

भाग ५

नेपाल सरकार

कृषि तथा पशुपन्छी विकास मन्त्रालयको

सूचना

नेपाल सरकार, कृषि तथा पशुपन्छी विकास मन्त्रालयले रासायनिक मल (नियन्त्रण) आदेश, २०५५ को दफा ३५ ले दिएको अधिकार प्रयोग गरी सो आदेशको अनुसूची-१ को सट्टा देहायको अनुसूची-१ राखी हेरफेर गरेकोले यो सूचना प्रकाशन गरिएको छ ।

"अनुसूची-१

(दफा ५ को उपदफा (१) सँग सम्बन्धित)

रासायनिक मलको स्पेसिफिकेसन

1. Ammonium Molybdate ($(\text{NH}_4)_6\text{Mo}_7\text{O}_{24} \cdot 4\text{H}_2\text{O}$)

S.No.	CHARACTERISTICS	REQUIREMENTS
1	PHYSICAL CONDITION 1.1 Description	Free flowing crystalline/powder.
2	CHEMICAL COMPOSITION 2.1 Molybdenum (as Mo), percent by weight, minimum 2.2 Lead (as Pb), percent by weight, maximum 2.3 Matter insoluble in water, percent by weight, maximum 2.4 Cadmium(as Cd)	52.0 0.003 1.0 0.0025 0.10 5.0-5.5

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	percent by weight, maximum 2.5 Arsenic (as As) percent by weight, maximum 2.6 pH	
3	Others	Labeling and packaging as per the manufacture's specification.

2. Ammonium Phosphate Sulphate (20-20-0)

S.No.	CHARACTERISTICS	REQUIREMENTS
1.	PHYSICAL CONDITION 1.1 Description 1.2 Particle size	- Granulated form, granule size 2-4 mm (80-90%) - Not less than 90 % of the material shall pass through 4 mm IS sieve and shall be retained on 1 mm IS Sieve. Not more than 5% shall be below 1 mm IS sieve.
2.	CHEMICAL COMPOSITION 2.1 Moisture percent by weight, maximum. 2.2 Total Nitrogen, percent (ammoniacal and nitrate) by weight, minimum 2.3 Ammoniacal nitrogen percent by weight, minimum 2.4 N in the form of Urea percent by weight, maximum 2.5 Neutral ammonium citrate soluble phosphates (as P ₂ O ₅)	1.0 20.0 18.0 2.0 20.0 17.0 13.0

	percent by weight, minimum. 2.6 Water soluble phosphates (as P_2O_5) percent by weight minimum 2.7 Sulphur (as S) percent by weight, minimum	
3	Others	• Certificate from an independent surveyor or a recognized Government laboratory showing there is no contamination with radioactive material.

3. Ammonium Phosphate Sulphate Nitrate (20-20-0)

S.No.	CHARACTERISTICS	REQUIREMENTS
1	PHYSICAL CONDITION 1.1 Description 1.2 Particle size	• Granulated form, granule size 2-4 mm (80-90%). • Not less than 90 per cent of the material shall pass through 4 mm IS sieve and shall be retained on 1 mm IS sieve. Not more than 5 percent shall be below 1 mm IS sieve.
2	CHEMICAL COMPOSITION 2.1 Moisture, percent by weight, maximum 2.2 Total nitrogen, (ammoniacal and nitrate) percent by	1.5 20.0 18.0

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	weight, minimum	2.0
	2.3 Ammoniacal nitrogen, percent by weight, minimum	20.0
	2.4 Nitrate nitrogen, percent by weight, maximum	17.0
	2.5 Neutral ammonium citrate soluble phosphates (as P_2O_5), percent by weight, minimum	13.0
	2.6 Water soluble phosphates (as P_2O_5) percent by weight, minimum	
	2.7 Sulphur (as S), percent by weight, minimum	
3	Others	• Certificate from an independent surveyor or a recognized government laboratory showing there is no contamination with radioactive material.

4. Ammonium Sulphate (21-0-0)

S.No.	CHARACTERISTICS	REQUIREMENTS
1	PHYSICAL CONDITION 1.1 Description 1.2 Form 1.3 Particle size	• White or yellowish white • Crystallized • Not less than 90 percent of the material shall pass through 2.8 mm IS sieve and be retained on 1 mm IS sieve. Not more than 5 percent shall be below 1 mm IS sieve.

2	CHEMICAL COMPOSITION 2.1 Moisture, percent by weight, maximum 2.2 Ammoniacal nitrogen, percent by weight, minimum 2.3 Total nitrogen, percent by weight, minimum 2.4 Free acidity (as H₂SO₄), percent by weight, maximum (0.04 for materials obtained from by-product ammonia and by-product gypsum) 2.5 Arsenic (as AS₂O₃), percent by weight, maximum 2.6 Sulphur (as S), percent by weight, minimum	1.0 20.5 21 0.025 0.01 23.0
3	Others	• Certificate from an independent surveyor or a recognized government laboratory showing there is no contamination with radioactive material.

5. Borax (Sodium Tetraborate) (Na₂B₄O₇·10H₂O) for soil application

S.No.	CHARACTERISTICS	REQUIREMENTS
1.	CHEMICAL COMPOSITION 1.1 Content of Boron (as B) percent by weight, minimum 1.2 Matter insoluble in water percent by weight, maximum 1.3 Lead (as Pb) percent by weight, maximum	10.5 1.0 0.003 9.0 - 9.5 0.0025 0.01

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	1.4 p^H (3.8% solution) not less than 1.5 Cadmium (as Cd) percent by weight, maximum 1.6 Arsenic(as As) percent by weight, maximum	
2.	Others	• Labelling and packaging as per the manufacturer's specification.

