GROUP	D
EXHIBIT	
28	

Agency / Organization

Oxy Vinyls, LP

Title

Oxy Vinyls SDS Source 2: The Chlorine Institute Pamphlet 171, Excerpts

THE CHLORINE INSTITUTE

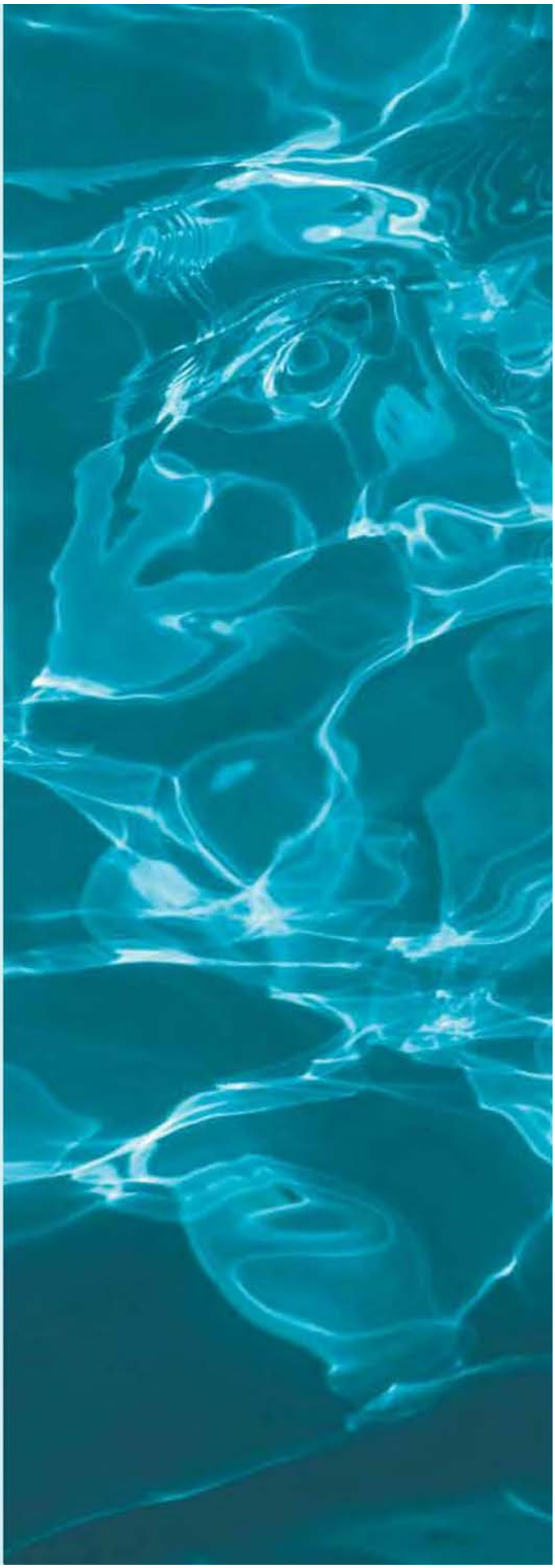
The Vinyl Institute

Pamphlet 171

Vinyl Chloride Monomer (VCM) Tank Car & Cargo Tank Handling Manual

Edition 1

A LEGACY OF 1924 since SAFETY STEWARDSHIP



July 2018

2.3 POLYMERIZATION AND OTHER REACTION CONSIDERATIONS

VCM is shipped in a stabilized state and is generally stable at normal temperatures and pressures. However, certain conditions or mixtures with certain materials can cause VCM to violently polymerize or other hazardous conditions.

Exposure to the following conditions or mixtures with the following elements and materials can cause explosive or violent polymerization of VCM:

- Air;
- Sunlight;
- Excessive heat;
- Oxidizers;
- Catalytic metals, such as copper, aluminum and their alloys; and
- Certain catalytic impurities.

Some of the questions that will need to be answered early in the emergency response efforts include:

1. What is the pressure in the tank car? For undamaged tanks, connecting a pressure gauge on the tank car is the easiest way to determine pressure. VCM does not have an extreme vapor pressure. The vapor pressure is only about 68 psig at 100°F (37.7°C). If the pressure is greater than that it may indicate that VCM is polymerizing inside the tank car.

2. What is the temperature of VCM in the tank car? Check the liquid VCM temperature in the tank. This can be done by using an infra-red thermometer gun on the pressure/manway plate of the tank. If it is above ambient temperature it may imply that VCM is polymerizing inside the tank car.

If both pressure and temperature are above normal conditions, then a polymerization reaction is most likely occurring in the tank car. Appropriate action should be taken.

REACTIVITY DATA:

Vinyl chloride is a reactive compound but is stable under recommended storage and handling conditions. Polymerization is possible when mixed with incompatible materials or stored/handled improperly.

Incompatibility: Polymerizes exothermically in the presence of light, air, oxygen or catalysts. Reacts with the following incompatible materials and creates a strong exothermic reaction: oxygen, moisture, polymerization additives, copper, aluminum, oxidizing agents, strong alkalis, strong acids. Reacts with air to form peroxides. Shock sensitive compounds may be formed.

Decomposition: Depending upon conditions, decomposition products may include: carbon monoxide, carbon dioxide, hydrogen chloride (HCl), phosgene.