

Ammonium Nitrate Fertilizers and the *Environmental Emergency Regulations**

What are the *Environmental Emergency Regulations*?

The *Environmental Emergency (E2) Regulations* are enforced by Environment and Climate Change Canada (ECCC) (formally Environment Canada) for the purpose of protecting the environment and human health during an environmental emergency situation by promoting prevention of an emergency and ensuring a level of preparedness to respond to an unintentional release. Under this directive, these regulations require those who “owns or has the charge, management or control” of prescribed amounts of substances to report specific information about the substance(s) being handled and the place, and may also have to prepare and implement environmental emergency plans.

How are ammonium nitrate fertilizers treated under the E2 Regulations?

The E2 Regulations apply to a number of substances which have been identified as having a harmful impact if they are unintentionally released to the environment, as follows:

*“For the purposes of the definition **substance** in section 193 of the Act, the list of substances consists of the substances set out in column 1 of Schedule 1 in their pure form or in a mixture that has a concentration equal to or greater than the applicable concentration set out in column 2...”*

Ammonium nitrate is included in this list of substances. It is listed under Schedule 1 with the following parameters:

CAS Registry Number	Column 1 Name of Substance	Column 2 Concentration (% by weight)	Column 3 Minimum Quantity (metric tonnes)
6484-52-2	ammonium nitrate (in solid form)	60	20.00
6484-52-2	ammonium nitrate (in liquid form)	81	20.00

* **PLEASE READ AND TAKE NOTE:** *This Bulletin is intended for initial guidance only. The Agricultural Ammonium Nitrate Code of Practice does not in any way supersede or derogate from any requirements contained in municipal, provincial or federal by-laws, regulations or legislation. You should always consult the applicable regulations and regulator in order to determine your compliance obligations. Fertilizer Canada makes no representations, warranties or covenants with respect to the information presented in this Bulletin, nor will it be responsible for any damage, loss or claims arising from any failure by a regulated party to comply with the applicable regulations.*

I have ammonium nitrate fertilizers; where do I start?

Any person in Canada who owns or manages a listed substance in an amount at or above a prescribed minimum must notify ECCC on the amount being kept as well as the facility location. The form and content of the notification is set out in Schedule 2 of the E2 Regulations. Based on the table above, these notification obligations under the E2 Regulations are triggered for pure solid or liquid ammonium nitrate when the stored quantity is equal to or exceeds 20.00 metric tonnes **or** where **any** quantity is stored in a container that has a maximum capacity equal to or greater than this tonnage.

Although not audited currently under the Agricultural Ammonium Nitrate Code of Practice (AN Code), both solid and liquid ammonium nitrate mixtures are also captured by the E2 Regulations. For solids, these are mixtures with a concentration of ammonium nitrate equal to or greater than 60% (by weight). For liquids, these are mixtures with a concentration of ammonium nitrate equal to or greater than 81% (by weight). For mixtures, notification obligations are triggered when the quantity is equal to or exceeds 4.5 metric tonnes **or** where **any** quantity is stored in a container that has a maximum capacity equal to or greater than this tonnage. For example, this can include mixtures such as calcium ammonium nitrate or NK21 if they have an ammonium nitrate concentration that is equal or greater than 60% (by weight).

In certain situations, ECCC must also be notified that an Environmental Emergency (E2) Plan has been prepared, and that that the E2 Plan has been implemented and tested.

What is an E2 Plan and when do I need one?

At a basic level, an Environmental Emergency (E2) Plan identifies any environmental emergency that can reasonably be expected to occur at a place where a listed substance is kept, that would likely have a harmful impact should it occur. It includes a description of the measures used to prevent, prepare for, respond to and recover from these identified emergencies as well as the names, roles and responsibilities of the individuals who will be carrying out the actions described in the plan and measures to notify members of the public who may be adversely affected by an environmental emergency.

Individuals who own or manage ammonium nitrate-based fertilizers must prepare an E2 Plan in the following circumstances:

For ammonium nitrate:

“(a) if the substance is set out in column 1 of Part 1 of Schedule 1 and is not part of a mixture, and

(i) the maximum expected quantity of the substance that was reported under paragraph 3(d) of Schedule 2 is equal to or exceeds the quantity set out in column 3 of Schedule 1 for that substance, and

(ii) the substance is in a storage container that has a maximum capacity equal to or exceeding the quantity set out in column 3 of Schedule 1;”

For ammonium nitrate mixtures:

“(b) if the substance is set out in column 1 of Part 1 of Schedule 1 and is a component in a mixture, other than a mixture that is a substance set out in column 1 of Schedule 1, and

(i) the mixture is in a quantity that is equal to or exceeds 4.5 tonnes, and

(ii) the mixture is in a storage container that has a maximum capacity equal to or exceeding 4.5 tonnes;...”

