



04/05/2010

Kit Components

Product code	Description
195-7040	Benzodiazepine & Tricyclic Antidepressant Kit

Components:

195-7055	Benzodiazepin & Tricyclic Conditioning Rgt.1
195-7043	Benzodiazepine & Tricyclic Conditioning Rgt.2
195-7076	Benzodiazepines & Tricyclic Elution Rgt.
195-7056	Benzodiazepine & Tricyclic Mobile Phase
195-7041	Benzodiazepine & Tricyclic Cartridge
195-7071	Benzodiazepine & Tricyclic Internal Std.
195-7044	Benzodiazepine & Tricyclic Wash Rgt.

Material Safety Data Sheet

Printing date 04/05/2010

Reviewed on 11/13/2009

1 Identification of substance:

- **Product details:**
- **Trade name:** Benzodiazepin & Tricyclic Conditioning Rgt.1
- **Catalog or product number:** 195-7055, 195-7066, 195-7042
- **Application of the substance / the preparation** In-vitro laboratory reagent or component
- **Manufacturer/Supplier:**
Bio-Rad Laboratories, Diagnostic Group
4000 Alfred Nobel Drive
Hercules, California 94547 1(510)724-7000
- **Information department:** Technical services, customer support.
- **Emergency information:**
1(800) 424-9300 Use only in the event of a CHEMICAL EMERGENCY involving a SPILL, LEAK, FIRE, EXPLOSION, or ACCIDENT.

2 Composition/Information on components:

- **Chemical characterization:**
- **CAS No. Description:**
67-56-1 methanol
- **Identification number(s):**
- **EINECS Number:** 200-659-6
- **Index number:** 603-001-00-X
- **Additional information:** For the wording of the listed risk phrases refer to section 15.
- **Chemical characterization**

· **Listing of dangerous and non-hazardous components:**

7732-18-5	water	1.0-2.5%
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3 Hazards identification

- **Emergency overview:**
Toxic by ingestion.
Toxic by inhalation.
Flammable.
T Toxic
F Highly flammable
- **Routes of exposure:**
Ingestion
Inhalation
- **Information pertaining to particular dangers for man and environment**
R 11 Highly flammable.
R 23/25 Toxic by inhalation and if swallowed.
- **Classification system**
The classification was made according to OSHA 29CFR 1910.1200 and 1910.1030, and is expanded upon from company and/or literature information.

4 First aid measures

- **General information**
Immediately remove any clothing soiled by the product.

(Contd. on page 2)

DUS

Material Safety Data Sheet

Printing date 04/05/2010

Reviewed on 11/13/2009

Trade name: **Benzodiazepin & Tricyclic Conditioning Rgt.1**

(Contd. of page 1)

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. Then consult a doctor.

- **After swallowing** Do not induce vomiting; immediately call for medical help.

- **Information for doctor**

- **The following symptoms may occur:** Breathing difficulty

5 Fire fighting measures

- **Suitable extinguishing agents**

CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

- **Protective equipment:**

Mount respiratory protective device.

Wear self-contained respiratory protective device.

6 Accidental release measures

- **Person-related safety precautions:** Wear protective equipment (See section 8). Keep unprotected persons away.

- **Measures for environmental protection:**

Prevent seepage into sewage system, workpits and cellars.

Dilute with plenty of water.

Do not allow to enter sewers/ surface or ground water.

- **Measures for cleaning/collecting:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

7 Handling and storage

- **Handling**

- **Information for safe handling:**

Ensure good ventilation/exhaustion at the workplace.

Open and handle receptacle with care.

No special precautions are necessary if used correctly.

- **Information about protection against explosions and fires:**

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

Keep respiratory protective device available.

- **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.

(Contd. on page 3)

Material Safety Data Sheet

Printing date 04/05/2010

Reviewed on 11/13/2009

Trade name: Benzodiazepin & Tricyclic Conditioning Rgt.1

(Contd. of page 2)

Store in cool, dry conditions in well sealed receptacles.

8 Exposure controls and personal protection

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

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

67-56-1 methanol

PEL (United States)	260 mg/m ³ , 200 ppm
REL (United States)	Short-term value: 325 mg/m ³ , 250 ppm Long-term value: 260 mg/m ³ , 200 ppm Skin
TLV (United States)	Short-term value: 328 mg/m ³ , 250 ppm Long-term value: 262 mg/m ³ , 200 ppm Skin; BEI

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

· **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.

· **Breathing equipment:** Not required.

· **Protection of hands:** Protective gloves.

· **Material of gloves:** Synthetic gloves

· **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:**

Safety glasses
Tightly sealed goggles.

9 Physical and chemical properties:

· **General Information**

Form:	liquid
Color:	Colorless
Odor:	Alcohol-like

· **Change in condition**

Melting point/Melting range: -98°C
Boiling point/Boiling range: 64°C

· **Flash point:** ≤ 21°C

· **Ignition temperature:** 455°C

· **Danger of explosion:** Product is not explosive. However, formation of explosive air/vapor mixtures are possible.

· **Explosion limits:**

Lower: 5.5 Vol %

(Contd. on page 4)

Material Safety Data Sheet

Printing date 04/05/2010

Reviewed on 11/13/2009

Trade name: Benzodiazepin & Tricyclic Conditioning Rgt.1

(Contd. of page 3)

Upper:	44 Vol %
· Vapor pressure at 20°C:	128 hPa
· Density at 20°C:	0.79 g/cm ³
· Solubility in / Miscibility with	
Water:	Fully miscible
Organic solvents:	98.0 %
Water:	2.0 %

10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Materials to be avoided:**
- **Dangerous reactions** No dangerous reactions known
- **Dangerous products of decomposition:** No dangerous decomposition products known

11 Toxicological information

- **Acute toxicity:**

- **LD/LC50 values for hazardous components per OSHA criteria:**

67-56-1 methanol

Oral	LD50	5628 mg/kg (rat)
Dermal	LD50	20000 mg/kg (rat)

- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritant effect.
- **Sensitization:** No sensitizing effects known.
- **Target organs:** Respiratory tract.

