

Safety Data Sheet

acc. to OSHA HCS

Printing date 02/13/2017

Reviewed on 02/10/2017

1 Identification

- **Product identifier**
- **Trade name:** Amiodarone by HPLC, MP
- **Article number:** 1955923
- **Application of the substance / the mixture** *In-Vitro-laboratory reagent or component*
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier**
 Bio-Rad Laboratories (Canada) Ltd.
 2403 Guenette Street
 Montreal, Quebec H4R 2E9
 Phone: (514) 334-4372
 Freephone: 1 (800) 361-1808
 Fax: (514) 334-0872
- **Information department:**
 Technical Support:
 E-mail: cdg_canada_salesmarketing@bio-rad.com
- **Emergency telephone number:**
 GBK Gefahrgut Büro GmbH
 Tel.: 0049(0)6123-84463

2 Hazard(s) identification

- **Classification of the substance or mixture**

Flammable Liquids - Category 2	H225 Highly flammable liquid and vapour.
Substances and Mixtures Which, in Contact with Water, Emit Flammable Gases - Category 1	H260 In contact with water releases flammable gases which may ignite spontaneously.
Acute Toxicity (Inhalation) - Category 3	H331 Toxic if inhaled.
Eye Irritation - Category 2A	H319 Causes serious eye irritation.
Specific Target Organ Toxicity - Single Exposure - Category 1	H370 Causes damage to organs.

· Label elements

· GHS label elements

The product is classified and labeled according to the Globally Harmonized System (GHS).

· Hazard pictograms



GHS02 GHS06 GHS07 GHS08

· Signal word Danger

· Hazard-determining components of labeling:

methanol
acetonitrile

· Hazard statements

Highly flammable liquid and vapour.
 In contact with water releases flammable gases which may ignite spontaneously.
 Toxic if inhaled.
 Causes serious eye irritation.
 Causes damage to organs.

· Precautionary statements

Do not allow contact with water.

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Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Hazard description:**· **WHMIS-symbols:**

B2 - Flammable liquid

B6 - Reactive flammable material

D1A - Very toxic material causing immediate and serious toxic effects

D2A - Very toxic material causing other toxic effects

· **Classification system:**· **NFPA ratings (scale 0 - 4)**

Health = 1

Fire = 3

Reactivity = 2

The substance demonstrates unusual reactivity with water.

· **HMIS-ratings (scale 0 - 4)**

Health = *1

Fire = 3

Reactivity = 2

3 Composition/information on ingredients

· **Chemical characterization: Mixtures**· **Description:** Mixture of the substances listed below with nonhazardous additions.· **Dangerous components:**

75-05-8	acetonitrile	15-40% w/w
	Flammable Liquids - Category 2, H225; Acute Toxicity (Oral) - Category 4, H302; Acute Toxicity (Dermal) - Category 4, H312; Acute Toxicity (Inhalation) - Category 4, H332; Eye Irritation - Category 2A, H319	
67-56-1	methanol	15-40% w/w
	Flammable Liquids - Category 2, H225; Acute Toxicity (Oral) - Category 3, H301; Acute Toxicity (Dermal) - Category 3, H311; Acute Toxicity (Inhalation) - Category 3, H331; Specific Target Organ Toxicity - Single Exposure - Category 1, H370	

4 First-aid measures

· **Description of first aid measures**· **General information:**

Immediately remove any clothing soiled by the product.

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- Remove breathing apparatus only after contaminated clothing have been completely removed.
In case of irregular breathing or respiratory arrest provide artificial respiration.
- **After inhalation:**
Supply fresh air or oxygen; call for doctor.
In case of unconsciousness place patient stably in side position for transportation.
 - **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
 - **After eye contact:**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
 - **After swallowing:** Do not induce vomiting; immediately call for medical help.
 - **Information for doctor:**
· **Most important symptoms and effects, both acute and delayed** No further relevant information available.
· **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** Water
- **Special hazards arising from the substance or mixture**
Hydrogen cyanide (HCN)
Carbon monoxide (CO)
- **Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:**
Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
Do not flush with water or aqueous cleansing agents
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.
Prevent formation of aerosols.
- **Information about protection against explosions and fires:**
Keep ignition sources away - Do not smoke.

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Protect against electrostatic charges.

Keep respiratory protective device available.

- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Keep receptacle tightly sealed.
Store in cool, dry conditions in well sealed receptacles.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.

- **Control parameters**

- **Components with limit values that require monitoring at the workplace:**

75-05-8 acetonitrile

EL Long-term value: 20 ppm
Skin

EV Long-term value: 20 ppm
Skin

67-56-1 methanol

EL Short-term value: 250 ppm
Long-term value: 200 ppm
Skin

EV Short-term value: 325 mg/m³, 250 ppm
Long-term value: 260 mg/m³, 200 ppm
Skin

- **Additional information:** The lists that were valid during the creation were used as basis.

- **Exposure controls**

- **Personal protective equipment:**

- **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Store protective clothing separately.

Avoid contact with the eyes.

Avoid contact with the eyes and skin.

