



VINYL CHLORIDE (D3, 98%) + HYDROQUINONE

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 30/03/2011
DLM-167

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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Substance
Substance name : VINYL CHLORIDE (D3, 98%) + HYDROQUINONE
EC-No. : 200-831-0 (Unlabeled)
CAS-No. : 6745-35-3
Product code : DLM-167
Formula : CD₂=CDCl
Synonyms : Chloroethylene-d3

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1. Relevant identified uses

Main use category : Professional use
Industrial/Professional use spec : For professional use only

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Cambridge Isotope Laboratories, Inc.
50 Frontage Road
Andover, MA 01810
USA

USA: 1-800-322-1174 Int: 1-978-749-8000
cilsales@isotope.com www.isotope.com

Emergency telephone number

Emergency numbers:

Chemtrec: 1-800-424-9300 (24 hours)
International: 1-703-741-5970 (24 hours)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Flam. Gas 1 H220
Press. Gas (Liq.) H280
Acute Tox. 3 (Oral) H301
Carc. 1A H350

Full text of hazard classes and H-statements : see section 16

Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

Carc.Cat.1; R45
Carc.Cat.1; R49
F+; R12
R5
T; R25

Full text of R-phrases: see section 16

GHS-US classification

Flam. Gas 1 H220
Press. Gas (Liq.) H280
Acute Tox. 3 (Oral) H301
Carc. 1B H350

Full text of H statements : see section 16

Adverse physicochemical, human health and environmental effects

Liver, Blood, Brain, Central nervous system.

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2.2. Label elements

Labeling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



Signal word (CLP) :

: Danger

Hazard statements (CLP) :

: H220 - Extremely flammable gas
H280 - Contains gas under pressure; may explode if heated
H301 - Toxic if swallowed
H350 - May cause cancer

Precautionary statements (CLP) :

: P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P264 - Wash hands, forearms and face thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P280 - Wear eye protection, face protection, protective clothing, protective gloves.
P301+P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor.
P308+P313 - IF exposed or concerned: Get medical advice/attention.
P330 - Rinse mouth.
P377 - Leaking gas fire: Do not extinguish, unless leak can be stopped safely.

GHS-US labeling

Hazard pictograms (GHS-US) :



Signal word (GHS-US) :

: Danger

Hazard statements (GHS-US) :

: H220 - Extremely flammable gas
H280 - Contains gas under pressure; may explode if heated
H301 - Toxic if swallowed
H350 - May cause cancer (Dermal, oral, Inhalation)

Precautionary statements (GHS-US) :

: P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P210 - Keep away from heat, hot surfaces, open flames, sparks. - No smoking.
P264 - Wash hands, forearms and face thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P280 - Wear eye protection, face protection, protective gloves, protective clothing.
P301+P310 - If swallowed: Immediately call a poison center or doctor
P308+P313 - If exposed or concerned: Get medical advice/attention.
P321 - Specific treatment (see supplemental first aid instruction on this label)
P330 - Rinse mouth.
P377 - Leaking gas fire: Do not extinguish, unless leak can be stopped safely.
P381 - Eliminate all ignition sources if safe to do so.
P403 - Store in a well-ventilated place.
P405 - Store locked up.
P410+P403 - Protect from sunlight. Store in a well-ventilated place.
P501 - Dispose of contents/container to Comply with applicable regulations

2.3. Other hazards

No additional information available

SECTION 3: Composition/Information on ingredients

3.1. Substances

Name	Product identifier	%	Classification according to Directive 67/548/EEC
VINYL CHLORIDE (D3, 98%) + HYDROQUINONE	(CAS-No.) 6745-35-3 (EC-No.) 200-831-0 (Unlabeled)	100	Carc.Cat.1; R45 Carc.Cat.1; R49 F+; R12 R5 T; R25

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Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
VINYL CHLORIDE (D3, 98%) + HYDROQUINONE	(CAS-No.) 6745-35-3 (EC-No.) 200-831-0 (Unlabeled)	100	Flam. Gas 1, H220 Press. Gas (Liq.), H280 Acute Tox. 3 (Oral), H301 Carc. 1A, H350

