

Material Safety Data Sheet



SPECS DB-WAX Test Standard (Capillary) PN: 200-0370

1. Product and company identification

Product name : SPECS DB-WAX Test Standard (Capillary) PN: 200-0370
Part No. : 200-0370
Manufacturer / Supplier : Agilent Technologies, Inc.
Logistics Center - Americas
500 Ships Landing Way
New Castle, Delaware 19720
Emergency telephone number : 1-302-633-8777
1-877-4 Agilent (Information Telephone Number)

2. Hazards identification

Physical state : Liquid.
OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Emergency overview - Signal Word : Warning!
Emergency overview - Label Statement : CONTAINS MATERIAL WHICH CAUSES DAMAGE TO THE FOLLOWING ORGANS: KIDNEYS, LIVER, CARDIOVASCULAR SYSTEM, SKIN, CENTRAL NERVOUS SYSTEM, EYE, LENS OR CORNEA.
SUSPECT CANCER HAZARD.
CONTAINS MATERIAL WHICH MAY CAUSE CANCER.
MAY BE HARMFUL IF SWALLOWED.
Emergency overview : Do not ingest. Wash thoroughly after handling. Risk of cancer depends on duration and level of exposure.
Routes of entry : Dermal contact. Eye contact.
Potential acute health effects
Eyes : No known significant effects or critical hazards.
Skin : No known significant effects or critical hazards.
Inhalation : No known significant effects or critical hazards.
Ingestion : Harmful if swallowed.
Medical conditions aggravated by over-exposure : Repeated or prolonged exposure to the substance can produce target organs damage.

See toxicological information (section 11)

3. Composition/information on ingredients

| <u>Name</u> | <u>CAS number</u> | <u>%</u> |
|-------------------------------|-------------------|----------|
| 1,2-Dichloroethane | 107-06-2 | 99.8 |
| Nonadecane | 629-92-5 | 0.025 |
| dodecanoic acid, methyl ester | 111-82-0 | 0.025 |
| Heptadecane (C17) | 629-78-7 | 0.025 |
| Ethylene glycol | 107-21-1 | 0.025 |
| Aniline | 62-53-3 | 0.025 |
| 2-Nonanone | 821-55-6 | 0.025 |
| 2-Chlorophenol | 95-57-8 | 0.025 |
| undecanol | 112-42-5 | 0.025 |

Use of the substance/preparation : A 1 ml. ampoule

3 . Composition/information on ingredients

Synonyms : aethylenchlorid (german); 1,2-bichloroethane; bichlorure d'ethylene (french); borer sol; brocide; chlorure d'ethylene (french); cloruro di ethene (italian); destruxol borer-sol; 1,2-dichloorethaan (dutch); 1,2-dichlor-aethan (german); dichloremulsion; 1,2-dichlorethane; di-chlor-mulsion; dichloro-1,2-ethane (french); alpha,beta-dichloroethane; sym-dichloroethane; 1,2-dichloroethane; dichloroethylene; 1,2-dicloroetano (italian); dutch liquid; dutch oil; edc; ent 1,656; ethane dichloride; ethyleendichloride (dutch); ethylene chloride; ethylene dichloride; ethylene dichloride (dot); 1,2-ethylene dichloride; freon 150; glycol dichloride; nci-c00511; ethane, 1,2-dichloro-; ent-1656; dowfume; 1,2-ethylidene dichloride.

4 . First aid measures

Eye contact : In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if adverse health effects persist or are severe.

Skin contact : In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention if adverse health effects persist or are severe.

Inhalation : If inhaled, remove to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention if adverse health effects persist or are severe.

Ingestion : Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention if adverse health effects persist or are severe.

5 . Fire-fighting measures

Flammability of the product : Flammable.

Products of combustion : These products are carbon oxides (CO, CO₂), halogenated compounds, hydrogen chloride.

