



07 April 2020

Trader Notice No. 02/2020

RE: The inclusion and labelling of inhibitors in fertilisers

To: All Blenders and Manufacturers of fertiliser using inhibitors

The Department of Agriculture, Food and the Marine (DAFM) would like to draw attention to the types of urease and nitrification inhibitors provided for under both Irish and European fertiliser regulations, the levels of inclusion and requirements for labelling.

The regulations allow for a range of inclusion levels of inhibitors (min - max). The rate of inhibitor used must meet minimum regulatory requirements, should ensure effective reduction in greenhouse gas/ammonia emissions and should be based on independent research relevant to Irish climatic conditions where possible.

NON-EC FERTILISERS

(FERTILISER NOT DESIGNATED 'EC FERTILISER' WHICH CAN BE MARKETED IN IRELAND ONLY)

The Irish Fertiliser Regulation (Statutory Instrument No. 248 of 1978) was amended in 2004 (Statutory Instrument No. 205 of 2004) to include a urease Inhibitor (NBPT) and a nitrification inhibitor (DMPP) (**Table 1**).

Labelling

Under the Irish Fertiliser regulation, the following information **must** be included on the label.

For NBPT (Urease Inhibitor),

- (1) The content of NBPT in the solid urea must be declared
- (2) The following statement must be included
"Urea with urease inhibitor N-butyl thiophosphoric triamide"

For DMPP (Nitrification Inhibitor),

- (1) The content of DMPP, expressed as a percentage of the total ammoniacal, ureic and cyanamide nitrogen must be declared.
- (2) The fertiliser type designation followed by the statement
"with nitrification inhibitor 3,4- Dimethylpyrazole phosphate"



EC FERTILISERS

(FERTILISER DESIGNATED 'EC FERTILISER' WHICH CAN BE FREELY MARKETED WITHIN THE EU)

The current EC Fertiliser Regulation 2003/2003 (as amended) includes different urease and nitrification inhibitors (**Table 2** and **Table 3**).

The Regulation states that urease and nitrification inhibitors listed may be added to specific nitrogenous fertiliser types subject to the following provisions:

- (1) At least 50 % of the total nitrogen content of the fertiliser consists of the nitrogen forms specified in column 3 of Tables F.1 and F.2 of the Regulation (ammonium nitrogen and urea nitrogen for nitrification inhibitors and urea nitrogen for urease inhibitors).
- (2) They do not belong to the fertiliser types mentioned in column 4 of Tables F.1 and F.2 of the Regulation.

Labelling

Under the EC Fertiliser Regulation 2003/2003 (as amended), the following information **must** be included on the label.

For urease inhibitors (listed in Table F.2. of the Regulation – see Table 2),

- (1) The following statement must be included
"with urease inhibitor ([type designation of urease inhibitor])" added to the type designation on the label.

For nitrification inhibitors (listed in Table F.1. of the Regulation – see Table 3),

- (1) The following statement must be included
"with nitrification inhibitor ([type designation of nitrification inhibitor])" added to the type designation on the label.

In addition to the above, technical information, as complete as possible, must be provided with each package or bulk consignment by the person responsible for marketing. This information must enable the user in particular to determine the rates and timing of application in relation to the crop being grown.

If you require any further information, please email: feedenquiries@agriculture.gov.ie

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Table 1: Inhibitors included in Statutory Instrument No. 205 of 2004

List of Inhibitors for Use with Type Designated Fertilisers Containing Certain Forms of Nitrogen					
Inhibitor Type	Fertiliser	Active Ingredient	Minimum content of inhibitor in fertiliser	Declaration of inhibitor	Data for identification of the fertiliser- to be included on the product label
NBPT Urease Inhibitor	Solid urea	N-butyl- thiophosphoric- triamide (NBPT)	Minimum of <u>0.05% NBPT</u> in the solid urea	Percentage of NBPT in the solid urea	Urea with urease inhibitor N-butyl thiophosphoric triamide
DMPP Nitrification Inhibitor	Straight N, NPK, NP and NK; organic and organo-mineral and the said fertilisers with trace elements, which contain a minimum of 55% of the total nitrogen in the form of ammoniacal, ureic or cyanamide nitrogen	3,4- Dimethylpyrazole phosphate (DMPP)	Minimum of <u>0.8 % DMPP</u> expressed as a % of the total ammoniacal, ureic and cyanamide nitrogen	Content of DMPP, expressed as a % of the total ammoniacal, ureic and cyanamide nitrogen	Fertiliser type designation, followed by: “with nitrification inhibitor 3,4- Dimethylpyrazole phosphate”

Table 2: Summary of urease inhibitors in EC Regulation No. 2003/2003 (as amended)

Urease Inhibitor Type	Active Ingredient	Year of Registration	<u>Minimum and maximum</u> inhibitor content as a percentage by mass of the total nitrogen present as urea nitrogen
NBPT	N-(n-butyl) thiophosphoric triamide (NBPT)	2008	Min 0.09 Max. 0.20
2NPT	N-(2-nitrophenyl)phosphoric triamide (2-NPT)	2012/2003	Min 0.04 Max. 0.15
NBPT + NPPT	N-(n-Butyl)thiophosphoric acid triamide (NBPT) and N-(n-Propyl)thiophosphoric acid triamide (NPPT) in a 3:1 ratio	2014	Min 0.02 Max 0.3

Table 3: Summary of nitrification inhibitors in EC Regulation No. 2003/2003 (as amended)

Nitrification Inhibitor Type	Active Ingredient	Minimum and maximum inhibitor content as a percentage by mass of the total nitrogen present as ammonium nitrogen and urea nitrogen
DCD	Dicyandiamide	Min 2.25 Max 4.5
DCD + TZ ratio 10:1	Product containing dicyandiamide (DCD) and 1,2,4-triazole (TZ)	Min 2.0 Max 4.0
TZ+MP ratio 2:1	Product containing 1,2,4-triazole (TZ) and 3-methylpyrazole (MP)	Min 0.2 Max 1.0
DMPP	3,4-dimethyl-1H-pyrazole phosphate (DMPP) EC No 424-640-9	Min 0.8 Max 1.6
DMPSA	Isomeric mixture of 2-(3,4- dimethylpyrazole-1-yl)- succinic acid and 2-(4,5- dimethylpyrazole-1-yl)- succinic acid (DMPSA) EC No 940-877-5	Min 0.8 Max 1.6