

HYDROGEN SULFIDE -- Chemical Fact Sheet

<i>What is it?</i> ¹	Hydrogen Sulfide is a colorless, corrosive and highly toxic gas with an offensive rotten egg odor. It is also highly flammable and a respiratory inhibitor. Hydrogen Sulfide's odor is readily detectable at low concentrations. However, high concentrations may deaden a person's sense of smell and therefore, no odor can be perceived.
<i>Where does it come from?</i>	Hydrogen Sulfide is created naturally by decaying organic matter and is released from sewage sludge, liquid manure, and sulfur hot springs. It is formed when Sulfur is removed from petroleum products in the petroleum refining process and is a by-product of paper pulping.
<i>What are the common uses for it?</i>	Hydrogen Sulfide is not produced for commercial sale. It is formed when removing sulfur compounds from petroleum products. It is then either converted to elemental Sulfur or Sulfuric Acid. Elemental Sulfur is used to make fertilizer. Sulfuric Acid can be used for a variety of industrial purposes.
<i>How is it transported in CCC?</i>	At oil refineries, Hydrogen Sulfide is produced in process units that remove sulfur from petroleum. It is then transported to a process unit where it is made into Sulfur or Sulfuric acid.
<i>How is it stored in CCC?</i>	Pure Hydrogen Sulfide is not stored at oil refineries. However, it is often present as a component of untreated intermediate gas and liquid streams.

Health Hazards from Exposure

<i>Exposure Route</i>	<i>Symptoms</i>	<i>First Aid</i>
Inhalation (low concentrations)	Offensive odor which can irritate nose, throat and lungs Headache Dizziness Discomfort or difficulty in breathing, coughing Nausea/vomiting	Remove to fresh air. Seek medical attention.
Inhalation (high concentrations & prolonged exposure)	Burning sensation Coughing and gagging Nausea/vomiting Unconsciousness Convulsions, coma, death	Remove to fresh air, get medical attention including oxygen administration. Initiate CPR if breathing has stopped.
Eyes	Irritates eyes Burning/discomfort Watering of eyes, redness	Rinse eyes with water for at least 5 minutes. Seek medical attention after exposure.
Skin	Irritates skin Burning/discomfort Redness	Wash skin with soapy water. Seek medical attention for all but minor exposure.

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

Chevron – Richmond Refinery
Shell Martinez Refinery
Tesoro Refinery
Conoco Phillips Refinery

For More Information

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.