6. Calcium Ammonium Nitrate (25-0-0)

S.No.	CHARACTERISTICS	REQUIREMENTS
1.	PHYSICAL CONDITION 1.1 Description 1.2 Form	Not less than 80 percent of the material should pass through 4 mm IS sieve and be retained on 1 mm IS sieve. Not more than 10 percent shall be below 1 mm IS sieve.
2.	CHEMICAL COMPOSITION 2.1 Total ammoniacal and nitrate nitrogen percent by weight, minimum 2.2 Ammoniacal nitrogen percent by weight, minimum 2.3 Calcium nitrate percent by weight, maximum 2.4 Moisture percent by weight, maximum	25.0 12.5 0.5 1.0
3.	Others	Labelling and packaging as per the manufacturer's specification.

7. Calcium Ammonium Nitrate (26-0-0)

S.No.	CHARACTERISTICS	REQUIREMENTS
1.	PHYSICAL CONDITION 1.1 Description 1.2 Form	Not less than 90 percent of the material should pass through 4 mm IS sieve and be retained on 1 mm IS sieve. Not more than 10 percent shall be below 1 mm IS sieve.
2.	CHEMICAL COMPOSITION 2.1 Total ammoniacal and nitrate nitrogen percent by weight, minimum 2.2 Ammoniacal nitrogen percent by weight, minimum 2.3 Calcium nitrate percent by weight, maximum 2.4 Moisture percent by weight, maximum	26.0 13.0 0.5 1.0
3.	Others	Labelling and packaging as per the manufacturer's specification.

8. Chelated Iron as Fe-EDTA

S.No.	CHARACTERISTICS	REQUIREMENTS
1	PHYSICAL CONDITION 1.1 Description 1.2 Form	• Free flowing • Crystalline or powder
2	CHEMICAL COMPOSITION 2.1 Iron content (as Fe), percent by weight, minimum 2.2 Lead (as Pb), percent by weight, maximum 2.3 pH	12.0 0.003 5.5-6.5

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3	Others	Labeling and packaging as per the manufacture's specification.
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9. Chelated Zinc as Zn – EDTA

S.No.	CHARACTERISTICS	REQUIREMENTS
1	PHYSICAL CONDITION 1.1 Description 1.2 Form	- Free flowing - Crystalline or powder or tablet.
2	CHEMICAL COMPOSITION 2.1 Zinc content (as Zn), percent by weight, minimum 2.2 Lead (as Pb), percent by weight, maximum 2.3 pH	12.0 0.003 6.0-6.5
3	Others	Labeling and packaging as per the manufacture's specification.

10. Copper Sulphate (CuSO₄.5H₂O)

S.No.	CHARACTERISTICS	REQUIREMENTS
1	PHYSICAL CONDITION 1.1 Description	Free flowing powder/granular.
2	CHEMICAL COMPOSITION 2.1 Copper (as Cu), percent by weight, minimum 2.2 Soluble iron and aluminum compounds (expressed as Fe), percent by weight, maximum 2.3 Lead (as Pb), percent	24.0 0.5 0.003 1.0 12.0 3.0

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	by weight, maximum 2.4 Matter insoluble in water, percent by weight, maximum 2.5 Sulphur (as S), percent by weight, minimum 2.6 pH (5% solution) not less than	
3	Others	Labeling and packaging as per the manufacture's specification.

11.Diammonium Phosphate (18-46-0)

S.No.	CHARACTERISTICS	REQUIREMENTS
1.	PHYSICAL CONDITION 1.1 Description 1.2 Particle size	- Free flowing granules 90% of the material shall pass through a 4 mm IS sieve and shall be retained on a 1 mm IS sieve. Not more than 5% shall be below than 1 mm size.
2.	CHEMICAL COMPOSITION 2.1 Total nitrogen, percent by weight, minimum 2.2 Ammoniacal nitrogen form, percent by weight, minimum 2.3 Total nitrogen in the form of Urea per cent by weight, maximum 2.4 Water soluble phosphates (as P ₂ O ₅), per cent by weight, minimum 2.5 Neutral Ammonium Citrate soluble phosphates (as P ₂ O ₅), percent by weight,	18.0 15.5 2.5 41.0 46.0 2.5

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	minimum 2.6 Moisture, percent by weight, maximum	
3	Others	Certificate from an independent surveyor or a recognized Government laboratory showing there is no contamination with radio active material.

12.Diammonium Phosphate (16-44-0)

S.No.	CHARACTERISTICS	REQUIREMENTS
1.	PHYSICAL CONDITION 1.1 Description 1.2 Particle size	- Free flowing granules 90% of the material shall pass through a 4 mm IS sieve and shall be retained on a 1 mm IS sieve. Not more than 5% shall be below than 1 mm size.
2.	CHEMICAL COMPOSITION 2.1 Total nitrogen, percent by weight, minimum 2.2 Total phosphates (as P_2O_5), percent by weight, minimum 2.3 Moisture, percent by weight, maximum	16.0 44.0 2.5
3	Others	Certificate from an independent surveyor or a recognized Government laboratory showing there is no contamination with radioactive material.

