
SPECIFICATION

1. Product name

a) trade name

- in Polish - **ZAKsan™**
- in English - **Ammonium nitrate (AN), granulated**
- in German - **Ammoniumnitrat, granuliert**

b) chemical name

- in Polish - mieszanina azotanu amonu z węglanem wapnia i węglanem magnezu
- in English - mixture of ammonium nitrate with calcium carbonate and magnesium carbonate
- in German - Mischung von Ammoniumnitrat mit Kalziumcarbonat und Magnesiumcarbonat

c) type of fertilizer

- in Polish - azotan amonu z wypełniaczem
- in English - ammonium nitrate
- in German - ammoniumnitrat

d) chemical formula - $\text{NH}_4\text{NO}_3 + \text{CaMg}(\text{CO}_3)_2$

e) PKWiU symbol - 20.15.35.0

f) CN symbol - 3102 40 90

[translator's note: PKWiU symbol = symbol of Polish Classification of Products and Services; CN symbol = commodity symbol]

2. Quality requirements

2.1 General requirements

ZAKsan™ has the form of loose granulated matter, coloured beige to brown.

2.2 Physical-chemical properties

Specification	Value	Test method	Foreign equivalent
a) Total nitrogen as a sum of ammonium nitrogen and nitrate nitrogen, % (m/m), within, of which:	32 ± 0.8	ZAK's internal method	Annex IV to Regulation (EC) № 2003/2003
b) nitrate nitrogen, % (m/m), within	16 ± 0.4	ZAK's internal method	Annex IV to Regulation (EC) № 2003/2003
c) ammonium nitrogen, % (m/m), within	16 ± 0.4	ZAK's internal method	Annex IV to Regulation (EC) № 2003/2003
d) loss on drying, % (m/m), max.	0.5	ZAK's internal method	No - use ZAK's internal method
e) grain size distribution, content of 2-5 mm, particles, % (m/m), min.	95	ZAK's internal method	No - use ZAK's internal method

3. Application

ZAKsan™ is a fertilizer.

4. Storage stability

When the storage and transport conditions as per sections 7 and 8 are observed, the fertilizer remains useful indefinitely.

5. Quality document

Unless the client's order (or contract) demands otherwise, each shipment of the product shall be provided with the quality certificate to show that the product quality satisfies the requirements listed in this Specification.

6. Packing

ZAKsan™ is packed to:

- 500-1000 kg big-bags,
- other types of packages, of different sizes, if they can maintain the fertilizer safety in the storage, transport, handling and application processes; those packages should be sealed or closed in such a way, or with the use of such devices, that every attempt to open a package should result in irreversible damage to the seal, to the seal control or to the package itself.

When the fertilizer is to be exported, the type of packing and the size of a unit package should be agreed upon with the client.

The packages should meet the requirements of PN-C-87001:1998 [Polish Standard], clauses 3.1.1 and 3.1.2, as well as the RID and ADR requirements for packing group III.

6.1 Marking

When the fertilizer is to be shipped to a domestic client, each unit package as per section 6 above should be provided with a tangible inscription or a label specifying at least the following information:

- a) information: "EC FERTILIZER",
- b) specification of fertilizer type,
- c) contents and chemical forms of nitrogen (N),
- d) net weight,
- e) producer's name and address,
- f) trade name as per section 1.a,
- g) instructions for use, storage and transport,
- h) handling signs as per PN-EN ISO 780:2001: signs № 4, 6, 14 and 17,
- i) safety sign № 19 as per PN-92/N-01256/01,
- j) information on possible hazards which may be posed by the fertilizer,
- k) information on procedures to be followed to eliminate any hazards, and on emergency procedures,
- l) date of production,
- m) information "Within facilities of agricultural producers this fertilizer MAY NOT be stored together with other fertilizers".

When the fertilizer is to be exported to EC countries, the packages shall be marked as per a), b), c), d) and e), while other marking should be agreed upon with the client. When the product is to be exported outside EC, the required marking/labelling should be agreed upon with the client.

