Carmel Resins Ltd.

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Technical Specification Sheet

CALUR

Calur is a slow release turf and lawn fertilizer based on a polycondensate of urea formaldehyde with a high Nitrogen content. **Calur** contains an organic material as a release controlling agent.

Calur has a long term action, releasing gradually the basic fertilizing agent Nitrogen.

Calur is an environmentally friendly product.

Typical Properties

Appearance	Granules and powder
Color	Multi-colored grey
pH (10% dispension in water)	7.0
Nitrogen, %	22
Volatiles, %	6.0
Specific gravity, g/ml	1.5

Long term controlled release of Calur as compared to competitive products.

In a study performed by Dr. A. Hadas and Dr. A. Berezkin of the Volcani Agricultural Research Organization, Bet Dagan, Israel the cumulated mineral Nitrogen percent released in soil by **Calur** was compared to a commercial Ureaform (UF) slow release fertilizer at a temperature of 30ºC:

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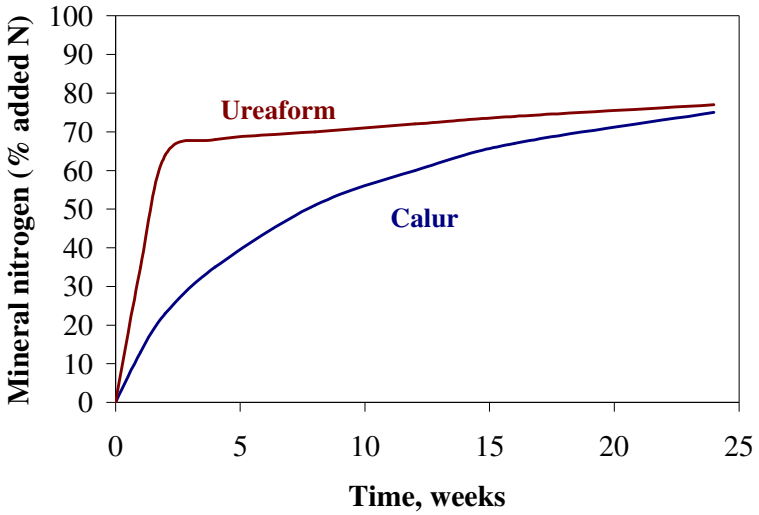
Fig. 1 Dependence between released nitrogen in soil vs. time



Cumulated Mineral Nitrogen % released from:

Time (weeks)	Calur	Ureaform (commercial)
2	23	65
4	35	66
8	51	70
12	60	73
16	66	74
20	70	75
24	75	77

From the above table, it is evident that **Calur** releases slowly the Nitrogen:

After 2 weeks – only 23% of the available quantity, whereas the Ureaform releases 65%. Between weeks 12 and 24 it gradually releases 15% of the available Nitrogen, whereas Ureaform gives a mere 4%.

The study explains the mechanism by which the organic matter present in **Calur** causes the formation of a microbial bio-mass which first retains the mineral Nitrogen from the UF and then is itself mineralized and gradually releases the Nitrogen.
In addition to the mineral Nitrogen, water and carbon dioxide are released. According to the studies performed by different researchers in the USA an Germany, no free formaldehyde is released during UF biodegradtion.