

## Nitric Acid and Incompatible Materials

Langerman<sup>1</sup> has summarised several incidents involving the accidental mixing of concentrated nitric acid with organic solvents such as methanol/ethanol.

Nitric acid is a strong oxidant and reacts vigorously with organic material to release NO<sub>2</sub> gas, typically after an induction period of 2-3 minutes (A video showing this can be found here: <https://shorturl.at/rxe40>). This is particularly hazardous if this occurs in a sealed waste container as the resulting pressure can lead to the container rupturing after a delay.



On a related topic, Meredith<sup>2</sup> has reported on the delayed exothermic decomposition of amines when mixed with oxidising acids such as sulphuric, perchloric and nitric.

### References:

1. *ACS Chem. Health Saf.* 2020, 27, 6, 346–351 <https://pubs.acs.org/doi/10.1021/acs.chas.0c00088>
2. *ACS Chem. Health Saf.* 2022, 29, 1, 72–78 <https://pubs.acs.org/doi/10.1021/acs.chas.1c00042>