

CATALOG



ABOUT US

Sinotec is a global leader in fertilizer trading, working to strengthen global food security. We supply high-quality, modern fertilizers to agricultural markets around the world, supporting the sustainable growth of the farming sector.

Thanks to a flexible logistics system, Sinotec ensures convenient delivery by sea, rail, and road to the needs of our clients and the specifics of each region.

Our product range includes fertilizers for cereals, vegetables, fruits, and berries—from granular solutions for open fields to water-soluble products for greenhouses and drip irrigation. We also offer innovative formulations developed in collaboration with research centers.

Sinotec doesn't just sell fertilizers—we deliver complete agronomic solutions that combine efficiency, advanced technology, and environmental care.



CONTENT

N/NS/NP	Nitrogen	
Ammonium nitrate (AN)	N 34.4	7
Stabilised ammonium nitrate (SAN)	NP 33:3	8
Sulphonitrate	NS 30:7	9
Calcium ammonium nitrate (CAN)	27N+12CaO	10
Calcium ammonium nitrate with sulphur (CNS)	NS 27:4+8CaO	11
Ammonium sulphate (AS)	NS 21:24	12
Urea	N 46.2	13
Urea ammonium sulphate (UAS)	NS 40:6, NS 34:12	14

P/NP/NP(S)	Phosphate fertilizers	
NP 22:20		16
Monoammonium phosphate (MAP)	NP 12:52	17
NP(S) 14:34(8), NP(S) 16:20(12), NP(S) 20:20(14)		18

K	Potassium fertilizers	
Pink Granular MOP		20
Pink Fine MOP		21
White Standard MOP		22
White Fine MOP		23

NPK/NPKS	Granular complex fertilizers	
Balanced		
NPK 15:15:15, NPKS 15:15:15:11, NPK 16:16:16		25
High-nitrogen		
NPKS 21:10:10:2, NPKS 27:17:3:3, NPKS 22:7:12:2		26
NPK 24:6:12:1, NPKS 27:6:6:2		27
Low-nitrogen		
NPKS 10:20:20:6, NPKS 10:26:26:2		28
High-phosphorus		
NPKS 10:20:10:5, NPKS 12:24:12:6, NPKS 14:23:14:6		29
Low-phosphorus (V-grades)		
NPK 18:4:18, NPK 19:4:19, NPK 19:9:19, NPK 20:4:20		30
NPKS 17:6:18:4+2Mg		31
High-potassium		
NPKS 6:18:34:2, NPKS 8:15:30:4, NPKS 8:20:30:3		32
NPKS 12:5:27:8, NPKS 13:13:21:7, NPKS 13:13:24:4		33
With trace elements		
NPKS 8:20:30:3+0.015Zn, NPKS 14:18:18:6+0.3B		34
NPKS 15:15:15:6+1B, NPKS 15:20:15:6+0.3B+0.3Zn		35

NPK/NPKS	Granular complex fertilizers	
Balanced		
MultiStart NPKS 8:20:30:3+1BIO, NPKS 15:15:15:11+1BIO		36

RM	Raw materials for WS NPK	
Urea microprilled		38

WS	Water-soluble fertilizers	
Calcium nitrate concentrated (CN)	17N+33CaO	40
Calcium nitrate concentrated with boron	(CN with B) 17N+32CaO+1B	41
Calcium nitrate concentrated with magnesium	(CN with Mg) 17N+32CaO+1MgO	42
Potassium nitrate (NOP)	NK 13.7:46.2	43
Monoammonium phosphate (MAP)	NP 12:61	44
Monopotassium phosphate (MKP)	PK 52:34	45
Magnesium sulphate	MgSO ₄ *6H ₂ O	46
SOLAR NPK micro Starter	NPK 15:30:15+2MgO+TE, NPK 11:40:11+2MgO+TE, NPK 13:40:13+TE	47
SOLAR NPK micro Universal	NPK 18:18:18+3MgO+TE, NPK 19:19:19+TE, NPK 20:20:20+TE	48
SOLAR NPK micro Finisher	NPK 15:7:30+3MgO+TE, NPK 12:6:36+2.5MgO+TE, NPK 3:11:38+TE, NPK 3:11:38+4MgO+TE	49
SOLAR NPK micro+Amino		50
SOLAR NPK micro+Stim		51
SOLAR NPK micro+BioSurf		52
AQUADROP NPK	NPK 13:40:13, NPK 18:18:18, NPK 20:20:20, NPK 5:15:45	53
Muriate of potash (MOP)	0:0:62	54

F	Feed grade products	
Feed-grade urea		56
Feed-grade monoammonium phosphate		57
Potassium chloride		58

LEGEND



Suitable for greenhouse applications



Embedding into the soil is required



Suitable for foliar application



Can be used in irrigation systems



Suitable for first half of the growing season



Suitable for UAVs application



Suitable for basal application



Suitable for soil application



Can be used in fertilizer blends



Improved physical and chemical properties to ensure even distribution of fertilizers across the entire spreading width



Products do not contain sodium, chlorine or heavy metals



Conformance to GOST R 58658-2019 – Fertilizer with Improved Characteristics



Low carbon footprint

A close-up photograph of golden wheat stalks, showing the intricate details of the grain heads and long awns. The background is a clear blue sky, creating a warm and vibrant atmosphere. The lighting is bright, highlighting the texture and color of the wheat.

N/NS/NP

NITROGEN FERTILIZERS

PACKAGING AND STORAGE:

AMMONIUM
NITRATE (AN)

bags



big bags



in bulk



Upon request, ammonium nitrate can be treated with an anti-caking agent (not suitable for greenhouse application).

Store in a dry insulated place, away from moisture and direct sunlight.

AMMONIUM NITRATE (AN)

N 34.4

Versatile highly concentrated nitrogen fertilizer containing ammonium and nitrate forms of nitrogen in equal amounts for extended plant nutrition.

Suitable for direct application to the soil and in fertilizer blends. Excellent physical and chemical characteristics to facilitate storage and application.

Fully water-soluble.

Most effective in the early stages of plant development. Recommended to apply before flowering.



APPEARANCE

WHITE OR SLIGHTLY COLORED GRANULES

Mass fraction of total nitrogen (N), % including mass fraction of:

- ammonium nitrogen
- nitrate nitrogen

34.4

17.2

17.2

Particle size distribution, %
Mass fraction of granules:

- sized under 1 mm, max
- sized 1-4 mm, min
- sized over 6 mm

3

95

0

Friability, %

100



PACKAGING AND STORAGE:

STABILISED
AMMONIUM
NITRATE
(SAN)

 big bags

 in bulk

Store in a dry insulated place, away from moisture and direct sunlight.

STABILISED AMMONIUM NITRATE (SAN)

NP 33:3

Versatile highly concentrated nitrogen fertilizer containing a small amount of the mobile phosphorus to support the initial stages of plant growth and development.

Contains ammonium and nitrate forms of nitrogen in equal amounts for extended plant nutrition. Contains phosphates in a water-soluble and readily available form.

Excellent physical and chemical characteristics to facilitate storage and application.

Suitable for all soils and crops. Most effective at the first, earliest top-dressing of winter crops.



APPEARANCE	WHITE GRANULES
Mass fraction of total nitrogen (N), % including mass fraction of:	33
■ ammonium nitrogen	16.5
■ nitrate nitrogen	16.5
■ digestible phosphates in terms of P_2O_5 , %, min	3
Particle size distribution, % Mass fraction of granules:	
■ sized under 1 mm, max	3
■ sized 1-4 mm, min	95
■ sized over 6 mm	0
Friability, %	100



PACKAGING AND STORAGE:

SULPHONITRATE



big bags



in bulk

Store in a dry insulated place, away from moisture and direct sunlight.

SULPHONITRATE

NS 30:7

**Nitrogen fertilizer with optimally balanced N:S ratio.
Effective for most crops on all soil types.**

Contains sulphur in a water-soluble sulphate form to improve the quality of agricultural products (increases oil content in oilseeds and protein content in cereals) and promote nitrogen absorption.

The 18% to 12% ratio of ammonium and nitrate forms of nitrogen reduces leaching losses and extends nutrition effect*. The granular form allows even distribution of the fertilizer across soil surface during application.

Improves absorption of phosphorus by the plant and supports extraction of phosphates accumulated in the soil. Improved physical and chemical characteristics (no caking and no dusting).



APPEARANCE

WHITE OR YELLOWISH-GRAY GRANULES

Mass fraction of total nitrogen (N), %
including mass fraction of:

- ammonium nitrogen
- nitrate nitrogen
- sulphate sulphur in terms of S, min, %

30
18
12
7

Particle size distribution, %
Mass fraction of granules with size, mm

- sized under 1 mm, max
- sized 1-5 mm, min
- sized over 6.3 mm

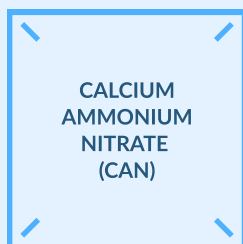
3
90
0

Friability, %

100



PACKAGING AND STORAGE:

 big bags

 in bulk

Store in a dry insulated place, away from moisture and direct sunlight.

CALCIUM AMMONIUM NITRATE (CAN)

$$27\text{N} + 12\text{CaO}$$

Physiologically neutral nitrogen fertilizer.
A safety benchmark for nitrogen-rich fertilizers.

Contains equal amounts of ammonium and nitrate forms of nitrogen for extended plant nutrition.
The presence of calcium carbonate prevents soil acidification.
Calcium contributes to the development of the root system and increases disease and pest resistance.

Excellent physical and chemical characteristics to facilitate storage and application.

Recommended for all types of soils at pH less than 6.5.

Used for all crops, especially for roots and tubers, fruits and berries.





APPEARANCE	WHITE-GREY GRANULES
Mass fraction of total nitrogen (N), % including mass fraction of: <ul style="list-style-type: none">■ ammonium nitrogen■ nitrate nitrogen■ calcium in terms of CaO, %■ calcium nitrate, %, max	27 13.5 13.5 12 1
Particle size distribution, % Mass fraction of granules: <ul style="list-style-type: none">■ sized under 1 mm, max■ sized 1-5 mm, min■ sized over 6,3 mm	3 90 0
Friability, %	100



PACKAGING AND STORAGE:

CALCIUM
AMMONIUM
NITRATE WITH
SULPHUR (CNS)

 big bags

 in bulk

Store in a dry insulated place, away from moisture and direct sunlight.

