



BULLETIN # 01-2018

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Guidance on the Applicability of the Agricultural Calcium Ammonium Nitrate Security Code of Practice to Fertilizer Products and the Supply Chain

Fertilizer Canada has released the new Agricultural Calcium Ammonium Nitrate Security Code of Practice (CAN Security Code) for implementation in 2019. The CAN Security Code aims to provide uniform security practices for the handling, transportation, storage and/or sale of CAN in Canada. Developed by fertilizer manufacturers, distributors, agri-retailers with input from government agencies, the CAN Security Code was created as a proactive industry-led approach to the expected new regulatory requirements for CAN resulting from the current review of the *Explosives Regulations* by Natural Resources Canada. Fertilizer Canada is working closely with Natural Resources Canada as they move forward with their regulatory process and we will ensure alignment of the CAN Security Code with any final regulatory decisions.

Compliance with the CAN Security Code is required as a condition of membership with Fertilizer Canada. As of January 1, 2019, CAN distribution and retail sites will be able to schedule their formal audit in order to obtain certification. The deadline for certification is December 31, 2019.

Scope of Application – Sites

Retail and distribution sites which transport, store, handle and/or sell agricultural CAN are required to be certified as compliant with the CAN Security Code through a formal audit. Table 1 provides a general description of the CAN supply chain and can be used to help determine which sites require an audit.

Table 1: General descriptions of CAN supply chain levels.

Level	Description	Audit Required?
Manufacturer	The manufacturer produces CAN and stores it to be sent to distribution and ag retail facilities.	No
Terminal/Port	To reach the Canadian market, CAN must be shipped into the country by marine vessel, train or truck. Terminals and ports are the offload points for imported CAN where a distributor or ag retailer can take possession of the product. Some may have on-site storage facilities for temporary or short term storage of product.	Yes ¹



Distributor	Some companies that manufacture CAN will ship to other companies which store and resell the product, or distribute the product on their behalf. Distribution sites typically consist of storage facilities for product received from a manufacturer, which in turn is transferred into other transportation units (i.e. train, truck) for delivery to ag retailers or end-users (i.e. farmers).	Yes
Ag Retailer	Ag retailers typically receive CAN by marine vessel, rail or truck from a terminal/port or distributor which is stored within an on-site structure prior to sale to an end-user (i.e. farmer).	Yes
Ag Retailer (intermediary)	In some cases, an ag retailer will not store product on their site but will broker a sale between another ag retailer or distributor and an end-user (i.e. farmer).	Yes ²
End-users	The end-use customers who are purchasing product from some point in the supply chain for use by their agricultural farming business growing various crops.	No

¹If the terminal/port has storage facilities

²Sections pertaining to storage requirements will be considered not applicable

Table 1 is not an exhaustive list. Sites which do not fall under the above supply chain levels or descriptions may still be required to complete an audit for certification. Please contact Fertilizer Canada or the Agrichemical Warehousing Standards Association if you have questions on site applicability.

Scope of Application – Products

The CAN Security Code applies to CAN which intended for use as an agricultural fertilizer. CAN used outside of agriculture (i.e. industrial end-use) is not captured. Therefore, the CAN Security Code applies to all dry, solid granular fertilizer products which are pure CAN, blends of CAN (e.g. compound fertilizers), or physical mixtures of ammonium nitrate (AN) and carbonates to give the same average make-up as CAN meeting the following criteria:

- a. Contains a minimum carbonate content of 20% by weight; and
- b. Contains a total AN content greater than 70% but less than 80% by weight.

Physical blends of AN with limestone, dolomite or other carbonates

While physical blends of ammonium nitrate (AN) with limestone chips, dolomite chips or other carbonates are captured under the CAN Security Code, they are not considered the same as the product CAN. CAN is specifically defined as:



Calcium Ammonium Nitrate (CAN): A fertilizer containing as its essential ingredients only AN and calcium carbonate (for instance limestone) and/or magnesium carbonate and calcium carbonate (for instance dolomite), prepared as a homogenous prill or granule, which:

- i. Has a maximum combustible material content, expressed as carbon, of 0.4% by weight; and*
- ii. Has a minimum content of carbonates of 20% by weight with a purity level of 90% by weight.*

CAN is manufactured to be a homogenous product, meaning that each single prill or granule has a similar AN to carbonate ratio in intimate contact that will remain constant throughout handling, storage and transportation. This quality is essential to its improved safety characteristics.

A physical blend is not CAN because the AN and the carbonate is not within the same granule/prill. Therefore, it is important for a site to tailor its transportation, handling and storage safety practices accordingly.