12 Ecological information:

- **Additional ecological information:**
- **General notes:**
Water hazard class 1 (German Regulation) (Assessment by list): slightly hazardous for water.
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

13 Disposal considerations

- **Product:**
- **Recommendation**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
Hand over to hazardous waste disposers.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

(Contd. on page 5)

DUS

Material Safety Data Sheet

Printing date 04/05/2010

Reviewed on 11/13/2009

Trade name: Benzodiazepin & Tricyclic Conditioning Rgt.1

(Contd. of page 4)

· **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

· **DOT regulations:**
 · **Hazard class:** 3
 · **Identification number:** UN1230
 · **Packing group:** II
 · **Proper shipping name (technical name):** METHANOL, solution
 · **Label:** 3+6.1

· **Land transport ADR/RID (cross-border)**
 · **ADR/RID class:** 3 Flammable liquids
 · **Danger code (Kemler):** 336
 · **UN-Number:** 1230
 · **Packing group:** II
 · **Label:** 3+6.1
 · **Description of goods:** 1230 METHANOL, solution

· **Maritime transport IMDG:**
 · **IMDG Class:** 3
 · **UN Number:** 1230
 · **Label:** 3+6.1
 · **Packing group:** II
 · **EMS Number:** F-E,S-D
 · **Marine pollutant:** No
 · **Proper shipping name:** METHANOL, solution

· **Air transport ICAO-TI and IATA-DGR:**
 · **ICAO/IATA Class:** 3
 · **UN/ID Number:** 1230
 · **Label:** 3+6.1
 · **Packing group:** II
 · **Proper shipping name:** METHANOL, solution

15 Regulations

· **SARA (Superfund Amendments and Reauthorization Act of 1986 - USA)**

· **Section 302/304 (40CFR355.30 / 40CFR355.40):**

Substance not listed.

· **Section 313 (40CFR372.65):**

67-56-1 | methanol

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

Substance is listed.

· **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**

Substance is not listed.

(Contd. on page 6)

Material Safety Data Sheet

Printing date 04/05/2010

Reviewed on 11/13/2009

Trade name: Benzodiazepin & Tricyclic Conditioning Rgt.1

(Contd. of page 5)

· NTP (National Toxicology Program)

Substance is not listed.

· OSHA-Ca (Occupational Safety & Health Administration)

Substance is not listed.

· Markings according to EU guidelines:

The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials

· Code letter and hazard designation of product:

T Toxic

F Highly flammable

· Risk phrases:

11 Highly flammable.

23/25 Toxic by inhalation and if swallowed.

· Safety phrases:

4 Keep away from living quarters.

7/9 Keep container tightly closed and in a well-ventilated place.

16 Keep away from sources of ignition - No smoking.

20 When using do not eat or drink.

36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

45 In case of accident or if you feel unwell, seek medical advice immediately.

· National regulations

· Technical instructions (air):

Class	Share in %
I	50-100

· Water hazard class: Water hazard class 1 (Assessment by list): slightly hazardous for water.

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 MSDS: Environmental Health and Safety.

· Contact:

Life Science Group, Environmental Health and Safety, 2000 Alfred Nobel Drive, Hercules, California, 94547: 1(510) 741-1000

Diagnostic Group, Environmental Health and Safety, 4000 Alfred Nobel Drive, Hercules, California, 94547: 1(510) 724-7000

· * Data compared to the previous version altered.

Material Safety Data Sheet

Printing date 04/05/2010

Reviewed on 11/13/2009

1 Identification of substance:

- **Product details:**
- **Trade name:** Benzodiazepine & Tricyclic Conditioning Rgt.2
- **Catalog or product number:** 195-7043
- **Application of the substance / the preparation** In-vitro laboratory reagent or component
- **Manufacturer/Supplier:**
Bio-Rad Laboratories, Diagnostic Group
4000 Alfred Nobel Drive
Hercules, California 94547 1(510)724-7000
- **Information department:** Technical services, customer support.
- **Emergency information:**
1(800) 424-9300 Use only in the event of a CHEMICAL EMERGENCY involving a SPILL, LEAK, FIRE, EXPLOSION, or ACCIDENT.

2 Composition/Information on components:

- **Chemical characterization**
- **Description:** Mixture of the substances listed below with non-hazardous additions.

· **Listing of dangerous and non-hazardous components:**

7732-18-5	water		50-100%
75-05-8	acetonitrile	Xn, Xi, F; R 11-20/21/22-36	10-20%

- **Additional information** For the wording of the listed risk phrases refer to section 15.

3 Hazards identification

- **Emergency overview:**
Irritant to skin.
Flammable.
Xn Harmful
F Highly flammable
- **Routes of exposure:**
Ingestion
Inhalation
Skin
- **Information pertaining to particular dangers for man and environment**
The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.
R 11 Highly flammable.
R 20/21/22 Harmful by inhalation, in contact with skin and if swallowed.
- **Classification system**
The classification was made according to the latest editions of the EU-lists, and expanded upon from company and literature data.
The classification was made according to OSHA 29CFR 1910.1200 and 1910.1030, and is expanded upon from company and/or literature information.

(Contd. on page 2)

DUS

Material Safety Data Sheet

Printing date 04/05/2010

Reviewed on 11/13/2009

Trade name: Benzodiazepine & Tricyclic Conditioning Rgt.2

(Contd. of page 1)

· **NFPA ratings (scale 0-4)**

Health = 2

Fire = 3

Reactivity = 0

4 First aid measures· **General information**

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

· **After inhalation**

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist. In case of unconsciousness place patient stably in side position for transportation.

· **After skin contact** Generally the product does not irritate the skin.· **After eye contact** Rinse opened eye for several minutes under running water.· **After swallowing** Immediately call a doctor.· **Information for doctor**· **The following symptoms may occur:** Breathing difficulty**5 Fire fighting measures**· **Suitable extinguishing agents**

CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

· **Protective equipment:** Mount respiratory protective device.**6 Accidental release measures**· **Person-related safety precautions:** Wear protective equipment (See section 8). Keep unprotected persons away.· **Measures for environmental protection:**

Prevent seepage into sewage system, workpits and cellars.

Dilute with plenty of water.

Do not allow to enter sewers/ surface or ground water.

· **Measures for cleaning/collecting:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

7 Handling and storage· **Handling**· **Information for safe handling:**

Ensure good ventilation/exhaustion at the workplace.

No special precautions are necessary if used correctly.

· **Information about protection against explosions and fires:**

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

· **Storage**· **Requirements to be met by storerooms and receptacles:** Store in a cool location.

