

07/22/2013

Kit Components

| Product code | Description |
|---------------|-------------------------|
| 212520 | `TB Stain Set ZN |

Components:

| | |
|---------|--------------------|
| 212520a | TB Carbofuchsin ZN |
| 212520b | TB Decolorizer |
| 212520c | TB Methylene Blue |

Safety Data Sheet
acc. to OSHA HCS

Date Prepared: 07/22/2013

Reviewed On: 06/12/2013

1 Identification

- **Product Identifier**
- **Product Name:** TB Carbofuchsin ZN
(TB Stain Set ZN)
- **Catalog Number:** 212520
- **Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the preparation** In-vitro Diagnostics
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
BD Diagnostic Systems
7 Loveton Circle
Sparks, MD 21152
Telephone: (410) 771 - 0100 or (800) 638 – 8663
Email Address: Technical_Services@bd.com
- **Information Department:** Technical Service
- **Emergency telephone number:**
In case of a chemical emergency, spill, fire, exposure, or accident, contact BD Diagnostic Systems (410) 771-0100 or (800)-638-8663, or ChemTrec at (800) 424-9300.

2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS08 Health hazard

Muta. 2 H341 Suspected of causing genetic defects.
Carc. 1B H350 May cause cancer.



GHS05 Corrosion

Skin Corr. 1B H314 Causes severe skin burns and eye damage.

- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**



T; Toxic

R45-24/25: May cause cancer. Toxic in contact with skin and if swallowed.



C; Corrosive

R34: Causes burns.

- **Classification system:**

The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.

- **Label elements**

- **GHS label elements**

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

(Contd. on page 2)

Safety Data Sheet
 acc. to OSHA HCS

Date Prepared: 07/22/2013

Reviewed On: 06/12/2013

Product Name: TB Carbolfuchsin ZN
(TB Stain Set ZN)

(Contd. of page 1)

· Hazard pictograms


GHS05 GHS08

· Signal word Danger

· Hazard-determining components of labeling:

 phenol
 basic fuchsin

· Hazard statements

 H314 Causes severe skin burns and eye damage.
 H341 Suspected of causing genetic defects.
 H350 May cause cancer.

· Precautionary statements

P260 Do not breathe dust/fume/gas/mist/vapours/spray.
 P280 Wear protective gloves/protective clothing/eye protection/face protection.
 P281 Use personal protective equipment as required.
 P264 Wash thoroughly after handling.
 P201 Obtain special instructions before use.
 P202 Do not handle until all safety precautions have been read and understood.
 P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P310 Immediately call a POISON CENTER or doctor/physician.
 P321 Specific treatment (see on this label).
 P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
 P363 Wash contaminated clothing before reuse.
 P308+P313 IF exposed or concerned: Get medical advice/attention.
 P301+P330+P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
 P405 Store locked up.
 P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· NFPA ratings (scale 0-4)

 Health = 3
 Flammability = 1
 Reactivity = 0

· HMIS ratings (scale 0-4)

 Health = *3
 Flammability = 1
 Reactivity = 0

(Contd. on page 3)

Safety Data Sheet
acc. to OSHA HCS

Date Prepared: 07/22/2013

Reviewed On: 06/12/2013

Product Name: TB Carbofuchsin ZN
(TB Stain Set ZN)

(Contd. of page 2)

- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

- **Chemical characterization: Mixture**
- **Description:** Mixture consisting of the following components.

· **Dangerous Components:**

| | | | |
|------------------------------------|---------------|--------------------------------------------------------|-------|
| CAS: 67-63-0 EINECS: 200-661-7 | isopropanol | Xi R36; F R11 R67 | 9.5% |
| CAS: 108-95-2 EINECS: 203-632-7 | phenol | T R23/24/25; C R34; Xn R48/20/21/22-68 Muta. Cat. 3 | 5.5% |
| CAS: 569-61-9 EINECS: 209-321-2 | basic fuchsin | T Carc. Cat. 2 R45 | 0.17% |

- **Additional information** Risk phrases refer to section 15.

