

megAN 33.5

1. SUBJECT OF THE SPECIFICATION

This Technical Specification cover mechanically granulated ammonium nitrate with calcium carbonate and magnesium carbonate (PFC 1(C)(I)(a)(i)(A): Straight solid inorganic macronutrient ammonium nitrate fertiliser of high nitrogen content), with an anti-caking agent.

2. REQUIREMENTS

2.1. GENERAL REQUIREMENTS

megAN 33.5 is produced in the form of white to beige granules, depending on the filler colour.

megAN 33.5 fulfils the requirements set forth in Regulation (EU) 2019/1009 of the European Parliament and of the Council of 5 June 2019 of 5 June 2019.

2.2. DETAILED REQUIREMENTS

Detailed requirements are shown in Table 1.

Table 1

No.	Requirements		Unit	Limits
1.	Total nitrogen content	-	% (w/w)	33.5 (-2.0/+1.0)
2.	Loss on drying at (105 ± 3) °C	max	% (w/w)	0.5
3.	Granulometry: the content of granules with dimensions of 2.0-5.0 mm.	min	% (w/w)	95

The producer guarantees the flowability of this product if stored under conditions specified in Section 5.

3. LABELLING

The labelling of the package must be placed in a conspicuous location, and remain indelible and clearly legible.

The labelling of the package complies with the Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures.

The labelling of the fertiliser package contains information in accordance with the Regulation (EU) 2019/1009 of the European Parliament and of the Council of 5 June 2019.

The labelling of the package may include other elements, resulting from the specificity of the product or the type of packaging.

Motor vehicles should be equipped with orange-coloured placards.

Railway cars should be marked with warning labels for Class 5.1. oxidizing materials placed on both sides, in accordance with RID.

Additionally, the railway car may be marked on both sides with orange-coloured placards bearing numerical markings (50/2067), if it contains a cargo consisting entirely of packages of one and the same kind of goods.

4. PACKING

megAN 33.5 may be delivered in original packages only. The following packages may be used:

- Big Bag Flexible IBCs, with a capacity of 500, 600, 750, 1000kg,
- other packaging as agreed with the customer.

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5. STORAGE

megAN 33.5 must be stored in accordance with applicable local regulations.

Storage place requirements:

- Stored fertilizer should be protected against moisture penetration. Store on a substrate made of non-combustible materials, on a dry and smooth surface without channels, holes and cavities where molten product could be trapped. As bases, you can use wooden pallets in perfect technical condition, not contaminated with petroleum products or ammonium nitrate.
- The weight of the product in a stack must not exceed 300 tonnes. Stacks should be at least 1 m away from each other, walls, roofs and heat sources. Ensure access by a vehicle to each stack.
- Protect against direct sunlight and temperatures above 30°C.

Packaging information:

- Fertilizer in flexible Intermediate bulk containers (IBCs) with a unit weight not exceeding 600 kg should be stored in stacks with up to 2 layers. Fertilizer packed in sacks with a unit weight of 750 and 1000 kg must be stored in one layer only.

Other guidelines:

- Do not store megAN 33.5 together with materials that may react with it or are flammable, i.e. e.g.: pesticides, disinfectants, herbicides, flammable materials, chlorates, hypochlorites, chlorinated organic compounds, bleaches, chromates, organic peroxides, organic compounds, alkalis, acids, sulfur, powdered metals (zinc, copper and copper alloys), organic materials such as hay, straw, oils, greases, grains, and animal fodder.
- Store away from heat sources, hot surfaces and sources of ignition.
- Do not store with fertilizers other than nitrate fertilizers.
- Access to all storage areas should be allowed only to authorized people.

6. TRANSPORT

megAN 33.5 should be transported in accordance with the applicable regulations concerning the international carriage of dangerous goods by road/rail. According to the RID/ADR regulations, the product is classified as Class 5.1 "Oxidizing substances", UN number: 2067.

7. ANALYTICAL METHODS

7.1. TESTING SCHEDULE

See Table 2.

Table 2

No.	Test description	Test decription as per:
1.	General requirements checking	7.4.
2.	Determination of total nitrogen content	7.5.
3.	Determination of loss on drying at (105 ± 3)°C	7.6.
4.	Determination of granulometry	7.7.

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7.2. BATCH SIZE

A traceable amount of product not greater than 1000 t is a batch of megAN 33.5.