Extinguishing media

Suitable : Use an extinguishing agent suitable for the surrounding fire.

Special exposure hazards - Explosibility : No specific hazard.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6 . Accidental release measures

Personal precautions : Avoid contact with eyes, skin and clothing.

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Methods for cleaning up : If emergency personnel are unavailable, contain spilled material. For small spills, add absorbent (soil may be used in the absence of other suitable materials), scoop up material and place in a sealable, liquid-proof container for disposal. For large spills, dike spilled material or otherwise contain it to ensure runoff does not reach a waterway. Place spilled material in an appropriate container for disposal.

7 . Handling and storage

Handling : Do not ingest. Wash thoroughly after handling.

Storage : Keep container tightly closed. Keep container in a cool, well-ventilated area.

8 . Exposure controls/personal protection

Product name **Exposure limits**

8 . Exposure controls/personal protection

1,2-Dichloroethane

ACGIH TLV (United States, 1/2004).

TWA: 40 mg/m³ 8 hour/hours. Form: All forms

TWA: 10 ppm 8 hour/hours. Form: All forms

NIOSH REL (United States, 12/2001).

STEL: 8 mg/m³ 15 minute/minutes. Form: All forms

STEL: 2 ppm 15 minute/minutes. Form: All forms

TWA: 4 mg/m³ 10 hour/hours. Form: All forms

TWA: 1 ppm 10 hour/hours. Form: All forms

OSHA PEL Z2 (United States, 8/1997).

AMP: 200 ppm 5 minute/minutes. Form: All forms

CEIL: 100 ppm Form: All forms

TWA: 50 ppm 8 hour/hours. Form: All forms

Engineering measures

- : Use only with adequate ventilation. If user operations generate dust, fumes, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Personal protection

Eyes

- : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts.

Skin

- : Chemical resistant protective gloves and clothing are recommended. The choice of protective gloves or clothing must be based on chemical resistance and other use requirements. Generally, BUNA-N offers acceptable chemical resistance. Individuals who are acutely and specifically sensitive to this chemical may require additional protective clothing.

Respiratory

- : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Hands

- : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Hygiene measures

- : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

9 . Physical and chemical properties

Physical state

- : Liquid.

Flash point

- : The lowest known value is Open cup: 15.85°C (60.5°F). (1,2-Dichloroethane)

Auto-ignition temperature

- : The lowest known value is 412.77°C (775°F) (1,2-Dichloroethane).

Flammable limits

- : Lower: 6.2% Upper: 16%

Color

- : Clear.

Odor

- : Chloroform. (Slight.)

pH

- : Not available.

Boiling/condensation point

- : 83°C (181.4°F)

Melting/freezing point

- : -35.5°C (-31.9°F)

Relative density

- : The only known value is 1.2569 (Water = 1) (1,2-Dichloroethane).

Vapor pressure

- : 8.3 kPa (62 mm Hg) (at 20°C)

Vapor density

- : 3.42 (Air = 1)

Evaporation rate

- : 5.05 (1,2-Dichloroethane) compared with Butyl acetate.

Solubility

- : Soluble in cold water, hot water.

10 . Stability and reactivity

- Stability and reactivity** : The product is stable.
- Incompatibility with various substances** : Highly reactive or incompatible with the following materials: oxidizing materials and metals.
- Hazardous decomposition products** : These products are halogenated compounds, hydrogen chloride.