4 First-aid measures

- **Description of first aid measures**
- **General information**
Symptoms of poisoning may even occur after several hours; therefore provide medical observation for at least 48 hours after the accident.
- **After inhalation** Seek medical treatment in case of complaints.
- **After skin contact** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact**
Rinse opened eye for 15 minutes under running water. Then consult a doctor.
- **After swallowing** Call a doctor immediately.
- **Information for doctor** Show this product label or this MSDS.
- **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, ABC multipurpose dry chemical or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture**
No further relevant information available.

(Contd. on page 4)

Safety Data Sheet
acc. to OSHA HCS

Date Prepared: 07/22/2013

Reviewed On: 06/12/2013

Product Name: TB Carbofuchsin ZN
(TB Stain Set ZN)

(Contd. of page 3)

- **Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **Environmental precautions:** Wipe up with damp sponge or mop.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders).
- **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.
- **Information about protection against explosions and fires:**
No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage**
- **Requirements to be met by storerooms and receptacles:** 15 - 30 °C
- **Information about storage in one common storage facility:**
Do not store together with oxidizing and acidic materials.
Do not store together with alkaline material.
- **Further information about storage conditions:**
Store in cool, dry conditions in well sealed containers.
- **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 Section 7.
- **Control parameters**

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

67-63-0 isopropanolPEL 980 mg/m³, 400 ppmREL Short-term value: 1225 mg/m³, 500 ppm
Long-term value: 980 mg/m³, 400 ppm

(Contd. on page 5)

Safety Data Sheet
 acc. to OSHA HCS

Date Prepared: 07/22/2013

Reviewed On: 06/12/2013

Product Name: TB Carbofuchsin ZN
(TB Stain Set ZN)

(Contd. of page 4)

| | |
|------------------------|---------------------------------------------------------------------------------------------------------------------|
| TLV | Short-term value: 984 mg/m ³ , 400 ppm Long-term value: 492 mg/m ³ , 200 ppm |
| 108-95-2 phenol | |
| PEL | 19 mg/m ³ , 5 ppm Skin |
| REL | Short-term value: C 60* mg/m ³ , C 15.6* ppm Long-term value: 19 mg/m ³ , 5 ppm *15-min |
| TLV | 19 mg/m ³ , 5 ppm Skin; BEI |

· **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 and skin.

· **Breathing equipment:**

In case of brief exposure, use a chemical fume hood or a NIOSH/MSHA-approved respirator.

· **Protection of hands:**



Chemical resistant gloves (i.e. nitrile, or equivalent).

· **Eye protection:** Safety glasses

9 Physical and chemical properties

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

· **General Information**

· **Appearance:**

Form: Liquid

Color: Red

Purple

· **Odor:** Characteristic

· **Change in condition**

Melting point/Melting range: Not determined

Boiling point/Boiling range: Not determined

· **Flash point:** Not applicable

(Contd. on page 6)

Safety Data Sheet
 acc. to OSHA HCS

Date Prepared: 07/22/2013

Reviewed On: 06/12/2013

Product Name: TB Carbolfuchsin ZN
(TB Stain Set ZN)

(Contd. of page 5)

- | | |
|--------------------------------------------------|-----------------------------------------------|
| · Ignition temperature: | 425.0 °C (797 °F) |
| · Auto igniting: | Product is not self igniting. |
| · Danger of explosion: | Product does not present an explosion hazard. |
| · Density: | Not determined |
| · Solubility in / Miscibility with Water: | Soluble |
| · Other information | No further relevant information available. |

10 Stability and reactivity

- **Reactivity**
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

- **LD/LC50 values that are relevant for classification:**

108-95-2 phenol

| | | |
|--------|------|------------------------------------|
| Oral | LD50 | 300 mg/kg (mus) 317 mg/kg (rat) |
| Dermal | LD50 | 670 mg/kg (rat) |

569-61-9 basic fuchsin

| | | |
|------|------|-----------------|
| Oral | LD50 | 500 mg/kg (mou) |
|------|------|-----------------|

67-63-0 isopropanol

| | | |
|--------|------|-------------------|
| Oral | LD50 | 5045 mg/kg (rat) |
| Dermal | LD50 | 12800 mg/kg (rab) |

- **Primary irritant effect:**
- **on the skin:** Caustic effect on skin and mucous membranes.
- **on the eye:** Strong caustic effect.
- **Sensitization:** No sensitizing effects known.

