

Safety Data Sheet
acc. to OSHA HCS

Printing date 02/27/2017

Reviewed on 02/27/2017

1 Identification

- **Product identifier**
- **Trade name:** Pyridinium-Crosslinks by HPLC, MP
- **Article number:** 1956570
- **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 3 H226 Flammable liquid and vapour.
Skin Corrosion - Category 1A H314 Causes severe skin burns and eye damage.
Serious Eye Damage - Category 1 H318 Causes serious eye damage.

- **Label elements**
- **GHS label elements**
The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



GHS02 GHS05

- **Signal word** *Danger*
- **Hazard statements**
Flammable liquid and vapour.
Causes severe skin burns and eye damage.
- **Precautionary statements**
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.
Immediately call a POISON CENTER/doctor.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.
- **Hazard description:**
- **WHMIS-symbols:**
B2 - Flammable liquid
D2B - Toxic material causing other toxic effects

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E - Corrosive material



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



- **HMIS-ratings (scale 0 - 4)**



3 Composition/information on ingredients

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

- **Dangerous components:**

75-05-8	acetonitrile	5-<10% 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	

4 First-aid measures

- **Description of first aid measures**
- **General information:** Immediately remove any clothing soiled by the product.
- **After inhalation:** In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:**
If skin irritation continues, consult a doctor.
Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:** Drink copious amounts of water and provide fresh air. Immediately call a doctor.
- **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, sand, extinguishing powder. Do not use water.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Special hazards arising from the substance or mixture**
In case of fire, the following can be released:
Carbon monoxide (CO)

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Hydrogen cyanide (HCN)

- **Advice for firefighters**
- **Protective equipment:** Wear self-contained respiratory protective device.
- **Additional information**
Cool endangered receptacles with water spray.
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Use respiratory protective device against the effects of fumes/dust/aerosol.
Ensure adequate ventilation
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Send for recovery or disposal in suitable receptacles.
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Use neutralizing agent.
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**
Keep receptacles tightly sealed.
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
- **Information about protection against explosions and fires:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store only in the original receptacle.
- **Information about storage in one common storage facility:** Store away from oxidizing agents.
- **Further information about storage conditions:** Keep receptacle tightly sealed.
- **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.

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· **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

· **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.

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.

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

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· Odor:	Characteristic
· Odor threshold:	Not determined.
· pH-value at 20 °C:	1,5
· Change in condition	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	81 °C
· Flash point:	25 °C
· Flammability (solid, gaseous):	Not applicable.
· Ignition temperature:	524 °C
· Decomposition temperature:	Not determined.
· Auto igniting:	Product is not selfigniting.
· Danger of explosion:	Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
· Explosion limits:	
Lower:	4,4 Vol.-%
Upper:	Not determined.
· Vapor pressure at 20 °C:	23 hPa
· Density at 20 °C:	0,99 g/cm ³
· Relative density	Not determined.
· Vapor density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with Water:	Not miscible or difficult to mix.
· 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:** To avoid thermal decomposition do not overheat.
- **Possibility of hazardous reactions**
Flammable vapor-air mixtures may develop if stored in large receptacles above room temperature.
Reacts with acids, alkalis and oxidizing agents.
- **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

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11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** Strong caustic effect on skin and mucous membranes.
- **on the eye:** Strong caustic effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Corrosive
Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.
- **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.
- **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.
Must not reach bodies of water or drainage ditch undiluted or unneutralized.
Danger to drinking water if even small quantities leak into the ground.
Rinse off of bigger amounts into drains or the aquatic environment may lead to decreased pH-values. A low pH-value harms aquatic organisms. In the dilution of the use-level the pH-value is considerably increased, so that after the use of the product the aqueous waste, emptied into drains, is only low water-dangerous.
- **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 be specially treated adhering to official regulations.
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

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- **Uncleaned packagings:**
- **Recommendation:**
Packagings that cannot be cleansed are to be disposed of in the same manner as the product.
Empty contaminated packagings thoroughly. They can be recycled after thorough and proper cleaning.

14 Transport information

- **UN-Number**
- **DOT, TDG, IMDG, IATA** UN2924
- **UN proper shipping name**
- **DOT** RQ Flammable liquids, corrosive, n.o.s. (Acetonitrile, heptafluorobutyric acid)
- **TDG** 2924 Flammable liquids, corrosive, n.o.s. (Acetonitrile, heptafluorobutyric acid)
- **IMDG, IATA** FLAMMABLE LIQUID, CORROSIVE, N.O.S. (ACETONITRILE, heptafluorobutyric acid)

· **Transport hazard class(es)**

· **DOT**



- **Class** 3 Flammable liquids
- **Label** 3, 8
- **TDG (Transport dangerous goods):**



- **Class** 3 Flammable liquids
- **Label** 3+8

· **IMDG**



- **Class** 3 Flammable liquids
- **Label** 3/8

· **IATA**



- **Class** 3 Flammable liquids
- **Label** 3 (8)

- **Packing group**
- **TDG, IMDG, IATA** II

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· Environmental hazards:	
· Marine pollutant:	No
· Special precautions for user	Warning: Flammable liquids
· Danger code (Kemler):	338
· EMS Number:	F-E,S-C
· Segregation groups	Acids
· Stowage Category	B
· Stowage Code	SW2 Clear of living quarters.
· Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not applicable.
· Transport/Additional information:	
· TDG	
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· Remarks:	LQ 7
· UN "Model Regulation":	UN 2924 FLAMMABLE LIQUIDS, CORROSIVE, N.O.S. (ACETONITRILE, HEPTAFLUOROBUTYRIC ACID), 3 (8), 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.

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

75-05-8 | acetonitrile

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

All ingredients are listed.

· **Canadian substance listings:**

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

75-05-8	acetonitrile
7647-14-5	sodium chloride
7732-18-5	water, distilled, conductivity or of similar purity

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

75-05-8 | acetonitrile

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

None of the ingredients is listed.

· **GHS label elements**

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

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· **Hazard pictograms**



GHS02 GHS05

· **Signal word** *Danger*

· **Hazard statements**

Flammable liquid and vapour.

Causes severe skin burns and eye damage.

· **Precautionary statements**

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.

Immediately call a POISON CENTER/doctor.

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*

· **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.**