13. Ferrous Sulphate ($\text{FeSO}_4 \cdot 7\text{H}_2\text{O}$)

S.No.	CHARACTERISTICS	REQUIREMENTS
1	PHYSICAL CONDITION 1.1 Description	Free flowing powder form.
2	CHEMICAL COMPOSITION 2.1 Ferrous iron (as Fe), percent by weight minimum 2.2 Sulphur (as S), percent by weight, minimum 2.3 Free acid (as H_2SO_4), percent by weight, maximum 2.4 Ferric Iron (as Fe), percent by weight, maximum 2.5 Lead (as Pb), percent by weight, maximum 2.6 Matter insoluble in water, percent by weight, maximum 2.7 pH not less than	19.0 10.5 1.0 0.5 0.003 1.0 3.5
3	Others	Labeling and packaging as per the manufacture's specification.

14. Manganese Sulphate

S.No.	CHARACTERISTICS	REQUIREMENTS
1	PHYSICAL CONDITION 1.1 Description	Free flowing form.

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2	CHEMICAL COMPOSITION 2.1 Manganese (as Mn), percent by weight, minimum 2.2 Lead (as Pb), percent by weight, maximum 2.3 Copper (as Cu), percent by weight, maximum 2.4 Magnesium (as Mg), percent by weight, maximum 2.5 Matter insoluble in water, percent by weight, maximum 2.6 Sulphur (as S), percent by weight, minimum 2.7 pH (5% solution) not less than	30.5 0.003 0.1 2.0 1.2 17.0 4.0
3	Others	Labeling and packaging as per the manufacture's specification.

15. Mono Ammonium Phosphate(11:52:0)

S.No.	CHARACTERISTICS	REQUIREMENTS
1.	PHYSICAL CONDITION 1.1 Description 1.2 Particle size	- Free flowing granules 90% of the material shall pass through a 4 mm IS sieve and shall be retained on a 1 mm IS sieve. Not more than 5% shall be below than 1 mm size.

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2.	CHEMICAL COMPOSITION	11.0
	2.1 Total nitrogen, all in ammoniacal form percent by weight, minimum	52.0
	2.2 Available phosphorus (as P_2O_5), percent by weight, minimum	44.5
	2.3 Water soluble phosphorus (as P_2O_5), percent by weight, minimum	1.0
	2.4 Moisture, percent by weight, maximum	
3	Others	Certificate from an independent surveyor or a recognized Government laboratory showing there is no contamination with radioactive material.

16. Mono Ammonium Phosphate (12:61:0) 100% water soluble

S.No.	CHARACTERISTICS	REQUIREMENTS
1.	PHYSICAL CONDITION	
	1.1 Description	Free flowing granules
	1.2 Particle size	90% of the material shall pass through a 4 mm IS sieve and shall be retained on a 1 mm IS sieve. Not more than 5% shall be below than 1 mm size.

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2.	CHEMICAL COMPOSITION	12.0
	2.1 Total nitrogen, all in ammoniacal form percent by weight, minimum	61.0
	2.2 Water soluble phosphorus (as P ₂ O ₅), percent by weight, minimum	0.5
	2.3 Sodium as NaCl percent by weight, maximum	0.5
	2.4 Matter insoluble in water percent by weight, maximum	0.5
	2.5 Moisture, percent by weight, maximum	
3	Others	• Certificate from an independent surveyor or a recognized Government laboratory showing there is no contamination with radioactive material.

17. NPK (10-26-26)

S.No.	CHARACTERISTICS	REQUIREMENTS
1	PHYSICAL CONDITION 1.1 Description and particle size	• 90 percent of the material shall pass between 1 mm and 4 mm IS sieve and not more than 5 percent will be below 1mm size.

2	CHEMICAL COMPOSITION	10
	2.1 Total nitrogen, percent by weight, minimum	7.0
	2.2 Ammoniacal nitrogen, percent by weight, minimum	3.0
	2.3 Nitrogen in the form of urea, percent by weight, maximum	26.0
	2.4 Neutral ammonium citrate soluble phosphate (as P_2O_5), percent by weight, minimum	22.5
	2.5 Water soluble phosphate (as P_2O_5), percent by weight, minimum	26.0
	2.6 water soluble potash (as K_2O), percent by weight, minimum	1.5
	2.7 Moisture, percent by weight, maximum	
3	Others	• Certificate from an independent surveyor or a recognized Government laboratory showing there is no contamination with active radioactive material.

18. NPK (12-32-16)

S.No.	CHARACTERISTICS	REQUIREMENTS
1	PHYSICAL CONDITION	
	1.1 Description and particle size	• 90 percent of the material shall pass between 1 mm and 4 mm sieve and not more than 5 percent will be below 1 mm size.

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2	CHEMICAL COMPOSITION 2.1 Total nitrogen, percent by weight, minimum 2.2 Ammoniacal nitrogen, percent by weight, minimum 2.3 Nitrogen in the form of urea, percent by weight, maximum 2.4 Neutral ammonium citrate soluble phosphate (P_2O_5), percent by weight, minimum 2.5 Water soluble phosphate (P_2O_5), percent by weight, minimum 2.6 Watersoluble potash (as K_2O), percent by weight, minimum. 2.7 Moisture, percent by weight, maximum	12 9.0 3.0 32.0 27.2 16.0 1.5
3	Others	• Certificate from independent surveyor or a recognized government laboratory showing there is no contamination with active radioactive material.

19. NPK 20:20:10

S.No.	CHARACTERISTICS	REQUIREMENTS
1	PHYSICAL CONDITION 1.1 Description and particle size	90 Percent of the material shall pass between 1 mm and 4 mm sieve and not more than 5 percent will be below 1 mm size.

