

Facility	AZF (Azote de France) fertilizer factory, Toulouse
Date	21 st September 2001
Consequences	30 fatalities and an estimated 10,000 injuries.
Description of accident	<p>The explosion occurred in a downgraded ammonium nitrates store, which was authorised for 500 tons and contained approximately 400 tons of product on the day of the explosion. The chemical was stored flat and separated by partitions. It is not known what caused the explosion.</p> <p>The TNT equivalent mass of the explosion was estimated by INERIS to be in the range of 20 to 40 tons of TNT.</p>
Key lessons learned [1,2]	<ul style="list-style-type: none"> • Redefinition of ammonium nitrate to cover lower percentage composition. • Necessary to improve quality of hazard studies and their homogeneity between different industrial sites. Studies should specify basic assumptions concerning accident scenarios, external threats and failure of safety systems. • Reduce the risks posed by hazardous installations via various measures such as double confinement and breaking up stock into smaller amounts. • Harmonisation of regulation requirements for transport of goods in areas such as ports and marshalling yards. • Defined new land use planning rules that deal with potential hazardous situations.
Reports & Links	<p>1) Accident on the 21st of September 2001 at a factory belonging to the Grande Paroisse Company in Toulouse, Report of the General Inspectorate for the Environment, October 2001</p> <p>2) Toulouse disaster, Debry, N., INERIS – Personal communication</p> <p>3) Dechy et. al., ‘First lessons of the Toulouse ammonium nitrate disaster, 21st September 2001, AZF plant, France’, Journal of Hazardous Materials, Vol 111, 2004, pp 131-138.</p> <p>4) Dechy et. al., ‘The 21st September 2001 disaster in Toulouse: an historical overview of the land use planning’, Proceedings of the ESReDA 28th Seminar, June 2005, Karlstad University, Sweden.</p>