From this, an E2 Plan is required for solid or liquid ammonium nitrate when the quantity is equal to or exceeds 20.00 metric tonnes **and** it is stored in a container with a maximum capacity equal to or greater than this tonnage. Although not currently audited under the AN Code, mixtures with an ammonium nitrate (concentration greater than 60% by weight for solid or 81% by weight for liquids) also require an E2 Plan when the quantity exceeds 4.5 metric tonnes **and** it is stored in a container with a maximum capacity equal to or greater than this tonnage.

The table below summarizes some of the most common scenarios and can be helpful in determining where to start:

	Notice of Substance and Place (Schedule 2)	Notice of E2 Plan Preparation (Schedule 4)	Notice of Implementation and Preparation (Schedule 5)
I have ≥ 20.00 tonnes of ammonium nitrate and it is in a container with a capacity of ≥ 20.00 tonnes	●	●	●
I have ≥ 20.00 tonnes of ammonium nitrate but it is in containers each with a capacity of < 20.00 tonnes	●		
I have < 20.00 tonnes of ammonium nitrate but it is in a container with a capacity of ≥ 20.00 tonnes	●		
I have < 20.00 tonnes of ammonium nitrate and it is in a container with a capacity of < 20.00 tonnes			
I have ≥ 4.5 tonnes of a mixed fertilizer* and it is in a container with a capacity of ≥ 4.5 tonnes	●	●	●
I have ≥ 4.5 tonnes of a mixed fertilizer* but it is in containers each with a capacity of < 4.5 tonnes	●		
I have < 4.5 tonnes of a mixed fertilizer* but it is in a container with a capacity of ≥ 4.5 tonnes	●		
I have < 4.5 tonnes of a mixed fertilizer* and it is in a container with a capacity of < 4.5 tonnes			

*With a concentration of ammonium nitrate ≥ 60 % by weight for solid mixtures or 81 % by weight for liquid mixtures

Where can I find more information?

Please consult the *Environmental Emergency Regulations* when determining what your compliance obligations are. Environment and Climate Change Canada also have a number of resources available to help with regulation interpretation and environmental emergency planning. These resources can be found using the links below:

Environmental
Emergency Regulations: <http://laws-lois.justice.gc.ca/eng/regulations/sor-2003-307/index.html>

E2 Regulations
Implementation Guide: <https://www.ec.gc.ca/lcpe-cepa/default.asp?lang=En&n=1FB6D405-1&offset=1&toc=show>

Quick Reference: <https://www.ec.gc.ca/lcpe-cepa/1FB6D405-BFE5-4CA1-96F9-89E40F75221E/figure.jpg>

E2 Regulations
Common Issues and
FAQ: <https://www.ec.gc.ca/ee-ue/default.asp?lang=En&n=95FF9482-1>

Who are our Federal regulators and how are they different?

1. Environment and Climate Change Canada (ECCC):

ECCC is focused on protecting and enhancing the quality of Canada's environment, ensuring that Canadians have a safe, clean and sustainable place to live. Their programs work to repair past damage, and to develop, implement and enforce policies to prevent future issues for activities with an environmental impact.

Applicable acts and regulations include but are not limited to:

- *Canadian Environmental Protection Act 1999*
- *Environmental Emergency Regulations*

2. Natural Resources Canada (NRCan):

NRCan is focused on keeping Canada's resources competitive and ensuring that they are developed and used responsibly. For ammonium nitrate, this means keeping the product in the right hands through security regulations for the prevention of criminal misuse.

Applicable acts and regulations include but are not limited to:

- *Explosives Act*
- *Explosives Regulations, 2013*

3. Transport Canada (TC):

TC is responsible for developing transportation policies and programs. This includes a wide number of policies for the safe, secure, efficient and environmentally-responsible transportation of products by marine, truck and rail. TC is also responsible for the storage regulations specific to ammonium nitrate.

Applicable acts and regulations include but are not limited to:

- *Canada Shipping Act, 2001*
- *Marine Transportation Security Act and Regulations*
- *Port Authorities Operations Regulations*
- *Cargo, Fumigation and Tackle Regulations*
- *Transportation of Dangerous Goods Act and Regulations*
- *Ammonium Nitrate Storage Facilities Regulations*