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2	CHEMICAL COMPOSITION	1.5
	2.1 Moisture, percent by weight, maximum	20.0
	2.2 Total nitrogen, percent by weight, minimum	10.0
	2.3 Nitrogen in ammoniacal form, percent by weight, minimum	10.0
	2.4 Nitrogen in nitrate form, percent by weight, maximum	20.0
	2.5 Neutral ammonium citrate soluble Phosphates (as P_2O_5), percent by weight, minimum	12.0
	2.6 Water Soluble phosphates (as P_2O_5) percent by weight, minimum	1.0
	2.7 Calcium nitrate, percent by weight, maximum	
3	Others	• Certificate from an independent surveyor or a recognized government laboratory showing there is no contamination with radioactive material.

21. Potassium Chloride (Muriate of Potash) (0-0-60)

S.No.	CHARACTERISTICS	REQUIREMENTS
1.	PHYSICAL CONDITION 1.1 Description 1.2 Particle size	- Crystalline free flowing white or light grey or pinkish in color and free from visible contamination with clay and grit. 65% of the material shall pass through a 1.7 mm IS sieve and be retained on a 0.25 mm IS sieve.
2.	CHEMICAL COMPOSITION 2.1 Potash content (as K_2O), percent by weight, minimum 2.2 Moisture percent by weight, maximum 2.3 Sodium (as NaCl), percent by weight, maximum	60.0 0.5 3.5
3	Others	Certificate from an independent surveyor or a recognized Government laboratory showing there is no contamination with radioactive material.

22. Potassium Chloride (Muriate of Potash) (Granular) (0-0-60)

S.No.	CHARACTERISTICS	REQUIREMENTS
1.	PHYSICAL CONDITION 1.1 Description 1.2 Form	90 percent of the material shall pass between 1 mm and 4 mm IS sieve and not more than 5 percent will be below 1 mm size

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2.	CHEMICAL COMPOSITION 2.1 Water soluble Potash (as K_2O), percent by weight, minimum 2.2 Sodium (as $NaCl$), percent by weight, maximum 2.3 Magnesium (as $MgCl_2$) percent by weight, maximum 2.4 Moisture percent by weight, maximum	60.0 3.5 1.0 0.5
3	Others	• Certificate from an independent surveyor or a recognized Government laboratory showing there is no contamination with radioactive material.

23. Potassium Sulphate (0-0-50)

S.No.	CHARACTERISTICS	REQUIREMENTS
1	PHYSICAL CONDITION 1.1 Particle size	• Not less than 65 percent of the material shall pass through 1.7 mm IS sieve and be retrained on 0.25 mm IS sieve.
1	CHEMICAL COMPOSITION 1.1 Potash content (K_2O), percent by weight, minimum 1.2 Sulphur (as S), percent by weight, minimum 1.3 Total chloride (as Cl) percent by weight (on dry basis), maximum 1.4 Sodium as $NaCl$, percent by weight (on	50.0 17.5 2.5 2.0 1.5

	dry basis), maximum 1.5 Moisture, percent by weight, maximum	
2	Others	Labeling and packaging as per the manufacture's specification

24. Single Super Phosphate (S.S.P) 16% P₂O₅ Powdered

S.No.	CHARACTERISTICS	REQUIREMENTS
1.	PHYSICAL CONDITION 1.1 Description	The material should be free from excessive lumps and shall not form hard cake on storage.
2.	CHEMICAL COMPOSITION 2.1 Moisture percent by weight, maximum. 2.2 Free Phosphoric acid (as P ₂ O ₅) percent by weight, maximum 2.3 Water soluble phosphates (as P ₂ O ₅) percent by weight, minimum 2.4 Neutral Ammonium Citrate Soluble phosphates (as P ₂ O ₅) percent by weight, minimum 2.5 Sulphur (as S) percent	12.0 4.0 14.5 16.0 11.0

	by weight, minimum	
3.	Others	• Certificate from an independent surveyor or a recognized Government laboratory showing there is no contamination with radioactive material

25. Single Super Phosphate (S.S.P) 16% P₂O₅ Granulated

S.No.	CHARACTERISTICS	REQUIREMENTS
1.	PHYSICAL CONDITION 1.1 Description 1.2 Particle Size	• The material should be free from excessive lumps and shall not form hard cake on storage. • Not Less than 90 per cent of the material shall pass through 4 mm IS sieve and shall be retained on 1 mm IS sieve. Not more than 5 percent shall pass through 1 mm IS sieve.
2.	CHEMICAL COMPOSITION 2.1 Moisture percent by weight, maximum. 2.2 Free Phosphoric acid (as P₂O₅) percent by weight, maximum 2.3 Water soluble phosphates (as P₂O₅) percent by weight, minimum 2.4 Neutral Ammonium	5.0 4.0 14.5 16.0 11.0

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	Citrate Soluble phosphates (as P_2O_5) percent by weight, minimum 2.5 Sulphur (as S) percent by weight, minimum	
3.	Others	Certificate from an independent surveyor or a recognized Government laboratory showing there is no contamination with radioactive material.

26. Solubor ($Na_2B_4O_7 \cdot 5H_2O + Na_2B_{10}O_{16} \cdot 10H_2O$) for soil spray

S.No.	CHARACTERISTICS	REQUIREMENTS
1.	CHEMICAL COMPOSITION 1.1 Content of Boron (as B) percent by weight, minimum 1.2 Matter insoluble in water percent by weight, maximum 1.3 Lead (as Pb) percent by weight, maximum	19.0 1.1 0.003
3	Others	Labelling and packaging as per the manufacturer's specification.