11 . Toxicological information

Toxicity data

| <u>Product/ingredient name</u> | <u>Test</u> | <u>Result</u> | <u>Route</u> | <u>Species</u> |
|--------------------------------|-------------|---------------|--------------|----------------|
| 1,2-Dichloroethane | LD50 | 670 mg/kg | Oral | Rat |
| | LD50 | 860 mg/kg | Oral | Rabbit |
| | LD50 | 413 mg/kg | Oral | Mouse |
| | LD50 | 2800 mg/kg | Dermal | Rabbit |
| | LDLo | 286 mg/kg | Oral | human |
| | LDLo | 714 mg/kg | Oral | man |

- Chronic effects on humans** : **CARCINOGENIC EFFECTS:** Classified + (Proven.) by NIOSH [1,2-Dichloroethane]. Classified 2B (Possible for humans.) by IARC [1,2-Dichloroethane]. Classified 2 (Reasonably anticipated to be human carcinogens.) by NTP, 2 (Suspected for humans.) by European Union [1,2-Dichloroethane]. Classified A4 (Not classifiable for humans or animals.) by ACGIH [1,2-Dichloroethane]. Contains material which causes damage to the following organs: kidneys, liver, cardiovascular system, skin, central nervous system (CNS), eye, lens or cornea.

- Other toxic effects on humans** : Hazardous in case of skin contact (irritant), of eye contact (irritant), of inhalation (lung irritant).

Specific effects

- Carcinogenic effects** : Contains material which may cause cancer. Risk of cancer depends on duration and level of exposure.

- Mutagenic effects** : No known significant effects or critical hazards.

- Teratogenicity / Reproductive toxicity** : No known significant effects or critical hazards.

Sensitization

- Ingestion** : No known significant effects or critical hazards.

- Inhalation** : No known significant effects or critical hazards.

- Eyes** : No known significant effects or critical hazards.

- Skin** : No known significant effects or critical hazards.

12 . Ecological information

Ecotoxicity data

| <u>Product/ingredient name</u> | <u>Species</u> | <u>Period</u> | <u>Result</u> |
|--------------------------------|----------------------------|---------------|---------------|
| 1,2-Dichloroethane | Daphnia magna (EC50) | 48 hour/hours | 160 mg/l |
| | Daphnia magna (EC50) | 48 hour/hours | 180 mg/l |
| | Daphnia magna (EC50) | 48 hour/hours | 324 mg/l |
| | Pimephales promelas (LC50) | 96 hour/hours | 116 mg/l |
| | Pimephales promelas (LC50) | 96 hour/hours | 136 mg/l |
| | Oncorhynchus mykiss (LC50) | 96 hour/hours | 225 mg/l |
| | | | |

- Environmental precautions** : No known significant effects or critical hazards.

- Products of degradation** : These products are carbon oxides (CO, CO₂) and water, halogenated compounds.

- Toxicity of the products of biodegradation** : The products of degradation are as toxic as the product itself.

13 . Disposal considerations

Waste disposal





- : The generation of waste should be avoided or minimized wherever possible. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.

Disposal should be in accordance with applicable regional, national and local laws and regulations. Local regulations may be more stringent than regional or national requirements.

The information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

14 . Transport information

| Regulatory information | UN number | Proper shipping name | Class | PG* | Label | Additional information |
|------------------------------|-----------|----------------------|-------|-----|---|---|
| DOT Classification | 3316 | Chemical Kits | 9 | II |  | Packaging instruction Passenger aircraft Quantity limitation: 10 kg Packaging instructions: 173.161 Cargo aircraft Quantity limitation: 10 kg Remarks Small Quantity |
| TDG Classification | 3316 | Chemical Kit | 9 | II |  | - |
| Mexico Classification | 3316 | Chemical Kit | 9 | II |  | - |
| IATA Class | 3316 | Chemical Kit | 9 | II |  | Quantity limitation - Passenger aircraft 10 kg Quantity limitation - Cargo aircraft 10 kg Packaging instruction 915 Remarks A44 Excepted Quantity |