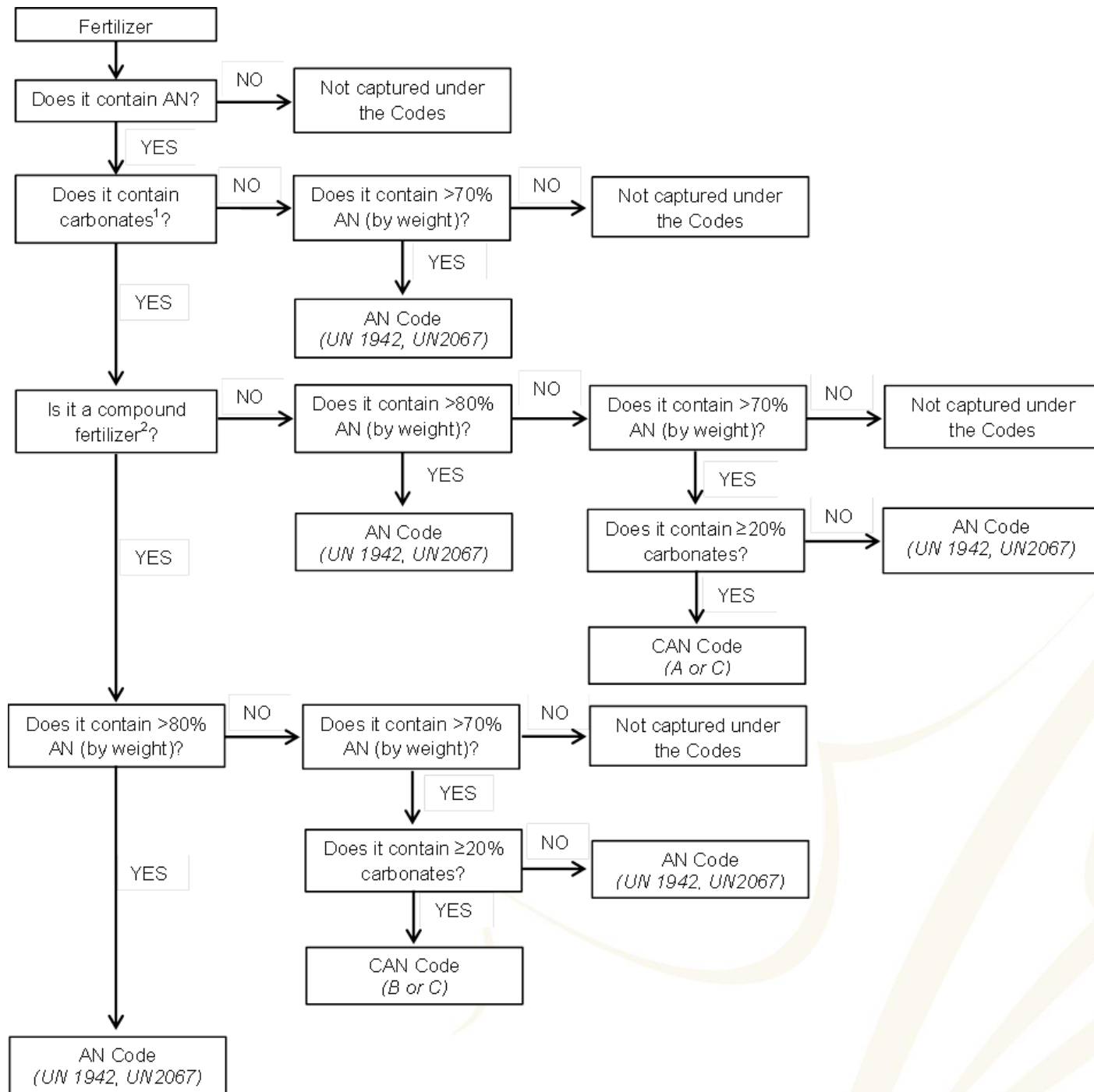
From a security perspective, physical blends of AN and carbonates could be manipulated in the same manner as CAN to produce illegal improvised explosive devices (IEDs). Therefore, while not CAN, the security measures of the CAN Security Code used for CAN are also applied to physical mixtures of AN/carbonates if they have a nutrient content that is roughly equivalent (at least 20% carbonates and between 70 and 80% AN).

Where is my product captured?

Fertilizer Canada currently implements two Codes of Practice related to AN-based products – the CAN Security Code and the Agricultural Ammonium Nitrate Code of Practice (AN). Currently, the AN Code of Practice applies to AN products which are classified under the *Transportation of Dangerous Goods Regulations* as UN1942 or UN2067. Figure 1 provides guidance to help determine whether a given AN-based fertilizer product will be captured under either the AN Code or the CAN Security Code of Practice.



Figure 1: Decision matrix to help determine the applicability of the Ammonium Nitrate Code of Practice (AN Code), the Calcium Ammonium Nitrate Security Code of Practice (CAN Code) or neither Code to a given fertilizer product.



¹Typically calcium carbonate (alternatively: CaCO₃ or limestone) or calcium magnesium carbonate (alternatively: CaMg(CO₃)₂ or dolomite)

²Where the nitrogen source is mixed with other nutrients to form a blend (NPK, NP, NK fertilizers)



Fertilizer Canada is committed to providing a robust and comprehensible CAN Security Code and will continue to work with the fertilizer industry to maintain our social licence to operate: ensuring that farmers can grow healthy crops with this product for years to come. Should you have any questions or wish to book an audit, please do not hesitate to contact us at the coordinates below:

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