(Contd. on page 7)

Safety Data Sheet
 acc. to OSHA HCS

Date Prepared: 07/22/2013

Reviewed On: 06/12/2013

Product Name: TB Carbolfuchsin ZN
(TB Stain Set ZN)

(Contd. of page 6)

- **Subacute to chronic toxicity:**
 Target organs: liver, gastrointestinal tumors, blood, lymphomas.
- **Additional toxicological information:**
 The product shows the following dangers according to internally approved calculation methods for preparations:
 Toxic
 Corrosive (causes skin burns)
 Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.
 Carcinogenic

- **Carcinogenic categories**

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

| | | |
|----------|---------------|----|
| 67-63-0 | isopropanol | 3 |
| 108-95-2 | phenol | 3 |
| 569-61-9 | basic fuchsin | 2B |

- **NTP (National Toxicology Program)**

| | | |
|----------|---------------|---|
| 569-61-9 | basic fuchsin | R |
|----------|---------------|---|

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 danger class 3 (Self-assessment): extremely hazardous for water.
- **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**
 Dispose of material in accordance with federal (40 CFR 261.3), state and local requirements.
 This product is not considered a RCRA hazardous waste.
 Must not be disposed of with solid waste.

(Contd. on page 8)

Safety Data Sheet
 acc. to OSHA HCS

Date Prepared: 07/22/2013

Reviewed On: 06/12/2013

Product Name: TB Carbolfuchsin ZN
(TB Stain Set ZN)

(Contd. of page 7)

- **Uncleaned packagings:**
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

- | | |
|----------------------------------------------------------------------------------|-----------------|
| · UN-Number | |
| · DOT, ADR, ADN, IMDG, IATA | Void |
| · UN proper shipping name | |
| · DOT, ADR, ADN, IMDG, IATA | Void |
| · Transport hazard class(es) | |
| · DOT, ADR, ADN, IMDG, IATA | |
| · Class | Void |
| · Packing group | |
| · DOT, ADR, IMDG, IATA | Void |
| · Environmental hazards: | |
| · Marine pollutant: | No |
| · Special precautions for user | Not applicable. |
| · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code | Not applicable. |
| · UN "Model Regulation": | - |

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**

- **SARA Section 355 (extremely hazardous substances)**

| | |
|----------|--------|
| 108-95-2 | phenol |
|----------|--------|

- **SARA Section 313 (specific toxic chemical listings)**

| | |
|---------|-------------|
| 67-63-0 | isopropanol |
|---------|-------------|

| | |
|----------|--------|
| 108-95-2 | phenol |
|----------|--------|

- **TSCA (Toxic Substances Control Act)**

| |
|-----------------------------|
| All ingredients are listed. |
|-----------------------------|

(Contd. on page 9)

Safety Data Sheet
 acc. to OSHA HCS

Date Prepared: 07/22/2013

Reviewed On: 06/12/2013

Product Name: TB Carbofuchsin ZN
(TB Stain Set ZN)

(Contd. of page 8)

· California Proposition 65 - Chemicals known to cause cancer

569-61-9 basic fuchsin

· California Proposition 65 - Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed.

· California Proposition 65 - Chemicals known to cause reproductive toxicity for males:

None of the ingredients is listed.

· California Proposition 65 - Chemicals known to cause developmental toxicity:

None of the ingredients is listed.

· Carcinogenic categories
· TLV (Threshold Limit Value established by ACGIH)

| | | |
|----------|-------------|----|
| 67-63-0 | isopropanol | A4 |
| 108-95-2 | phenol | A4 |

· GHS label elements

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

· Hazard pictograms


GHS05 GHS08

· Signal word Danger
· Hazard-determining components of labeling:

 phenol
 basic fuchsin

· Hazard statements

 H314 Causes severe skin burns and eye damage.
 H341 Suspected of causing genetic defects.
 H350 May cause cancer.

· Precautionary statements

 P260 Do not breathe dust/fume/gas/mist/vapours/spray.
 P280 Wear protective gloves/protective clothing/eye protection/face protection.
 P281 Use personal protective equipment as required.
 P264 Wash thoroughly after handling.
 P201 Obtain special instructions before use.
 P202 Do not handle until all safety precautions have been read and understood.
 P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P310 Immediately call a POISON CENTER or doctor/physician.