- **Breathing equipment:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

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Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

- **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- **Eye protection:**



Tightly sealed goggles

- **Body protection:** Protective work clothing

9 Physical and chemical properties

- **Information on basic physical and chemical properties**

- **General Information**

- **Appearance:**

Form:	Fluid
Color:	Colorless
Odor:	Alcohol-like
Odor threshold:	Not determined.

pH-value at 20 °C:	4,5
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- **Change in condition**

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	>82 °C

Flash point:	5 °C
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Flammability (solid, gaseous):	Not applicable.
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Ignition temperature:	455 °C
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Decomposition temperature:	Not determined.
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Auto igniting:	Product is not selfigniting.
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Danger of explosion:	Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
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- **Explosion limits:**

Lower:	3,0 Vol %
Upper:	44,0 Vol %

Vapor pressure at 20 °C:	128 hPa
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Density at 20 °C:	0,95 g/cm ³
Relative density	Not determined.
Vapor density	Not determined.
Evaporation rate	Not determined.

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- | | |
|---|--|
| · Solubility in / Miscibility with Water: | Fully miscible. |
| · Partition coefficient (n-octanol/water): | Not determined. |
| · Viscosity: | |
| Dynamic: | Not determined. |
| Kinematic: | Not determined. |
| · Other information | No further relevant information available. |

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions**
 - Reacts with acids.
 - Reacts with alkali (lyes).
 - Contact with water releases flammable gases.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:**
 - Hydrogen cyanide (prussic acid)
 - Carbon monoxide and carbon dioxide

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **Primary irritant effect:**
 - **on the skin:** No irritant effect.
 - **on the eye:** Irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
 - The product shows the following dangers according to internally approved calculation methods for preparations:
 - Toxic
 - Irritant
- **Carcinogenic categories**

· IARC (International Agency for Research on Cancer)

None of the ingredients is listed.

· NTP (National Toxicology Program)
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None of the ingredients is listed.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.

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- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
Water hazard class 2 (Self-assessment): hazardous for water
Do not allow product to reach ground water, water course or sewage system.
Danger to drinking water if even small quantities leak into the ground.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

- | | |
|---|--|
| · UN-Number | UN1992 |
| · DOT, TDG, IMDG, IATA | |
| · UN proper shipping name | Flammable liquids, toxic, n.o.s. (Methanol, Acetonitrile) |
| · DOT | 1992 Flammable liquids, toxic, n.o.s. (Methanol, Acetonitrile) |
| · TDG | FLAMMABLE LIQUID, TOXIC, N.O.S. (METHANOL, ACETONITRILE) |
| · IMDG, IATA | |
| · Transport hazard class(es) | |
| · DOT | |
|  | |
| · Class | 3 Flammable liquids |
| · Label | 3, 6.1 |
| · TDG (Transport dangerous goods): | |
|  | |
| · Class | 3 Flammable liquids |

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· **Label** 3+6.1· **IMDG**· **Class** 3 Flammable liquids· **Label** 3/6.1· **IATA**· **Class** 3 Flammable liquids· **Label** 3 (6.1)· **Packing group**· **DOT, TDG, IMDG, IATA** II· **Environmental hazards:**· **Marine pollutant:** No· **Special precautions for user** Warning: Flammable liquids· **Danger code (Kemler):** 339· **EMS Number:** F-E,S-D· **Stowage Category** B· **Stowage Code** SW2 Clear of living quarters.· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.· **Transport/Additional information:**· **TDG**

· **Excepted quantities (EQ)** Code: E2
 Maximum net quantity per inner packaging: 30 ml
 Maximum net quantity per outer packaging: 500 ml

· **IMDG**· **Limited quantities (LQ)** 1L

· **Excepted quantities (EQ)** Code: E2
 Maximum net quantity per inner packaging: 30 ml
 Maximum net quantity per outer packaging: 500 ml

· **UN "Model Regulation":** UN 1992 FLAMMABLE LIQUIDS, TOXIC, N.O.S.
 (METHANOL, ACETONITRILE), 3 (6.1), II

15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**· **Sara**· **Section 355 (extremely hazardous substances):**

None of the ingredient is listed.

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· **Section 313 (Specific toxic chemical listings):**

75-05-8 | acetonitrile

67-56-1 | methanol

· **TSCA (Toxic Substances Control Act):**

All ingredients are listed.

· **Canadian substance listings:**

· **Canadian Domestic Substances List (DSL)**

All ingredients are listed.

· **Canadian Ingredient Disclosure list (limit 0.1%)**

75-05-8 | acetonitrile

· **Canadian Ingredient Disclosure list (limit 1%)**

67-56-1 | methanol

· **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms**



GHS02



GHS06



GHS07



GHS08

· **Signal word** *Danger*

· **Hazard-determining components of labeling:**

methanol

acetonitrile

· **Hazard statements**

Highly flammable liquid and vapour.

In contact with water releases flammable gases which may ignite spontaneously.

Toxic if inhaled.

Causes serious eye irritation.

Causes damage to organs.

· **Precautionary statements**

Do not allow contact with water.

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Department issuing SDS:**

Bio-Rad Laboratories GmbH

Heidemannstrasse 164

D-80939 Munich

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· Contact:

Technical Support:

E-Mail: cts-ce@bio-rad.com**· Abbreviations and acronyms:**

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organisation

ICAO-TI: Technical Instructions by the "International Civil Aviation Organisation" (ICAO)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

WHMIS: Workplace Hazardous Materials Information System (Canada)

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

· * Data compared to the previous version altered.

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