

AQUA AMMONIA (19-30%) -- Chemical Fact Sheet

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| <i>What is it?</i> ¹ | Aqua Ammonia (also called, aqueous ammonia and ammonium hydroxide) is a clear, colorless liquid with a pungent, suffocating odor. Its odor allows it to be noticed at low concentrations. It is formed when anhydrous ammonia dissolves in water. Use of Aqueous Ammonia, where possible, is a safer alternative than Anhydrous Ammonia. |
| <i>Where does it come from?</i> | Ammonia is created by mixing nitrogen and hydrogen gases in the presence of a catalyst or as a by-product from the petroleum refining process. Aqua ammonia is created by dissolving anhydrous ammonia in water. |
| <i>What are the common uses for it?</i> | Household cleaner Reduction of nitrogen oxides stack emissions at power plants Use for water treatment plant Pesticides |
| <i>How is it transported in CCC?</i> | Aqueous Ammonia is shipped by truck. |
| <i>How is it stored in CCC?</i> | Aqueous Ammonia is stored in tanks. |

Health Hazards from Exposure

| <i>Exposure Route</i> | <i>Symptoms</i> | <i>First Aid</i> |
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| Inhalation (low concentrations) | Burning sensation Headache Nausea Coughing Wheezing Shortness of breath | Remove to fresh air. If breathing is difficult give oxygen. Get medical attention if symptoms persist. |
| Inhalation (high concentrations & prolonged exposure) | Burning sensation Coughing, gagging Chest pain Fluid in lungs Suffocation, death | Remove to fresh air, get medical attention including oxygen administration. Initiate CPR if breathing has stopped. |
| Ingestion | Burns of mouth, throat, and stomach Vomiting Diarrhea | DO NOT INDUCE VOMITING. Give large quantities of water. Seek medical attention. |

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| Eyes | Blurred Vision Redness Temporary blindness Permanent blindness | Rinse eyes with water for at least 15 minutes. Seek medical attention. |
| Skin | Irritates skin Redness of Skin Skin burns | Wash skin with water for 15 minutes. Remove all contaminated clothing and wash before reuse. Seek medical attention |

**Contra Costa RMP/CalARP Companies
that Use, Store or Manufacture this Chemical²**

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| Air Products Tesoro | EBMUD Orinda Water Treatment Plant | General Chemical – Bay Point Works |
| Criterion Catalysts | EBMUD San Pablo Water Treatment | Martinez Water Treatment Plant |
| The Dow Chemical Company | EBMUD Lafayette Water Treatment | Mirant Contra Costa |
| Bollman Water Treatment Plant | EBMUD Walnut Creek Water Treatment | Mirant Delta |
| Calpine Riverview Energy Center | GWF Power Systems – Loveridge Rd | Randall Bold Water Treatment |
| Chevron – Richmond Refinery | GWF Power Systems – Nichols Rd | Shell Martinez Refinery |
| Conoco Phillips | GWF Power Systems – Site 1A, Pittsburg | Tesoro Refinery |
| Crockett Cogeneration | GWF Power Systems – Wilbur West | Veolia ES Technical Solutions |
| EBMUD Sobrante Filter Plant | GWF Power Systems – Wilbur East | |

For More Information

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| US Environmental Protection Agency and Technology Transfer Network | www.epa.gov/swerceppo www.epa.gov/ttn/uatw/hapindex.html | (800)535–0202 EPCRA Hotline (919)541–0888 |
| National Institute of Occupational Safety & Health and the Agency for Toxic Substances and Disease Registry | www.cdc.gov/niosh http://atsdr1.atsdr.cdc.gov:8080/hazdat.html | (800)477–1544 |
| Occupational Safety and Health Administration | www.osha.gov www.osha-slc.gov/ChemSamp_data | (202)219–8151 or (202)219–7056 |
| ChemFinder® | http://Chemfinder.camsoft.com | (800)315–7300 |
| International Safety Cards | http://siri.org/msds/mf/cards/list.html | |
| MSDS Sites | www.chem.utah.edu/msds www.msdonline.com | |
| Poison Control Center | www.calpoison.org | (800) 876 - 4766 |
| California Health Service Department Sacramento | www.dhs.ca.gov | (916) 540 - 3014 |
| Contra Costa County Health Services – Hazardous Materials Department | www.cchealth.org/gourps/hazmat | (925) 646 – 2286 |

This is a brief summary of information on this chemical. For more detailed information you can obtain a Material Safety Data Sheet from Contra Costa Health Services. You can also call any of the companies listed above for more information.

¹This information was obtained from the Agency for Toxic Substances and Disease Registry website.

²The companies listed were obtained from Business Plans submitted to Contra Costa County Health Services Department.