(Contd. on page 10)

Safety Data Sheet
acc. to OSHA HCS

Date Prepared: 07/22/2013

Reviewed On: 06/12/2013

Product Name: TB Carbolfuchsin ZN
(TB Stain Set ZN)

(Contd. of page 9)

P321 Specific treatment (see on this label).
P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P363 Wash contaminated clothing before reuse.
P308+P313 IF exposed or concerned: Get medical advice/attention.
P301+P330+P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **National regulations**· **Additional classification according to Decree on Hazardous Materials:**

CERCLA: This product contains Phenol which has a Reporting Quantity (RQ) of 1000#.

SARA 311/312: Subject to reporting.

313: Isopropyl Alcohol and Phenol are subject to reporting.

TSCA: This product is exempt under TSCA.

· **Water hazard class:**

Water danger class 3 (Self-assessment): extremely hazardous for water.

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.**16 Other information**

To the best of our knowledge, the information contained herein is accurate. However, neither Becton, Dickinson and Company or any of its subsidiaries assumes any liabilities whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we can not guarantee that these are the only hazards that exist.

· **Department issuing MSDS:**

Environmental, Health & Safety

Created by Michael J. Spinazzola

· **Contact:** Technical Service Representative· **Abbreviations and acronyms:**

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

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

ICAO: International Civil Aviation Organization

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

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

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)

(Contd. on page 11)



Safety Data Sheet
acc. to OSHA HCS

Date Prepared: 07/22/2013

Reviewed On: 06/12/2013

Product Name: TB Carbofuchsin ZN
(TB Stain Set ZN)

HMIS: Hazardous Materials Identification System (USA)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent

(Contd. of page 10)

US

Date Prepared: 07/22/2013

Reviewed On: 06/12/2013

1 Identification

- **Product Identifier**
- **Product Name:** TB Decolorizer
(TB Stain Set ZN)
- **Catalog Number:** 212520
- **Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the preparation** *In-vitro Diagnostics*
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
BD Diagnostic Systems
7 Loveton Circle
Sparks, MD 21152
Telephone: (410) 771 - 0100 or (800) 638 – 8663
Email Address: Technical_Services@bd.com
- **Information Department:** Technical Service
- **Emergency telephone number:**
In case of a chemical emergency, spill, fire, exposure, or accident, contact BD Diagnostic Systems (410) 771-0100 or (800)-638-8663, or ChemTrec at (800) 424-9300.

2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS02 Flame

Flam. Liq. 2 H225 Highly flammable liquid and vapour.

GHS08 Health hazard

STOT SE 2 H371 May cause damage to organs.

- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**



Xn; Harmful

R20/21/22-40-68/20/21/22: Harmful by inhalation, in contact with skin and if swallowed. Limited evidence of a carcinogenic effect. Harmful: possible risk of irreversible effects through inhalation, in contact with skin and if swallowed.

F; Highly flammable

R11: Highly flammable.

- **Classification system:**

The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.

(Contd. on page 2)

US

Safety Data Sheet
 acc. to OSHA HCS

Date Prepared: 07/22/2013

Reviewed On: 06/12/2013

Product Name: TB Decolorizer
(TB Stain Set ZN)

(Contd. of page 1)

 · **Label elements**

 · **GHS label elements**

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

 · **Hazard pictograms**


GHS02 GHS08

 · **Signal word** *Danger*

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

methanol

 · **Hazard statements**

H225 Highly flammable liquid and vapour.

H371 May cause damage to organs.

 · **Precautionary statements**

P210

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

P241

Use explosion-proof electrical/ventilating/lighting/equipment.

P260

Do not breathe dust/fume/gas/mist/vapours/spray.

P280

Wear protective gloves/protective clothing/eye protection/face protection.

P240

Ground/bond container and receiving equipment.

P233

Keep container tightly closed.

P242

Use only non-sparking tools.

P243

Take precautionary measures against static discharge.

P264

Wash thoroughly after handling.

P270

Do not eat, drink or smoke when using this product.

 P303+P361+P353 **IF ON SKIN (or hair):** Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

P309+P311

IF exposed or if you feel unwell: Call a POISON CENTER or doctor/physician.

P370+P378

In case of fire: Use for extinction: CO2, powder or water spray.

