



NATIONAL TRANSPORTATION SAFETY BOARD  
**Investigative Hearing**

Norfolk Southern Railway general merchandise freight train 32N  
derailment with subsequent hazardous material release and fires,  
in East Palestine, Ohio, on February 3, 2023

<b>GROUP</b>	D
<b>EXHIBIT</b>	
30	

Agency / Organization

**Oxy Vinyls, LP**

Title

**Oxy Vinyls SDS Source 4 NIOSH Vinyl Chloride Monomer**



# The National Institute for Occupational Safety and Health (NIOSH)

## Vinyl chloride

<p><b>SYNONYMS &amp; TRADE NAMES</b></p> <p>Chloroethene, Chloroethylene, Ethylene monochloride, Monochloroethene, Monochloroethylene, VC, VCM, Vinyl chloride monomer (VCM)</p>					
<p><b>CAS NO.</b></p> <p>75-01-4</p>	<p><b>RTECS NO.</b></p> <p>KU9625000</p>	<p><b>DOT ID &amp; GUIDE</b></p> <p>1086 116P(inhibited)</p>			
<p><b>FORMULA</b></p> <p>CH<sub>2</sub>=CHCl</p>	<p><b>CONVERSION</b></p> <p>1 ppm = 2.56 mg/m<sup>3</sup></p>	<p><b>IDLH</b></p> <p>Ca [N.D.] See: <a href="#">IDLH INDEX</a></p>			
<p><b>EXPOSURE LIMITS</b></p> <p>NIOSH REL Ca <a href="#">See Appendix A</a> OSHA PEL [1910.1017] TWA 1 ppm C 5 ppm [15-minute]</p>			<p><b>MEASUREMENT METHODS</b></p> <p><b>NIOSH 1007;</b> <b>OSHA 4 , 75</b> See: <a href="#">NMAM</a> or <a href="#">OSHA Methods</a></p>		
<p><b>PHYSICAL DESCRIPTION</b></p> <p>Colorless gas or liquid (below 7°F) with a pleasant odor at high concentrations. [Note: Shipped as a liquefied compressed gas.]</p>					
<p><b>MOLECULAR WEIGHT</b></p> <p>62.5</p>	<p><b>BOILING POINT</b></p> <p>7°F</p>	<p><b>FREEZING POINT</b></p> <p>-256°F</p>	<p><b>SOLUBILITY</b></p> <p>(77°F): 0.1%</p>	<p><b>VAPOR PRESSURE</b></p> <p>3.3 atm</p>	<p><b>IONIZATION POTENTIAL</b></p> <p>9.99 eV</p>
	<p><b>FLASH POINT</b></p> <p>NA (Gas)</p>	<p><b>UPPER EXPLOSIVE LIMIT</b></p> <p>33.0%</p>	<p><b>LOWER EXPLOSIVE LIMIT</b></p> <p>3.6%</p>	<p><b>RELATIVE GAS DENSITY</b></p> <p>2.21</p>	

Flammable Gas

#### INCOMPATIBILITIES & REACTIVITIES

Copper, oxidizers, aluminum, peroxides, iron, steel [Note: Polymerizes in air, sunlight, or heat unless stabilized by inhibitors such as phenol. Attacks iron & steel in presence of moisture.]

#### EXPOSURE ROUTES

inhalation, skin and/or eye contact (liquid)

#### SYMPTOMS

lassitude (weakness, exhaustion); abdominal pain, gastrointestinal bleeding; enlarged liver; pallor or cyanosis of extremities; liquid: frostbite; [potential occupational carcinogen]

#### TARGET ORGANS

Liver, central nervous system, blood, respiratory system, lymphatic system

#### CANCER SITE

[liver cancer]

#### PERSONAL PROTECTION/SANITATION

(See [protection codes](#))

**Skin:**Frostbite

**Eyes:**Frostbite

**Wash skin:**No recommendation

**Remove:**When wet (flammable)

**Change:**No recommendation

**Provide:**Frostbite wash

#### FIRST AID

(See [procedures](#))

**Eye:**Frostbite

**Skin:**Frostbite

**Breathing:**Respiratory support

#### RESPIRATOR RECOMMENDATIONS

(See [Appendix E](#))

##### NIOSH

**At concentrations above the NIOSH REL, or where there is no REL, at any detectable concentration:**

(APF = 10,000) Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode

(APF = 10,000) Any supplied-air respirator that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained positive-pressure breathing apparatus

**Escape:**

(APF = 50) Any air-purifying, full-facepiece respirator (gas mask) with a chin-style, front- or back-mounted canister providing protection against the compound of concern

Any appropriate escape-type, self-contained breathing apparatus

[Important additional information about respirator selection](#)

#### SEE ALSO