BB Chemicals

NP FERTILISER

Ammoniated superphosphate is a nitrogen–phosphorus (NP) fertiliser produced by reacting solid superphosphate with ammonia, which raises the nutrient content and improves storage behaviour. It supplies nitrogen in ammoniacal form, phosphorus in highly plant-available form and sulphur from the sulphate matrix. The product is supplied as free-flowing granules, treated against caking, in the traded grades NP 16-20 + 13S and NP 20-20 + 13S.

APPLICATIONS

Basic and pre-sowing fertilisation of all agricultural crops on any soil type, in particular on calcareous, alluvial and black cotton soils where phosphorus availability governs early root development.

Phosphorus and sulphur correction on acidic soils, where ammoniated superphosphate gives higher phosphorus availability than plain superphosphates together with better storage and handling properties.

AMMONIATED SUPERPHOSPHATE · NP 16-20 + 13S · NP 20-20 + 13S

Specification:

IDENTITY, PHYSICAL AND CHEMICAL CHARACTERISTICS

ITEM OF TEST	TEST RESULTS	METHOD / REFERENCE
NUTRIENT GRADE, N – P_2O_5 – S	NP 16-20 + 13S; NP 20-20 + 13S; further grades as agreed per order	Producer specification (EC fertiliser); FCO 1985, Schedule I, Part A
APPEARANCE	Free-flowing granules of uniform size, free from visible foreign matter	Visual; granulometry per EN 1235
TOTAL NITROGEN (N)	20.0 ± 0.7 % (NP 20-20 + 13S); min. 16.0 % (NP 16-20 + 13S)	EN 15750 (method A); FCO 1985, Schedule I
AMMONIACAL NITROGEN (N-NH_4), min.	19.0 % (NP 20-20 + 13S); 16.0 % (NP 16-20 + 13S, all nitrogen ammoniacal)	EN 15475; FCO 1985, Schedule I
TOTAL PHOSPHORUS PENTOXIDE (P_2O_5)	20.0 ± 0.7 %	Extraction EN 15956; determination EN 15959
P_2O_5 SOLUBLE IN NEUTRAL AMMONIUM CITRATE AND WATER (AVAILABLE), min.	19.0 %	Extraction EN 15957; determination EN 15959
WATER-SOLUBLE P_2O_5, min.	18.0 % (NP 20-20 + 13S); 19.5 % for the 16-20-0 grade under FCO Schedule I	Extraction EN 15958; determination EN 15959
POTASSIUM OXIDE (K_2O)	Not declared; the product is a nitrogen–phosphorus fertiliser	Reg. (EU) 2019/1009, Annex I, Part II, PFC 1(C)(I)(a)(ii)
TOTAL SULPHUR (S), min.	13.0 %	Extraction EN 15960; determination EN 15749; FCO 1985, Schedule I
MOISTURE (WATER CONTENT), max.	2.0 %; max. 1.0 % for the 16-20-0 and 20-20-0 grades under FCO Schedule I	EN 13466-1
GRANULOMETRY, fraction 1 – 5 mm, min.	98.0 %; alternatively min. 90 % between 1 mm and 4 mm with max. 5 % below 1 mm	EN 1235; FCO 1985, Schedule I (IS sieves)
BULK DENSITY	approx. 970 – 1,100 kg/m^3, grade-dependent	Producer safety data sheet NP 16-20 + 13S; producer technical data sheet 16-20-0 + 13S
pH, 10 % aqueous solution	4.5 – 6.0	Producer safety data sheet NP 16-20 + 13S
FREE ACIDITY (as H_3PO_4)	Neutralised by ammoniation; free acidity as agreed per order	Producer specification (EC fertiliser)
ANTI-CAKING AND ANTI-DUST TREATMENT	Granules treated with an anti-caking additive; conditioning agent as agreed per order	Producer specification (EC fertiliser)

Nutrient values are the specification of ammoniated superphosphate (ammonium phosphate sulphate) grades actually traded as EC fertilisers, cross-checked against the statutory grade specifications of the Indian Fertiliser (Control) Order 1985, Schedule I. Analytical methods are the CEN methods listed for inorganic macronutrient fertilisers in the harmonised-standards request under Regulation (EU) 2019/1009. Grade and tolerances are confirmed per order.