P405

Store locked up.

P403+P235

Store in a well-ventilated place. Keep cool.

P501

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

 · **NFPA ratings (scale 0-4)**


Health = 2

Flammability = 3

Reactivity = 0

 · **HMIS ratings (scale 0-4)**


Health = *2

Flammability = 3

Reactivity = 0

(Contd. on page 3)

Safety Data Sheet
acc. to OSHA HCS

Date Prepared: 07/22/2013

Reviewed On: 06/12/2013

Product Name: TB Decolorizer
(TB Stain Set ZN)

(Contd. of page 2)

- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

- **Chemical characterization: Mixture**
- **Description:** Mixture consisting of the following components.

· **Dangerous Components:**

| | | | |
|-------------------------------------|-------------------|--------------------------------|-------|
| CAS: 64-17-5 EINECS: 200-578-6 | ethanol | F R10 | 92.3% |
| CAS: 67-56-1 EINECS: 200-659-6 | methanol | T R23/24/25-39/23/24/25; F R11 | 4.7% |
| CAS: 7647-01-0 EINECS: 231-595-7 | hydrochloric acid | C R34; Xi R37 | 3.0% |

- **Additional information** Risk phrases refer to section 15.

4 First-aid measures

- **Description of first aid measures**
- **General information**
Symptoms of poisoning may even occur after several hours; therefore provide medical observation for at least 48 hours after the accident.
- **After inhalation** Seek medical treatment in case of complaints.
- **After skin contact** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact**
Rinse opened eye for 15 minutes under running water. Then consult a doctor.
- **After swallowing** Immediately call a doctor.
- **Information for doctor** Show this product label or this MSDS.
- **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, ABC multipurpose dry chemical or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture**
No further relevant information available.

(Contd. on page 4)

Safety Data Sheet
acc. to OSHA HCS

Date Prepared: 07/22/2013

Reviewed On: 06/12/2013

Product Name: TB Decolorizer
(TB Stain Set ZN)

(Contd. of page 3)

- **Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **Environmental precautions:** Wipe up with damp sponge or mop.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders).
- **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.
- **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:** 15 - 30 °C
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Store in cool, dry conditions in well sealed containers.
- **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 Section 7.
- **Control parameters**

Components with limit values that require monitoring at the workplace:**64-17-5 ethanol**

| | |
|-----|-----------------------------------|
| PEL | 1900 mg/m ³ , 1000 ppm |
| REL | 1900 mg/m ³ , 1000 ppm |
| TLV | 1880 mg/m ³ , 1000 ppm |

(Contd. on page 5)

US

Safety Data Sheet
 acc. to OSHA HCS

Date Prepared: 07/22/2013

Reviewed On: 06/12/2013

Product Name: TB Decolorizer
(TB Stain Set ZN)

(Contd. of page 4)

67-56-1 methanol

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

7647-01-0 hydrochloric acid

| | |
|-----|------------------------------------------------------|
| PEL | Short-term value: C 7 mg/m ³ , C 5 ppm |
| REL | Short-term value: C 7 mg/m ³ , C 5 ppm |
| TLV | Short-term value: C 2.98 mg/m ³ , C 2 ppm |

· **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.

Wash hands before breaks and at the end of work.

· **Breathing equipment:**

In case of brief exposure, use a chemical fume hood or a NIOSH/MSHA-approved respirator.

· **Protection of hands:**



Chemical resistant gloves (i.e. nitrile, or equivalent).

· **Eye protection:** Safety glasses

· **Body protection:** Protective work clothing (lab coat).

9 Physical and chemical properties

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

· **General Information**

· **Appearance:**

| | |
|---------------|----------------|
| Form: | Liquid |
| Color: | Clear |
| Odor: | Characteristic |

· **Change in condition**

| | |
|-------------------------------------|----------------|
| Melting point/Melting range: | Not determined |
| Boiling point/Boiling range: | 78 °C (172 °F) |

· **Flash point:** 15.5 °C (60 °F)

(Contd. on page 6)

Safety Data Sheet
 acc. to OSHA HCS

Date Prepared: 07/22/2013

Reviewed On: 06/12/2013

Product Name: TB Decolorizer
(TB Stain Set ZN)