CALCIUM AMMONIUM NITRATE WITH SULPHUR (CNS)

NS 27:4+8CaO

Highly effective calcium-containing nitrogen fertilizer with sulphur.

Contains ammonium and nitrate forms of nitrogen for extended plant nutrition. Contains sulphur in a water-soluble sulphate form to improve the quality of agricultural products (increases oil content in oilseeds and protein content in cereals and grain legumes).

Calcium contributes to the development of the root system and increases disease and pest resistance.

Excellent physical and chemical characteristics to facilitate storage and application.

Suitable for all soils and crops (requires embedding into the soil). Most effective as supplementary fertilizer for oilseeds, cereals, fodder crops, and root crops.



APPEARANCE

WHITE-GREY GRANULES

Mass fraction of total nitrogen (N), % including mass fraction of:

- ammonium nitrogen
- nitrate nitrogen
- sulphate sulphur in terms of S, %, min
- calcium in terms of CaO, %, min
- calcium nitrate, %, max

27

13.5

13.5

4

8

1

Particle size distribution, %
Mass fraction of granules:

- sized under 1 mm, max
- sized 1-5 mm, min
- sized over 6.3 mm

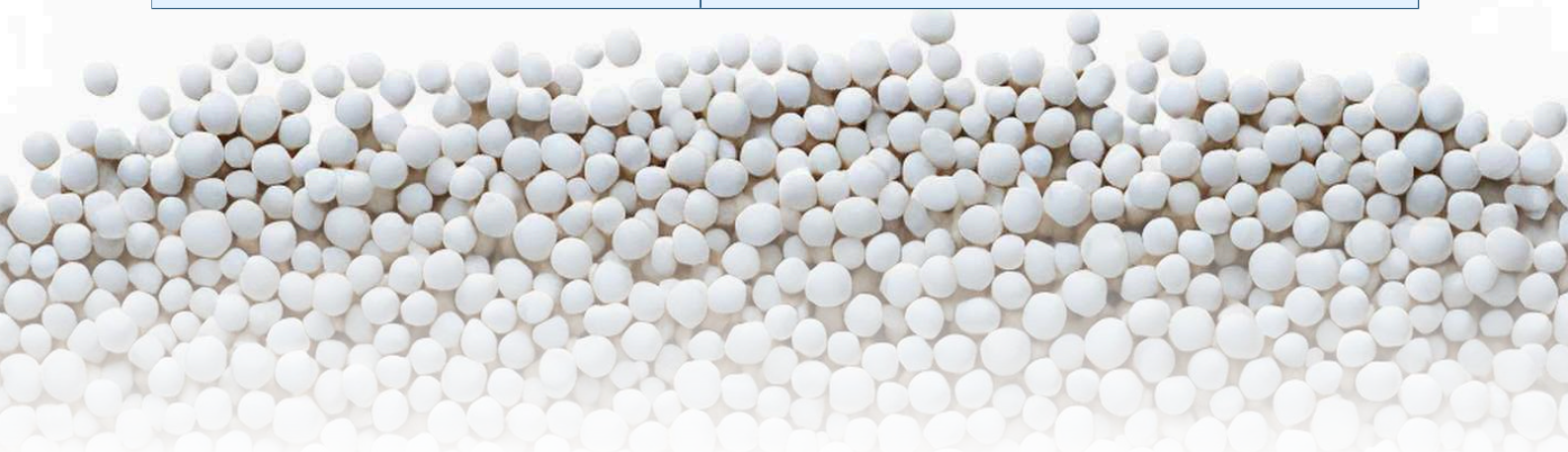
3

90

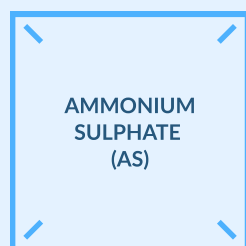
0

Friability, %

100



PACKAGING AND STORAGE:



bags

big bags



The product is a strong acid-forming fertilizer: systematic application acidifies the soil solution and it is therefore recommended to combine it with neutral fertilizers and check soil pH annually.

Store in a dry insulated place, away from moisture and direct sunlight.

AMMONIUM SULPHATE (AS)

NS 21:24

Granular nitrogen fertilizer with high sulphur content suitable for all soils and crops.

Contains ammonium nitrogen resistant to leaching and easily digestible sulphur in a water-soluble sulphate form.

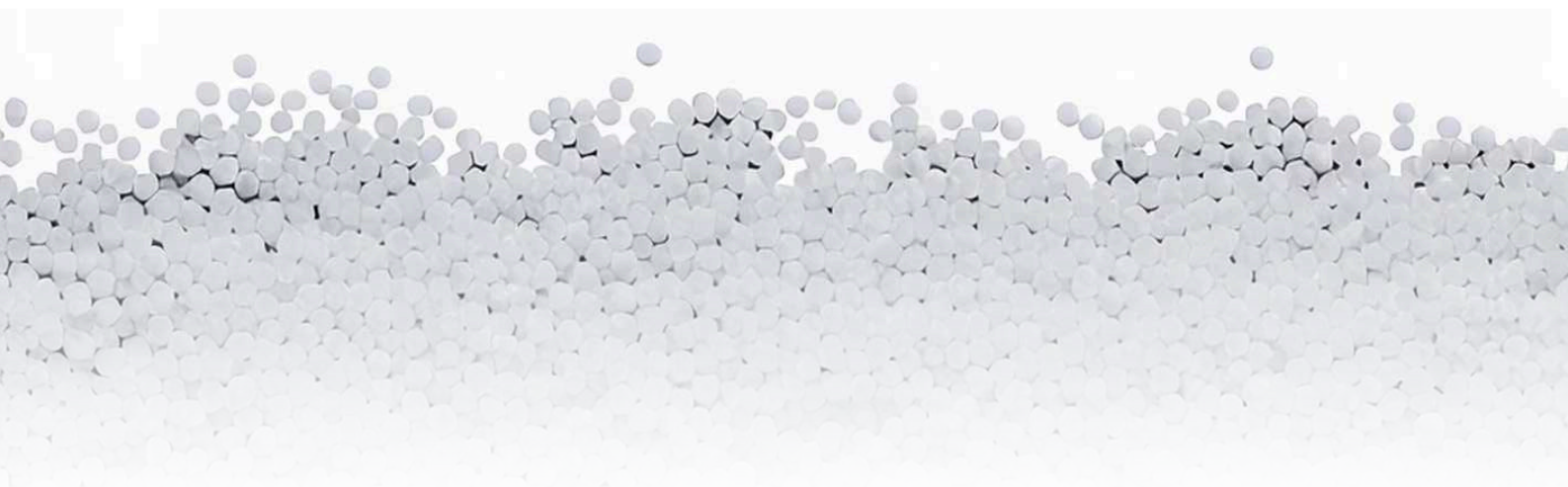
An optimal fertilizer for main application. Also suitable for supplemental root feeding of winter crops, hayfields and pastures, oilseeds, cabbages, and crops with high demand for sulphur.

Reduces the loss of nitrogen from leaching on light-textured soils. Highly efficient on soils with a low content of mobile sulphur.

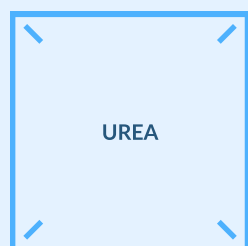
Basal application will be effective in the no leaching water regime.



APPEARANCE	WHITE GRANULES
Mass fraction of total nitrogen (N), % including mass fraction of:	21
■ ammonium nitrogen	21
■ sulphate sulphur in terms of S, %, min	24
Particle size distribution, % Mass fraction of granules:	
■ sized under 1 mm, max	3
■ sized 1-4 mm, min	80
■ sized over 6 mm	0
Friability, %	100



PACKAGING AND STORAGE:



bags



big bags



in bulk



Upon request, urea can be treated with an anti-caking agent

Store in a dry insulated place, away from moisture and direct sunlight.

UREA

N 46.2

**The most concentrated nitrogen fertilizer.
Extended nitrogen nutrition for the plant.**

Requires embedding into the soil immediately after application.

Fully water-soluble. Suitable for irrigation systems and foliar application.



APPEARANCE	WHITE GRANULES
Mass fraction of total nitrogen (N), %	46.2
Mass fraction of biuret, %, max	1.4*
Particle size distribution, % Mass fraction of granules:	
■ sized under 1 mm, max	5(3)*
■ sized 1-4 mm, min	94
■ sized over 6 mm	0
Friability, %	100

PACKAGING AND STORAGE:

UREA
AMMONIUM
SULPHATE
(UAS)

 big bags

Store in a dry insulated place, away from moisture and direct sunlight.

UREA AMMONIUM SULPHATE (UAS)

NS 40:6, NS 34:12

Universal nitrogen fertilizer with high sulphur availability.

The composition contains a prolonged nitrogen in amid form, as well as an ammonium form of nitrogen and sulphur in a water-soluble sulphate form.

The use of urea ammonium sulphate improves the commodity indicators of product quality, in particular – increasing the content of protein in grains and oil content in oilseeds, as well as increasing the general yield of sulphur demanding crops.

Fertilizer is suitable for main and pre-sowing application, as well as foliar supplementary feeding of agricultural crops. It is recommended to embed fertilizer for decreasing its loss.

Excellent physical and chemical characteristics to facilitate storage and application.



	40:6	34:12
APPEARANCE	WHITE OR SLIGHTLY COLORED GRANULES	
Mass fraction of total nitrogen (N), % including mass fraction of:	40	34
■ ammonium nitrogen	5	11
■ ureic nitrogen	35	23
■ sulphate sulphur in terms of S, %, min	6	12
Particle size distribution, % Mass fraction of granules:		
■ sized under 1 mm, max	10	10
■ sized 1-4 mm, min	90	90
■ sized over 6 mm	0	0
Friability, %	100	100



An aerial photograph of a vineyard, showing neat rows of green grapevines stretching across a hillside. A dirt path or road runs diagonally through the upper right portion of the image. The lighting creates strong shadows, emphasizing the texture and layout of the vines.