7.3. SAMPLING

Perform according to PN-EN1482-1:2008 standard.

7.4. GENERAL REQUIREMENTS CHECKING

Testing for compliance with general requirements is performed visually.

7.5. DETERMINATION OF TOTAL NITROGEN CONTENT

Perform according to PN-EN 15476:2009 standard.

7.6. DETERMINATION OF LOSS ON DRYING AT (105 ± 3) °C

7.6.1. Principle of the method

The method consists in drying a fertilizer sample at a temperature of 105±3°C for 3.5 h and then cooling it down, weighing it and calculating the water content on the basis of weight loss.

7.6.2. Equipment and instruments

- weighing containers with a diameter of 50 - 70 mm;
- analytical balance with a weighing accuracy of 0.0002 g;
- laboratory dryer with temperature control;
- desiccator.

7.6.3. Determination

In a weighing container that has been dried and weighed with an accuracy of 0.0002 g, weigh 10 g of the tested fertilizer sample with the same accuracy. Dry the sample in a laboratory dryer at a temperature of (105±3)°C for 3.5 h and, after cooling in a desiccator for 0.5 h, weigh it with an accuracy of 0.0002 g.

The period of keeping the sample in the desiccator before weighing (cooling, drying empty weighing containers and cooling the samples after cooling) must be the same: 0.5 h.

7.6.4. Calculation of determination results

Loss on drying (X) at a temperature of (105±3)°C expressed as a percentage (m/m) should be calculated according to the formula:

$$X = \frac{(m - m_1) \times 100}{m}$$

where:

m - weight of the sample before drying, [g];

m₁ - weight of the sample after drying, [g].

7.6.5. Final determination result

The final result of the determination should be the arithmetic mean of the results of two parallel determinations, the difference of which does not exceed 0.05 % (m/m).

7.7. DETERMINATION OF GRANULOMETRY

7.7.1. Principle of the method

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The method consists in dry sieving a fertilizer sample through a suitable set of sieves, weighing the obtained fractions and calculating their percentage content.

7.7.2. Equipment

- a) set of control sieves with a square mesh size of 2.0 mm and 5.0 mm;
- b) laboratory vibrating screen;
- c) balance with a weighing accuracy of 0.1 g.

7.7.3. Determination

Weigh 200 g of the test sample with an accuracy of 0.1 g, transfer it quantitatively to the upper sieve of the set and put on the lid. Sieve the sample mechanically or manually for 10 minutes. Then weigh the residue on each of the sieves and the collection container with an accuracy of 0.1 g.

7.7.4. Calculation of determination results

The content of the granules with dimensions of (2.0-5.0) mm (X) should be calculated as a percentage (m/m) according to the formula:

$$X = \frac{m_1 \times 100}{m}$$

where:

- m_1 - weight of the screenings on the sieve with a square mesh size of 2.0 mm, [g];
- m - weight of the sample for analysis, [g].

7.7.5. Final determination result

The final result should be the arithmetic mean of the results of at least two parallel determinations, the difference of which should not exceed 1.0 % (m/m).

7.8. RESULTS EVALUATION AND TEST CERTIFICATE

A batch of megAN 33.5 shall be considered to meet the requirements of this Technical Specification if test results conform with the requirements indicated in Table 1.

The quality control certificate confirms compliance of the test results with the requirements of this Technical Specification.

8. REFERENCES

- PN-EN 1482-1:2008 Fertilizers and liming materials. Sampling and sample preparation. Part 1: Sampling.
- PN-EN 15476:2009 Fertilizers - determination of nitric and ammoniacal nitrogen according to Devarda.
- PN-EN 1235:1999 Solid fertilizers. Test sieving the grain size.
- Regulation (EU) 2019/1009 of the European Parliament and of the Council of 5 June 2019 of 5 June 2019 laying down rules on the making available on the market of EU fertilising products and amending Regulations (EC) No 1069/2009 and (EC) No 1107/2009 and repealing Regulation (EC) No 2003/2003.
- Regulation (EC) no 1272/2008 (CLP) of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 (REACH).
- European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR).

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- Convention concerning International Carriage by Rail (COTIF), Appendix C - Regulation concerning the International Carriage of Dangerous Goods by Rail (RID).
- Act dated on 19th August 2011 relating to transportation of dangerous goods.

9. ADDITIONAL INFORMATION

WT-2024/ZA-76/1 supersedes WT-2024/ZA-76.