(Contd. of page 5)

| | |
|--------------------------------------------------|--------------------------------------------------------------------------------------------|
| · Ignition temperature: | 425.0 °C (797 °F) |
| · Auto igniting: | Product is not self igniting. |
| · Danger of explosion: | Product is not explosive. However, formation of explosive air/vapor mixtures are possible. |
| · Explosion limits: | |
| Lower: | 3.8 Vol % |
| Upper: | 13.5 Vol % |
| · Vapor pressure at 25 °C (77 °F): | 59.0 hPa (44 mm Hg) |
| · Density at 25 °C (77 °F): | 1.53 g/cm ³ |
| · Solubility in / Miscibility with Water: | Soluble |
| · Solvent content: | |
| Organic solvents: | 97.0 % |
| · Other information | No further relevant information available. |

10 Stability and reactivity

- **Reactivity**
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** Incompatible material: strong oxidizers.
- **Hazardous decomposition products:**
Carbon dioxide (CO₂)
Hydrogen chloride (HCl)

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

 · **LD/LC50 values that are relevant for classification:**
64-17-5 ethanol

| | | |
|------|------|------------------|
| Oral | LD50 | 3450 mg/kg (MOU) |
| | | 7060 mg/kg (rat) |

67-56-1 methanol

| | | |
|------|------|------------------|
| Oral | LD50 | 5628 mg/kg (rat) |
|------|------|------------------|

(Contd. on page 7)



Safety Data Sheet acc. to OSHA HCS

Date Prepared: 07/22/2013

Reviewed On: 06/12/2013

**Product Name: TB Decolorizer
(TB Stain Set ZN)**

(Contd. of page 6)

- **Primary irritant effect:**
- **on the skin:** No irritating effect.
- **on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Subacute to chronic toxicity:**
Target organs: liver, gastrointestinal tumors, blood, lymphomas.
Target organs: thyroid, kidney, ureter or bladder tumors.
- **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Harmful
- **Carcinogenic categories**

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

| | | |
|-----------|-------------------|---|
| 7647-01-0 | hydrochloric acid | 3 |
|-----------|-------------------|---|

· **NTP (National Toxicology Program)**

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 1 (Self-assessment): slightly hazardous for water.
- **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 with solid waste.
Dispose of material in accordance with federal (40 CFR 261.3), state and local requirements.
RCRA hazardous waste - RCRA # D001 (ignitable).

(Contd. on page 8)

Safety Data Sheet
 acc. to OSHA HCS

Date Prepared: 07/22/2013

Reviewed On: 06/12/2013

Product Name: TB Decolorizer
(TB Stain Set ZN)

(Contd. of page 7)

- **Uncleaned packagings:**
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

 · **UN-Number**

 · **DOT** UN3316
 · **ADR, IMDG, IATA** 3316

 · **UN proper shipping name**

 · **DOT, IMDG, IATA** CHEMICAL KITS
 · **ADR** 3316 CHEMICAL KIT

 · **Transport hazard class(es)**

 · **DOT, IMDG, IATA**

 · **Class** 9 Miscellaneous dangerous substances and articles.

 · **Label** 9

 · **ADR**

 · **Class** 9 (M11) Miscellaneous dangerous substances and articles

 · **Label** 9

 · **Packing group**

 · **DOT, ADR, IMDG, IATA** II

 · **Environmental hazards:**

 · **Marine pollutant:** No

 · **Special precautions for user** Warning: Miscellaneous dangerous substances and articles

 · **EMS Number:** F-A,S-P

 · **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.

(Contd. on page 9)

Safety Data Sheet
 acc. to OSHA HCS

Date Prepared: 07/22/2013

Reviewed On: 06/12/2013

**Product Name: TB Decolorizer
 (TB Stain Set ZN)**

(Contd. of page 8)

 · **UN "Model Regulation":** UN3316, CHEMICAL KITS, 9, II

15 Regulatory information

 · **Safety, health and environmental regulations/legislation specific for the substance or mixture**

 · **SARA Section 355 (extremely hazardous substances)**

| | |
|-----------|-------------------|
| 7647-01-0 | hydrochloric acid |
|-----------|-------------------|

 · **SARA Section 313 (specific toxic chemical listings)**

All ingredients are listed.

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

All ingredients are listed.