27. Triple super phosphate (T.S.P.)

S.No.	CHARACTERISTICS	REQUIREMENTS
1	PHYSICAL CONDITION 1.1 Description 1.2 Particle size	- The material should be free from excessive lumps and shall not form hard cake on storage. - Not less than 90 percent of the material shall pass through 4 mm IS sieve and shall be retained on 1 mm IS sieve. Not more than 5 percent shall be below 1 mm.

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2	CHEMICAL COMPOSITION 2.1 Moisture, percent by weight, maximum 2.2 Free phosphoric acid (as P_2O_5), percent by weight, maximum 2.3 Total phosphates (as P_2O_5), percent by weight, minimum 2.4 Water soluble phosphates (as P_2O_5), percent by weight, minimum	12 3.0 46.0 42.5
3	Country of Origin	Specify the country
4	Packing	- Polypropylene or polyethylene outer woven with 1 ply. Polypropylene inner bag of 50 kg net. Outer and inner bag should not be less than 200 gm. and 200 gauges respectively. - Bag should be stitched with strong synthetic thread.
5	Marking on bag 5.1 Front side 5.2 Back side	Each bag shall bear legibly and indelibly the following information a. Name of the fertilizer. b. Name of the manufacturer and his recognized trade mark if .and country of origin c. Percentage of phosphorous d. Gross and net weight in kg. e. Year of manufacture. a. Name of the importer and his recognized trademark if any. b. Lot no. c. Apart from those two information importer is free to add any other information in the bags, if any, for its internal use.

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6	Others	• Certificate from an independent surveyor or a recognized Government laboratory showing there is no contamination with radioactive material.
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28. Urea (46-0-0)Prilled

S.No.	CHARACTERISTICS	REQUIREMENTS
1.	PHYSICAL CONDITION 1.1 Description and Form 1.2 Particle size	• Free flowing, white granules, prilled • 90 percent of the material shall pass through 2.8 mm IS sieve and not less than 80 percent by weight shall be retained on 1 mm IS sieve.
2.	CHEMICAL COMPOSITION 2.1 Moisture percent by weight, maximum. 2.2 Total Nitrogen, percent by weight, minimum 2.3 Biuret percent by weight, maximum	1.0 46.0 1.5
3	Others	• Certificate from an independent surveyor or a recognized Government laboratory showing there is no contamination with radioactive material.

29. Urea (46-0-0) (Granular)

S.No.	CHARACTERISTICS	REQUIREMENTS
1.	PHYSICAL CONDITION 1.1 Description and Form 1.2 Particle size	- Free flowing, white granules, Granular - Not less than 90 per cent of the material shall pass through 4 mm IS sieve and be retained on 2 mm IS sieve. Not more than 5 percent shall be below 2 mm IS sieve.
2.	CHEMICAL COMPOSITION 2.1 Moisture percent by weight, maximum. 2.2 Total Nitrogen, percent by weight, minimum 2.3 Biuret percent by weight, maximum	1.0 46.0 1.5
3	Others	Certificate from an independent surveyor or a recognized Government laboratory showing there is no contamination with radioactive material

30. Urea Ammonium Phosphate (28-28-0)

S.No.	CHARACTERISTICS	REQUIREMENTS
1	PHYSICAL CONDITION 1.1 Description and particle size	Practical size –Not less than 90 Percent of the material shall pass through 4 mm IS sieve and be retained on 1 mm IS sieve. Not more than 5 percent of the particles shall be below 1 mm IS sieve.

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2	CHEMICAL COMPOSITION 2.1 Moisture, percent by weight, maximum 2.2 Total nitrogen, percent by weight, minimum 2.3 Ammoniacal nitrogen, percent by weight, minimum 2.4 Neutral ammonium citrate soluble phosphate (as P_2O_5), percent by weight, minimum 2.5 Water soluble phosphate (as P_2O_5), percent by weight, minimum	1.5 28.0 9.0 28.0 25.2
3	Others	• Certificate from independent surveyor or a recognized Government laboratory showing there is no contamination with active radioactive material.

31. Zinc SulphateHeptahydrate ($ZnSO_4 \cdot 7H_2O$)

S.No.	CHARACTERISTICS	REQUIREMENTS
1	PHYSICAL CONDITION 1.1 Description 1.2 Form	• Free flowing • Crystalline form

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2	CHEMICAL COMPOSITION	21.0
	2.1 Zinc (as Zn), percent by weight, minimum	0.003
	2.2 Lead (as Pb), percent by weight, maximum	0.1
	2.3 Copper (as Cu), percent by weight, maximum	0.5
	2.4 Magnesium (as Mg), percent by weight, maximum	1.0
	2.5 Matter insoluble in water, percent by weight, maximum	10.0
	2.6 Sulphur (as S), percent by weight, minimum	0.0025
	2.7 Cadmium (as Cd), percent by weight, maximum	0.01
	2.8 Arsenic (as As), percent by weight, maximum	4.0
	2.9 pH not less than	
3	Others	Labeling and packaging as per the manufacture's specification.

32. Zinc Sulphate Mono – hydrate (ZnSO₄.H₂O)

S. No.	CHARACTERISTICS	REQUIREMENTS	REQUIREMENTS
1	PHYSICAL CONDITION 1.1 Description	Free flowing powder form.	Free flowing powder form.
2	CHEMICAL COMPOSITION		
	2.1 Zinc (as Zn), percent by weight,	33.0	33.0
		0.003	0.003

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	minimum	0.1	0.1
2.2	Lead (as Pb) percent by weight, maximum	0.5	0.5
2.3	Copper (as Cu), percent by weight, maximum	0.5	1.0
		1.0	1.0
2.4	Magnesium (as Mg), percent by weight, maximum	-	15.0
		-	0.0025
2.5	Iron(as Fe), percent by weight, maximum	-	0.01
		4.0	4.0
2.6	Matter insoluble in water, percent by weight, maximum		
2.7	Sulphur (as S), percent by weight, minimum		
2.8	Cadmium (as Cd), percent by weight, maximum		
2.9	Arsenic (as As), percent by weight, maximum		
2.10	pH not less than		
3	Others	Labeling and packaging as per the manufacture's specification.	Labeling and packaging as per the manufacture's specification.