(Contd. on page 3)

DUS

Material Safety Data Sheet

Printing date 04/05/2010

Reviewed on 11/13/2009

Trade name: Benzodiazepine & Tricyclic Conditioning Rgt.2

(Contd. of page 2)

- **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.

8 Exposure controls and personal protection

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

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

75-05-8 acetonitrile

PEL (United States)	70 mg/m ³ , 40 ppm
REL (United States)	34 mg/m ³ , 20 ppm
TLV (United States)	34 mg/m ³ , 20 ppm
	Skin

- **Additional information:** The lists that were valid during the creation were used as basis.
- **Personal protective equipment**
- **General protective and hygienic measures**
 Keep away from foodstuffs, beverages and feed.
 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.
- **Material of gloves** Synthetic gloves
- **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:**
 Safety glasses
 Tightly sealed goggles.

9 Physical and chemical properties:

General Information

Form:	Liquid
Color:	Clear
Odor:	Ether-like

Change in condition

Melting point/Melting range: undetermined
Boiling point/Boiling range: 81°C

Flash point: ≤ 21°C

Ignition temperature: 525°C

Auto igniting: Product is not selfigniting.

Danger of explosion: Product is not explosive. However, formation of explosive air/vapor mixtures are possible.

(Contd. on page 4)

Material Safety Data Sheet

Printing date 04/05/2010

Reviewed on 11/13/2009

Trade name: Benzodiazepine & Tricyclic Conditioning Rgt.2

(Contd. of page 3)

- **Explosion limits:**
 - Lower:** 4.4 Vol %
 - Upper:** 16.0 Vol %
- **Vapor pressure at 20°C:** 97 hPa
- **Density at 20°C:** 0.968 g/cm³
- **Solubility in / Miscibility with Water:** Fully miscible
- **Solvent content:**
 - Organic solvents:** 0.0 %
 - Water:** 88.0 %

10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Materials to be avoided:**
- **Dangerous reactions:** No dangerous reactions known
- **Dangerous products of decomposition:** No dangerous decomposition products known

11 Toxicological information

- **Acute toxicity:**
- **LD/LC50 values for hazardous components per OSHA criteria:**

75-05-8 acetonitrile

Oral	LD50	2730 mg/kg (rat)
Dermal	LD50	1250 mg/kg (rbt)

- **Primary irritant effect:**
 - **on the skin:** No irritant effect.
 - **on the eye:** No irritant effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**

The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
 The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
 Harmful
- **Target organs:**
 - Skin.
 - Respiratory tract.

12 Ecological information:

- **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.

(Contd. on page 5)

Material Safety Data Sheet

Printing date 04/05/2010

Reviewed on 11/13/2009

Trade name: Benzodiazepine & Tricyclic Conditioning Rgt.2

(Contd. of page 4)

Danger to drinking water if even small quantities leak into the ground.

13 Disposal considerations

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

14 Transport information

- **DOT regulations:**
- **Hazard class:** 3
- **Identification number:** UN1648
- **Packing group:** II
- **Proper shipping name (technical name):** ACETONITRILE, solution
- **Label:** 3
- **Land transport ADR/RID (cross-border)**
- **ADR/RID class:** 3 Flammable liquids
- **Danger code (Kemler):** 33
- **UN-Number:** 1648
- **Packing group:** II
- **Label:** 3
- **Description of goods:** 1648 ACETONITRILE, solution
- **Maritime transport IMDG:**
- **IMDG Class:** 3
- **UN Number:** 1648
- **Label:** 3
- **Packing group:** II
- **EMS Number:** F-E,S-D
- **Marine pollutant:** No
- **Proper shipping name:** ACETONITRILE, solution
- **Air transport ICAO-TI and IATA-DGR:**
- **ICAO/IATA Class:** 3
- **UN/ID Number:** 1648
- **Label:** 3
- **Packing group:** II
- **Proper shipping name:** ACETONITRILE, solution

DUS

(Contd. on page 6)

Material Safety Data Sheet

Printing date 04/05/2010

Reviewed on 11/13/2009

Trade name: Benzodiazepine & Tricyclic Conditioning Rgt.2

(Contd. of page 5)

15 Regulations

· **SARA (Superfund Amendments and Reauthorization Act of 1986 - USA)**

· **Section 302/304 (40CFR355.30 / 40CFR355.40):**

None of the ingredients is listed.

· **Section 313 (40CFR372.65):**

75-05-8 acetonitrile

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

All ingredients are listed.

· **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**

None of the ingredients is listed.

· **NTP (National Toxicology Program)**

None of the ingredients is listed.

· **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

· **Markings according to EU guidelines:**

The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials

· **Code letter and hazard designation of product:**

Xn Harmful

F Highly flammable

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

acetonitrile

· **Risk phrases:**

11 Highly flammable.

20/21/22 Harmful by inhalation, in contact with skin and if swallowed.

· **Safety phrases:**

9 Keep container in a well-ventilated place.

16 Keep away from sources of ignition - No smoking.

36/37 Wear suitable protective clothing and gloves.

45 In case of accident or if you feel unwell, seek medical advice immediately.

· **National regulations**

· **Water hazard class:** Water hazard class 2 (Self-assessment): hazardous for water.

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 MSDS:** Environmental Health and Safety.

· **Contact:**

Life Science Group, Environmental Health and Safety, 2000 Alfred Nobel Drive, Hercules, California, 94547: 1(510) 741-1000

Diagnostic Group, Environmental Health and Safety, 4000 Alfred Nobel Drive, Hercules, California, 94547: 1(510) 724-7000

· *** Data compared to the previous version altered.**

Material Safety Data Sheet

Printing date 04/05/2010

Reviewed on 11/13/2009

1 Identification of substance:

- **Product details:**
- **Trade name:** Benzodiazepines & Tricyclic Elution Rgt.
- **Catalog or product number:** 195-7076
- **Application of the substance / the preparation** In-vitro laboratory reagent or component
- **Manufacturer/Supplier:**
Bio-Rad Laboratories, Diagnostic Group
4000 Alfred Nobel Drive
Hercules, California 94547
1(510)724-7000
- **Information department:** Technical services, customer support.
- **Emergency information:**
1(800) 424-9300 Use only in the event of a CHEMICAL EMERGENCY involving a SPILL, LEAK, FIRE, EXPLOSION, or ACCIDENT.

2 Composition/Information on components:

- **Chemical characterization**
- **Description:** Mixture of the substances listed below with non-hazardous additions.