Full text of R- and H- phrases: see section 16

Name	Product identifier	%	GHS-US classification
VINYL CHLORIDE (D3, 98%) + HYDROQUINONE (Main constituent)	(CAS-No.) 6745-35-3	100	Flam. Gas 1, H220 Press. Gas (Liq.), H280 Acute Tox. 3 (Oral), H301 Carc. 1B, H350

Full text of H-phrases: see section 16

3.2. Mixtures

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: Move out of dangerous area. Consult a physician and show this safety data sheet.
First-aid measures after inhalation	: If breathed in, move person to fresh air. If not breathing, give artificial respiration. Consult a physician.
First-aid measures after skin contact	: Wash with soap and plenty of water. Consult a physician.
First-aid measures after eye contact	: Flush eye with water for 15 minutes. Get medical attention.
First-aid measures after ingestion	: Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects	: May cause cancer.
Symptoms/effects after inhalation	: May be harmful if inhaled. May cause respiratory tract irritation.
Symptoms/effects after skin contact	: May be harmful if absorbed through skin. May cause skin irritation.
Symptoms/effects after eye contact	: May cause eye irritation.
Symptoms/effects after ingestion	: Toxic if swallowed.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Use water spray, alcohol-resistant foam, dry chemical, or carbon dioxide.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Extremely flammable gas. Contains gas under pressure; may explode if heated.

5.3. Advice for firefighters

Firefighting instructions	: Wear self contained breathing apparatus for fire fighting if necessary.
Protection during firefighting	: Do not enter fire area without proper protective equipment, including respiratory protection.
Other information	: Use water spray to cool unopened containers.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

6.1.2. For emergency responders

No additional information available

6.2. Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment : Clean up any spills as soon as possible, using an absorbent material to collect it. Keep in suitable, closed containers for disposal.

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Methods for cleaning up : Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed : Use explosion-proof equipment. Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Keep away from sources of ignition - No smoking. Take measures to prevent build up of electrostatic charge.

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Keep container tightly closed in a cool, dry and well-ventilated place.

Storage conditions : Store at room temperature away from light and moisture.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

VINYL CHLORIDE (D3, 98%) + HYDROQUINONE (6745-35-3)		
Italy - Portugal - USA ACGIH	ACGIH TWA (ppm)	1.00000000 ppm USA. ACGIH Threshold Limit Values (TLV)
Italy - Portugal - USA ACGIH	Remark (ACGIH)	Liver damage, Lung cancer, Confirmed human carcinogen. Potential Occupational Carcinogen See Appendix A. Substance listed; for more information see OSHA document 1910.1017
USA IDLH	US IDLH (ppm)	1 ppm California permissible exposure limits for chemical contaminants (Title 8, Article 107)
USA IDLH	Remark (IDLH)	Skin see Section 5210
USA OSHA	OSHA PEL (TWA) (ppm)	1 ppm OSHA Specifically Regulated Chemicals/Carcinogens
USA OSHA	OSHA PEL (STEL) (ppm)	5 ppm OSHA Specifically Regulated Chemicals/Carcinogens
USA OSHA	Remark (OSHA)	1910.1017 This section applies to the manufacture, reaction, packaging, repackaging, storage, handling or use of vinyl chloride or polyvinyl chloride, but does not apply to the handling or use of fabricated products made of polyvinyl chloride. This section applies to the transportation of vinyl chloride or polyvinyl chloride except to the extent that the Department of Transportation may regulate the hazards covered by this section Polyvinyl chloride means polyvinyl chloride homopolymer or copolymer before such is converted to a fabricated product. Vinyl chloride means vinyl chloride monomer. OSHA specifically regulated carcinogen.

8.2. Exposure controls

Appropriate engineering controls : Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment : Gloves. Protective clothing. Protective goggles. Self-contained breathing apparatus.



Materials for protective clothing : Wear suitable protective clothing and gloves.

Hand protection : Wear suitable protective clothing and gloves.

Eye protection : Wear safety glasses with side shields (or goggles) and a face shield.

