



## Monoethanolamine and Ammonia Fact Sheet

1. Monoethanolamine (MEA) is a stable alkaline liquid.
2. Ammonia is a gas.
3. MEA has a larger molecule than ammonia, which means it is less volatile.
4. MEA **does not** give off gas when used in hair colour.
5. Ammonia gas **is** given off when used in hair colour.
6. Ammonia gas can dissolve in water to form Ammonium Hydroxide, which is highly corrosive. This can occur on the skin, eyes and lungs if large enough amounts of gas are released. (Source MSDS sheet from Airgas Inc.)
7. The Danish government has banned the mixing of ammonia colours in the salon. They have to be mixed under an extraction system in a separate room.
8. The symptoms associated with specific ammonia concentrations are as follows:

0.6ppm-53ppm	Odour threshold.
25ppm-50ppm	Irritation of the eyes and mucous membrane, which can be tolerated for several hours.
100ppm-150ppm	Immediate irritation of the throat which may be tolerated for 1 hour.

(Source MSDS sheet from Airgas Inc.)
9. Ammonia in small doses **does not** present a health risk.
10. Prolonged exposure of ammonia **does** present a health risk.
11. Many colours, including Matrix, use ammonia **and** monoethanolamine.
12. The argument that MEA has not been used long enough to be judged "safe" is completely untrue, it has been used for at least 30 years in hair colour.
13. There is no proof that ammonia washes off the hair and that MEA does not.
14. Tints of Nature uses oleic acid in the formulation specifically to neutralise MEA, so even if the colour was not washed off correctly, the MEA has been neutralised and would have no adverse effect on the hair.