Overview

These sensors require the presence of an acid electrolyte for their operation. This acid is tightly contained within an absorption media within the overall plastic body. In normal operation the chances of exposure to the acids are very small.

Inherent Hazards

These sensors contain a small quantity (~0.5 ml) of either 5M Sulfuric Acid or 5.7M Ortho-phosphoric Acid (SO₂ and PH₃ sensors). Both of these acids are corrosive. In normal operation there is a minimal risk of these liquids escaping from the sensor body.

The sensors also contain a very small amount of a metallic powder or carbon. These compounds are catalysts and if removed from the sensor body, and dried out, could promote oxidation and ignition of flammable/oxidisable species. In addition the dry powder could cause irritation to eyes and respiratory system.

These sensors contain small pins. Care needs to be taken to prevent puncture injuries.

If leakage of the contents is observed, gloves and eye protection should be worn to limit the chances of exposure before attempting any clean up procedures. Any spilt liquid and the sensor body can be washed with copious amounts of water.
Operational Hazards

Applying an excessive voltage to the sensor could cause excessive internal heating increasing the chances of leakage from the sensor caused by rupture of the internal seals.

Decommissioning

There are no particular hazards associated with decommissioning of this product.

Disposal

Sensors must not be disposed of by burning or crushing. Sensors must be disposed of according to local regulations.

This Product is compliant with the RoHS directive, 2002/95/EC

Material Data

The following table of material data provides information to assist disposal in accordance with environmental regulations.

<table>
<thead>
<tr>
<th>Sensor Type</th>
<th>Mass (g)</th>
<th>5 M (38%) Sulfuric Acid / Water CAS 7664-93-9</th>
<th>5.7 M Ortho-Phosphoric Acid / Water CAS 7664-38-2</th>
<th>Brass</th>
<th>ABS</th>
<th>Catalyst (See Note 1)</th>
<th>PTFE</th>
<th>Glass Fibre</th>
</tr>
</thead>
<tbody>
<tr>
<td>EC4 Series Electrochemical sensor</td>
<td>~5.6</td>
<td>~15%</td>
<td>0</td>
<td>~5%</td>
<td>~60%</td>
<td>Platinum black, Ruthenium black, Gold Powder, Silver Powder, Graphite</td>
<td>&lt;5%</td>
<td>&lt;5%</td>
</tr>
<tr>
<td>(excluding SO₂ and PH₃)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EC4 Series Electrochemical sensor (SO₂ and PH₃ ONLY)</td>
<td>~5.6</td>
<td>0</td>
<td>~15%</td>
<td>~5%</td>
<td>~60%</td>
<td></td>
<td></td>
<td>&lt;5%</td>
</tr>
</tbody>
</table>

Note 1: The catalyst contained in the sensor may be made up of one or several of these elements.

In the event of encountering difficulties in disposing of these products, contact SGX Sensortech (IS) Ltd for advice.