P/NP/NP(S)

PHOSPHATE FERTILIZERS

PACKAGING AND STORAGE:



big bags

in bulk

Store in a dry insulated place, away from moisture and direct sunlight.

NP 22:20

Versatile granular highly concentrated nitrogenphosphorus fertilizer with sulphur content.

Contains 2% of sulphur in an easily digestible sulphate form.

Suitable for basal application on potassium-rich soils with no leaching water regime. Well suited for presowing or at-sowing application on all crops.


Recommended for top-dressing of fruit and berry crops.



APPEARANCE	GREY GRANULES
Mass fraction of total nitrogen (N), %, including mass fraction of:	22
■ ammonium nitrogen, %	13
■ nitrate nitrogen, %	9
■ total phosphates in terms of P ₂ O ₅ , %	20
■ digestible phosphates in terms P ₂ O ₅ , %	20
■ sulphate sulphur in terms of S, %, min	2
Particle size distribution, % Mass fraction of granules, mm	
■ sized under 1 mm, max	3
■ sized 1-4 mm, min	90
■ sized over 6 mm	0
Friability, %	100




PACKAGING AND STORAGE:



MONOAMMONIUM PHOSPHATE (MAP)

 big bags

 in bulk

Store in a dry insulated place, away from moisture and direct sunlight.

MONOAMMONIUM PHOSPHATE (MAP)

NP 12:52

Versatile granular highly concentrated nitrate-free nitrogen-phosphorus fertilizer.

Contains phosphates in readily available form.

Suitable for direct application to the soil and in fertilizer blends on all soils and crops. Especially for cereals, root crops, rapeseed, sugarcane, and as top-dressing for fruit and berry crops.

Recommended for at-planting application. Also effective as basic fertilizer on soils with low levels of available phosphorus.

Especially effective on cereals, root crops, rapeseed, sugarcane, and as a top-dressing for fruit and berry crops.

Excellent physical and chemical characteristics to facilitate storage and application.




12:52	
APPEARANCE	GREY GRANULES
Mass fraction of total nitrogen (N), %, including mass fraction of:	12
■ ammonium nitrogen, %	12
■ total phosphates in terms of P_2O_5 , %	52
■ digestible phosphates in terms P_2O_5 , %	50
Particle size distribution, % Mass fraction of granules, mm	
■ sized under 1 mm, max	3
■ sized 1-6 mm, min	-
■ sized 2-5 mm, min	90
■ sized over 6 mm	0
Friability, %	100

PACKAGING AND STORAGE:

NP(S) 14:34(8),
16:20(12),
20:20(14)

 big bags

 in bulk

Store in a dry insulated place, away from moisture and direct sunlight.

NP(S) 14:34(8), 16:20(12), 20:20(14)

Versatile granular highly concentrated nitrate-free nitrogen-phosphorus fertilizer with high sulphur content.

Contains phosphates in readily available form and nitrogen in ammonium form for a long-term effect. The sulphur content in the fertilizer promotes active growth of plants, increases their immunity and viability, and increases the overall product quality through increased protein content. Additionally, sulphur content improves absorption of nitrogen through synergy effects of both elements.

Suitable for direct application to the soil and in fertilizer blends on all types of soils and crops, especially for cereals, root crops, rapeseed, sugarcane, and as a top-dressing for fruit and berry crops. Also recommended for at-planting application. Effective basic fertilizer on soils with low levels of available phosphorus and high fraction of available potassium.

While NP(S) 14:34(8) is recommended for application as main fertiliser on soils with low intensity water flow in autumn, NP(S) 20:20(14) and 16:20(12) is recommended to be applied on all kinds of soils in spring.

Excellent physical and chemical characteristics facilitate storage and application.



	40:6	34:12	34:12
APPEARANCE	GRANULES FROM WHITE TO GREY IN COLOR WITH VARIOUS SHADES		
Mass fraction of total nitrogen (N), %, including mass fraction of:	14	16	20
■ ammonium nitrogen, %	14	16	20
■ total phosphates in terms of P ₂ O ₅ , %	34	20	20
■ digestible phosphates in terms P ₂ O ₅ , %	33	20	20
■ sulphate sulphur in terms of S, % min	8	12	14
Particle size distribution, % Mass fraction of granules, mm			
■ sized under 1 mm, max	3	3	3
■ sized 1-5 mm, min	90	90	90
■ sized over 6 mm	0	0	0
Friability, %	100	100	100



POTASSIUM
FERTILIZERS

PACKAGING AND STORAGE:



PINK GRANULAR
MOP 60% K₂O



bags



big bags



in bulk

Store in a dry insulated place, away from moisture and direct sunlight.

PINK GRANULAR MOP 60% K₂O

N 34.4

The most concentrated straight potassium fertilizer in granular form.

Ideal source of potassium for all chloride-tolerant crops and soil types.

Suitable for both straight application and bulk blending.

Excellent granulometric characteristics and granule strength.



APPEARANCE

GRANULES OF IRREGULAR SHAPE FROM PINK TO RED-BROWN COLOR

Mass fraction of:

- potassium chloride, %, min
- water-soluble potassium oxide (on K₂O basis), %, min
- sodium chloride, %
- magnesium (Mg), %
- calcium (Ca), %
- moisture content, %, max

95

60

3.1

0.01

0.16

0.5

Granulometric composition, %:

- sized over 4 mm, max
- sized under 2 mm, max
- sized under 1 mm, max

10

10

2



PACKAGING AND STORAGE:



PINK FINE MOP
60% K₂O



bags



big bags



in bulk

Store in a dry insulated place, away from moisture and direct sunlight.

PINK FINE MOP 60% K₂O

Straight potassium fertilizer for direct application and fertilizers manufacture.

Suitable for all chloride-tolerant crops and soil types.

Suitable for straight application.

Used for production of complex fertilizers.



APPEARANCE

CRYSTALS FROM PINK TO RED-BROWN COLOR

Mass fraction of:

- potassium chloride, %, min
- water-soluble potassium oxide (on K₂O basis), %, min
- sodium chloride, %
- magnesium (Mg), %
- calcium (Ca), %
- moisture content, %, max

95

60

3

0.01

0.16

0.5


Granulometric composition, %

- sized under 2 mm, max

90

PACKAGING AND STORAGE:

**WHITE
STANDARD MOP**
60%/62% K₂O

 bags

 big bags

 in bulk

Store in a dry insulated place, away from moisture and direct sunlight.

WHITE STANDARD MOP

60%/62% K₂O

High-purity water-soluble potassium fertilizer for fertilizers manufacture.

Used for production of complex and potassium fertilizers (potassium nitrate, potassium sulphate).


Suitable for production of liquid fertilizers.



	60% K ₂ O	62% K ₂ O
APPEARANCE	CRYSTALS OF GREYISH-WHITE COLOR	
Mass fraction of:		
■ potassium chloride, %, min	95	98,2
■ water-soluble potassium oxide (on K ₂ O basis), %, min	60	62
■ sodium chloride, %	2,3	1,5
■ magnesium (Mg), %	0,01	0,01
■ calcium (Ca), %	0,01	0,01
■ sulphate (SO ₄ ²⁻), %	0,01	0,01
■ moisture content, %, max	0,5	0,5
■ insolubles, %	0,01	0,01
Granulometric composition, %		
■ sized under 0.4 mm, max	31	31
■ sized under 0.4 mm, max	100	100

PACKAGING AND STORAGE:

WHITE FINE MOP
60%/62% K₂O

 bags

 big bags

 in bulk

Store in a dry insulated place, away from moisture and direct sunlight.

WHITE FINE MOP 60%/62% K₂O

High-purity water-soluble potassium fertilizer for fertilizers manufacture.

Used for production of complex and potassium fertilizers (potassium nitrate, potassium sulphate).

Suitable for production of liquid fertilizers.



	60% K ₂ O	62% K ₂ O
APPEARANCE	CRYSTALS OF GREYISH-WHITE COLOR	
Mass fraction of:		
■ potassium chloride, %, min	95	98,2
■ water-soluble potassium oxide (on K ₂ O basis), %, min	60	62
■ sodium chloride, %	2,4	1,2
■ magnesium (Mg), %	0,01	0,01
■ calcium (Ca), %	0,02	0,01
■ sulphate (SO ₄ ²⁻), %	0,02	0,01
■ moisture content, %, max	0,5	0,5
■ insolubles, %	0,03	0,03
Granulometric composition, %		
■ sized under 0.4 mm, max	95,7	95,7
■ sized under 2 mm	100	100



NPK/NPKS

GRANULAR COMPLEX FERTILIZERS

PACKAGING AND STORAGE:

NPK 15:15:15
NPKS 15:15:15:11
NPK 16:16:16

 big bags

 in bulk



Granules can be colored in pink and blue.



Various trace elements can be added to all NPK grades.

Store in a dry insulated place, away from moisture and direct sunlight.

NPK 15:15:15, NPKS 15:15:15:11, NPK 16:16:16

Granular complex fertilizers with balanced composition of key nutrients.

The 11% sulphur content in NPKS 15:15:15:11 supports the quality of agricultural products (increases the protein content in cereals and oil content in oilseeds).

Suitable for all types of soil. Optimal for pre-sowing or at-sowing application for all types of crops.

With their consistent nutrient composition in each granule these complex NPK fertilizers ensure uniform distribution of all nutrients across the field.



	15:15:15	15:15:15:11	16:16:16
APPEARANCE	WHITE TO VARIOUS SHADES OF GREY OR PINK GRANULES		
Mass fraction of total nitrogen (N), % Including mass fraction of:	15	15	16
■ ammonium nitrogen, %	8	15	8
■ nitrate nitrogen, %	7	-	8
■ total phosphates in terms of P ₂ O ₅ , %	15	15	16
■ digestible phosphates in terms of P ₂ O ₅ , %, min	15	15	16
■ potassium in terms of K ₂ O, %	15	15	16
■ sulphate sulphur in terms of S, %, min	-	11	-
Particle size distribution, % Mass fraction of granules, mm			
■ sized under 1 mm, max	3	3	3
■ sized 1-5 mm, min	90	90	90
■ sized over 6.3 mm	0	0	0
Friability, %	100	100	100

PACKAGING AND STORAGE:

NPKS 21:10:10:2
NPKS 21:17:3:3
NPKS 22:7:12:2

 big bags

 in bulk

Store in a dry insulated place, away from moisture and direct sunlight.