· **Listing of dangerous and non-hazardous components:**

75-05-8	acetonitrile	Xn, Xi, F; R 11-20/21/22-36	35-50%
67-56-1	methanol	T, F; R 11-23/24/25-39/23/24/25	35-50%
7732-18-5	water		20-35%

- **Additional information** For the wording of the listed risk phrases refer to section 15.

3 Hazards identification

- **Emergency overview:**
Irritant to eyes.
Flammable.
T Toxic
F Highly flammable
- **Information pertaining to particular dangers for man and environment**
The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.
R 11 Highly flammable.
R 36 Irritating to eyes.
R 39/23/24/25 Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed.
- **Classification system**
The classification was made according to the latest editions of the EU-lists, and expanded upon from company and literature data.
The classification was made according to OSHA 29CFR 1910.1200 and 1910.1030, and is expanded upon from company and/or literature information.
- **NFPA ratings (scale 0-4)**
Health = 3
Fire = 3
Reactivity = 0

DUS

(Contd. on page 2)

Material Safety Data Sheet

Printing date 04/05/2010

Reviewed on 11/13/2009

Trade name: **Benzodiazepines & Tricyclic Elution Rgt.**

(Contd. of page 1)

4 First aid measures

- **After inhalation** Supply fresh air; consult doctor in case of complaints.
- **After skin contact** Generally the product does not irritate the skin.
- **After eye contact** Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing** Induce vomiting and call for medical help.

5 Fire fighting measures

- **Suitable extinguishing agents**
CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Protective equipment:** Wear self-contained respiratory protective device.

6 Accidental release measures

- **Person-related safety precautions:** Wear protective equipment (See section 8). Keep unprotected persons away.
- **Measures for environmental protection:**
Prevent seepage into sewage system, workpits and cellars.
Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.
- **Measures for cleaning/collecting:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.

7 Handling and storage

- **Handling**
- **Information for safe handling:** No special precautions are necessary if used correctly.
- **Information about protection against explosions and fires:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
- **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.

8 Exposure controls and personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Components with limit values that require monitoring at the workplace:**

75-05-8 acetonitrile

(Contd. on page 3)

DUS

Material Safety Data Sheet

Printing date 04/05/2010

Reviewed on 11/13/2009

Trade name: Benzodiazepines & Tricyclic Elution Rgt.

(Contd. of page 2)

PEL (United States)	70 mg/m ³ , 40 ppm
REL (United States)	34 mg/m ³ , 20 ppm
TLV (United States)	34 mg/m ³ , 20 ppm
	Skin

67-56-1 methanol

PEL (United States)	260 mg/m ³ , 200 ppm
REL (United States)	Short-term value: 325 mg/m ³ , 250 ppm Long-term value: 260 mg/m ³ , 200 ppm
	Skin
TLV (United States)	Short-term value: 328 mg/m ³ , 250 ppm Long-term value: 262 mg/m ³ , 200 ppm
	Skin; BEI

- **Additional information:** The lists that were valid during the creation were used as basis.
- **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.
Avoid contact with the eyes and skin.
- **Breathing equipment:** Not required.
- **Protection of hands:**
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Protective gloves.
- **Material of gloves** Synthetic gloves
- **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:**
Safety glasses
Tightly sealed goggles.
- **Body protection:** Protective work clothing.

9 Physical and chemical properties:

· **General Information**

Form:	Liquid
Color:	Colorless
Odor:	Alcohol-like

· **Change in condition**

Melting point/Melting range: undetermined
Boiling point/Boiling range: 64°C

· **Flash point:** ≤ 21°C

· **Ignition temperature:** 455°C

· **Auto igniting:** Product is not selfigniting.

· **Danger of explosion:** Product is not explosive. However, formation of explosive air/vapor mixtures are possible.

(Contd. on page 4)

Material Safety Data Sheet

Printing date 04/05/2010

Reviewed on 11/13/2009

Trade name: Benzodiazepines & Tricyclic Elution Rgt.

(Contd. of page 3)

- **Explosion limits:**
 - Lower:** 4.4 Vol %
 - Upper:** 44.0 Vol %
- **Vapor pressure at 20°C:** 128 hPa
- **Density at 20°C:** 0.836 g/cm³
- **Solubility in / Miscibility with Water:** Fully miscible
- **Solvent content:**
 - Organic solvents:** 36.0 %
 - Water:** 28.0 %

10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Materials to be avoided:**
- **Dangerous reactions:** No dangerous reactions known
- **Dangerous products of decomposition:** No dangerous decomposition products known

11 Toxicological information

- **Acute toxicity:**
- **LD/LC50 values for hazardous components per OSHA criteria:**

75-05-8 acetonitrile

Oral	LD50	2730 mg/kg (rat)
Dermal	LD50	1250 mg/kg (rbt)

67-56-1 methanol

Oral	LD50	5628 mg/kg (rat)
Dermal	LD50	20000 mg/kg (rat)

- **Primary irritant effect:**
 - **on the skin:** Irritant to skin and mucous membranes.
 - **on the eye:** Irritant effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
 - The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
 - The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
 - Irritant
- **Target organs:** Eye.

Material Safety Data Sheet

Printing date 04/05/2010

Reviewed on 11/13/2009

Trade name: Benzodiazepines & Tricyclic Elution Rgt.

(Contd. of page 4)

12 Ecological information:

- **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.*

13 Disposal considerations

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

14 Transport information

- **DOT regulations:**
- **Hazard class:** 3
- **Identification number:** UN1993
- **Packing group:** II
- **Proper shipping name (technical name):** FLAMMABLE LIQUID, N.O.S. (ACETONITRILE, METHANOL)
- **Label:** 3
- **Land transport ADR/RID (cross-border)**
- **ADR/RID class:** -
- **Maritime transport IMDG:**
- **Marine pollutant:** No
- **Air transport ICAO-TI and IATA-DGR:**
- **ICAO/IATA Class:** 3
- **UN/ID Number:** 1993
- **Label:** 3
- **Packing group:** II
- **Proper shipping name:** FLAMMABLE LIQUID, N.O.S. (ACETONITRILE, METHANOL)

15 Regulations

· **SARA (Superfund Amendments and Reauthorization Act of 1986 - USA)**

· **Section 302/304 (40CFR355.30 / 40CFR355.40):**

None of the ingredients is listed.

