



(EN) PRODUCT INFO

# SICO SRN 40N DRY

a unique and complete range of methylene urea formulations  
for a controlled nitrogen fertilization

MADE IN  
EU

INNOVATIVE NITROGENOUS GRANULAR  
FERTILIZER BASED ON  
METHYLENE UREA / UREA FORM



OPTIMALISATION OF NITROGENOUS FERTILIZATION  
FOR FULL AND BALANCED DEVELOPMENT.  
FOR ECO-FRIENDLY FARMING  
AND SUPERIOR HARVESTS.

## WHAT IS SICO SRN 40N DRY

SICO-SRN special Slow Release Nitrogen is obtained through the condensation of urea molecules, forming polymer chains of different lengths. Depending on the quantity of polymer chains with differing lengths, SICO SRN can provide three different products, with nitrogen release patterns from 12 weeks to 10 months, named SHORTER ( MU ), BALANCED and LONGER ( UF ) . The nitrogen release rates of SICO-SRN products are determined by the design of the polymer lengths and the ratio between fast acting nitrogen (Water Soluble Nitrogen) and gradual release nitrogen (Water Insoluble Nitrogen). The release of nitrogen in the soil depend both from hydrolysis ( for the soluble part) and from microbial action ( for the insoluble and slowly soluble part). Shorter chains (MU) are more soluble and readily available for plants. On the other hand, longer chains (UF) are more insoluble and require more time to be digested from microbial action in the soil. SICO-SRN fertilizers are available in round granules and in several particle size range from 0,4 mm to 3,5 mm.

## HOW TO USE SICO SRN 40N DRY

SICO-SRN is used mainly as ingredient for the manufacture of N, NP, NK or NPK slow release fertilizer, adding some of the total nitrogen under the slow release form of Ureaform. Thanks to the different sizes available and the dust free round granules, SICO-SRN is a preferred component in the production of higher quality bulk blend fertilizers. SICO-SRN can be also used for specific manufacturing processes for compacted or granulated fertilizers starting from chip 40 size (0,4 mm) or using the granular sizes (2 or 3,5 mm) if the process is based on initial crushing of all raw materials. Greater efficiency is achieved when SICO-SRN products are blended with other Soluble Nitrogen Sources, like simple Urea or Ammonium Sulphate. SICO-SRN can be also used directly as straight nitrogenous fertilizer to supply all the required nitrogen in one application or used to integrate traditional NPK fertilizer programs. The desired NPK analysis and percentage of N slow release can be reached just by mixing the desired quantity of SICO-SRN with the other raw materials in the required ratio.

## WHY SICO SRN 40N DRY

The release characteristics of SICO-SRN products are so steady and safe that they are great for many applications. SICO-SRN can be used on food crops, horticulture and fruits and for turf, flowers, landscaping and ornamental plants and on all new seedlings. SICO-SRN products facilitate a gradual release of nitrogen that is in harmony with the natural nutrient requirements of the plant.