CONTAMINANT AND IMPURITY LIMITS

ITEM OF TEST	TEST RESULTS	METHOD / REFERENCE
CADMIUM (Cd), max.	60 mg/kg P_2O_5 (phosphate fertiliser, total P ≥ 5 % P_2O_5-equivalent)	Reg. (EU) 2019/1009, Annex I, Part II, PFC 1(C)(I), point 2(a); EN 16319 (ICP-AES, aqua regia)
HEXAVALENT CHROMIUM (Cr VI), max.	2 mg/kg dry matter	Reg. (EU) 2019/1009, Annex I, Part II, PFC 1(C)(I), point 2(b); EN 16318 (photometry / ion chromatography)
MERCURY (Hg), max.	1 mg/kg dry matter	Reg. (EU) 2019/1009, Annex I, Part II, PFC 1(C)(I), point 2(c); EN 16320 (vapour generation, aqua regia)
NICKEL (Ni), max.	100 mg/kg dry matter	Reg. (EU) 2019/1009, Annex I, Part II, PFC 1(C)(I), point 2(d); EN 16319 (ICP-AES, aqua regia)
LEAD (Pb), max.	120 mg/kg dry matter	Reg. (EU) 2019/1009, Annex I, Part II, PFC 1(C)(I), point 2(e); EN 16319 (ICP-AES, aqua regia)
ARSENIC (As), max.	40 mg/kg dry matter	Reg. (EU) 2019/1009, Annex I, Part II, PFC 1(C)(I), point 2(f); EN 16317 (ICP-AES, aqua regia)
BIURET ($C_2H_5N_3O_2$), max.	12 g/kg dry matter	Reg. (EU) 2019/1009, Annex I, Part II, PFC 1(C)(I), point 2(g); EN 15479 or ISO 18643 (HPLC)
PERCHLORATE (ClO_4^-), max.	50 mg/kg dry matter	Reg. (EU) 2019/1009, Annex I, Part II, PFC 1(C)(I), point 2(h); EN 17246 (ion chromatography)
COPPER (Cu), max.	600 mg/kg dry matter (does not apply where copper is intentionally added and declared)	Reg. (EU) 2019/1009, Annex I, Part II, PFC 1(C)(I), point 3; CEN/TS 17754
ZINC (Zn), max.	1,500 mg/kg dry matter (does not apply where zinc is intentionally added and declared)	Reg. (EU) 2019/1009, Annex I, Part II, PFC 1(C)(I), point 3; CEN/TS 17754

All contaminant limits are the statutory maxima for inorganic macronutrient fertilisers laid down in Regulation (EU) 2019/1009, Annex I, Part II, PFC 1(C)(I), points 2 and 3. Because the product contains 5 % phosphorus pentoxide-equivalent or more by mass, the cadmium limit applied is 60 mg/kg P_2O_5 and not the 3 mg/kg dry matter limit for low-phosphorus fertilisers. Batch results are reported in the certificate of analysis.

Product: ammoniated superphosphate (ammonium phosphate sulphate), nitrogen–phosphorus fertiliser with sulphur

CN / HS code: 3105 59 00 (other NP fertilisers, not containing nitrates)

EU product function category: PFC 1(C)(I)(a)(ii), compound solid inorganic macronutrient fertiliser

Traded grades: NP 16-20 + 13S; NP 20-20 + 13S

Appearance: free-flowing granules, fraction 1 – 5 mm, anti-caking treated

Applications: basic and pre-sowing fertilisation of all agricultural crops, phosphorus and sulphur supply on calcareous, alluvial, black cotton and acidic soils

Packaging: polypropylene bags 50 kg and 25 kg net; big bags 500 kg net; other packaging by agreement

Storage & transport: dry, covered, well-ventilated premises in intact packaging, protected from moisture, precipitation and direct sunlight

Shelf life: as agreed per order; the product is not perishable, but caking may occur on prolonged storage or under high humidity

COMPLIANCE & DOCUMENTATION

- The product is placed on the Union market as an EU fertilising product of product function category PFC 1(C)(I)(a)(ii) under Regulation (EU) 2019/1009; the EU declaration of conformity and CE marking documentation of the producing plant are available on request.
- The cadmium content complies with the limit of 60 mg/kg phosphorus pentoxide (P_2O_5) for phosphate fertilisers set out in Annex I, Part II, PFC 1(C)(I), point 2(a) of Regulation (EU) 2019/1009.
- The product is a mixture of substances registered under Regulation (EC) No 1907/2006 (REACH); the registration numbers of the individual components are stated in the safety data sheet of the delivered grade.
- Comparable ammoniated superphosphate grades are classified as not hazardous under Regulation (EC) No 1272/2008 (CLP) in the producers' safety data sheets, which also state that the product is not subject to the international dangerous goods rules (ADR/RID, IMDG, ICAO/IATA); the classification of each delivered grade is confirmed in its own safety data sheet.
- Third-party laboratory test reports for contaminants, the producer safety data sheet and plant management-system certificates are available on request.
- Each consignment is accompanied by a certificate of analysis with batch-specific results.

References: Regulation (EU) 2019/1009, consolidated text, Annex I, Part II, PFC 1(C)(I), eur-lex.europa.eu; Standardisation request M/564 for fertilising products (CEN methods per parameter), fertilizer-certification.eu; Specification sheet NP 20:20 + 13S, EC fertiliser, Agropolychim, axp.com.ua; Fertiliser (Control) Order 1985, Schedule I (ammonium phosphate sulphate 16-20-0 and 20-20-0), agriwelfare.gov.in.