· **Section 313 (40CFR372.65):**

75-05-8 | acetonitrile

(Contd. on page 6)

Material Safety Data Sheet

Printing date 04/05/2010

Reviewed on 11/13/2009

Trade name: Benzodiazepines & Tricyclic Elution Rgt.

(Contd. of page 5)

67-56-1 | methanol

· TSCA (Toxic Substances Control Act):

All ingredients are listed.

· Carcinogenic categories

· IARC (International Agency for Research on Cancer)

None of the ingredients is listed.

· NTP (National Toxicology Program)

None of the ingredients is listed.

· OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

· Markings according to EU guidelines:

The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials

· Code letter and hazard designation of product:

T Toxic

F Highly flammable

· Hazard-determining components of labelling:

methanol

acetonitrile

· Risk phrases:

11 Highly flammable.

36 Irritating to eyes.

39/23/24/25 Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed.

· Safety phrases:

9 Keep container in a well-ventilated place.

16 Keep away from sources of ignition - No smoking.

26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

45 In case of accident or if you feel unwell, seek medical advice immediately.

60 This material and its container must be disposed of as hazardous waste.

· National regulations

· Technical instructions (air):

Class	Share in %
I	35-50

· Water hazard class: Water hazard class 2 (Self-assessment): hazardous for water.

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 MSDS: Environmental Health and Safety.

· Contact:

(Contd. on page 7)

Material Safety Data Sheet

Printing date 04/05/2010

Reviewed on 11/13/2009

Trade name: Benzodiazepines & Tricyclic Elution Rgt.

(Contd. of page 6)

Life Science Group, Environmental Health and Safety, 2000 Alfred Nobel Drive, Hercules, California, 94547: 1(510) 741-1000

Diagnostic Group, Environmental Health and Safety, 4000 Alfred Nobel Drive, Hercules, California, 94547: 1(510) 724-7000

· * **Data compared to the previous version altered.**

DUS

Material Safety Data Sheet

Printing date 04/05/2010

Reviewed on 10/21/2009

1 Identification of substance:

- **Product details:**
- **Trade name:** Benzodiazepine & Tricyclic Cartridge
- **Catalog or product number:** 195-7041
- **Application of the substance / the preparation** In-vitro laboratory reagent or component
- **Manufacturer/Supplier:**
Bio-Rad Laboratories, Diagnostic Group
4000 Alfred Nobel Drive
Hercules, California 94547 1(510)724-7000
- **Information department:** Technical services, customer support.
- **Emergency information:**
1(800) 424-9300 Use only in the event of a CHEMICAL EMERGENCY involving a SPILL, LEAK, FIRE, EXPLOSION, or ACCIDENT.

2 Composition/Information on components:

- **Chemical characterization:**
- **CAS No. Description:**
60676-86-0 Silica, vitreous
- **Identification number(s):**
- **EINECS Number:** 262-373-8
- **Additional information:** For the wording of the listed risk phrases refer to section 15.

3 Hazards identification

- **Emergency overview:** not applicable
- **Information pertaining to particular dangers for man and environment** not applicable
- **Classification system**
The classification was made according to OSHA 29CFR 1910.1200 and 1910.1030, and is expanded upon from company and/or literature information.
- **NFPA ratings (scale 0-4)**
Health = 0
Fire = 0
Reactivity = 0

4 First aid measures

- **General information** No special measures required.
- **After inhalation** Supply fresh air; consult doctor in case of complaints.
- **After skin contact** Generally the product does not irritate the skin.
- **After eye contact** Rinse opened eye for several minutes under running water.
- **After swallowing** Induce vomiting and call for medical help.

5 Fire fighting measures

- **Suitable extinguishing agents**
CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

(Contd. on page 2)

DUS

Material Safety Data Sheet

Printing date 04/05/2010

Reviewed on 10/21/2009

Trade name: Benzodiazepine & Tricyclic Cartridge

(Contd. of page 1)

· **Protective equipment:** No special measures required.

6 Accidental release measures

- **Person-related safety precautions:** Not required
- **Measures for environmental protection:** No special measures required.
- **Measures for cleaning/collecting:** Pick up mechanically.
- **Additional information:** No dangerous substances are released.

7 Handling and storage

- **Handling**
- **Information for safe handling:**
No special measures required.
No special precautions are necessary if used correctly.
- **Information about protection against explosions and fires:** No special measures required.
- **Storage**
- **Requirements to be met by storerooms and receptacles:** According to product specification
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** None.

8 Exposure controls and personal protection

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

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

60676-86-0 Silica, vitreous

PEL (United States)	see Quartz listing
REL (United States)	0.05* mg/m ³ *respirable dust (REL-Crystalline Silica)
TLV (United States)	TLV withdrawn

- **Additional information:** The lists that were valid during the creation were used as basis.
- **Personal protective equipment**
- **General protective and hygienic measures** The usual precautionary measures for handling chemicals should be followed.
- **Protection of hands:** Protective gloves.
- **Material of gloves** Synthetic gloves
- **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:** Safety glasses

9 Physical and chemical properties:

· **General Information**

Form: Solid.
Color: Clear

(Contd. on page 3)

Material Safety Data Sheet

Printing date 04/05/2010

Reviewed on 10/21/2009

Trade name: Benzodiazepine & Tricyclic Cartridge

(Contd. of page 2)

Odor:	Odorless
Change in condition	
<i>Melting point/Melting range:</i>	undetermined
<i>Boiling point/Boiling range:</i>	undetermined
Flash point:	Not applicable
Flammability (solid, gaseous)	Product is not flammable.
Danger of explosion:	Product does not present an explosion hazard.
Density:	Not determined
Solubility in / Miscibility with	
Water:	Insoluble
Organic solvents:	0.0 %
Solids content:	100.0 %

10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Materials to be avoided:**
- **Dangerous reactions** No dangerous reactions known
- **Dangerous products of decomposition:** No dangerous decomposition products known

11 Toxicological information

- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritant effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.
The substance is not subject to classification according to the latest version of the EU lists.
- **Target organs:** Not applicable.

