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# Ammonium Nitrate

Posted by Anonymous on Thu, 2015-11-26 09:24

Ammonium Nitrate: Hi. Wondering if anyone uses ammonium nitrate for senior chemistry? Have a teacher who has requested some ammonium nitrate for making rockets? Not sure if it is a banned substance for schools, or if limitations are in place for having it. Any info on this would be useful. Thanks.

**Voting:**

No votes yet

**Year Level:**
Senior Secondary
**Laboratory Technicians:**
Laboratory Technicians

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# Ammonium Nitrate

Submitted by sat on 10 December 2015

Answer reviewed 26 February 2023

**Rockets**

Making ammonium nitrate rocket fuel in the school lab is extremely hazardous and **Science ASSIST strongly advises against conducting this activity** and instead recommends the use of commercially available rocket kits and engines. To locate a supplier see School science suppliers.[1]

## Senior chemistry

Ammonium nitrate is included in the Science List of recommended chemicals for science in Australian schools 2021,[2] with use restricted for Year 11 and 12 students. It has applications to show endothermic reactions, as well as in a saturated solution for use as a salt bridge. Science ASSIST recommends substituting ammonium nitrate with less hazardous chemicals, for example:

- solubility of salts: use sodium or potassium nitrate;
- endothermic reactions: use sodium thiosulphate or potassium iodide.

## Ammonium nitrate regulations

Ammonium nitrate is a chemical of high security concern and is a precursor chemical to the manufacture of explosives. Where it occurs in solid form or in concentrations above 45%, it is referred to as security sensitive ammonium nitrate (SSAN). Its use and availability are regulated by individual state and territory legislation.

Ammonium nitrate is not a banned chemical for schools. Some states permit SSAN in quantities up to 3 kg in schools where there is a curriculum requirement, however an end user declaration (EUD) and/or applying for exemption may be required before purchasing.

Solutions of ammonium nitrate are permitted in all jurisdictions. Schools in NSW, Victoria, WA and Qld do not require a licence to store up to 3 kg of ammonium nitrate. Schools in Tasmania can apply for an exemption for a licence to store up to 3kg of ammonium nitrate. Schools in South Australia and ACT require a licence to store any amount of solid ammonium nitrate.

## Additional information

See previous question about ammonium nitrate: Ammonium nitrate

See AIS: School science area security

## References and further reading


[1] Science ASSIST. (2023). *School science suppliers*. Retrieved from the Science ASSIST website. https://assist.asta.edu.au/resource/664/school-science-suppliers

[2] Science ASSIST. (2021). *List of recommended chemicals for science in Australian schools 2021*, Retrieved from the Science ASSIST website, https://assist.asta.edu.au/resource/4669/list-recommended-chemicals-scie...

Tenchov, R. (2022, November 23) *Ammonium nitrate: making it safer today for a better tomorrow,* Retrieved from the CAS, a division of the American Chemical Society website: https://www.cas.org/resources/cas-insights/safety/ammonium-nitrate-makin... ( Scroll down to download their insight report Ammonium Nitrate Explosions: Lessons Learned.

Work Safe Queensland. (nd) 'Ammonium nitrate', Retrieved (26 February 2023) from the Work Safe Queensland website: https://www.worksafe.qld.gov.au/safety-and-prevention/hazards/hazardous-...

# Ammonium Nitrate

Submitted by on 29 November 2015

Making rockets?? That is a concern. If the substance is banned would depend on your institution (what state? Public or private?) restrictions. In NSW DoE Ammonium Nitrate is a controlled substance to only Year 11 and 12 students or teacher use and its just in any explosive capacity (such as a rocket motor) is explicitly banned. The only rocket motors we are allowed to use are the commercially packaged ones from Estes and there are also size limits on their use. All these rules are outlined in the CSIS policy for NSW DoE schools. Also as a side note, Ammonium Nitrate is a controlled substance by the Federal Police so care needs to be taken with who has access to stock supplies and what uses are permitted with stocks held. Hope that helps.

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