7. Storage

Because ZAKsan™ is hygroscopic, it shall be stored in clean and dry storage buildings, provided with the marking as per Section 6 above, on non-flammable floors or linings which keep water/moisture away. The fertilizer should be protected against water, atmospheric precipitation, direct sunlight and heating up to over 30°C.

No open flame devices may be used in the rooms where ammonium nitrate is stored. The wiring system(s) shall be protected against short circuit.

No chemical compounds or materials which could react with ZAKsan™, like: plant pesticides, chlorine-containing fertilizers, organic substances, strongly alkaline substances (e.g. soda lye), lime, cement, powdered metals, metal oxides or acids, or

flammable materials, like: coal, sawdust, greases or engine fuels, should be placed in the immediate vicinity of the fertilizer.

ZAKsan™ may be stored next to nitrate fertilizers only.

Flexible containers (big-bags) up to 500 kg may be stacked not more than 2 high, while those with more than 500 kg fertilizer may be arranged in one tier only. The big-bags should be placed at least 1.5 m away from a heat source and at least 0.2 m away from the storage room wall. All damaged big-bags shall be stored separately. Not more than 300 t of ZAKsan™ may be stored in one storage room. If those rules are not observed, the fertilizer quality may change or the material may undergo uncontrolled decomposition. If more than 1250 Mg is stored in one location, that site is qualified as a lower-tier establishment, while the stock over 5000 Mg qualifies the site as an upper-tier establishment, according to Directive 2012/18/EU of the European Parliament and of the Council, Annex I, part 2, item 2, Note 14.

Note:

- **It is not permissible for agricultural producers to store ZAKsan™ together with other fertilizers.**
- **ZAKsan™ MAY NOT be stored / piled up in bulk.**

7.1 Marking within storage houses/yards

The places where the fertilizer is stored in unit packages shall be provided with information panels where the fertilizer name and its date of production shall be specified. In retail selling centres, each panel shall additionally specify the date when the stack of big-bags was first arranged and the content of the principal ingredient in per cent.

8. Transport

ZAKsan™ in unit packages (big-bags) may be transported with the use of any covered means of transportation. However, the conditions as per section 7 above should be observed. The fertilizer should be protected against atmospheric impacts and contamination. The means of transport should be clean, dry and leak-tight, and their technical condition should not be the reason for any damage to unit packages. ZAKsan™ may be carried as a full load shipment with the total mass up to 3000 kg, in closed vehicles or in closed containers. The vehicles and containers should be designed in such a way as to rule out any contact of the fertilizer being transported with flammable materials and/or chemical compounds which could react with the fertilizer, as listed in section 7. When the floor and/or walls in a vehicle is/are made of wood or any flammable material, they should be provided with liquid-proof and non-flammable lining or they should be protected with a non-flammable impregnating agent, e.g. sodium silicate solution (water glass).

The RID and ADR regulations classify ZAKsan™ as a dangerous substance, class 5.1, packing group III.

According to ADR regulations, the vehicles carrying ZAKsan™ should be marked with orange-coloured reflectorized plates affixed at the front and the other at the rear of each transport unit (as regards RID, rail cars – the orange-coloured plates should be affixed to both sides of the rail cars).

Note:

ZAKsan™ shall be made available to the end user in big-bags only.

9. Other information

ZAKsan™ is a mechanically granulated material.

10. Reference documents

Product Sheet, part II	<i>Material Safety Data Sheet</i>
PN-92/N-01256.01	<i>Safety signs. Fire protection.</i>
PN-EN ISO 780:2001	<i>Packaging. Pictorial marking for handling of goods.</i>
PN-C-87001:1998	<i>Fertilizers. Packing, stocking and transport.</i>

The latest revisions of the above standards should be consulted.

11. In place of

KW-98/ZAK-021.01 (issue 07) “Kędzierzyńska Saletra Amonowa®. Specification.” The product name, the product sheet numbering system, and the product sheet graphic design were changed.