13 Disposal considerations

- **Product:**
- **Recommendation** Dispose of waste in accordance to applicable national, regional, or local regulations.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

—DUS—
(Contd. on page 4)

Material Safety Data Sheet

Printing date 04/05/2010

Reviewed on 10/21/2009

Trade name: Benzodiazepine & Tricyclic Cartridge

(Contd. of page 3)

14 Transport information

· **DOT regulations:**

· **Hazard class:** -

· **Land transport ADR/RID (cross-border)**

· **ADR/RID class:** -

· **Maritime transport IMDG:**

· **IMDG Class:** -

· **Marine pollutant:** No

· **Air transport ICAO-TI and IATA-DGR:**

· **ICAO/IATA Class:** -

· **Transport/Additional information:** Not dangerous according to the above specifications.

15 Regulations

· **SARA (Superfund Amendments and Reauthorization Act of 1986 - USA)**

· **Section 302/304 (40CFR355.30 / 40CFR355.40):**

Substance not listed.

· **Section 313 (40CFR372.65):**

Substance is not listed.

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

Substance is listed.

· **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**

60676-86-0 Silica, vitreous

3

· **NTP (National Toxicology Program)**

Substance is not listed.

· **OSHA-Ca (Occupational Safety & Health Administration)**

Substance is not listed.

· **Markings according to EU guidelines:**

Observe the general safety regulations when handling chemicals

The substance is not subject to classification according to EU lists and other sources of literature known to us.

The product is not subject to identification regulations under EU Directives and the Ordinance on Hazardous Materials (GefStoffV).

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 MSDS:** Environmental Health and Safety.

· **Contact:**

(Contd. on page 5)

Material Safety Data Sheet

Printing date 04/05/2010

Reviewed on 10/21/2009

Trade name: Benzodiazepine & Tricyclic Cartridge

(Contd. of page 4)

Life Science Group, Environmental Health and Safety, 2000 Alfred Nobel Drive, Hercules, California, 94547: 1(510) 741-1000

Diagnostic Group, Environmental Health and Safety, 4000 Alfred Nobel Drive, Hercules, California, 94547: 1(510) 724-7000

· * **Data compared to the previous version altered.**

DUS

Material Safety Data Sheet

Printing date 04/05/2010

Reviewed on 11/13/2009

1 Identification of substance:

- **Product details:**
- **Trade name:** Benzodiazepine & Tricyclic Internal Std.
- **Catalog or product number:** 195-7071
- **Application of the substance / the preparation** In-vitro laboratory reagent or component
- **Manufacturer/Supplier:**
Bio-Rad Laboratories, Diagnostic Group
4000 Alfred Nobel Drive
Hercules, California 94547
1(510)724-7000
- **Information department:** Technical services, customer support.
- **Emergency information:**
1(800) 424-9300 Use only in the event of a CHEMICAL EMERGENCY involving a SPILL, LEAK, FIRE, EXPLOSION, or ACCIDENT.

2 Composition/Information on components:

- **Chemical characterization:**
- **CAS No. Description:**
67-56-1 methanol
- **Identification number(s):**
- **EINECS Number:** 200-659-6
- **Index number:** 603-001-00-X
- **Additional information:** For the wording of the listed risk phrases refer to section 15.

3 Hazards identification

- **Emergency overview:**
Toxic by ingestion.
Toxic by inhalation.
Flammable.
T Toxic
F Highly flammable
- **Routes of exposure:**
Ingestion
Inhalation
- **Information pertaining to particular dangers for man and environment**
R 11 Highly flammable.
R 23/25 Toxic by inhalation and if swallowed.
- **Classification system**
The classification was made according to OSHA 29CFR 1910.1200 and 1910.1030, and is expanded upon from company and/or literature information.
- **NFPA ratings (scale 0-4)**
Health = 3
Fire = 3
Reactivity = 0

4 First aid measures

- **General information**
Immediately remove any clothing soiled by the product.

(Contd. on page 2)

DUS

Material Safety Data Sheet

Printing date 04/05/2010

Reviewed on 11/13/2009

Trade name: **Benzodiazepine & Tricyclic Internal Std.**

(Contd. of page 1)

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. Then consult a doctor.

- **After swallowing** Do not induce vomiting; immediately call for medical help.

- **Information for doctor**

- **The following symptoms may occur:** Breathing difficulty

5 Fire fighting measures

- **Suitable extinguishing agents**

CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

- **Protective equipment:**

Mount respiratory protective device.

Wear self-contained respiratory protective device.

6 Accidental release measures

- **Person-related safety precautions:** Wear protective equipment (See section 8). Keep unprotected persons away.

- **Measures for environmental protection:**

Prevent seepage into sewage system, workpits and cellars.

Dilute with plenty of water.

- **Measures for cleaning/collecting:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

7 Handling and storage

- **Handling**

- **Information for safe handling:**

Ensure good ventilation/exhaustion at the workplace.

Open and handle receptacle with care.

No special precautions are necessary if used correctly.

- **Information about protection against explosions and fires:**

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

Keep respiratory protective device available.

- **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.

DUS

(Contd. on page 3)

Material Safety Data Sheet

Printing date 04/05/2010

Reviewed on 11/13/2009

Trade name: Benzodiazepine & Tricyclic Internal Std.

(Contd. of page 2)

8 Exposure controls and personal protection

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

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

67-56-1 methanol

PEL (United States)	260 mg/m ³ , 200 ppm
REL (United States)	Short-term value: 325 mg/m ³ , 250 ppm Long-term value: 260 mg/m ³ , 200 ppm Skin
TLV (United States)	Short-term value: 328 mg/m ³ , 250 ppm Long-term value: 262 mg/m ³ , 200 ppm Skin; BEI

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

· **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.

· **Breathing equipment:** Not required.

· **Protection of hands:** Protective gloves.

· **Material of gloves:** Synthetic gloves

· **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:**

Safety glasses
Tightly sealed goggles.

9 Physical and chemical properties:

· **General Information**

Form:	Liquid
Color:	Colorless
Odor:	Alcohol-like

· **Change in condition**

Melting point/Melting range: -98°C
Boiling point/Boiling range: undetermined

· **Flash point:** ≤ 21°C

· **Ignition temperature:** 455°C

· **Danger of explosion:** Product is not explosive. However, formation of explosive air/vapor mixtures are possible.

· **Explosion limits:**

Lower: 5.5 Vol %
Upper: 44 Vol %

· **Vapor pressure at 20°C:** 128 hPa

(Contd. on page 4)

Material Safety Data Sheet

Printing date 04/05/2010

Reviewed on 11/13/2009

Trade name: Benzodiazepine & Tricyclic Internal Std.

