

# Growth

by urea granules



## Stamicarbon Urea Process Data

### Typical consumption figures of a Stamicarbon urea plant per ton of urea:

	<u>Granulation</u>	<u>Prilling</u>	<u>Unit</u>
NH <sub>3</sub> (100%)	564	567	kg
CO <sub>2</sub> (100%)	730	733	kg
MP steam intake (23 bar - 330 °C)	895	915	kg
Electricity use (excl. CO <sub>2</sub> compressor, incl. Granulator)	65	20	kWh
Cooling water circulating ( $\Delta T = 10$ °C)	66	77	t
LP steam export (4 bar saturated)	275	175	kg
Steam condensate export	385	350	kg
Process condensate export	300	680	kg
UF85	5	-	kg

### Typical product parameters:

Nitrogen	46.3	46.4	wt%
Biuret	0.85	0.85	wt%
Moisture	0.2	0.25	wt%
Formaldehyde	0.3	-	wt%
Crushing strength (3.15 mm granule)	4.5	-	kgf
Particle size distribution (2 - 4 mm)	95	-	wt%
Particle size distribution (1 - 2.4 mm)	-	97.5	wt%

### Treated process condensate:

Ammonia	2	ppm wt
Urea	1	ppm wt

### Emissions:

Ammonia from granulation vent stack	135	mg/Nm <sup>3</sup>
Ammonia from granulation vent stack*	< 30	mg/Nm <sup>3</sup>
Urea from granulation vent stack	25	mg/Nm <sup>3</sup>

(\* When acidic washing with nitric or sulfuric acid applied)

### Typical consumption figures Stamicarbon UAN plant, per ton of UAN - 32%N:

Ammonia	296	kg
Carbon dioxide	353	kg
Nitric Acid (56%)	353	kg
Steam (23 bar - 330 °C)	167	kg
Electricity excl. CO <sub>2</sub> compressor	6	kWh
Corrosion inhibitor	1.4	kg
Steam produced (4 bar, saturated)	233	kg

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