33. Boronated Single Super Phosphate (S.S.P) 16% P₂O₅ Granulated

S.No.	CHARACTERISTICS	REQUIREMENTS
1.	PHYSICAL CONDITION 1.1 Description 1.2 Particle Size	- The material should be free from excessive lumps and shall not form hard cake on storage. - Not Less than 90 per cent of the material shall pass through 4 mm IS sieve and shall be retained on 1 mm IS sieve. Not more than 5 per cent shall pass through 1 mm IS sieve.
2.	CHEMICAL COMPOSITION 2.1 Moisture percent by weight, maximum. 2.2 Free Phosphoric acid (as P ₂ O ₅) percent by weight, maximum 2.3 Water soluble phosphates (as P ₂ O ₅) percent by weight, minimum 2.4 Neutral Ammonium Citrate Soluble phosphates (as P ₂ O ₅) percent by weight, minimum 2.5 Sulphur (as S) per cent by weight, minimum 2.6 Boron (as B) percent by weight	12.0 4.0 14.5 16.0 11.0 0.15-0.20
3.	Others	Certificate from an independent surveyor or a recognized Government laboratory showing there is no contamination with radioactive material.

34. Calcium Nitrate (100% water soluble)

S.No.	CHARACTERISTICS	REQUIREMENTS
1	CHEMICAL COMPOSITION 1.1 Total nitrogen (Ammoniacal and nitrate form), percent by weight, minimum 1.2 Nitrate Nitrogen as N, percent by weight, minimum 1.3 Water Soluble Calcium (as Ca), percent by weight, minimum 1.4 Matter insoluble in water, percent by weight, maximum	15.5 14.5 18.5 1.5
2	Others	Certificate from independent surveyor or a recognized government laboratory showing there is no contamination with active radioactive material.

35. DAP Fortified with Boron (18:46:0:0.3)

S.No.	CHARACTERISTICS	REQUIREMENTS
1.	PHYSICAL CONDITION 1.1 Particle Size	Not less than 90 percent of the material shall be retained between 1 mm and 4 mm IS sieve and not more than 5 percent shall be below 1 mm IS sieve.
2.	CHEMICAL COMPOSITION 2.1 Moisture percent by weight maximum 2.2 Total Nitrogen percent by weight, minimum 2.3 Ammonical nitrogen percent by weight, minimum	1.5 18.0 15.5 2.5

	2.4 Urea nitrogen(as N) percent by weight, maximum	46.0
	2.5 Neutral ammonium citrate soluble phosphate(as P ₂ O ₅), percent by weight, minimum	41.0
	2.6 Water Soluble phosphate(as P ₂ O ₅) per cent by weight, minimum	0.3
	2.7 Boron(as B) percent by weight, minimum	
3.	Others	Labelling and packaging as per the manufacturer's specification.

36. DAP fortified with Zinc(18:46:0:0.5)

S.No.	CHARACTERISTICS	REQUIREMENTS
1.	PHYSICAL CONDITION 1.1 Particle Size	Not less than 90 percent of the material shall pass through 4 mm IS sieve and retained on 1 mm IS sieve. Not more than 5 percent shall be below 1 mm IS sieve.
2.	CHEMICAL COMPOSITION 2.1 Moisture percent by weight maximum 2.2 Total Nitrogen percent by weight, minimum 2.3 Ammonical nitrogen percent by weight, minimum 2.4 Urea Nitrogen percent by weight, maximum 2.5 Neutral ammonium citrate soluble phosphate(as P ₂ O ₅), percent by weight, minimum 2.6 Water Soluble phosphates(as P ₂ O ₅) per cent by weight, minimum	2.5 18.0 15.5 2.5 46.0 41.0 0.5

	2.7 Zinc(as Zn) percent by weight, minimum	
3.	Others	Labelling and packaging as per the manufacturer's specification.

37. Magnesium sulphate

S.No.	CHARACTERISTICS	REQUIREMENTS
1	PHYSICAL CONDITION 1.1 Description	Free flowing, crystalline form.
2	CHEMICAL COMPOSITION 2.1 Magnesium (as Mg), percent by weight, minimum 2.2 Sulphur (as S), percent by weight, minimum 2.3 Matter insoluble in water, percent by weight, maximum 2.4 Lead (as Pb), percent by weight, maximum 2.5 pH (5% solution)	9.6 12.0 1.0 0.003 5.0-8.0
3	Others	Certificate from independent surveyor or a recognized government laboratory showing there is no contamination with active radioactivematerial.

38. Mono-Potassium Phosphate (0:52:34) (100% Water soluble)

S.No.	CHARACTERISTICS	REQUIREMENTS
1	CHEMICAL COMPOSITION 1.1 Moisture, percent by weight, maximum 1.2 Water soluble phosphates (as	0.5 52.0

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	P ₂ O ₅), percent by weight, minimum 1.3 Water soluble potash (as K ₂ O), percent by weight, minimum 1.4 Sodium (as NaCl), percent by weight (on dry basis), maximum	34.0 0.025
2	Others	Certificate from independent surveyor or a recognized government laboratory showing there is no contamination with active radioactivematerial.