NPKS 21:10:10:2, NPKS 21:17:3:3 NPKS 22:7:12:2

Granular complex NPKS fertilizers with high nitrogen content.

Fully provides mineral nutrition for the plants due to the balanced composition of essential elements. The presence of ammonium and nitrate forms of nitrogen provides a prolonged effect of the fertilizer. The presence of phosphorus, potassium and sulphur allows for more efficient absorption of nitrogen, reducing its loss from leaching.

Suitable for all types of soils and all crops, optimally as basic fertilizer on soils with a high content of mobile phosphorus and potassium. Effective for top-dressing of perennial grasses, hayfields and pastures. Suitable for inter-row top-dressing on perennial plantations and fruits.

With their consistent nutrient composition in each granule these complex NPKS fertilizers ensure uniform distribution of all nutrients across the field.



	21:10:10:2	21:17:3:3	22:7:12:2
APPEARANCE	PINK, LIGHT PINK OR LIGHT BROWN GRANULES		
Mass fraction of total nitrogen (N), % Including mass fraction of:	21	21	22
■ ammonium nitrogen	11	13	12
■ nitrate nitrogen	10	8	10
■ total phosphates in terms of P ₂ O ₅ , %	10	17	7
■ digestible phosphates in terms of P ₂ O ₅ , %, min	10	10	7
■ potassium in terms of K ₂ O, %	10	3	12
■ sulphate sulphur in terms of S, %, min	2	3	2
Particle size distribution, % Mass fraction of granules, mm			
■ sized under 1 mm, max	3	3	3
■ sized 1-5 mm, min	90	90	90
■ sized over 6.3 mm	0	0	0
Friability, %	100	100	100

PACKAGING AND STORAGE:

NPKS 24:6:12:1
NPKS 27:6:6:2

 big bags

 in bulk

Store in a dry insulated place, away from moisture and direct sunlight.

NPKS 24:6:12:1, NPKS 27:6:6:2

Granular complex NPKS fertilizers with high nitrogen content.

Fully provides mineral nutrition for the plants due to the balanced composition of essential elements. The presence of ammonium and nitrate forms of nitrogen provides a prolonged effect of the fertilizer. The presence of phosphorus, potassium and sulphur allows for more efficient absorption of nitrogen, reducing its loss from leaching.

Suitable for all types of soils and all crops, optimally as basic fertilizer on soils with a high content of mobile phosphorus and potassium. Effective for top-dressing of perennial grasses, hayfields and pastures. Suitable for inter-row top-dressing on perennial plantations and fruits.

With their consistent nutrient composition in each granule these complex NPKS fertilizers ensure uniform distribution of all nutrients across the field.



	24:6:12:1	27:6:6:2
APPEARANCE	PINK, LIGHT PINK OR LIGHT BROWN GRANULES	
Mass fraction of total nitrogen (N), % Including mass fraction of:	24	27
■ ammonium nitrogen	12	15
■ nitrate nitrogen	12	12
■ total phosphates in terms of P ₂ O ₅ , %	6	6
■ digestible phosphates in terms of P ₂ O ₅ , %, min	6	6
■ potassium in terms of K ₂ O, %	12	6
■ sulphate sulphur in terms of S, %, min	1	2
Particle size distribution, % Mass fraction of granules, mm		
■ sized under 1 mm, max	3	3
■ sized 2-5 mm, min	90	90
■ sized over 6.3 mm	0	0
Friability, %	100	100

PACKAGING AND STORAGE:

NPKS 10:20:20:6
NPKS 10:26:26:2

 big bags

 in bulk

Store in a dry insulated place, away from moisture and direct sunlight.

NPKS 10:20:20:6, NPKS 10:26:26:2

Versatile granular complex NPKS fertilizers with high phosphorus and potassium contents.

Ammonium nitrogen gives a sustained delivery of nitrogen as it becomes slowly available to the plant after conversion to nitrate form.

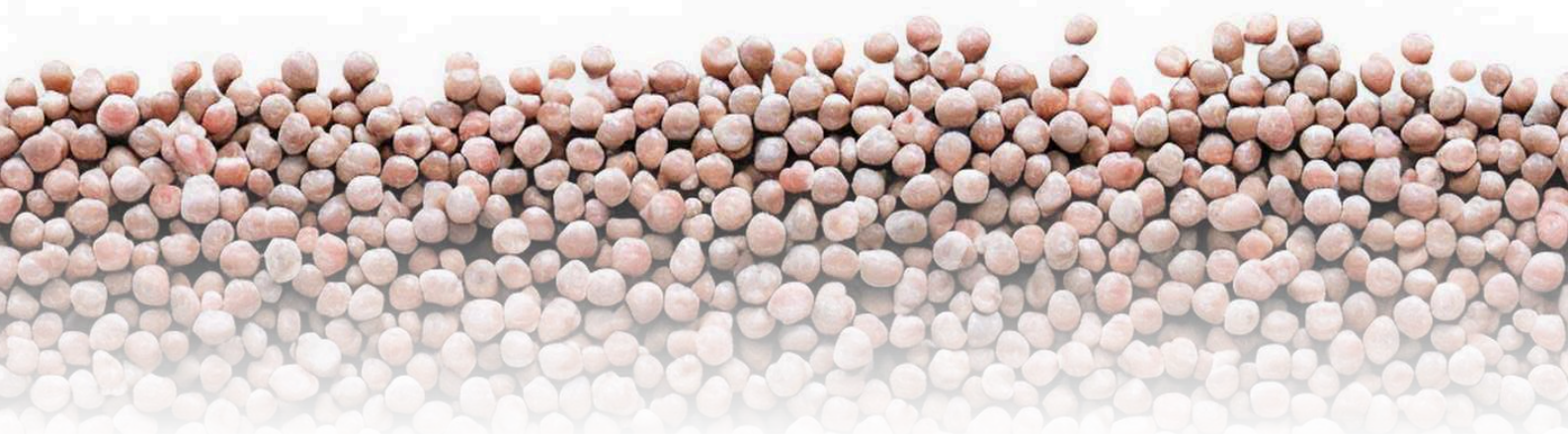
Suitable for all crops and soils. Especially effective for grain, vegetable, fodder, fruit and berry crops as main and at-planting fertilizers.

Excellent physical and chemical characteristics to facilitate storage and application.

With their consistent nutrient composition in each granule these complex NPKS fertilizers ensure uniform distribution of all nutrients across the field.




	10:20:20:6	10:26:26:2
APPEARANCE	WHITE TO VARIOUS SHADES OF GREY OR PINK GRANULES	
Mass fraction of total nitrogen (N), % Including mass fraction of:	10	10
■ ammonium nitrogen	10	10
■ total phosphates in terms of P ₂ O ₅ , %	20	26
■ digestible phosphates in terms of P ₂ O ₅ , %, min	19.5	25.5
■ potassium in terms of K ₂ O, %	20	26
■ sulphate sulphur in terms of S, %, min	6	2
Particle size distribution, % Mass fraction of granules, mm		
■ sized under 1 mm, max	3	3
■ sized 2-5 mm, min	90	90
■ sized over 6.3 mm	0	0
Friability, %	100	100



PACKAGING AND STORAGE:

NPKS 10:20:10:5
NPKS 12:24:12:6
NPKS 14:23:14:6

 big bags

 in bulk

Store in a dry insulated place, away from moisture and direct sunlight.

NPKS 10:20:10:5, NPKS 12:24:12:6, NPKS 14:23:14:6

Granular complex NPKS fertilizers with high phosphorus content.

Suitable for all crops and soils. Used as main fertilizer for winter crops, as well as pre-planting and at-planting fertilizer for spring crops. Ideal for cereals and vegetables.

Also recommended for phosphorus-deficient soils.

With their consistent nutrient composition in each granule these complex NPKS fertilizers ensure uniform distribution of all nutrients across the field.



	10:20:10:5	12:24:12:6	14:23:14:6
APPEARANCE	WHITE TO VARIOUS SHADES OF GREY OR PINK GRANULES		
Mass fraction of total nitrogen (N), % Including mass fraction of:	10	12	14
■ ammonium nitrogen	10	12	12
■ amide nitrogen	-	-	2
■ total phosphates in terms of P_2O_5 , %	20	24	23
■ digestible phosphates in terms of P_2O_5 , %, min	20	24	23
■ potassium in terms of K_2O , %	10	12	14
■ sulphate sulphur in terms of S, %, min	5	6	6
Particle size distribution, % Mass fraction of granules, mm			
■ sized under 1 mm, max	3	3	3
■ sized 1-4 mm, min	90	90	95
■ sized over 6.3 mm	0	0	0
Friability, %	10	10	10



PACKAGING AND STORAGE:

NPK 18:4:18
NPK 19:4:19
NPK 19:9:19
NPK 20:4:20

 big bags

 in bulk



Various trace elements can be added to all NPK grades.

Store in a dry insulated place, away from moisture and direct sunlight.

NPK 18:4:18, NPK 19:4:19, NPK 19:9:19, NPK 20:4:20

Granular complex NPK fertilizer with high nitrogen, potassium and additional magnesium content.

Granular complex NPK has a balanced nitrogen source, containing both forms of nitrogen (nitrate and ammonium). The nitrate form of nitrogen is a prerequisite to feed fast growing crops and ensure good root development, while the ammonium form is important to keep a sustained delivery of nitrogen.

Magnesium improves absorption of phosphorus, supports activation of enzymes and accelerates formation of carbohydrates.

Optimal for soils with a high phosphorus content.

Recommended for perennial crops, fruit, coffee, cocoa, sugarcane, vegetables. Suitable for top-dressing during inter-row tillage.

With their consistent nutrient composition in each granule these complex NPK fertilizer ensure uniform distribution of all nutrients across the field.