(Contd. of page 3)

- **Density at 20°C:** 0.79 g/cm³
- **Solubility in / Miscibility with**
- **Water:** Fully miscible
- **Organic solvents:** 100.0 %

10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Materials to be avoided:**
- **Dangerous reactions** No dangerous reactions known
- **Dangerous products of decomposition:** No dangerous decomposition products known

11 Toxicological information

- **Acute toxicity:**
- **LD/LC50 values for hazardous components per OSHA criteria:**

67-56-1 methanol

Oral	LD50	5628 mg/kg (rat)
Dermal	LD50	20000 mg/kg (rat)

- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritant effect.
- **Sensitization:** No sensitizing effects known.
- **Target organs:** Respiratory tract.

13 Disposal considerations

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

14 Transport information

- **DOT regulations:**
- **Hazard class:** 3
- **Identification number:** UN1230
- **Packing group:** II
- **Proper shipping name (technical name):** METHANOL, mixture
- **Label** 3+6.1

(Contd. on page 5)

Material Safety Data Sheet

Printing date 04/05/2010

Reviewed on 11/13/2009

Trade name: Benzodiazepine & Tricyclic Internal Std.

(Contd. of page 4)

· **Land transport ADR/RID (cross-border)**
 · **ADR/RID class:** 3 Flammable liquids
 · **Danger code (Kemler):** 336
 · **UN-Number:** 1230
 · **Packing group:** II
 · **Label** 3+6.1
 · **Description of goods:** 1230 METHANOL, mixture

· **Maritime transport IMDG:**
 · **IMDG Class:** 3
 · **UN Number:** 1230
 · **Label** 3+6.1
 · **Packing group:** II
 · **EMS Number:** F-E,S-D
 · **Marine pollutant:** No
 · **Proper shipping name:** METHANOL, mixture

· **Air transport ICAO-TI and IATA-DGR:**
 · **ICAO/IATA Class:** 3
 · **UN/ID Number:** 1230
 · **Label** 3+6.1
 · **Packing group:** II
 · **Proper shipping name:** METHANOL, mixture

15 Regulations

· **SARA (Superfund Amendments and Reauthorization Act of 1986 - USA)**

· **Section 302/304 (40CFR355.30 / 40CFR355.40):**

Substance not listed.

· **Section 313 (40CFR372.65):**

Substance is listed.

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

67-56-1 methanol

439-14-5 diazepam

· **California Proposition 65:**

· **Developmental Toxicity**

439-14-5 diazepam

· **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**

439-14-5 diazepam

3

· **NTP (National Toxicology Program)**

Substance is not listed.

· **OSHA-Ca (Occupational Safety & Health Administration)**

Substance is not listed.

(Contd. on page 6)

Material Safety Data Sheet

Printing date 04/05/2010

Reviewed on 11/13/2009

Trade name: Benzodiazepine & Tricyclic Internal Std.

(Contd. of page 5)

· Markings according to EU guidelines:

The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials

· Code letter and hazard designation of product:

T Toxic

F Highly flammable

· Risk phrases:

11 Highly flammable.

23/25 Toxic by inhalation and if swallowed.

· Safety phrases:

4 Keep away from living quarters.

7/9 Keep container tightly closed and in a well-ventilated place.

16 Keep away from sources of ignition - No smoking.

20 When using do not eat or drink.

36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

45 In case of accident or if you feel unwell, seek medical advice immediately.

· National regulations

· Technical instructions (air):

Class	Share in %
I	50-100

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 MSDS: Environmental Health and Safety.

· Contact:

Life Science Group, Environmental Health and Safety, 2000 Alfred Nobel Drive, Hercules, California, 94547: 1(510) 741-1000

Diagnostic Group, Environmental Health and Safety, 4000 Alfred Nobel Drive, Hercules, California, 94547: 1(510) 724-7000

*** Data compared to the previous version altered.**

Material Safety Data Sheet

Printing date 04/05/2010

Reviewed on 11/13/2009

1 Identification of substance:

- **Product details:**
- **Trade name:** Benzodiazepine & Tricyclic Wash Rgt.
- **Catalog or product number:** 195-7044
- **Application of the substance / the preparation** In-vitro laboratory reagent or component
- **Manufacturer/Supplier:**
Bio-Rad Laboratories, Diagnostic Group
4000 Alfred Nobel Drive
Hercules, California 94547
1(510)724-7000
- **Information department:** Technical services, customer support.
- **Emergency information:**
1(800) 424-9300 Use only in the event of a CHEMICAL EMERGENCY involving a SPILL, LEAK, FIRE, EXPLOSION, or ACCIDENT.

2 Composition/Information on components:

- **Chemical characterization**
- **Description:** Mixture of the substances listed below with non-hazardous additions.

· **Listing of dangerous and non-hazardous components:**

7732-18-5	water		50-100%
75-05-8	acetonitrile	Xn, Xi, F; R 11-20/21/22-36	10-20%

- **Additional information** For the wording of the listed risk phrases refer to section 15.

3 Hazards identification

- **Emergency overview:**
Irritant to skin.
Flammable.
Xn Harmful
F Highly flammable
- **Routes of exposure:**
Ingestion
Inhalation
Skin
- **Information pertaining to particular dangers for man and environment**
The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.
R 11 Highly flammable.
R 20/21/22 Harmful by inhalation, in contact with skin and if swallowed.
- **Classification system**
The classification was made according to the latest editions of the EU-lists, and expanded upon from company and literature data.
The classification was made according to OSHA 29CFR 1910.1200 and 1910.1030, and is expanded upon from company and/or literature information.

(Contd. on page 2)

DUS

Material Safety Data Sheet

Printing date 04/05/2010

Reviewed on 11/13/2009

Trade name: Benzodiazepine & Tricyclic Wash Rgt.

(Contd. of page 1)

· **NFPA ratings (scale 0-4)**

Health = 2

Fire = 3

Reactivity = 0

4 First aid measures· **General information**

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

· **After inhalation**

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist. In case of unconsciousness place patient stably in side position for transportation.

· **After skin contact** Generally the product does not irritate the skin.· **After eye contact** Rinse opened eye for several minutes under running water.· **After swallowing** Immediately call a doctor.· **Information for doctor**· **The following symptoms may occur:** Breathing difficulty**5 Fire fighting measures**· **Suitable extinguishing agents**

CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

· **Protective equipment:** Mount respiratory protective device.**6 Accidental release measures**· **Person-related safety precautions:** Wear protective equipment (See section 8). Keep unprotected persons away.· **Measures for environmental protection:**

Prevent seepage into sewage system, workpits and cellars.