 · **California Proposition 65 - Chemicals known to cause cancer**

None of the ingredients is listed.

 · **California Proposition 65 - Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

 · **California Proposition 65 - Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

 · **California Proposition 65 - Chemicals known to cause developmental toxicity:**

| | |
|---------|---------|
| 64-17-5 | ethanol |
|---------|---------|

 · **Carcinogenic categories**

 · **TLV (Threshold Limit Value established by ACGIH)**

| | | |
|-----------|-------------------|----|
| 64-17-5 | ethanol | A4 |
| 7647-01-0 | hydrochloric acid | A4 |

 · **GHS label elements**

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

 · **Hazard pictograms**


GHS02 GHS08

 · **Signal word** Danger

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

methanol

 · **Hazard statements**

H225 Highly flammable liquid and vapour.

(Contd. on page 10)

Safety Data Sheet
acc. to OSHA HCS

Date Prepared: 07/22/2013

Reviewed On: 06/12/2013

Product Name: TB Decolorizer
(TB Stain Set ZN)

(Contd. of page 9)

*H371 May cause damage to organs.***· Precautionary statements**

- P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.*
- P241 Use explosion-proof electrical/ventilating/lighting/equipment.*
- P260 Do not breathe dust/fume/gas/mist/vapours/spray.*
- P280 Wear protective gloves/protective clothing/eye protection/face protection.*
- P240 Ground/bond container and receiving equipment.*
- P233 Keep container tightly closed.*
- P242 Use only non-sparking tools.*
- P243 Take precautionary measures against static discharge.*
- P264 Wash thoroughly after handling.*
- P270 Do not eat, drink or smoke when using this product.*
- P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.*
- P309+P311 IF exposed or if you feel unwell: Call a POISON CENTER or doctor/physician.*
- P370+P378 In case of fire: Use for extinction: CO2, powder or water spray.*
- P405 Store locked up.*
- P403+P235 Store in a well-ventilated place. Keep cool.*
- P501 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**

To the best of our knowledge, the information contained herein is accurate. However, neither Becton, Dickinson and Company or any of its subsidiaries assumes any liabilities whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we can not guarantee that these are the only hazards that exist.

· Department issuing MSDS:

*Environmental, Health & Safety
Created by Michael J. Spinazzola*

· Contact: Technical Service Representative**· Abbreviations and acronyms:**

*RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer
(Regulations Concerning the International Transport of Dangerous Goods by Rail)*

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

ICAO: International Civil Aviation Organization

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

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

(Contd. on page 11)



Safety Data Sheet
acc. to OSHA HCS

Date Prepared: 07/22/2013

Reviewed On: 06/12/2013

Product Name: TB Decolorizer
(TB Stain Set ZN)

(Contd. of page 10)

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)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent

US

Date Prepared: 07/22/2013

Reviewed On: 06/12/2013

1 Identification

- **Product Identifier**
- **Product Name:** TB Methylene Blue
(TB Stain Set ZN)
- **Catalog Number:** 212520
- **Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the preparation** *In-vitro Diagnostics*
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
BD Diagnostic Systems
7 Loveton Circle
Sparks, MD 21152
Telephone: (410) 771 - 0100 or (800) 638 – 8663
Email Address: Technical_Services@bd.com
- **Information Department:** Technical Service
- **Emergency telephone number:**
In case of a chemical emergency, spill, fire, exposure, or accident, contact BD Diagnostic Systems (410) 771-0100 or (800)-638-8663, or ChemTrec at (800) 424-9300.

2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS02 Flame

Flam. Liq. 3 H226 Flammable liquid and vapour.

- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**



Xn; Harmful

*R40: Limited evidence of a carcinogenic effect.**R10: Flammable.*

- **Classification system:**

The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.

- **Label elements**

- **GHS label elements**

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

- **Hazard pictograms**



GHS02

- **Signal word** *Warning*

(Contd. on page 2)

Safety Data Sheet
 acc. to OSHA HCS

Date Prepared: 07/22/2013

Reviewed On: 06/12/2013

Product Name: TB Methylene Blue
(TB Stain Set ZN)

(Contd. of page 1)

- **Hazard statements**

H226 Flammable liquid and vapour.