	NPK 18:4:18	19:4:19	19:9:19	20:4:20
APPEARANCE	PINK, LIGHT-PINK OR LIGHT-BROWN GRANULES			
Mass fraction of total nitrogen (N), % Including mass fraction of:	18	19	19	20
■ ammonium nitrogen	9	10	10	10
■ nitrate nitrogen	9	9	9	10
■ total phosphates in terms of P ₂ O ₅ , %	4	4	9	4
■ digestible phosphates in terms of P ₂ O ₅ , %, min	4	4	9	4
■ potassium in terms of K ₂ O, %	18	19	19	20
■ sulphate sulphur in terms of S, %, min	-	-	-	-
■ magnesium in term of Mg, %, min	-	-	-	-
Particle size distribution, % Mass fraction of granules, mm				
■ sized under 1 mm, max	3	3	3	3
■ sized 1-5 mm, min	90	90	90	90
■ sized over 6.3 mm	0	0	0	0
Friability, %	100	100	100	100

PACKAGING AND STORAGE:

**NPKS 17:6:18:4
+2Mg**

 big bags

 in bulk



Various trace elements can be added to all NPK grades.

Store in a dry insulated place, away from moisture and direct sunlight.

NPKS 17:6:18:4+2Mg

Granular complex NPK fertilizers with high nitrogen and potassium content.

Granular complex NPK has a balanced nitrogen source, containing both forms of nitrogen (nitrate and ammonium). The nitrate form of nitrogen is a prerequisite to feed fast growing crops and ensure good root development, while the ammonium form is important to keep a sustained delivery of nitrogen.

Optimal for soils with a high phosphorus content.

Recommended for perennial crops, fruit, coffee, cocoa, sugarcane, vegetables. Suitable for top-dressing during inter-row tillage.

With their consistent nutrient composition in each granule these complex NPK fertilizers ensure uniform distribution of all nutrients across the field.




17:6:18:4+2Mg	
APPEARANCE	PINK, LIGHT PINK OR LIGHT BROWN GRANULES
Mass fraction of total nitrogen (N), % Including mass fraction of:	17
■ ammonium nitrogen	10
■ nitrate nitrogen	7
■ total phosphates in terms of P ₂ O ₅ , %	6
■ digestible phosphates in terms of P ₂ O ₅ , %, min	6
■ potassium in terms of K ₂ O, %	18
■ sulphate sulphur in terms of S, %, min	4
■ magnesium in term of Mg, %, min	2
Particle size distribution, % Mass fraction of granules, mm	
■ sized under 1 mm, max	3
■ sized 1-5 mm, min	90
■ sized over 6.3 mm	0
Friability, %	100

PACKAGING AND STORAGE:

NPKS 6:18:34:2
NPKS 8:15:30:4
NPKS 8:20:30:3

 big bags

 in bulk

Store in a dry insulated place, away from moisture and direct sunlight.

NPKS 6:18:34:2, NPKS 8:15:30:4, NPKS 8:20:30:3

Granular complex NPKS fertilizers with high potassium content.

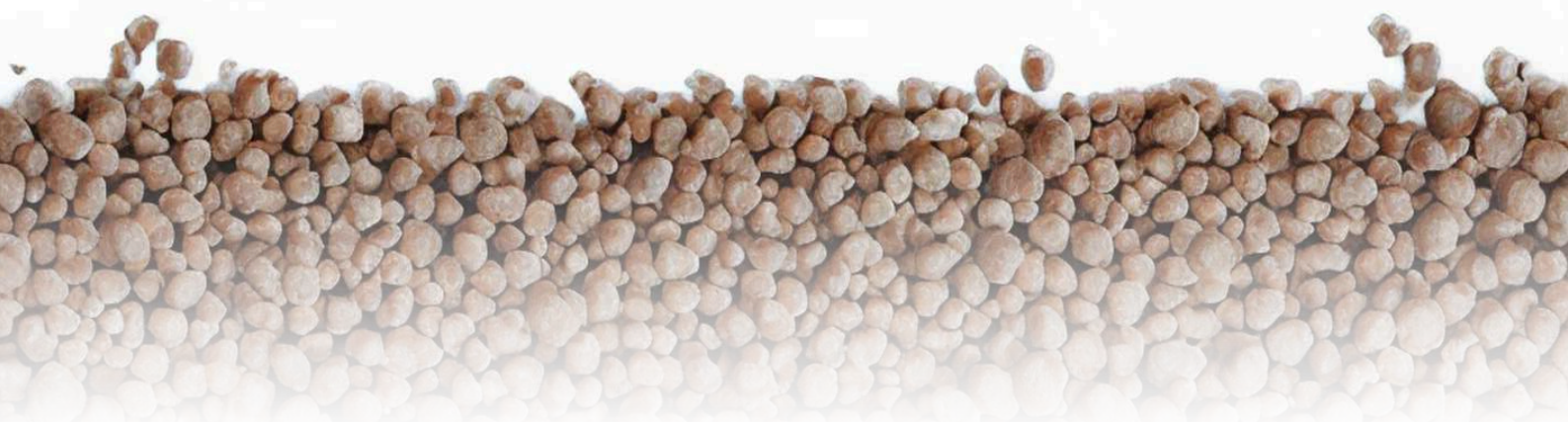
Suitable for all crops and soils. Ammonium nitrogen gives a sustained delivery of nitrogen as it becomes slowly available to the plant after conversion to nitrate form.

Effective as main fertilizer or for pre-planting and at-planting application. Recommended for potassium-loving crops.

With their consistent nutrient composition in each granule these complex NPKS fertilizers ensure uniform distribution of all nutrients across the field.



	6:18:34:2	8:15:30:4	8:20:30:3
APPEARANCE	LIGHT GREY, GREY, PINK AND GREY-PINK GRANULES		
Mass fraction of total nitrogen (N), % Including mass fraction of:	6	8	8
■ ammonium nitrogen	6	8	8
■ total phosphates in terms of P_2O_5 , %	18	15	20
■ digestible phosphates in terms of P_2O_5 , %, min	18	15	19.5
■ potassium in terms of K_2O , %	34	30	30
■ sulphate sulphur in terms of S, %, min	2	4	3
Particle size distribution, % Mass fraction of granules, mm			
■ sized under 1 mm, max	3	3	3
■ sized 1-4 mm, min	95	95	95
■ sized over 6 mm	0	0	0
Friability, %	10	10	10



PACKAGING AND STORAGE:

NPKS 12:5:27:8
NPKS 13:13:21:7
NPKS 13:13:24:4

 big bags

 in bulk



Various trace elements can be added to all NPK grades.

Store in a dry insulated place, away from moisture and direct sunlight.

NPKS 12:5:27:8, NPKS 13:13:21:7, NPKS 13:13:24:4

Granular complex NPKS fertilizers with high potassium content.

Suitable for all crops and soils (especially phosphorus-rich soils). Ammonium nitrogen gives a sustained delivery of nitrogen as it becomes slowly available to the plant after conversion to nitrate form. Low content of nitrate form of nitrogen is a prerequisite to feed fast growing crops and ensure good root development at the time of application.

Effective as main fertilizer, for pre-planting and at-planting application. Recommended for potassium-loving crops.

With their consistent nutrient composition in each granule these complex NPKS fertilizers ensure uniform distribution of all nutrients across the field.



	12:5:27:8	13:13:21:7	13:13:24:4
APPEARANCE	LIGHT GREY, GREY, PINK AND GREY-PINK GRANULES		
Mass fraction of total nitrogen (N), % Including mass fraction of:	12	13	13
■ ammonium nitrogen	10	11	10
■ nitrate nitrogen	2	2	3
■ total phosphates in terms of P ₂ O ₅ , %	5	13	13
■ digestible phosphates in terms of P ₂ O ₅ , %, min	4	11	11
■ potassium in terms of K ₂ O, %	27	21	24
■ sulphate sulphur in terms of S, %, min	8	7	4
Particle size distribution, % Mass fraction of granules, mm			
■ sized under 1 mm, max	3	3	3
■ sized 1-5 mm, min	90	90	90
■ sized over 6 mm	0	0	0
Friability, %	10	10	10



PACKAGING AND STORAGE:

**NPKS 8:20:30:3
+0.015ZN,
NPKS 14:18:18:6
+0.3B**

 big bags

 in bulk

Store in a dry insulated place, away from moisture and direct sunlight.

NPKS 8:20:30:3+0.015ZN, NPKS 14:18:18:6+0.3B

Granular complex NPKS fertilizers with micronutrients.

Ensure comprehensive nutrition because of balanced composition and the presence of micronutrients in one granule. Suitable for all crops and all soils.

Boron is necessary for normal cell division and growth; it supports transportability and storability of agricultural products.

Zinc supports growth of the root system and the absorption of nutrients from the soil; it increases the protein and carbohydrate content in agricultural products.

Effective as basic and at-sowing fertilizer for all crops.

Recommended for use on maize, cereals, rapeseed, root and tubers crops.

With their consistent nutrient composition in each granule these complex NPKS fertilizers ensure uniform distribution of all nutrients across the field.



	8:20:30:3+0.015Zn	14:18:18:6+0.3B
APPEARANCE	PINK AND GREYISH-PINK GRANULES	
Mass fraction of total nitrogen (N), % Including mass fraction of:	8	14
■ ammonium nitrogen	8	12
■ amide nitrogen	-	2
■ total phosphates in terms of P ₂ O ₅ , %	20	18
■ digestible phosphates in terms of P ₂ O ₅ , %, min	20	18
■ potassium in terms of K ₂ O, %	30	18
■ sulphate sulphur in terms of S, %, min	3	6
■ zinc in terms of Zn, %	0.015	-
■ boron in terms of B, %	-	0.3
Particle size distribution, % Mass fraction of granules, mm		
■ sized under 1 mm, max	3	3
■ sized 1-4 mm, min	95	95
■ sized over 6 mm	0	0
Friability, %	100	100

PACKAGING AND STORAGE:

**NPKS 15:15:15:6+1B,
NPKS 5:20:15:6
+0.3B+0.3Zn**

 big bags

 in bulk

Store in a dry insulated place, away from moisture and direct sunlight.

NPKS 15:15:15:6+1B NPKS 15:20:15:6+0.3B+0.3Zn

Granular complex NPKS fertilizers with micronutrients.

Ensure comprehensive nutrition because of balanced composition and the presence of micronutrients in one granule. Suitable for all crops and all soils.