Dilute with plenty of water.

Do not allow to enter sewers/ surface or ground water.

· **Measures for cleaning/collecting:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

7 Handling and storage· **Handling**· **Information for safe handling:**

Ensure good ventilation/exhaustion at the workplace.

No special precautions are necessary if used correctly.

· **Information about protection against explosions and fires:**

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

· **Storage**· **Requirements to be met by storerooms and receptacles:** Store in a cool location.

(Contd. on page 3)

DUS

Material Safety Data Sheet

Printing date 04/05/2010

Reviewed on 11/13/2009

Trade name: Benzodiazepine & Tricyclic Wash Rgt.

(Contd. of page 2)

- **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.

8 Exposure controls and personal protection

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

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

75-05-8 acetonitrile

PEL (United States)	70 mg/m ³ , 40 ppm
REL (United States)	34 mg/m ³ , 20 ppm
TLV (United States)	34 mg/m ³ , 20 ppm
	Skin

- **Additional information:** The lists that were valid during the creation were used as basis.
- **Personal protective equipment**
- **General protective and hygienic measures**
Keep away from foodstuffs, beverages and feed.
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.
- **Material of gloves** Synthetic gloves
- **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:**
Safety glasses
Tightly sealed goggles.

9 Physical and chemical properties:

General Information

Form:	Liquid
Color:	Colorless
Odor:	Recognizable Slightly ether-like

- **Change in condition**
Melting point/Melting range: undetermined
Boiling point/Boiling range: 81°C

- **Flash point:** ≤ 21°C
- **Ignition temperature:** 525°C
- **Auto igniting:** Product is not selfigniting.

(Contd. on page 4)

Material Safety Data Sheet

Printing date 04/05/2010

Reviewed on 11/13/2009

Trade name: Benzodiazepine & Tricyclic Wash Rgt.

(Contd. of page 3)

· Danger of explosion:	Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
· Explosion limits:	
Lower:	4.4 Vol %
Upper:	16.0 Vol %
· Vapor pressure at 20°C:	97 hPa
· Density at 20°C:	0.952 g/cm ³
· Solubility in / Miscibility with	
Water:	Fully miscible
· Solvent content:	
Organic solvents:	0.0 %
Water:	82.0 %

10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Materials to be avoided:**
- **Dangerous reactions** No dangerous reactions known
- **Dangerous products of decomposition:** No dangerous decomposition products known

11 Toxicological information

- **Acute toxicity:**

- **LD/LC50 values for hazardous components per OSHA criteria:**

75-05-8 acetonitrile

Oral	LD50	2730 mg/kg (rat)
Dermal	LD50	1250 mg/kg (rbt)

- **Primary irritant effect:**

- **on the skin:** No irritant effect.
- **on the eye:** No irritant effect.
- **Sensitization:** No sensitizing effects known.

- **Additional toxicological information:**

The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:

The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:

Harmful

- **Target organs:**

Skin.
Respiratory tract.

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(Contd. on page 5)

Material Safety Data Sheet

Printing date 04/05/2010

Reviewed on 11/13/2009

Trade name: Benzodiazepine & Tricyclic Wash Rgt.

(Contd. of page 4)

12 Ecological information:

- **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.*

13 Disposal considerations

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

14 Transport information

- **DOT regulations:**
- **Hazard class:** 3
- **Identification number:** UN1648
- **Packing group:** II
- **Proper shipping name (technical name):** ACETONITRILE, solution
- **Label** 3
- **Land transport ADR/RID (cross-border)**
- **ADR/RID class:** 3 Flammable liquids
- **Danger code (Kemler):** 33
- **UN-Number:** 1648
- **Packing group:** II
- **Label** 3
- **Description of goods:** 1648 ACETONITRILE, solution
- **Maritime transport IMDG:**
- **IMDG Class:** 3
- **UN Number:** 1648
- **Label** 3
- **Packing group:** II
- **EMS Number:** F-E,S-D
- **Marine pollutant:** No
- **Proper shipping name:** ACETONITRILE, solution
- **Air transport ICAO-TI and IATA-DGR:**
- **ICAO/IATA Class:** 3
- **UN/ID Number:** 1648
- **Label** 3
- **Packing group:** II

(Contd. on page 6)

Material Safety Data Sheet

Printing date 04/05/2010

Reviewed on 11/13/2009

Trade name: Benzodiazepine & Tricyclic Wash Rgt.

(Contd. of page 5)

· Proper shipping name: ACETONITRILE, solution

15 Regulations

· SARA (Superfund Amendments and Reauthorization Act of 1986 - USA)

· Section 302/304 (40CFR355.30 / 40CFR355.40):

None of the ingredients is listed.

· Section 313 (40CFR372.65):

75-05-8 acetonitrile

· TSCA (Toxic Substances Control Act):

All ingredients are listed.

· Carcinogenic categories

· IARC (International Agency for Research on Cancer)

None of the ingredients is listed.

· NTP (National Toxicology Program)

None of the ingredients is listed.

· OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

· Markings according to EU guidelines:

The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials

· Code letter and hazard designation of product:

Xn Harmful

F Highly flammable

· Hazard-determining components of labelling:

acetonitrile

· Risk phrases:

11 Highly flammable.

20/21/22 Harmful by inhalation, in contact with skin and if swallowed.

· Safety phrases:

9 Keep container in a well-ventilated place.

16 Keep away from sources of ignition - No smoking.

36/37 Wear suitable protective clothing and gloves.

45 In case of accident or if you feel unwell, seek medical advice immediately.

· National regulations

· Water hazard class: Water hazard class 2 (Self-assessment): hazardous for water.

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 MSDS: Environmental Health and Safety.

(Contd. on page 7)

DUS

Material Safety Data Sheet

Printing date 04/05/2010

Reviewed on 11/13/2009

Trade name: Benzodiazepine & Tricyclic Wash Rgt.

(Contd. of page 6)

· Contact:

Life Science Group, Environmental Health and Safety, 2000 Alfred Nobel Drive, Hercules, California, 94547: 1(510) 741-1000

Diagnostic Group, Environmental Health and Safety, 4000 Alfred Nobel Drive, Hercules, California, 94547: 1(510) 724-7000

· * Data compared to the previous version altered.

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