NitroShield® (25% NBPT)
Fertiliser Additives

Use

Use with Nitroflo liquid nitrogen and Multiflo High NPK range, to reduce the risk of ammonia volatilisation in warm or dry conditions. The addition of NitroShield in these conditions will improve nitrogen use efficiency (NUE). Used correctly NitroShield will meet the requirements of the Red Tractor Farm Assurance standard.

Crops

Most agricultural crops.

Pack Size

10 litres.

Function of NitroShield

In warm dry conditions, or on alkaline soils, liquid nitrogen fertiliser (UAN) such as Nitroflo can lose a small amount of the N applied as volatilised ammonia. This is dependent on conditions at the time of application and shortly afterwards, if the weather remains warm and dry the risk of volatilisation increases.

Nitrogen losses in these conditions can be mitigated by including NitroShield with Nitroflo at time of application.

NitroShield is a urease inhibitor, based on NBPT. NBPT strongly blocks three active sites of the urease enzyme which delays urea hydrolysis and thereby reduces ammonia losses.

Composition

25% w/w (272g/L) NBPT (N(n-Butyl)thiophosphoric triamide)

Crops and Timing

Crop	Timing
Winter Cereals	Main top-dressing applications in April & May
Spring Cereals	April/May top-dressing applications
OSR	Final application in April
Sugar Beet & Maize	Pre-emergence applications
Grass	All top-dressing applications during April-September
(Pre-drilling/incorporated within 12 hours - Not Required)	

Directions for Use

Use NitroShield in tank mix with Nitroflo to reduce the risk of ammonia losses during the months of April to September. In England from 2024 applications of Nitroflo made after 31st March must include an effective urease inhibitor such as NitroShield 25 unless agronomic justification is provided by a FACTS qualified adviser, e.g. losses are mitigated by rapid incorporation.

In Scotland, Wales and Northern Ireland liquid fertilisers containing urea can be applied according to the relevant legislation.

Add half of the fertiliser to the spray tank, slowly add the required amount of NitroShield whilst agitating then add the remaining fertiliser. If possible, add directly to the spray tank. If using an induction hopper, rinse with liquid fertiliser rather than water. Maintain agitation whilst spraying.

Application Rate - Per cubic metre of Nitroflo

Use the reduced rate of 1.0 L of NitroShield per m^3 of Nitroflo if **ALL** the following conditions apply:

- Soils are neutral or slightly acidic
- The crop canopy provides full coverage of the soil
- Ambient temperature is not expected to be more than 15°C within 24 hours of application
- A FACTS qualified advisor has recommended it

Use the full rate of 1.25 L of NitroShield per m^3 of Nitroflo if **ANY** the following conditions apply:

- Soils are alkaline (pH >7.0)
- The crop canopy does not provide full coverage of the soil
- Ambient temperature is expected to exceed 15°C within 24 hours of application

Grade	NitroShield Rate	
	Reduced Rate	Full Rate
All Nitroflo grades (except Nitroflo 15S)	1.0 L/m^3	1.25 L/m^3
Nitroflo 15S	600 ml/m^3	750 ml/m^3
Multiflo N-P (17-8-0, 17-6-0, 14-14-0)		750 ml/m^3
Multiflo N-K (16-0-8, 16-0-4, 10-0-10)		
Multiflo N-P-K (15-3.5-7.5, 14-7-7, 10-5-9, 9-9-9)		

Sprayer Tank Ready Reckoner

Sprayer Tank Capacity	Amount of NitroShield at reduced rate of 1.0 L/m^3	Amount of NitroShield at full rate of 1.25 L/m^3
1800 L	1.80 L	2.25 L
2000 L	2.00 L	2.50 L
2500 L	2.50 L	3.13 L
3000 L	3.00 L	3.75 L
4000 L	4.00 L	5.00 L
5000 L	5.00 L	6.25 L

Notes

DIDIN can be tank mixed with NitroShield to give additional protection against nitrogen losses and further improve nitrogen use efficiency.