Boron is necessary for normal cell division and growth; it supports transportability and storability of agricultural products.

Zinc supports growth of the root system and the absorption of nutrients from the soil; it increases the protein and carbohydrate content in agricultural products.

Effective as basic and at-sowing fertilizer for all crops.

Recommended for use on maize, cereals, rapeseed, root and tubers crops.

With their consistent nutrient composition in each granule these complex NPKS fertilizers ensure uniform distribution of all nutrients across the field.



	15:15:15:6+1B	15:20:15:6+0.3B+0.3Zn
APPEARANCE	PINK AND GREYISH-PINK GRANULES	
Mass fraction of total nitrogen (N), % Including mass fraction of:	15	15
■ ammonium nitrogen	11	12
■ amide nitrogen	4	3
■ total phosphates in terms of P ₂ O ₅ , %	15	20
■ digestible phosphates in terms of P ₂ O ₅ , %, min	15	20
■ potassium in terms of K ₂ O, %	15	15
■ sulphate sulphur in terms of S, %, min	6	6
■ of zinc, %	-	0.3
■ of boron, %	1	0.3
Particle size distribution, % Mass fraction of granules, mm		
■ sized under 1 mm, max	3	3
■ sized 1-4 mm, min	95	95
■ sized over 6 mm	0	0
Friability, %	100	100

PACKAGING AND STORAGE:

MultiStart
NPKS 8:20:30:3+BIO,
MultiStart
NPKS 15:15:15:11
+BIO

big bags



Possibility of production different biomodified NPKS grades of complex fertilizers.

Store in a dry insulated place, away from moisture and direct sunlight, at a temperature from -40 °C to +40 °C.

Guaranteed storage life – 1 year. Shelf life – 2 years.

MULTISTART NPKS 8:20:30:3+BIO, MULTISTART NPKS 15:15:15:11+BIO

Granular complex biomodified fertilizer containing the main nutrients (nitrogen, phosphorus, potassium and sulphur), as well as *Bacillus rhizospheric* bacteria.

Once in the soil, the bacteria produce auxins, which stimulate development of the root system, increase its absorption capacity and produce organic acids, which increase the content of water-soluble forms of phosphorus in the soil.

The microorganisms in the fertilizer inhibit the activity of pathogens in the rhizosphere and increase the plant's bacterial and fungal resistance.

MultiStart NPKS increases biological activity of the soil, improves yields of crops and quality of agricultural products and supports business profitability.

Used for pre-sowing or at-sowing application for all types of crops.



	MultiStart 8:20:30:3+BIO	MultiStart 15:15:15:11+BIO
APPEARANCE	WHITE TO VARIOUS SHADES OF GREY OR PINK GRANULES	
Mass fraction of total nitrogen (N), % Including mass fraction of:	8	15
■ ammonium nitrogen	8	15
■ total phosphates in terms of P ₂ O ₅ , %	20	15
■ digestible phosphates in terms of P ₂ O ₅ , %, min	19.5	15
■ potassium in terms of K ₂ O, %	30	15
■ sulphate sulphur in terms of S, %, min	3	11
Viable bacterial cells per 1 gram of fertilizer, CFU/g, min	5x10 ⁴	5x10 ⁴
Particle size distribution, % Mass fraction of granules, mm		
■ sized under 1 mm, max	3	3
■ sized 1-5 mm, min	90	90
■ sized over 6 mm	0	0
Friability, %	100	100

A close-up photograph of a tomato plant. In the foreground, a cluster of tomatoes is shown, with some being bright red and ripe, and others being green and unripe. The tomatoes are still attached to their green stems and leaves. The background is a soft-focus green, showing more of the plant and other tomatoes. A dark blue rectangular box is overlaid on the bottom left of the image, containing white text.

RM

RAW MATERIALS FOR
WS NPK

PACKAGING AND STORAGE:



 big bags

Store in a dry insulated place, away from moisture and direct sunlight.

UREA MICROPRILLED

Microprilled urea can be used to produce water-soluble NPK blends.

Fine microprills lead to high uniformity of blends.

NPK blends containing microprills do not cake, segregate and do not produce dust.



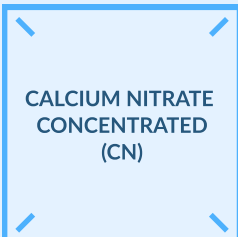
APPEARANCE	WHITE OR SLIGHTLY COLORED GRANULES	
<ul style="list-style-type: none">■ nitrogen content on dry basis, %, min■ biuret content, %, max■ free ammonia content, %, max■ hygroscopic water content, %, max		<div>46,2</div> <div>1,4</div> <div>0,02</div> <div>0,3</div>
<p>Granulometric composition, content of granules sized, %:</p> <ul style="list-style-type: none">■ 1 to 1,5 mm, max■ 0.7 to 1 mm, min■ less than 0.3 mm, max		<div>10</div> <div>60</div> <div>5</div>



WS

WATER-SOLUBLE FERTILIZERS

PACKAGING AND STORAGE:



**CALCIUM NITRATE
CONCENTRATED
(CN)**

 bags

 big bags


Do not mix calcium nitrate with fertilizers containing phosphates and sulphates.

Store in a dry insulated place, away from moisture and direct sunlight.

CALCIUM NITRATE CONCENTRATED (CN)

17N+33CaO

The only water-soluble source of calcium with the maximum content of the active substance (calcium nitrate content – 98%*).

The product has a low content of ammonium nitrogen and is in anhydrous form. Calcium nitrate increases plant's resistance to environmental factors, improves quality of fruits and increases their shelf life. The presence of accessible calcium is necessary throughout the growing season, since calcium is not redistributed within the plant.

Used in greenhouse vegetable growing, in drip irrigation systems. An excellent solution for top-dressing fruit and berry crops, roots and tubers crops.

* vs 78% content in similar products



APPEARANCE	WHITE OR GREY-YELLOW GRANULES
Mass fraction of total nitrogen (N), % including mass fraction of:	17
■ nitrate nitrogen	16.7
■ ammonium nitrogen	0.3
■ calcium in terms of CaO, %, min	33
Particle size distribution, % Mass fraction of granules:	
■ sized under 1 mm, max	5
■ sized 1-4 mm, min	90
■ sized over 6.3 mm	0
pH (1% aqueous solution)	5.5 – 6.5
Water solubility at 20 °C, g/100 cm ³	120
Friability, %	100

PACKAGING AND STORAGE:

**CALCIUM NITRATE
CONCENTRATED
WITH BORON
(CN WITH B)**



bags



big bags



Do not mix calcium nitrate with fertilizers containing phosphates and sulphates.

Store in a dry insulated place, away from moisture and direct sunlight.

CALCIUM NITRATE CONCENTRATED WITH BORON (CN WITH B)

 $17\text{N}+32\text{CaO}+1\text{B}$

Granular fertilizer containing fully water-soluble calcium and boron in combination with fast acting nitrate nitrogen.

High calcium content increases storability and quality of agricultural products. Calcium nitrate increases plant's resistance to environmental factors, improves quality of fruits and increases their shelf life.

The addition of boron stimulates the setting and preservation of crop ovaries. Ideal for light soils (sandy, sandy-loam and light loam soils).

Recommended for use in fertigation systems for all crops. Suitable for top-dressing sugar beet, vegetable, roots and tubers crops, fruit and berry crops, cotton.



APPEARANCE

WHITE OR GREY-YELLOW GRANULES

Mass fraction of total nitrogen (N), % including mass fraction of:

- nitrate nitrogen
- ammonium nitrogen
- calcium in terms of CaO, %, min
- boron in terms of B, %, max

17

16.7

0.3

32

1

Particle size distribution, % Mass fraction of granules:

- sized under 1 mm, max
- sized 1-4 mm, min
- sized over 6.3 mm

5

90

0

pH (1% aqueous solution)

5.5 – 6.5

Water solubility at 20 °C, g/100 cm³

120

Friability, %

100

PACKAGING AND STORAGE:

**CALCIUM NITRATE
CONCENTRATED
WITH MAGNESIUM
(CN WITH MG)**

 bags

 big bags



Do not mix calcium nitrate with fertilizers containing phosphates and sulphates.

Store in a dry insulated place, away from moisture and direct sunlight.

CALCIUM NITRATE CONCENTRATED WITH MAGNESIUM (CN WITH MG)

17N+32CaO+1MgO

Granular fertilizer containing fully water-soluble calcium and magnesium in combination with fast acting nitrate nitrogen.

High calcium content increases storability and quality of agricultural products. Calcium nitrate increases plant's resistance to environmental factors, improves quality of fruits and increases their shelf life.

Magnesium improves absorption of phosphorus, supports activation of enzymes and accelerates formation of carbohydrates. Ideal for light soils (sandy, sandy-loam and light loam soils).

Recommended for use in fertigation systems on all crops.

Effective on vegetable, fruit and berry crops.



APPEARANCE	WHITE OR GREY-YELLOW GRANULES
Mass fraction of total nitrogen (N), % including mass fraction of:	17
■ nitrate nitrogen	16.7
■ ammonium nitrogen	0.3
■ calcium in terms of CaO, %, min	32
■ magnesium in terms of MgO, %, max	1
Particle size distribution, % Mass fraction of granules:	
■ sized under 1 mm, max	5
■ sized 1-4 mm, min	90
■ sized over 6.3 mm	0
pH (1% aqueous solution)	5.5 – 6.5
Water solubility at 20 °C, g/100 cm ³	120
Friability, %	100

PACKAGING AND STORAGE:

POTASSIUM
NITRATE (NOP)

bags



big bags

Store in a dry insulated place, away from moisture and direct sunlight.

POTASSIUM NITRATE (NOP)

NK 13,7:46,2

Highly effective water-soluble nitrogen-potassium fertilizer with high potassium content. SOLAR potassium nitrate is a chemical purity benchmark for similar products.

Potassium supports the intensity of photosynthesis and oxidation, is involved in carbohydrate metabolism, and helps the plant retain water by strengthening cell walls. Potassium nitrate increases the plant's resistance to adverse environmental factors like rapid changes in water and temperature conditions.

Ideal for use in greenhouse farming, fertigation systems, for foliar feeding of grain, technical, fruit, berry and ornamental crops.