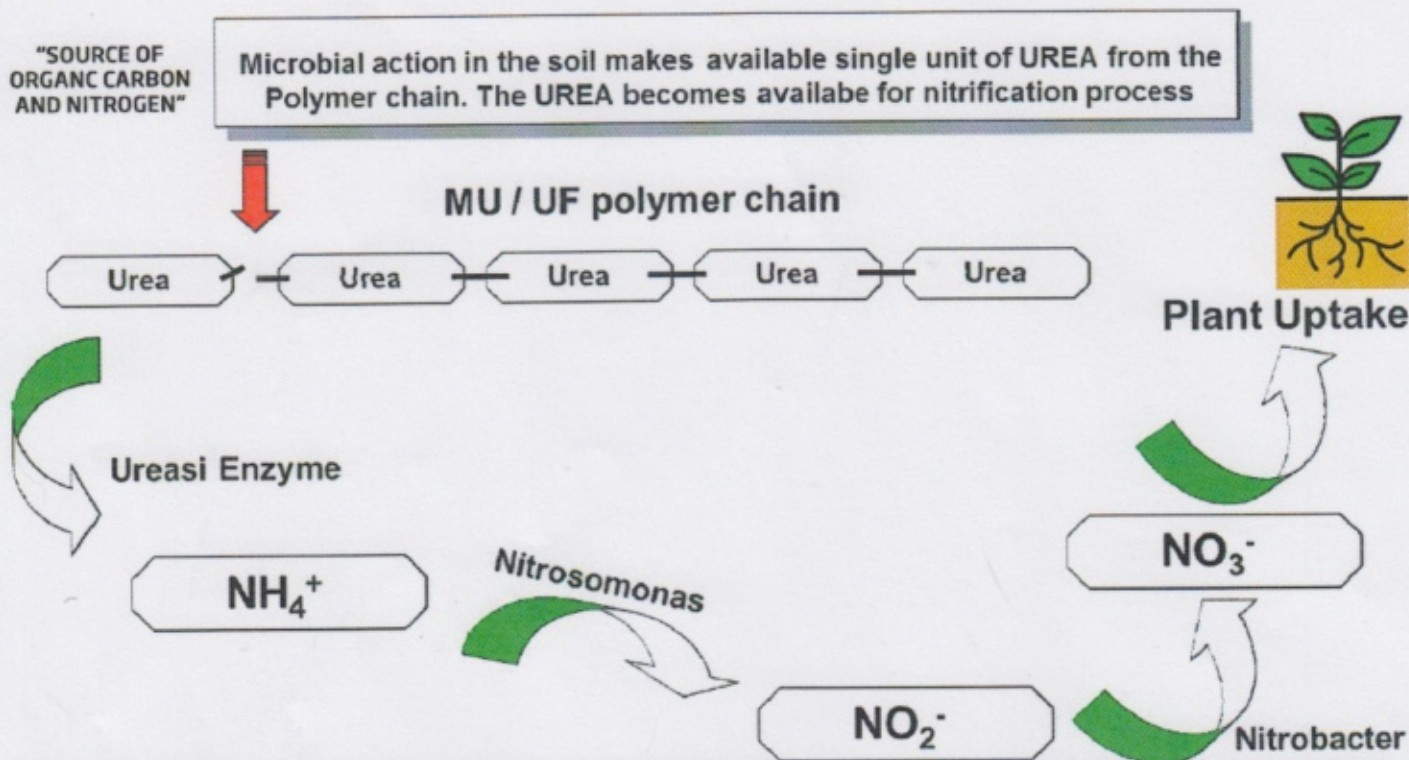
## BENEFITS

- Reduce loss of available nitrogen for plants
- Superior harvest
- High Uniformity Index (U.I.) for superior blending
- Eliminate potential of nitrate ground water pollution
- Long lasting Nitrogen from 12 weeks to 10 months
- Increase natural soil fertility
- Long shelf life, free flowing without caking
- Eliminate phytotoxicity and burning potential
- Nitrogen availability process in balance with crop demand
- Rapid root development
- Reduced distribution of fertilizer
- Reduced cost of fertilization

The salt index of SICO-SRN products is lower than 1.5 and is the lowest available in the market. This makes our fertilizer very safe for all applications and new plant development. SICO-SRN products enhance the microbial activity of the soil because SICO-SRN is a form of organic carbon with low salt content. This improves the soil profile leading to stronger root development and optimal plant growth. SICO-SRN products will leach less than other fertilizers thanks to the bio-availability of the Nitrogen in sync with plant root activity. They are well suited for eco-environmental fertilization practices (Best Management Practice). Maximum absorption and efficiency of nitrogen utilization is achieved. This results in the use of less fertilizer to achieve the desired results. The round granules of SICO-SRN products allow you to blend with greater confidence and less dust. Your finished NPK blend will spread better with a better distribution of particles. The Uniformity Index (U.I.) is 50-70, one of the most uniform products available in the fertilizer industry.