PG* : Packing group

15 . Regulatory information

- HCS Classification** : Carcinogen
Target organ effects
- U.S. Federal regulations** : TSCA 4(a) final test rules: 2-Chlorophenol
TSCA 8(a) PAIR: 1,2-Dichloroethane
TSCA 8(b) inventory: 1,2-Dichloroethane; dodecanoic acid, methyl ester; 2-Chlorophenol; undecanol
TSCA 12(b) one-time export: 2-Chlorophenol
SARA 302/304/311/312 extremely hazardous substances: No products were found.
SARA 302/304 emergency planning and notification: No products were found.
SARA 302/304/311/312 hazardous chemicals: 1,2-Dichloroethane
SARA 311/312 MSDS distribution - chemical inventory - hazard identification: 1,2-Dichloroethane: Fire hazard, Immediate (acute) health hazard, Delayed (chronic) health hazard
Clean Water Act (CWA) 307: 1,2-Dichloroethane; 2-Chlorophenol
Clean Water Act (CWA) 311: No products were found.
Clean Air Act (CAA) 112 accidental release prevention: No products were found.
Clean Air Act (CAA) 112 regulated flammable substances: No products were found.
Clean Air Act (CAA) 112 regulated toxic substances: No products were found.

SARA 313

| | <u>Product name</u> | <u>CAS number</u> | <u>Concentration</u> |
|--|----------------------|-------------------|----------------------|
| Form R - Reporting requirements | : 1,2-Dichloroethane | 107-06-2 | 99.8 |
| Supplier notification | : 1,2-Dichloroethane | 107-06-2 | 99.8 |

SARA 313 notifications must not be detached from the MSDS and any copying and redistribution of the MSDS shall include copying and redistribution of the notice attached to copies of the MSDS subsequently redistributed.

- State regulations** : Pennsylvania RTK: 1,2-Dichloroethane: (special hazard, environmental hazard, generic environmental hazard); 2-Chlorophenol: (special hazard, environmental hazard, generic environmental hazard)
Massachusetts RTK: 1,2-Dichloroethane; 2-Chlorophenol
New Jersey: 1,2-Dichloroethane; 2-Chlorophenol

- State regulations - California Prop. 65** : **WARNING:** This product contains a chemical known to the State of California to cause cancer.

| <u>Ingredient name</u> | <u>Cancer</u> | <u>Reproductive</u> | <u>No significant risk level</u> | <u>Maximum acceptable dosage level</u> |
|------------------------|---------------|---------------------|----------------------------------|--|
| 1,2-Dichloroethane | Yes. | No. | Yes. | No. |

EU regulations

- Hazard symbol/symbols** : Toxic
- Risk phrases** : R45- May cause cancer.
R22- Harmful if swallowed.
R36/37/38- Irritating to eyes, respiratory system and skin.
- Safety phrases** : S53- Avoid exposure - obtain special instructions before use.

International regulations

- International lists** : Australia (NICNAS): 1,2-Dichloroethane; dodecanoic acid, methyl ester; 2-Chlorophenol; undecanol

China: 1,2-Dichloroethane; dodecanoic acid, methyl ester; 2-Chlorophenol; undecanol

Germany water class: 1,2-Dichloroethane; dodecanoic acid, methyl ester; 2-Chlorophenol; undecanol

Japan (METI): 1,2-Dichloroethane; 2-Chlorophenol; undecanol

Japan (MOL): 1,2-Dichloroethane

15 . Regulatory information

Korea (TCCL): 1,2-Dichloroethane; dodecanoic acid, methyl ester; 2-Chlorophenol; undecanol

Philippines (RA6969): 1,2-Dichloroethane; dodecanoic acid, methyl ester; 2-Chlorophenol; undecanol

16 . Other information

Label requirements : CONTAINS MATERIAL WHICH CAUSES DAMAGE TO THE FOLLOWING ORGANS: KIDNEYS, LIVER, CARDIOVASCULAR SYSTEM, SKIN, CENTRAL NERVOUS SYSTEM, EYE, LENS OR CORNEA. SUSPECT CANCER HAZARD. CONTAINS MATERIAL WHICH MAY CAUSE CANCER. MAY BE HARMFUL IF SWALLOWED.

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Notice to reader

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