APPEARANCE

WHITE CRYSTALLINE PRODUCT

Mass fraction of total nitrogen (N), % including mass fraction of:

- nitrate nitrogen
- potassium in terms of K_2O , %, min
- insoluble residue, %, max

13.7

13.7

46.2

0.01

pH (1% aqueous solution)

5.4

Water solubility at 20 °C, g/100 cm³

31

Friability, %

100

PACKAGING AND STORAGE:

MONOAMMONIUM
PHOSPHATE (MAP)

bags



big bags



Do not mix MAP with fertilizers containing calcium and magnesium.

Store in a dry insulated place, away from moisture and direct sunlight.

MONOAMMONIUM PHOSPHATE
(MAP)

NP 12:61

Due to its 100% water solubility SOLAR MAP is an excellent source of nitrogen and phosphorus in an easily available form.

Monoammonium phosphate is effective during early stages of plant development, especially during the formation of the root system. Ideal for use in fertigation systems and in fertilizer blends.



APPEARANCE

WHITE CRYSTALS

Mass fraction of total nitrogen (N), % including mass fraction of:

- ammonium nitrogen
- water-soluble phosphates in terms of P_2O_5 , %
- insoluble residue, %, max

12

12

61

0.1

pH (1% aqueous solution)

4.5

Water solubility at 20 °C, g/100 cm³

37.1

Friability, %

100

PACKAGING AND STORAGE:

MONOPOTASSIUM
PHOSPHATE (MKP)

bags



big bags

Store in a dry insulated place, away from moisture and direct sunlight.

MONOPOTASSIUM PHOSPHATE (MKP)

PK 52:34

Highly efficient water-soluble phosphorus-potassium fertilizer.

Monopotassium phosphate is the most concentrated phosphorus-potassium fertilizer on the market converted into the content of each element.

Fertilizer is effective during the late stages of vegetation period when the nitrogen application is not recommended.

Provides plants with an additional resistance effect against bacterial and fungal activity.

Ideal for use in greenhouses, fertigation systems, or for supplementary foliar feeding.

Can be used for production of complex water-soluble fertilizers.



APPEARANCE

WHITE CRYSTALS

Mass fraction of:

- water-soluble phosphates in terms of P_2O_5 , %
- water-soluble potassium in terms of K_2O , %
- insoluble residue, %, max

52

34

0.1

pH (1% aqueous solution)

4.5

Water solubility at 20 °C, g/100 cm³

24

Friability, %

100

PACKAGING AND STORAGE:

MAGNESIUM
SULPHATE

bags



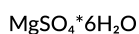
big bags



in bulk

Store in a dry insulated place, away from moisture and direct sunlight.

MAGNESIUM SULPHATE



Water-soluble fertilizer containing magnesium and high content of sulphur in easily accessible form.

Magnesium in the fertilizer increases photosynthetic and fermentative activity of the plants.

Sulphur in sulphate form is easily absorbed by the root system. The sulphur content in the fertilizer promotes active growth of plants, increases their immunity and viability, and increases the overall product quality through increased protein content.

This fertilizer grade is recommended for early vegetative development stage of the plant.

Perfectly suitable for use in greenhouses and as foliar application in open fields.



APPEARANCE

WHITE CRYSTALS

Mass fraction of:

- magnesium in terms of magnesium (MgO), %
- magnesium (Mg), %
- sulphates in terms of S, %
- insoluble residue, %, max

 18 ± 1
 11 ± 1

13

0.1

Particle size distribution, %
Mass fraction of granules, mm

- sized under 1 mm, max
- sized over 0.125 mm

5

90

Friability, %

100

PACKAGING AND STORAGE:



bags

Store in a dry insulated place, away from moisture and direct sunlight.

SOLAR NPK MICRO STARTER

NPK 15:30:15+2MgO+TE, NPK 11:40:11+2MgO+TE, NPK 13:40:13+TE

Water-soluble phosphorus-rich NPK fertilizers.

At the early growth stages the special formula of the fertilizer stimulates development of the root system, increases absorption of nutrients, improves metabolism, division and reproduction processes in plant cells. At the stage of budding and flowering the products accelerate formation of reproductive organs and improve quality of agricultural products.

A balanced ratio of nutrients makes these fertilizers suitable for all crops. Ideal for foliar application to field crops.



	15:30:15 +2MgO+TE	11:40:11 +2MgO+TE	13:40:13 +TE
APPEARANCE	YELLOW CRYSTALS		
Mass fraction of			
■ total nitrogen (N), %	15	11	13
■ nitrate nitrogen	4.4	3	4.5
■ ammonium nitrogen	6	8	8.5
■ amide nitrogen	4.6	-	-
■ water-soluble phosphates in terms of P ₂ O ₅ , %	30	40	40
■ potassium in terms of K ₂ O, %	15	11	13
■ sulphates in terms of S, %	2	2	-
■ magnesium in terms of MgO, %	2	2	-
■ insoluble residue, %, max	0.1	0.1	0.1
Mass fraction of trace elements (* – in chelated EDTA form), %, min			
■ boron (B)	0.02	0.02	0.02
■ copper (Cu)*	0.01	0.01	0.01
■ iron (Fe)*	0.1	0.1	0.1
■ manganese (Mn)*	0.05	0.05	0.05
■ molybdenum (Mo)	0.01	0.01	0.01
■ zinc (Zn)*	0.01	0.01	0.01
Friability, %	100	100	100

PACKAGING AND STORAGE:

SOLAR NPK MICRO
UNIVERSAL

bags

Store in a dry insulated place, away from moisture
and direct sunlight.

SOLAR NPK MICRO UNIVERSAL

NPK 18:18:18+3MgO+TE, NPK 19:19:19+TE, NPK 20:20:20+TE

The equal-ratio water-soluble grade fertilizers are designed for comprehensive plant nutrition at all phases of growth and support correct development of the plant throughout the growing season.

The products are effective during stress periods like drought, waterlogging, diseases, pests, etc.

A balanced ratio of nutrients makes these fertilizers suitable for all crops. Ideal for foliar application to field crops.



	18:18:18 +3MgO+TE	19:19:19 +TE	20:20:20 +TE
APPEARANCE	GREEN CRYSTALS		
Mass fraction of			
■ total nitrogen (N), %	18	19	20
■ nitrate nitrogen	5.4	10.5	6
■ ammonium nitrogen	3.6	8.5	4
■ amide nitrogen	9	-	10
■ water-soluble phosphates in terms of P ₂ O ₅ , %	18	19	20
■ potassium in terms of K ₂ O, %	18	19	20
■ sulphates in terms of S, %	2.5	-	-
■ magnesium in terms of MgO, %	3	-	-
■ insoluble residue, %, max	0.1	0.1	0.1
Mass fraction of trace elements (* – in chelated EDTA form), %, min			
■ boron (B)	0.02	0.02	0.02
■ copper (Cu)*	0.01	0.01	0.01
■ iron (Fe)*	0.1	0.1	0.1
■ manganese (Mn)*	0.05	0.05	0.05
■ molybdenum (Mo)	0.01	0.01	0.01
■ zinc (Zn)*	0.01	0.01	0.01
Friability, %	100	100	100

PACKAGING AND STORAGE:



bags

Store in a dry insulated place, away from moisture and direct sunlight.

SOLAR NPK MICRO FINISHER

NPK 15:7:30+3MgO+TE, NPK 12:6:36+2.5MgO+TE,
NPK 3:11:38+TE, NPK 3:11:38+4MgO+TE

Water-soluble potassium-rich NPK fertilizers.

At the final stages of vegetation the products promote even ripening and intensive fruiting, improve taste, appearance and storability of agricultural products, increase sugar content in sugar beet roots and stimulate the plant's resistance to drought conditions.

A balanced ratio of nutrients makes these fertilizers suitable for all crops. Ideal for foliar application to field crops.



	15:7:30 +3MgO +TE	12:6:36 +2.5MgO +TE	3:11:38 +TE	3:11:38 +4MGO +TE
APPEARANCE	PINK CRYSTALS			
Mass fraction of				
■ total nitrogen (N), %	15	12	3	3
■ nitrate nitrogen	8.7	10.6	0.2	3
■ ammonium nitrogen	1.4	1.4	2.8	-
■ amide nitrogen	4.9	-	-	-
■ water-soluble phosphates in terms of P ₂ O ₅ , %	7	6	11	11
■ potassium in terms of K ₂ O, %	30	36	38	38
■ sulphates in terms of S, %	2.5	2	-	-
■ magnesium in terms of MgO, %	3	2.5	-	4
■ insoluble residue, %, max	0.1	0.1	0.1	0.1
Mass fraction of trace elements (* – in chelated EDTA form), %, min				
■ boron (B)	0.02	0.02	0.02	0.02
■ copper (Cu)*	0.01	0.01	0.01	0.01
■ iron (Fe)*	0.1	0.1	0.1	0.1
■ manganese (Mn)*	0.05	0.05	0.05	0.05
■ molybdenum (Mo)	0.01	0.01	0.01	0.01
■ zinc (Zn)*	0.01	0.01	0.01	0.01
Friability, %	100	100	100	100

PACKAGING AND STORAGE:



bags

Store in a dry insulated place, away from moisture and direct sunlight.

SOLAR NPK MICRO+AMINO

Starter 13:40:13+TE+Amino

Universal 20:20:20+TE+Amino

Finisher 12:6:36+2.5MgO+TE+Amino

Complex water-soluble fertilizers with trace elements and complex of amino acids

This unique fertiliser includes a combination of 17 plant based amino acids. The complex of amino acids protects the crop from abiotic stress factors, optimizes water exchange, accelerates growth of generative organs and fertility of pollen, increases yield and improves storability characteristics of the end product.