## HOW IT WORKS **SICO-SRN<sup>40N</sup> DRY**

Unlike other Controlled Release Nitrogen sources, the bioavailability of **SICO-SRN** slow release nitrogen mainly depends on the soil micro-organism activity and mineralization action. **SICO-SRN** is a source of organic carbon (life energy) and nitrogen (nutrient) for the soil micro-organisms. Compared to other controlled release nitrogen sources, **SICO-SRN** does not inhibit the microbial activity in the soil but rather improves the natural fertility of the soil increasing and sustaining population of beneficial organisms because it is a source of organic carbon and nitrogen. This helps the soil make plants more resistant to disease and stress, which differs in this respect from coated products. In comparison with coated products, the slow release characteristics of **SICO-SRN** products will not be lost if particles "are damaged" or "are broken" during shipping and handling. A gradual release of nitrogen is still assured, without nitrogen loss or dumping. Using **SICO-SRN** products you feed and develop the beneficial microbial population responsible for the natural nitrogen mineralization process (breakdown of polymer chains into simple units). The conditions controlling the root growth and activity of the plants, ( mainly temperature and humidity), are the same as those that regulate the microbial activity. This means that **SICO-SRN** nitrogen is made available when the conditions for root activity and growth are optimal. The release of Nitrogen is in sync with crop needs. Furthermore, **SICO-SRN** protects groundwater from nitrates and keeps nitrogen in the soil profile providing uniform and sustained feeding even in hot weather and heavy rains. This is because the Nitrogen release in **SICO-SRN** products is not directly dependent only on temperature or hydrolysis. **SICO-SRN** is also a source of slowly available water soluble Nitrogen, a meaningful distinction from looking only at water insoluble nitrogen.



MU & UF Fertilizers have different grade of solubility depending on different chains length. The microorganisms "eat" the Carbon links that bind the single urea molecules together and the single unit of Urea are available for the nitrification process.



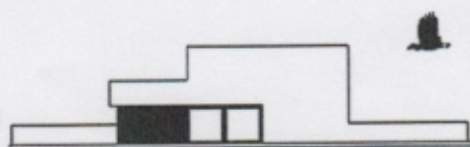
### CONTENTS AND TECHNICAL PARAMETERS OF SICO- SRN RANGE

	<i>Shorter(MU)</i>	<i>Balanced(UF)</i>	<i>Longer(UF)</i>
Total Nitrogen (N) content	≥ 40.0 %	≥ 39 %	≥ 39 %
Ureic Nitrogen (N)	≤ 4.5 %	≤ 3.5 %	≤ 2.3 %
Ureaform Nitrogen (N)	≥ 35.5 %	≥ 35.5 %	≥ 36.7 %
1 <sup>st</sup> Fraction – (CWSN ) Cold Water Soluble Nitrogen	≥ 18.5 %	≥ 15.3 %	≥ 11.5 %
2 <sup>nd</sup> Fraction – (HWSN) Only Hot Water Soluble Nitrogen	≥ 13.5 %	≥ 12.0 %	≥ 12.0 %
3 <sup>rd</sup> Fraction – (HWIN) Hot Water Insoluble Nitrogen	≤ 8.0 %	≤ 11.7 %	≤ 15.5 %
HWSN (% of Total Nitrogen )	≥ 80 %	≥ 70 %	≥ 60 %

pH ( solution 10 % at 20 °C )		6.5+7.5		Salt Index ≤ 1.5		Moisture ( % ) ≤ 1.5	
size	SGN	mm	UI Uniformity Index	Kg/mc	Bulk Density lbs per cu.ft.	Angle of Repose degrees	
powder	10	(0,10-0,15)	-	650	41	-	
Chlp 40	40	(0,35-0,45)	16	700	44	34	
Microgranular 110	110	(1-1,2)	50	750	47	33	
Microgranular 150	150	(1,4-1,6)	54	820	51	33	
Standard	215	(2,1-2,3)	70	845	53	32	
Big	349	(3,3-3,6)	69	855	54	35	

## HOW TO GET **SICO-S<sup>40N</sup> DRY** PRODUCTS

SICO-SRN can be shipped by truck or in sea container 20 ft. or 40 ft. all over the world "just in time" thanks to the continuous availability of the products. SICO-SRN is packed in 1.000 Kg ( 2.205 lb) big bags or 25 Kg bags ( 55 lb).



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