MATERIAL SAFETY DATA SHEET

TETRASODIUM PYROPHOSPHATE (TSPP)

SECTION 1: CHEMICAL PRODUCT & COMPANY IDENTIFICATION

<table>
<thead>
<tr>
<th>1.1 Product Details</th>
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<tbody>
<tr>
<td>1.1.1 Product name</td>
<td>TETRASODIUM PYROPHOSPHATE</td>
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<tr>
<td>1.1.2 Chemical name</td>
<td>Tetrasodium Pyrophosphate</td>
</tr>
<tr>
<td>1.1.3 Chemical formula</td>
<td>Na₄P₂O₇</td>
</tr>
<tr>
<td>1.2 Company</td>
<td>Aditya Birla Chemicals</td>
</tr>
<tr>
<td></td>
<td>77 Moo 6 Soi Sukhaphiban 1,</td>
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<tr>
<td></td>
<td>Poochao Saming Prai Road,</td>
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<td>Samrong, Phrapradaeng,</td>
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<td></td>
<td>Samutprakarn 10130</td>
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<td></td>
<td>Telephone: +66 (0) 2396 1715-6, 2748 5173 – 4</td>
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<td></td>
<td>Fax: +66 (0) 2398 0774</td>
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<td>E-mail: <a href="mailto:mktg@thaipoly.co.th">mktg@thaipoly.co.th</a></td>
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<td></td>
<td>website: <a href="http://www.thaipoly.com">www.thaipoly.com</a></td>
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<td>1.3 Emergency</td>
<td>Telephone: +66 (0) 2396 1715 - 6, 2748 5173 –4</td>
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</tbody>
</table>

SECTION 2: COMPOSITION

| 2.1 Ingredients     | Tetrasodium Pyrophosphate |
| 2.1 CAS No.         | 7722-88-5 |

SECTION 3: HAZARDS

3.1 No known hazards

SECTION 4: FIRST AID MEASURES

| 4.1 Eye Contact     | Wash with water |
| 4.2 Skin contact    | None required |
| 4.3 Inhalation/ingestion | If any symptoms following 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 paper or plastic sacks and dispose of as industrial waste.

SECTION 7: HANDLING & STORAGE

7.1 Handling
No special precaution required.

7.2 Storage
Protect from contamination. Store in original, unopened packages in clean, cool, dry place. Store one pallet high to avoid compaction.

SECTION 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION

8.1 Regulations
None

8.2 Air contamination limits
None listed

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Form
Powder or Granule

9.2 Colour
White

9.3 Odour
None

9.4 Change in Physical State
Melts above 950°C

9.5 Bulk Density
1.0 g /ml

9.6 Vapour pressure
Not applicable

9.7 Viscosity
Not applicable

9.8 Solubility
5.5 g/100 g water at 20°C
24.6 g/100 g water at 60°C

9.9 pH Value
10.4 at 20°C (1% solution)

9.10 Flash point
Not applicable

9.11 Ignition temperature
Does not burn

9.12 Explosion limits
Not relevant

SECTION 10: STABILITY AND REACTIVITY

10.1 Thermal Decomposition
Melts above 950°C

10.1 Hazardous thermal decomposition products
None

10.2 Hazardous reactions
None
SECTION 11: TOXICOLOGICAL INFORMATION

11.1 The food grade standard of the product has been used as a food additive for many years.

SECTION 12: ECOLOGICAL INFORMATION

12.1 Ecological effects | May act as a plant nutrient and promotes eutrophication.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Sweep up spillage and recover/recycle if possible. Otherwise place in paper or plastic sacks and dispose of as industrial waste.

SECTION 14: TRANSPORT INFORMATION

14.1 Not classified as a substance hazardous for transport.

SECTION 15: REGULATORY INFORMATION

15.1 Not classified as a substance hazardous for supply

SECTION 16: OTHER INFORMATION

16.1 This product may be used in the food processing applications:
16.1.1 As a constituent of phosphate mixes used in the preparation of products such as hamburgers and sausages.
16.1.2 As a constituent of emulsifying - salt blends used in the manufacture of processed cheese.
16.1.3 In solutions for the immersion - treatments of seafoods to control yield and modify texture.
16.1.4 As a general buffer, sequestrant and stabilizing agent in dairy products and other foodstuffs
16.2 This product may be used in the technical applications:

<table>
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<tr>
<th>16.2.1 Soap powders and synthetic detergents</th>
<th>improves resistance to hard water. It is also incorporate in both soap powders and synthetic detergents to stabilize sodium perborate and minimize the risk of oxidative damage to fabrics.</th>
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</thead>
<tbody>
<tr>
<td>16.2.2 Alkaline detergents for bottle washing etc.</td>
<td>utilized in detergent mixes. Consisting mainly of alkalis to assist in the prevention of precipitation of insoluble salts from hard water.</td>
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<tr>
<td>16.2.3 Textiles</td>
<td>utilised in the degumming of silk and the removal of calcium alginate linking stitches in hosiery manufacture.</td>
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<tr>
<td>16.2.4 Other important uses</td>
<td>Processing aid for china clays, oil - well muds, deflocculation in ceramics manufacture, dispersion of pigments in emulsion paints, complexing agent in plating baths, paper - coating compositions, paper tissue manufacture, dispersant in latex manufacture, and stabiliser in peroxide bleaching (textiles)</td>
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