Skin and body protection : Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Respiratory protection : When appropriate, use NIOSH/CEN approved respirator.

Environmental exposure controls : Avoid release to the environment.

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SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Gas
Appearance	: Compressed gas
Molecular mass	: 65.52 g/mol (Labeled)
Color	: Colorless
Odor	: No data available
Odor threshold	: No data available
pH	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Melting point	: -153.8 °C (-244.8 °F) - lit
Freezing point	: No data available
Boiling point	: -13.4 °C (7.9 °F) - lit
Flash point	: -61 °C (-77.8 °F) - closed cup
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapor pressure	: 3400 hPa at 20 °C (68 °F)
Relative vapor density at 20 °C	: No data available
Relative density	: 0.911 g/mL at 25 °C (77 °F)
Solubility	: No data available
Log Pow	: No data available
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
Explosion limits	: Upper explosion limit: 31 %(V) at 1013 hPa - Lower explosion limit: 3.8 %(V) at 1013 hPa

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Stable if stored under recommended conditions.

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

Heat, flames and sparks.

10.5. Incompatible materials

Strong oxidizing agents.

10.6. Hazardous decomposition products

Formed under fire conditions: carbon oxides, Hydrogen chloride gas.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Oral: Toxic if swallowed.

VINYL CHLORIDE (D3, 98%) + HYDROQUINONE (6745-35-3)	
LD50 oral rat	500 mg/kg
ATE CLP (oral)	100.000 mg/kg body weight

Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified

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Carcinogenicity	: This is or contains a component that has been reported to be carcinogenic based on its IARC, OSHA, ACGIH, NTP, or EPA classification.
Reproductive toxicity	: Not classified
Specific target organ toxicity – single exposure	: Not classified
Specific target organ toxicity – repeated exposure	: Not classified
Aspiration hazard	: Not classified
Potential Adverse human health effects and symptoms	: Burning sensation. Cough. Laryngitis. Wheezing. Shortness of breath. Headache. Nausea. Vomiting. Stomach - Irregularities - Based on Human Evidence. This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.
IARC group	: 1
Symptoms/effects after inhalation	: May be harmful if inhaled. May cause respiratory tract irritation.
Symptoms/effects after skin contact	: May be harmful if absorbed through skin. May cause skin irritation.
Symptoms/effects after eye contact	: May cause eye irritation.
Symptoms/effects after ingestion	: Toxic if swallowed.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional legislation (waste) : Waste materials should be disposed of under conditions which meet Federal, State, and local environmental control regulations.

Product/Packaging disposal recommendations : Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

Ecology - waste materials : Dispose of as unused product.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number

UN-No.(DOT) : 1086

DOT NA no. UN1086

14.2. UN proper shipping name

Proper Shipping Name (DOT) : Vinyl chloride, stabilized

Class (DOT) : 2.1 - Class 2.1 - Flammable gas 49 CFR 173.115

Hazard labels (DOT) : 2.1 - Flammable gas



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DOT Special Provisions (49 CFR 172.102)	:	21 - This material must be stabilized by appropriate means (e.g. addition of chemical inhibitor, purging to remove oxygen) to prevent dangerous polymerization (see 173.21(f) of this subchapter). B44 - All parts of valves and safety relief devices in contact with lading must be of a material which will not cause formation of acetylides. N86 - UN pressure receptacles made of aluminum alloy are not authorized. T50 - When portable tank instruction T50 is referenced in Column (7) of the 172.101 Table, the applicable liquefied compressed gases are authorized to be transported in portable tanks in accordance with the requirements of 173.313 of this subchapter.
DOT Packaging Exceptions (49 CFR 173.xxx)	:	306
DOT Packaging Non Bulk (49 CFR 173.xxx)	:	304
DOT Packaging Bulk (49 CFR 173.xxx)	:	314;315
DOT RQ	:	1 lbs
Marine pollutant	:	No

14.3. Additional information

Other information	:	No supplementary information available.
Special transport precautions	:	IATA Passenger: Not permitted for transport.

