



Product Specification

|                             |                                                                                                                 |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------|
| E Control                   | QC2\DATAD\DA\PS\20890XPS.xls                                                                                    |
| PRODUCT CODE                | 20890                                                                                                           |
| PRODUCT NAME                | PERCHLOROC ACID 70% AR for diamond industry                                                                     |
| SYNONYMS                    | N/A                                                                                                             |
| C.I. NO.                    | N/A                                                                                                             |
| CASR NO.                    | 7601-90-3                                                                                                       |
| ATOMIC OR MOLECULAR FORMULA | HClO <sub>4</sub>                                                                                               |
| ATOMIC OR MOLECULAR WEIGHT  | 100.46                                                                                                          |
| PROPERTIES                  | Strong oxidizing agent, will ignite vigorously in contact with organic materials, or detonate by shock or heat. |

## HClO<sub>4</sub>

| PARAMETER                         | LIMIT                                                                         |
|-----------------------------------|-------------------------------------------------------------------------------|
| Description                       | A clear liquid colour not more than 10 Hazen units.                           |
| Solubility                        | Mix 50 ml with 50 ml of water. The solution is clear & colourless with no sep |
| Minimum assay<br>(By acidimetric) | 70.0%                                                                         |
| Wt. per ml at 20°C                | About 1.67 g                                                                  |
| Substances insoluble in ethanol   | Passes test.                                                                  |

### MAXIMUM LIMIT OF IMPURITIES

|                                              |           |
|----------------------------------------------|-----------|
| Residue on ignition<br>(as SO <sub>4</sub> ) | 0.003%    |
| Chloride (Cl)                                | 0.0003%   |
| Free chlorine (Cl <sub>2</sub> )             | 0.00005%  |
| Nitrogen compound (N)                        | 0.001%    |
| Phosphate & Silicate<br>(SiO <sub>2</sub> )  | 0.0005%   |
| Sulphate (SO <sub>4</sub> )                  | 0.001%    |
| Cadmium (Cd)                                 | 0.000005% |
| Copper (Cu)                                  | 0.00001%  |
| Iron (Fe)                                    | 0.0001%   |
| Lead (Pb)                                    | 0.000005% |
| Manganese (Mn)                               | 0.000005% |
| Silver (Ag)                                  | 0.00001%  |
| Zinc (Zn)                                    | 0.00001%  |
| Strontium (Sr)                               | 0.000005% |
| Titanium (Ti)                                | 0.00001%  |
| Nickel (Ni)                                  | 0.00001%  |
| Potassium (K)                                | 0.00001%  |
| Sodium (Na)                                  | 0.0001%   |
| Chlorate (ClO <sub>3</sub> )                 | 0.001%    |
| Aluminium (Al)                               | 0.00001%  |
| Arsenic (As)                                 | 0.000005% |
| Barium (Ba)                                  | 0.000005% |
| Beryllium (Be)                               | 0.000005% |
| Bismuth (Bi)                                 | 0.00001%  |
| Calcium (Ca)                                 | 0.00005%  |
| Cobalt (Co)                                  | 0.000005% |
| Lithium (Li)                                 | 0.000005% |

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| Magnesium (Mg)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                            | 0.00005%                                                        |                           |
| Note(s) : Assay (if applicable) method mentioned.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                            |                                                                 |                           |
| <p><b>DANGER</b></p> <p><b>HAZARD STATEMENTS</b> : May cause fire or explosion; strong oxidizer. May intensify fire; oxidizer. Harmful if swallowed. Causes severe skin burns and eye damage.</p> <p><b>PRECAUTIONARY STATEMENTS</b> :</p> <p><b>Prevention</b> : Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product. Wear fire/flame resistant/retardant clothing. Do not breathe dust or mist. Wash thoroughly after handling. Wear protective gloves/clothing and eye/face protection. Keep away from heat. Take any precaution to avoid mixing with combustible or incompatible materials. Keep away from clothing and other combustible materials.</p> <p><b>Response</b> : IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. If on skin or hair: remove/take off immediately all contaminated clothing. Rinse with water/shower. Wash contaminated clothing before reuse. Specific treatment: refer to Label or MSDS. Absorb spillage to prevent material damage. IF ON CLOTHING: Rinse immediately contaminated clothing and skin with plenty of water before removing clothes. In case of major fire and large quantities: Evacuate area and fight fire remotely due to the risk of explosion.</p> <p><b>Disposal</b> : Add in small quantities to large, stirred excess of water, keeping the final concentration less than 2%. Neutralize with 5% sodium hydroxide soln. and run to waste with large quantities of running water. Aqueous solutions of organic acids should be carefully neutralized with sodium bicarbonate or sodium hydroxide. Check pH, store in container and dispose off.</p> |                            | <p>IMDG Code : 5.1/I</p> <p>UN No. : 1873</p> <p>IATA : 5.1</p> |                           |
| Hazard pictogram(s) :                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                            |                                                                 |                           |
| <div></div> <p><b>Oxidising liquids Corrosive to metals</b></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                            |                                                                 |                           |
| Prepared By : DINESH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Checked By: RAJU VYAS      | Approved By: S.S.TOLIA                                          | Issue Date : 01/07/2002   |
| Name/Dept. : Officer (Q.A.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Name/Dept. :Incharge(Q.A.) | Name/Dept. : Incharge (Tech.)                                   | Revision No. : 03         |
| Sign. :                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Sign. :                    | Sign. :                                                         | Revision dt. : 28/08/2010 |
| Date : 26/08/2010                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Date : 26/08/2010          | Date : 28/08/2010                                               | AMEND NO. : P062          |