

# Phenol

# Maritime Chemical Accident

1973, January 13

Port of Gothenburg, Sweden

**Phenol** (Class 6) in a cistern; poisonous liquid or solid, melting point +55 °C , TLV 5 ppm (USA), IDLH 250 ppm (USA)

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**Summary:** On January 13, 1973, the German tank vessel **Amalie Essberger** was unloading **molten phenol** in the port of Gothenburg. The phenol was loaded into a **cistern** which suddenly **ruptured**. A total of 400 tonnes of phenol leaked onto the quay and into the water. When the rescue service arrived a large gas cloud covered the quay area. The company personnel had already started to recover phenol on the quay. They were fully equipped with chemical resistant clothing. Much of the phenol, especially that in the water, had soon **solidified** in the cool weather. Phenol solidifies at +55 °C and the air temperature was around 0 °C . A **safety zone** of 50 m was set up and incoming vessels were redirected. It was relatively easy to recover solidified phenol on the quay but more difficult in the water. Monitoring with instruments in the water clearly showed contamination by phenol. Divers searching the area found large stacks of solidified phenol on the bottom. The sunken phenol could be dredged by grab cranes and transferred to barges and later carried to a depository site. Measurements made in the environment after the accident showed no signs of environmental damage.

**Cause of Accident:** A cistern rupture, probably due to overpressure during loading.

**Comments on Response:** The response operation was performed successfully. This was much due to valuable experiences from a similar accident earlier occurred in Denmark. No personal injuries and no environmental damage were reported.

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**Source of Information:** 1) Article (in Swedish) from the news magazine of the Swedish Fire Protection Association. 2) Report from the Swedish Fire Department in Gothenburg.  
(Abstracted July 2001 by Edvard Molitor, Swedish Coast Guard HQ)