

## MATERIAL SAFETY DATA SHEET

### CHLORINATED TRISODIUM PHOSPHATE (TSP-Cl)

#### SECTION 1: CHEMICAL PRODUCT & COMPANY IDENTIFICATION

Date of Issue: 27/09/03

Rev-02

1.1 Product Details	
1.1.1 Product name	CHLORINATED TRISODIUM PHOSPHATE
1.1.2 Chemical name	Chlorinated Trisodium Phosphate
1.1.3 Chemical formula	$[\text{Na}_3\text{PO}_4 \cdot 11\text{H}_2\text{O}]_4 \cdot \text{NaOCl}$
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: <a href="mailto:mktg@thaipoly.co.th">mktg@thaipoly.co.th</a> Website: <a href="http://www.thaipoly.com">www.thaipoly.com</a>
1.3 Emergency	Telephone: +66 (0) 2396 1715 - 6, 2748 5173 – 4

#### SECTION 2: COMPOSITION

2.1 Ingredients	Trisodium Phosphate Chlorinated Formula: $[\text{Na}_3\text{PO}_4 \cdot 11\text{H}_2\text{O}]_4 \cdot \text{NaOCl}$
2.2 CAS Number	11084-85-8 R36/38 - Irritating to eyes and skin. R31 - Contact with acids liberates toxic gas.

#### SECTION 3: HAZARDS

3.1 Moderate eye and skin irritant particularly under wet conditions.
3.2 Liberates chlorine when in contact with acids.
3.3 Will decompose above 60°C to liberate water, oxygen and chlorine.

#### SECTION 4: FIRST AID MEASURES

4.1 Eye Contact	Wash with plenty of water for at least 15 minutes and seek medical advice
4.2 Skin contact	Wash with plenty of water and seek medical advice if irritation persists.
4.3 Inhalation	Remove to a well-ventilated area and seek medical attention if required.
4.4 Ingestion	If significant quantities are ingested, drink plenty of water and obtain medical advice.

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### **SECTION 5: FIRE-FIGHTING MEASURES**

5.1 Governed by other materials present. In the event of a fire, self-contained breathing apparatus is advised.
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### **SECTION 6: ACCIDENTAL RELEASE MEASURES**

6.1 Goggles or face shield, dust, mark (3M H8500 or equivalent) and PVC gloves should be used.
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6.2 Spillages should be swept up and placed in polylined fiberboard kegs or plastic drums. Avoid contact with acids (see 3.0 above)
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6.3 Recover/recycle if possible, otherwise retain on site for temporary storage and consult your local Waste
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6.4 Authority for disposal instructions. (See also 13.0 below)
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### **SECTION 7: HANDLING & STORAGE**

7.1 Handling	Wear gloves, dust mark (3M H8500 or equivalent) and goggles when handling this powder. Attempt to avoid wet conditions where prolonged contact can cause eye and skin inflammation.
7.2 Storage	Store containers in a cool dry area to avoid loss of available chlorine.

### **SECTION 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION**

8.1 There is no published air contamination limit but due to the irritant effect on mucous membranes the EH40 general dust requirement should be enforced.
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Total inhalable dust: 10 mg/m <sup>3</sup> 8 hr TWA
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Total inhalable dust: 10 mg/m <sup>3</sup> 8 hr TWA
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8.2 When working with this chemical personal protection equipment is specified as follows
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8.2.1 Respiratory protection	Dust mark when handling powders
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8.2.2 Hand protection	PVC or leather gloves.
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8.2.3 Eye protection	Safety goggles or face shield
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8.2.4 Skin (body) protection	Industrial coverall
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8.2.5 Foot protection	Safety boots
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8.2.6 Head protection	Safety helmet
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### **SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

9.1 Appearance	Normally white powder (may be dyed pink) with faint chlorine odour.
9.2 Bulk Density	0.84 g/ml.
9.3 Vapour pressure	Not applicable
9.4 Viscosity	Not applicable
9.5 Solubility	20g per 100g water at 20°C
9.6 pH Value	11.7 at 20°C (1% Soln)
9.7 Flash point	Not applicable
9.8 Ignition temperature	Does not burn or help other materials to burn
9.9 Explosion limits	Not relevant

### **SECTION 10: STABILITY AND REACTIVITY**

10.1 Thermal decomposition	Decomposes above 60°C first losing water then chlorine to yield a sodium phosphate residue which melts at temperature greater than 1000°C
10.2 Hazardous reactions	May react with acids to liberate a toxic gas (chlorine). Avoid contact also with caustic alkalis, peroxy – salts (perborate and percarbonate), reducing agents, cationic surfactants and many readily chlorinated non-ionic surfactants.

### **SECTION 11: TOXICOLOGICAL INFORMATION**

11.1 LD50 oral rats = 5000 - 10,000 mg/kg. Due to its hypo chlorite content and high pH value this material can irritate skin, eyes and mucous membranes particularly under wet or damp conditions when inflammation may result.
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### **SECTION 12: ECOLOGICAL INFORMATION**

12.1 Ecological effects	High concentrations in receiving waters will injure aquatic life by raising pH and by chlorination effect. The orthophosphate can act as a plant nutrient and precipitate heavy metals.
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### **SECTION 13: DISPOSAL CONSIDERATIONS**

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13.1 Spillages should be swept up and placed in polylined fiberboard kegs or plastic drums. Avoid contact with acids (see 3.0 above)

13.2 Recover/recycle if possible otherwise retain on site for temporary storage and consult your local Waste Authority for disposal instructions.

13.3 Treat empty packages as contaminated waste.

### **SECTION 14: TRANSPORT INFORMATION**

14.1 Not classified as a substance hazardous for transport.

### **SECTION 15: REGULATORY INFORMATION**

15.1 Label according to Directives 67/548/EEC and 88/379/EEC, 91/325/EEC\* and 1993 CHIP Regulations.

[\*12th Adaptation to technical progress (including classification 'Dangerous for the Environment') to take effect July 1, 1992) **R&S phrases shown in bold print.**]

15.2 R36/38 - Irritating to eyes and skin.

15.3 R31 - Contact with acids liberates toxic gas.

15.4 S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

### **SECTION 16: OTHER INFORMATION**

16.1 TPC supplies chlorinated Trisodium phosphate for these applications: Cleaning and Sterilizing, Stain removal, and Detergent formulations.

16.2 Technical Note - Carbon monoxide can be formed by the atmospheric oxidation of some organic compounds under warm, alkaline conditions. The compounds include certain reducing sugars, sugar alcohols and complex phenols - common constituents of foods and other natural products. Where a closed vessel may have contained any of the above compounds and a person needs to enter during, or after, alkaline cleaning, test the atmosphere for carbon monoxide and oxygen as part of the procedure for vessel - entry. This advice applies whether or not a phosphate has been used and is given here only because of a report that phosphates can increase the evolution of carbon monoxide.

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