39. Neem Coated Urea (46:0:0)

S.No.	CHARACTERISTICS	REQUIREMENTS
1.	PHYSICAL CONDITION 1.1 Particle size	Not less than 90 per cent of the material shall pass through 2.8 mm IS sieve and not less than 80 per cent by weight shall be retained on 1 mm IS sieve.
2.	CHEMICAL COMPOSITION 2.1 Moisture percent by weight, maximum. 2.2 Total Nitrogen, percent by weight, minimum 2.3 Biuret per cent by weight, maximum 2.4 Neem oil content soluble in Benzene, percent by weight, minimum.	1.0 46.0 1.5 0.035
3	Others	Certificate from an independent surveyor or a recognized

	Government laboratory showing there is no contamination with radioactive material
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40. Nitrophosphate with Potash Fortified with Boron (15:15:15:0.2B)

S.No.	CHARACTERISTICS	REQUIREMENTS
1.	PHYSICAL CONDITION 1.1 Particle Size	Not less than 90 percent of the material shall pass through 4 mm IS sieve and retained on 1 mm IS sieve.
2.	CHEMICAL COMPOSITION 2.1 Moisture percent by weight, maximum 2.2 Total Nitrogen percent by weight, minimum 2.3 Ammonical nitrogen percent by weight, minimum 2.4 Nitrate nitrogen percent by weight, maximum 2.5 Neutral ammonium citrate soluble phosphate(as P ₂ O ₅), percent by weight, minimum 2.6 Water Soluble phosphates(as P ₂ O ₅) per cent by weight, minimum 2.7 Water Soluble potash(as K ₂ O) per cent by weight, minimum 2.8 Boron(as B) percent by weight, minimum 2.9 Calcium Nitrate percent by weight, maximum	1.5 15.0 7.5 7.5 15.0 4.0 15.0 0.2 1.0
3.	Others	Labelling and packaging as per the manufacturer's specification.

41. NPK 15:15:15

S.No.	CHARACTERISTICS	REQUIREMENTS
1	PHYSICAL CONDITION 1.1 Description and particle size	Not less than 90 percent of the material shall pass through 4 mm IS sieve and be retained on 1 mm IS sieve.
2	CHEMICAL COMPOSITION 2.1 Total nitrogen, percent by weight, minimum 2.2 Ammoniacal nitrogen, percent by weight, minimum 2.3 Nitrogen in the form of urea, percent by weight, maximum 2.4 Neutral ammonium citrate soluble phosphate (as P ₂ O ₅), minimum 2.5 Water soluble phosphate (as P ₂ O ₅), percent by weight, minimum. 2.6 Watersoluble potash (as K ₂ O), percent by weight, minimum. 2.7 Moisture, percent by weight, maximum	15.0 12.0 3.0 15.0 12.0 15.0 1.5
3	Others	Certificate from independent surveyor or a recognized government laboratory showing there is no contamination with active radioactive material.

42. NPK 19:19:19 (100% Water soluble)

S.No.	CHARACTERISTICS	REQUIREMENTS
1	CHEMICAL COMPOSITION 1.1 Total nitrogen percent by weight, minimum 1.2 Nitrate nitrogen, percent by	19.0 4.0

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	weight, maximum	
1.3	Ammoniacal nitrogen, percent by weight, minimum	4.5
1.4	Urea nitrogen, percent by weight, maximum	10.5
1.5	Water soluble phosphate (as P ₂ O ₅), percent by weight, minimum.	19.0
1.6	Water soluble potash (as K ₂ O), percent by weight, minimum.	19.0
1.7	Sodium (as NaCl), percent by weight (on dry basis), maximum	0.5
1.8	Matter insoluble in water, percent by weight, maximum	0.5
1.9	Moisture, percent by weight, maximum	

43. Potassium Nitrate (13:0:45) (100% Water soluble)

S.No.	CHARACTERISTICS	REQUIREMENTS
1	CHEMICAL COMPOSITION 1.1 Moisture, percent by weight, maximum 1.2 Total nitrogen (all in nitrate form), percent by weight, minimum 1.3 Water soluble potash (as K ₂ O), percent by weight, minimum 1.4 Sodium (as Na), percent by weight (on dry basis), maximum 1.5 Total chloride (as Cl), percent by weight (on dry basis), maximum 1.6 Matter insoluble in water, percent by weight, maximum	0.5 13.0 45.0 1.0 1.5 0.05
2	Others	Certificate from independent surveyor or a recognized government laboratory showing

		there is no contamination with active radioactivematerial.
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44. Rock Phosphate (Powdered)

S.No.	CHARACTERISTICS	REQUIREMENTS
1	PHYSICAL CONDITION 1.1 Description and particle size	Minimum 90 percent of the material shall pass through 0.5 mm IS sieve and the balance 10 percent of material shall pass through 0.25 IS sieve.
2	CHEMICAL COMPOSITION 2.1 Total phosphorus (as P ₂ O ₅) percent by weight minimum	18.0
3	Others	Certificate from independent surveyor or a recognized government laboratory showing there is no contamination with active radioactivematerial.

