TRISODIUM PHOSPHATE (TSP)

SECTION 1: CHEMICAL PRODUCT & COMPANY IDENTIFICATION

Date of Issue: 27/09/03

1.1 Product Details

| 1.1.1 Product name | 1. Trisodium Phosphate Anhydrous  
|                    | 2. Trisodium Phosphate Hydrated |

1.1.2 Chemical name

| 1. Trisodium Phosphate Anhydrous  
| 2. Trisodium Phosphate Hydrated |

1.1.3 Chemical formula

| 1. Na₃PO₄  
| 2. Na₃PO₄·12H₂O |

1.2 Company

Aditya Birla Chemicals  
77 Moo 6 Soi Sukhaphiban 1,  
Poochao Saming Prai Road,  
Samrong, Phrapradaeng,  
Samutprakarn 10130  
Telephone: +66 (0) 2396 1715-6, 2748 5173 – 4  
Fax: +66 (0) 2398 0774  
E-mail: mktg@thaipoly.co.th  
Website: www.thaipoly.com

1.3 Emergency

Telephone: +66 (0) 2396 1715 - 6, 2748 5173 – 4

SECTION 2: COMPOSITION

2.1 Ingredients

| 1. Trisodium Phosphate Anhydrous Na₃PO₄  
| 2. Trisodium Phosphate Hydrated Na₃PO₄·12H₂O |

2.2 CAS Number

| 7601-54-9 (Anhydrous)  
| 10101-89-0 (Hydrated) |

SECTION 3: HAZARDS

3.1 No known hazards

SECTION 4: FIRST AID MEASURES

4.1 Eye Contact

None required

4.2 Skin contact

None required

4.3 Inhalation / Ingestion

If any symptoms follow ingestion or inhalation, obtain medical advice.
SECTION 5: FIRE-FIGHTING MEASURES

5.1 Governed by other materials present. No special fire-fighting equipment or measures required.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Sweep up spillage and recover/recycle if possible. Otherwise place in a fiber keg or paper sack and dispose as industrial waste.

SECTION 7: HANDLING & STORAGE

<table>
<thead>
<tr>
<th>7.1 Handling</th>
<th>Minimize dust formation.</th>
</tr>
</thead>
</table>
| 7.2 Storage  | 1. Protect from contamination,  
|              | 2. Store in original, unopened package in clean, cool, dry place.  
|              | 3. Store one pallet high to avoid compaction. |

SECTION 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION

<table>
<thead>
<tr>
<th>8.1 Regulations</th>
<th>None</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.2 Air contamination limits</td>
<td>None listed</td>
</tr>
</tbody>
</table>
SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>9.1 Form</th>
<th>Powder or granules</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.2 Colour</td>
<td>White</td>
</tr>
<tr>
<td>9.3 Odour</td>
<td>None</td>
</tr>
<tr>
<td>9.4 Change in physical state</td>
<td>Hydrated lose water above 100°C to give anhydrous substance which melts without decomposition above 1000°C (1832°F)</td>
</tr>
<tr>
<td>9.5 Bulk Density</td>
<td>0.9-1.1 g/ml dependent on grade (50 taps)</td>
</tr>
<tr>
<td>9.6 Vapour pressure</td>
<td>Not applicable</td>
</tr>
<tr>
<td>9.7 Viscosity</td>
<td>Not applicable</td>
</tr>
<tr>
<td>9.8 Solubility</td>
<td>12.5 g/100 g water at 20°C, 90 g/100 g water at 90°C</td>
</tr>
<tr>
<td>9.9 pH Value</td>
<td>12.1 at 20°C (1% soln)</td>
</tr>
<tr>
<td>9.10 Flash point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>9.11 Ignition temperature</td>
<td>Does not burn or help other materials to burn</td>
</tr>
<tr>
<td>9.12 Explosion limits</td>
<td>Not relevant</td>
</tr>
</tbody>
</table>

SECTION 10: STABILITY AND REACTIVITY

<table>
<thead>
<tr>
<th>10.1 Thermal decomposition</th>
<th>Hydrated lose water above 10°C to give anhydrous substance which melts without decomposition above 1000°C</th>
</tr>
</thead>
<tbody>
<tr>
<td>10.2 Hazardous thermal decomposition products</td>
<td>None</td>
</tr>
<tr>
<td>10.3 Hazardous reactions</td>
<td>None</td>
</tr>
</tbody>
</table>

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 When of sufficient purity the material is of low toxicity and is used as a permitted food additive. Food grade material is classified as GRAS (generally recognized as safe) by FDA. High pH of solutions may cause irritation to skin and eyes.

SECTION 12: ECOLOGICAL INFORMATION

12.1 Ecological effects | High pH may affect effluent and sewage treatment processes. Orthophosphate may act as a plant nutrient and precipitate heavy metals.
SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Sweep up spillage and recover/recycle if possible. Otherwise place in a fiber keg or paper sack and dispose as industrial waste.

SECTION 14: TRANSPORT INFORMATION

14.1 Not classified as a substance hazardous for transport.

SECTION 15: REGULATORY INFORMATION

15.1 Labeling based on supplier's classification
   (Directive 67/548/EEC and UK CPL Regulations 1984)
   15.2 R36/38 - Irritating to eyes and skin.
   15.3 S37/39 - Wear suitable gloves and eye/face protection.

SECTION 16: OTHER INFORMATION

16.1 This product may be used in the following applications:
   16.1.1 Industrial detergents such as degreasers for steel.
   16.1.2 Heavy-duty domestic cleaners such as for toilets and floors.
   16.1.3 Boiler - water treatment.
   16.1.4 Testing of steel parts after cleaning or pickling.
   16.1.5 Food grade material may be used as an additive to processed cheese.

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