Overland transport

Class (ADR)	:	2 - Gases
Hazard identification number (Kemler No.)	:	239
Classification code (ADR)	:	2F
Hazard labels (ADR)	:	2.1 - Flammable gases



Orange plates	:	An orange rectangular label with a black border, divided into two horizontal sections. The top section contains the number '239' and the bottom section contains the number '1086'.
Tunnel restriction code (ADR)	:	B/D
Limited quantities (ADR)	:	0
EAC	:	2YE
Excepted quantities (ADR)	:	E0

Transport by sea

DOT Vessel Stowage Location	:	B - (i) The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length; and (ii) "On deck only" on passenger vessels in which the number of passengers specified in paragraph (k)(2)(i) of this section is exceeded.
DOT Vessel Stowage Other	:	40 - Stow "clear of living quarters"
MFAG-No	:	116P

Air transport

DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	:	Forbidden
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	:	150 kg
Civil Aeronautics Law	:	Gases under pressure/Gases flammable under pressure

14.4. Environmental hazards

Other information	:	No supplementary information available.
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14.5. Special precautions for user

Special transport precautions	:	IATA Passenger: Not permitted for transport.
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14.6. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. US Federal regulations

VINYL CHLORIDE (D3, 98%) + HYDROQUINONE (6745-35-3)	
SARA Section 302 Threshold Planning Quantity (TPQ)	Not subject to reporting requirements of the United States SARA Section 302
SARA Section 311/312 Hazard Classes	Fire hazard Sudden release of pressure hazard Delayed (chronic) health hazard
SARA Section 313 - Emission Reporting	Subject to reporting requirements of the United States SARA Section 313

15.2. International regulations

CANADA

VINYL CHLORIDE (D3, 98%) + HYDROQUINONE (6745-35-3)
Listed on the Canadian DSL (Domestic Substances List)

15.2.1. National regulations

No additional information available

15.3. US State regulations

VINYL CHLORIDE (D3, 98%) + HYDROQUINONE (6745-35-3)	
U.S. - California - Proposition 65 - Carcinogens List	Yes
U.S. - California - Proposition 65 - Developmental Toxicity	No
U.S. - California - Proposition 65 - Reproductive Toxicity - Female	No
U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No
State or local regulations	U.S. - Massachusetts - Right To Know List U.S. - Pennsylvania - RTK (Right to Know) List U.S. - New Jersey - Right to Know Hazardous Substance List

SECTION 16: Other information

Other information : This product is not radioactive. The data given for this product are those of the corresponding unlabeled compound, unless specifically indicated otherwise. Health and safety data for labeled compounds are generally not available, but are assumed to be similar or identical to the corresponding unlabeled compound.

Full text of R-, H- and EUH-phrases:

Acute Tox. 3 (Oral)	Acute toxicity (oral) Category 3
Carc. 1A	Carcinogenicity Category 1A
Flam. Gas 1	Flammable gases Category 1
Press. Gas (Liq.)	Gases under pressure Liquefied gas
H220	Extremely flammable gas
H280	Contains gas under pressure; may explode if heated
H301	Toxic if swallowed
H350	May cause cancer
R12	Extremely flammable
R25	Toxic if swallowed
R45	May cause cancer
R49	May cause cancer by inhalation
R5	Heating may cause an explosion
F+	Extremely flammable
T	Toxic

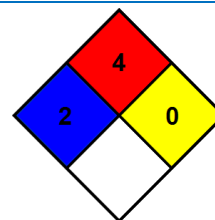
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- NFPA health hazard : 2 - Materials that, under emergency conditions, can cause temporary incapacitation or residual injury.
- NFPA fire hazard : 4 - Materials that rapidly or completely vaporize at atmospheric pressure and normal ambient temperature or that are readily dispersed in air and burn readily.
- NFPA reactivity : 0 - Material that in themselves are normally stable, even under fire conditions.



Hazard Rating

- Health : 2 Moderate Hazard - Temporary or minor injury may occur
- Flammability : 4 Severe Hazard
- Physical : 3 Serious Hazard

CIL Substance SDS

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product