45. Rock Phosphate (Mixed)

S.No.	CHARACTERISTICS	REQUIREMENTS
1	PHYSICAL CONDITION 1.2 Description and particle size	100 percent should pass through 100 mesh IS Sieve.
2	CHEMICAL COMPOSITION 2.1 Total phosphorus (as P ₂ O ₅) percent by weight minimum 2.2 Moisture percent by weight, maximum	10.0 25.0
3	Others	Certificate from independent surveyor

		or a recognized government laboratory showing there is no contamination with active radioactive material.
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46. SSP fortified with Zinc

S.No.	CHARACTERISTICS	REQUIREMENTS
1.	CHEMICAL COMPOSITION 1.1 Moisture percent by weight, maximum. 12.0 1.2 Free Phosphoric acid (as P₂O₅) percent by weight, maximum 4.0 1.3 Water soluble phosphates (as P₂O₅) percent by weight, minimum 14.5 1.4 Neutral Ammonium Citrate Soluble phosphates (as P₂O₅) percent by weight, minimum 16.0 1.5 Sulphur (as S) percent by weight, minimum 11.0 1.6 Zinc (as Zn) percent by weight, minimum 0.5	
2.	Others	Certificate from an independent surveyor or a recognized Government laboratory showing there is no contamination with radioactive material.

47. Sulphur (90% Granular)(0-0-0-90)

S.No.	CHARACTERISTICS	REQUIREMENTS
1	PHYSICAL CONDITION 1.1 Description and particle size	Not less than 90 percent of the material

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		shall pass through 4.0 mm IS sieve and be retained on 1 mm IS sieve and not more than 5% shall be below 1 mm IS sieve.
2	CHEMICAL COMPOSITION 2.1 Total sulphur (as S), percent by weight, minimum 2.2 Moisture, percent by weight, maximum	90 0.5
3	Others	Certificate from independent surveyor or a recognized government laboratory showing there is no contamination with active radioactive material.

Note: The product may contain inert filler materials as bentonite etc. up to the extent of 10% by weight maximum.

48. Urea Briquettes (46:0:0)

S.No.	CHARACTERISTICS	REQUIREMENTS
1.	PHYSICAL CONDITION 1.1 Particle size	Minimum 90 percent of the material shall be retained between 5.7 mm and 3.8 mm IS sieve.
2.	CHEMICAL COMPOSITION 2.1 Moisture percent by weight, maximum. 2.2 Total Nitrogen, percent by weight, minimum 2.3 Biuret percent by weight, maximum 2.4 Neem oil content soluble in Benzene, percent by weight, minimum.	1.0 46.0 1.5 0.035
3	Others	Certificate from an

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		independent surveyor or a recognized Government laboratory showing there is no contamination with radioactive material
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49. Zincated Urea(43-0-0-2)

S.No.	CHARACTERISTICS	REQUIREMENTS
1.	PHYSICAL CONDITION 1.1 Particle Size	Not more than 90 percent of the material shall pass through 2.8mm IS sieve and not less than 80 percent by weight shall be retained on 1 mm IS sieve
2.	CHEMICAL COMPOSITION 2.1 Moisture percent by weight, maximum 2.2 Total Nitrogen percent by weight (on dry basis), minimum 2.3 Zinc (as Zn) percent by weight, minimum 2.4 Biuret, percent by weight, maximum	1.0 43.0 2.0 1.5
3.	Others	Labelling and packaging as per the manufacturer's specification.

50. Gahun (Wheat) mal -Basal NPK fortified with Boron (10:20:10:0.2)

S.No.	CHARACTERISTICS	REQUIREMENTS
1.	PHYSICAL CONDITION 1.1 Description and particle size	90 percent of the material shall pass between 1 mm and 4 mm IS sieve and not more than 5 percent will be below

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		1 mm size.
2.	CHEMICAL COMPOSITION	Percentage
	2.1 Total nitrogen percent by weight, minimum	10
	2.2 Total phosphate (P_2O_5) percent by weight, minimum	20
	2.3 Total potash (as K_2O) percent by weight, minimum	10
	2.4 Total B percent by weight, minimum	0.2
	2.5 Moisture percent by weight, maximum	1.5
3.	Others	Certificate from independent surveyor or recognized Government Laboratory showing there is no contamination with active radioactive material.

51. Dhan (Rice) mal -Basal (NPK Fortified with Zn) 20:20:20:1.0

S.No.	CHARACTERISTICS	REQUIREMENTS
1.	PHYSICAL CONDITION 1.1 Description and particle size	90 percent of the material shall pass between 1 mm and 4 mm IS sieve and not more than 5 percent will be below 1 mm size.
2.	CHEMICAL COMPOSITION 2.1 Total nitrogen percent by weight, minimum	Percentage 20

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	2.2 Total phosphate (P_2O_5) percent by weight, minimum	20
	2.3 Total potash (as K_2O) percent by weight, minimum	20
	2.4 Total Zn percent by weight, minimum	1.0
	2.5 Moisture percent by weight, maximum	1.5
3.	Others	Certificate from independent surveyor or recognized Government Laboratory showing there is no contamination with active radioactive material.

52. Makai (Maize) mal -Basal (NPK fortified with B) 10:20:20:0.3

S.No.	CHARACTERISTICS	REQUIREMENTS
1.	PHYSICAL CONDITION 1.1 Description and particle size	90 percent of the material shall pass between 1 mm and 4 mm IS sieve and not more than 5 percent will be below 1 mm size.
2.	CHEMICAL COMPOSITION	Percentage
	2.1 Total nitrogen percent by weight, minimum	10
	2.2 Total phosphate (P_2O_5) percent by weight, minimum	20
	2.3 Total potash (as K_2O) percent by weight, minimum	20
	2.4 Total B percent by weight, minimum	0.3
	2.5 Moisture percent by weight, maximum	1.5
3.	Others	Certificate from

		independent surveyor or recognized Government Laboratory showing there is no contamination with active radioactive material.
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डा. युवक ध्वज जि.सी.
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