.

Specific Initiatives
Conduct local hiring with an open door, irrespective of gender or race. Start appointing locally hired employees to key positions, and develop and utilize local managers and supervisors. Incorporate training by instructors from plants in Japan and dispatch employees to Japan for training.
Relationship with the Local Community

Specific Initiatives
As more than 90% of our employees are local hires, we contribute to the local community through employment. We are creating new employment opportunities on an ongoing basis. In addition, 30% of employees who play key roles in plant operations receive plant operation management training in Japan, contributing to the transfer of technology.