	Starter 13:40:13+TE +Amino	Universal 20:20:20+TE +Amino	Finisher 12:6:36 +2.5MgO+TE +Amino
APPEARANCE	VARIOUS COLORS CRYSTALS		
Mass fraction of			
■ total nitrogen (N), %	13	20	12
■ nitrate nitrogen	4.5	6	10.6
■ ammonium nitrogen	8.5	4	1.4
■ amide nitrogen	-	10	-
■ water-soluble phosphates in terms of P ₂ O ₅ , %	40	20	6
■ potassium in terms of K ₂ O, %	13	20	36
■ sulphate sulphur in terms of S, %, min	-	-	2
■ magnesium in terms of MgO, %	-	-	2.5
■ insoluble residue, %, max	0.1	0.1	0.1
Complex of Amino acids, %, min	1	1	1
Mass fraction of trace elements (* – in chelated form), %, min:			
■ boron (B)	0.02	0.02	0.02
■ copper (Cu)*	0.01	0.01	0.01
■ iron (Fe)*	0.1	0.1	0.1
■ manganese (Mn)*	0.05	0.05	0.05
■ molybdenum (Mo)	0.01	0.01	0.01
■ zinc (Zn)*	0.01	0.01	0.01
Friability, %	100	100	100

PACKAGING AND STORAGE:



bags

Store in a dry insulated place, away from moisture and direct sunlight.

SOLAR NPK MICRO+STIM

Starter 13:40:13+TE+Stim

Universal 20:20:20+TE+Stim

Finisher 12:6:36+2.5MgO+TE+Stim

Complex water-soluble fertilizers with trace elements and an effective plant growth stimulant (PGS).

Growth stimulant is a participant of citric acid cycle (Krebs cycle). It effectively promotes development of root system and vegetative organs, improves metabolism of proteins, vitamins and chlorophyll in the plant and increases the overall yield of crops.



	Starter 13:40:13+TE +Stim	Universal 20:20:20+TE +Stim	Finisher 12:6:36 +2.5MgO+TE +Stim
APPEARANCE	VARIOUS COLORS CRYSTALS		
Mass fraction of			
■ total nitrogen (N), %	13	20	12
■ nitrate nitrogen	4.5	6	10.6
■ ammonium nitrogen	8.5	4	1.4
■ amide nitrogen	-	10	-
■ water-soluble phosphates in terms of P ₂ O ₅ , %	40	20	6
■ potassium in terms of K ₂ O, %	13	20	36
■ sulphate sulphur in terms of S, %, min	-	-	2
■ magnesium in terms of MgO, %	-	-	2.5
■ insoluble residue, %, max	0.1	0.1	0.1
Growth stimulant, %, min	1	1	1
Mass fraction of trace elements (* – in chelated form), %, min:			
■ boron (B)	0.02	0.02	0.02
■ copper (Cu)*	0.01	0.01	0.01
■ iron (Fe)*	0.1	0.1	0.1
■ manganese (Mn)*	0.05	0.05	0.05
■ molybdenum (Mo)	0.01	0.01	0.01
■ zinc (Zn)*	0.01	0.01	0.01
Friability, %	100	100	100

PACKAGING AND STORAGE:



Store in a dry insulated place, away from moisture and direct sunlight.

SOLAR NPK MICRO+BIOSURF

Starter 13:40:13+TE+BioSurf

Universal 20:20:20+TE+BioSurf

Finisher 12:6:36+2.5MgO+TE+BioSurf

Complex water-soluble fertilizer with trace elements and biological surfactant.

Biological surfactant increases the contact surface area of the droplet with the leaf surface and shows an increased adhesion causing better absorption of nutritional elements.

Though the surfactant doesn't represent a nutritional element itself, using water-soluble fertilizers with additional surfactant agent improves the intake efficiency of the elements following an increased crop yield. The agent is biologically synthesized and has no toxic effect on the crop.



	Starter 13:40:13+TE +BioSurf	Universal 20:20:20+TE +BioSurf	Finisher 12:6:36 +2.5MgO+TE +BioSurf
APPEARANCE	VARIOUS COLORS CRYSTALS		
Mass fraction of			
■ total nitrogen (N), %	13	20	12
■ nitrate nitrogen	4.5	6	10.6
■ ammonium nitrogen	8.5	4	1.4
■ amide nitrogen	-	10	-
■ water-soluble phosphates in terms of P ₂ O ₅ , %	40	20	6
■ potassium in terms of K ₂ O, %	13	20	36
■ sulphate sulphur in terms of S, %, min	-	-	2
■ magnesium in terms of MgO, %	-	-	2.5
■ insoluble residue, %, max	0.1	0.1	0.1
Fraction of the biosurfactant, %, min	1	1	1
Mass fraction of trace elements (* – in chelated form), %, min:			
■ boron (B)	0.02	0.02	0.02
■ copper (Cu)*	0.01	0.01	0.01
■ iron (Fe)*	0.1	0.1	0.1
■ manganese (Mn)*	0.05	0.05	0.05
■ molybdenum (Mo)	0.01	0.01	0.01
■ zinc (Zn)*	0.01	0.01	0.01
Friability, %	100	100	100

PACKAGING AND STORAGE:



bags



AQUADROP fertilizers are not recommended for use in professional greenhouses due to their chloride content. Can be used in soil-based farm greenhouses.

Store in a dry insulated place, away from moisture and direct sunlight.

AQUADROP NPK

NPK 13:40:13, NPK 18:18:18, NPK 20:20:20, NPK 5:15:45

AQUADROP is a line of water-soluble complex fertilizers specially designed for fertigation of fruit and vegetable crops.

The line boasts a wide range of brands with optimal nutrient ratios to provide complete mineral nutrition throughout the growing season.

All AQUADROP products are suitable for drip irrigation systems.



	13:40:13	18:18:18	20:20:20	5:15:45
APPEARANCE	WHITE CRYSTALS			
Mass fraction of				
■ total nitrogen (N), %	13	18	20	5
■ ammonium nitrogen	7.5	10.8	4	3
■ nitrate nitrogen	-	7.2	-	-
■ amide nitrogen	5.5	-	16	2
■ water-soluble phosphates in terms of P ₂ O ₅ , %	40	18	20	15
■ potassium in terms of K ₂ O, %	13	18	20	45
■ insoluble residue, %, max	0.1	0.1	0.1	0.1
■ chlorides in terms of Cl, %	10	14	15	34
Friability, %	100	100	100	100

PACKAGING AND STORAGE:



bags

Store in a dry insulated place, away from moisture and direct sunlight.

MURIATE OF POTASH (MOP)

0:0:62

The most concentrated source of water-soluble potassium fertilizer for fertigation and application.

Ideal water-soluble potassium fertilizer for all chloridetolerant crops in open field fertigation systems.

Maximum concentration of K₂O and 100% water solubility.

Safe for irrigation systems.

Compatible with all types of water-soluble fertilizers.



APPEARANCE	CRYSTALS OF GREYISH-WHITE COLOR
Mass fraction of	
■ potassium chloride, %, min	98.2
■ potassium in terms of K ₂ O, %	62
■ moisture content, %, max	0.5
■ insoluble residue, %, max	0.01
Granulometric composition, %	
■ sized under 2 mm	100
Friability, %	100



FEED GRADE
PRODUCTS

PACKAGING AND STORAGE:



bags



big bags

Store in a dry insulated place, away from moisture and direct sunlight.

FEED-GRADE UREA

An effective protein supplement to boost dairy production.

- replenishes dietary deficiency of crude protein
- improves absorption of nutrients by organisms
- increases milk yield and animal weight gain



APPEARANCE	WHITE OR SLIGHTLY COLORED GRANULES
Mass fraction of: <ul style="list-style-type: none"> ■ total nitrogen in terms of dry matter, %, min ■ biuret, max, % ■ free ammonia, %, max ■ hygroscopic water, %, max 	46.0 3.0 0.03 0.3
pH	8.0 – 13.0
Particle size distribution, %: <ul style="list-style-type: none"> ■ sized 1-4 mm, %, max ■ sized 2-4 mm, %, max ■ sized under 1 mm, %, max ■ sized over 6 mm 	94 50 5 0
Mass fraction of: <ul style="list-style-type: none"> ■ fluorine, mg/kg, max ■ arsenic, mg/kg, max ■ lead, mg/kg, max ■ cadmium, mg/kg, max ■ mercury, mg/kg, max 	100 0.5 0.5 0.4 0.1

PACKAGING AND STORAGE:

FEED-GRADE
MONOAMMONIUM
PHOSPHATE

bags



big bags



Product safety is confirmed under
GMP + FSA standards

Store in a dry insulated place, away from moisture
and direct sunlight.

FEED-GRADE MONOAMMONIUM
PHOSPHATE

An excellent source of phosphorus for nutrition enrichment
and balancing. Phosphorus availability in this product is
over 91%.

- boosts immunity
- increases milk yield and animal weight gain
- normalises metabolism
- improves meat quality



APPEARANCE	WHITE CRYSTALS
Mass fraction of: <ul style="list-style-type: none"> ■ phosphorus soluble in a 0.4% hydrochloric acid solution in terms of P_2O_5, % ■ nitrogen soluble in 0.4% hydrochloric acid sol ■ water, %, max 	61 12 0.3
Particle size distribution, %: <ul style="list-style-type: none"> ■ sized 4-7 mm, %, max ■ sized over 7 mm, % 	3 0
Mass fraction of: <ul style="list-style-type: none"> ■ fluorine, mg/kg, max ■ arsenic, mg/kg, max ■ lead, mg/kg, max ■ cadmium, mg/kg, max ■ mercury, mg/kg, max 	0.05 1 1 0.4 0.1

PACKAGING AND STORAGE:



 big bags

Store in a dry insulated place, away from moisture and direct sunlight.

POTASSIUM CHLORIDE

A food additive used in the production of premixtures and compound feeds to replenish potassium deficiency.

- maintains normal osmotic pressure, affects tissue excitability
- promotes digestion and improves metabolism
- promotes intensive growth and development of poultry
- increases resistance to thermal stress



APPEARANCE	WHITE WITH A GREY OR PINK SHADE CRYSTALLINE PRODUCT
Mass fraction of: <ul style="list-style-type: none">■ potassium chloride, %■ sodium chloride, %■ water, %, max	95.0 – 98.8 1.1 – 4.8 0.5
Typical content of particles sized under 2 mm, %	100
Mass fraction of: <ul style="list-style-type: none">■ arsenic, mg/kg, max■ lead, mg/kg, max■ cadmium, mg/kg, max■ mercury, mg/kg, max	50.0 50.0 0.4 0.1



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