

**URANIUM CORPORATION OF INDIA LTD.**  
(A Government of India Enterprises)  
Tummalapalle Uranium Project  
(P.O.) M. C. Palle, Vemula (M), YSR District, Andhra Pradesh – 516 349

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Public Tender No. : **TMPL/PUR/298/223**  
Item: Annual rate contract for supply of chemicals

**M A T E R I A L   D E T A I L S**

Sl. No.	Description of Material	Quantity in kgs
1	Softening chemicals	1500
2	De scaling chemical	12000
3	Passivation chemical	1500
4	Antiscaling chemical	1000
5	Biocides -1	1000
6	Biocides-2	1000

Note: Property of scaling material is composition of calcium, Magnesium, Sodium carbonate, Sodium Bi-Carbonate, Sodium Sulphate, Lime, Silica

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**Material Composition of Chemicals**

**1) Chemical Name : Antiscalants for Cooling Towers**

**COMPOSITION & INGREDIENTS FOR MAX – 100**

This chemical is used for suppressing the scale formation in cooling water lines. It controls the deposition of scales by not allowing the scales to precipitate. This chemical is a mixture of organic and inorganic compounds like H.E.D.P, Anti Corrosive Chemicals, Sodium Iodate, PH Reducers and water. This is only for your kind information and do not experiment on these details.

**PHYSICAL AND CHEMICAL PROPERTIES**

Appearance and odour : White slippery liquid with strong pungent smell.

PH : 02 - 03

Viscosity : 1.1 – 1.2 ( At room temperature )

**2) Chemical Name : BIOCIDES-1 & BIOCIDES-2**

**COMPOSITION & INGREDIENTS FOR BIOCIDES-1 & BIOCIDES-2**

This chemical is used for controlling the fungus deposits in the cooling towers. The fungus or algae will deposit in the cooling water lines when the system is directly or partially exposed to sunlight. This chemical is a mixture of Chlorine Shockers, Ecofix chemicals and Boroquate etc., This is only for your kind information and do not experiment on these details.

**PHYSICAL AND CHEMICAL PROPERTIES**

Appearance and odour : White slippery liquid with strong pungent smell.

PH : 06 - 08

Viscosity : 1.2 – 1.3 ( At room temperature )

**HANDLING AND STORAGE**

The material comes in plastic carbouys packing. The cap of the carbouys should be tightly closed after each use to avoid leakage and loss of concentration. The chemical should be used within a period of 6 months from the date of supply, for good results. The material should be stored at room temperature. Avoid keeping it in high temperature areas. Please shake the contents well before each use. The chemical doesn't ignite at high or low temperatures.

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**3) Chemical Name : SOFTENING CHEMICAL**

**Reactivity** : Highly alkaline in nature, Non reactive on all metals, if exposed to chemical directly for more than a week continuously. Non reactive on Plastics, Rubber. Highly reactive on Aluminium.

**Product Description:** Light white coloured liquid, which is easily soluble in water. Ph: 13.0 – 14.0, Non corrosive on all Metals if exposed to chemical directly for more than a week continuously, Non reactive on Plastics, Rubber. Dosage shall vary from 2 – 7 %. Highly reactive on Aluminium.

**PRINCIPAL INGREDIENTS :**

This chemical is used for softening the scales. It is a mixture of Tri Sodium Phosphate ( T.S.P – 20 % ), Foam Generating Chemicals ( 3 % ), PH Boosters ( 12 % ), Wetting Agents ( 20 % ), Alkaline Chemical ( Sodium Hydroxide – 15 % ), Remaining - Water etc., All these chemicals are used for softening the scales and render safe for the parent metal.

**PHYSICAL AND CHEMICAL PROPERTIES**

Appearance & odor	: Pale white colored liquid with slight pungent smell
Solubility	: Easily soluble in water
Chemical state	: Highly alkaline and Non Corrosive
Fire point	: Nil
Flash point	: Nil
Specific gravity	: 1.01 - 1.04
pH	: 13.0 - 14.0

**4) Chemical Name : DESCALING CHEMICAL**

**Reactivity** : Highly corrosive in nature, Reactive on all Metals, if exposed to chemical directly for more than a week continuously, Non reactive on Plastics, Rubber. Highly reactive on Aluminium.

**Product Description:** It is formulated by using Descaling agents ( 45 % ), Foam generating chemicals ( 5 % ), Corrosion Inhibitors ( For HCl and Descaling agents – 15 % ), HCl ( 05 % ), pH reducers ( 10 % ), Remaining Water etc.

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**PRINCIPAL INGREDIENTS :**

This chemical is used for descaling process, which means it is a process of removing the scales. This chemical is acidic in nature. It is formulated by using Descaling agents ( 45 % ), Foam generating chemicals ( 5 % ), Corrosion Inhibitors ( For HCl and Descaling agents – 15 % ), HCl ( 05 % ), pH reducers ( 10 % ), Remaining Water etc., Corrosion inhibitors are used to render safe for metal parts like Copper, MS, GI, SS, Brass, “O” rings etc., Foam generating chemicals are used for generating foam during descaling, so that the scales easily floats and gets released from the system. Highly reactive on Aluminum.

**PHYSICAL AND CHEMICAL PROPERTIES**

Appearance & odor	: Pale pink coloured liquid with pungent smell
Solubility	: Easily soluble in water
Chemical state	: Highly Acidic and Corrosive
Fire point	: Nil
Flash point	: Nil
Specific gravity	: 1.01 - 1.02
pH	: 1.0 - 1.5

5) **Chemical Name** : **PASSIVATION CHEMICAL**

**Reactivity** : Highly alkaline in nature, Non reactive on all Metals, if exposed to chemical directly for more than a week continuously, Non reactive on Plastics, Rubber. Highly reactive on Aluminium.

**Product Description:** Light white coloured liquid, which is easily soluble in water. Ph :13.0 – 14.0, Non corrosive on all Metals if exposed to chemical directly for more than a week continuously, Non reactive on Plastics, Rubber. Dosage shall vary from 2 – 7 %. Highly reactive on Aluminium.

**PRINCIPAL INGREDIENTS :**

This chemical is used for softening the scales. It is a mixture of Tri Sodium Phosphate ( T.S.P – 20 % ), Foam Generating Chemicals ( 3 % ), PH Boosters ( 12 % ), Alkaline Chemical ( Sodium Hydroxide – 15 % ), Remaining - Water etc., All these chemicals are used for softening the scales and render safe for the parent metal.

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**PHYSICAL AND CHEMICAL PROPERTIES**

Appearance & odor	: Pale white coloured liquid with slight pungent smell
Solubility	: Easily soluble in water
Chemical state	: Highly alkaline and Non Corrosive
Fire point	: Nil
Flash point	: Nil
Specific gravity	: 1.01 - 1.02
pH	: 13.0 - 14.0

**HANDLING INFORMATION**

The material comes in plastic carboys packing. The cap of the carboys should be tightly closed after each use to avoid leakage and loss of concentration. Shake the contents before every use. The chemical should be used within a period of 6 months from the date of supply, for good results. The material should be stored at room temperature. However, the chemical doesn't ignite at high or low temperatures.

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