- **Precautionary statements**

- P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
 P241 Use explosion-proof electrical/ventilating/lighting/equipment.
 P280 Wear protective gloves/protective clothing/eye protection/face protection.
 P240 Ground/bond container and receiving equipment.
 P233 Keep container tightly closed.
 P242 Use only non-sparking tools.
 P243 Take precautionary measures against static discharge.
 P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
 P370+P378 In case of fire: Use for extinction: CO2, powder or water spray.
 P403+P235 Store in a well-ventilated place. Keep cool.
 P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

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



Health = 2
 Flammability = 3
 Reactivity = 0

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



HEALTH 2 Health = 2
 FIRE 3 Flammability = 3
 REACTIVITY 0 Reactivity = 0

- **Other hazards**

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

- **Chemical characterization: Mixture**

- **Description:** Mixture consisting of the following components.

- **Dangerous Components:**

| | | | |
|-----------------------------------|----------|--------------------------------|-------|
| CAS: 64-17-5 EINECS: 200-578-6 | ethanol | F R10 | 28.5% |
| CAS: 67-56-1 EINECS: 200-659-6 | methanol | T R23/24/25-39/23/24/25; F R11 | 1.5% |

- **Additional information** Risk phrases refer to section 15.

US

(Contd. on page 3)

Safety Data Sheet
acc. to OSHA HCS

Date Prepared: 07/22/2013

Reviewed On: 06/12/2013

Product Name: TB Methylene Blue
(TB Stain Set ZN)

(Contd. of page 2)

4 First-aid measures

- **Description of first aid measures**
- **General information**
Symptoms of poisoning may even occur after several hours; therefore provide medical observation for at least 48 hours after the accident.
- **After inhalation** *Seek medical treatment in case of complaints.*
- **After skin contact** *Immediately wash with water and soap and rinse thoroughly.*
- **After eye contact**
Rinse opened eye for 15 minutes under running water. Then consult a doctor.
- **After swallowing** *Immediately call a doctor.*
- **Information for doctor** *Show this product label or this MSDS.*
- **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, ABC multipurpose dry chemical or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture**
No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** *No special measures required.*

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** *Not required.*
- **Environmental precautions:** *Wipe up with damp sponge or mop.*
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders).
- **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.*

(Contd. on page 4)

Safety Data Sheet

acc. to OSHA HCS

Date Prepared: 07/22/2013

Reviewed On: 06/12/2013

**Product Name: TB Methylene Blue
(TB Stain Set ZN)**

(Contd. of page 3)

- **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:** 15 - 30 °C
- **Information about storage in one common storage facility:**
Store away from oxidizing agents.
- **Further information about storage conditions:**
Store in cool, dry conditions in well sealed containers.
- **Storage class** II A
- **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 Section 7.
- **Control parameters**

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

64-17-5 ethanol

| | |
|-----|-----------------------------------|
| PEL | 1900 mg/m ³ , 1000 ppm |
| REL | 1900 mg/m ³ , 1000 ppm |
| TLV | 1880 mg/m ³ , 1000 ppm |

67-56-1 methanol

| | |
|-----|--------------------------------------------------------------------------------------------------------------------|
| PEL | 260 mg/m ³ , 200 ppm |
| REL | Short-term value: 325 mg/m ³ , 250 ppm Long-term value: 260 mg/m ³ , 200 ppm Skin |
| TLV | 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.
- **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, use a chemical fume hood or a NIOSH/MSHA-approved respirator.

(Contd. on page 5)

Safety Data Sheet
 acc. to OSHA HCS

Date Prepared: 07/22/2013

Reviewed On: 06/12/2013

Product Name: TB Methylene Blue
(TB Stain Set ZN)

(Contd. of page 4)

· Protection of hands:


Chemical resistant gloves (i.e. nitrile, or equivalent).

- **Eye protection:** Safety glasses
- **Body protection:** Protective work clothing (lab coat).

9 Physical and chemical properties

· Information on basic physical and chemical properties
· General Information
· Appearance:

| | |
|---------------|----------------|
| Form: | Liquid |
| Color: | Blue |
| Odor: | Characteristic |

· Change in condition

| | |
|-------------------------------------|----------------|
| Melting point/Melting range: | Not determined |
| Boiling point/Boiling range: | 78 °C (172 °F) |

| | |
|-----------------------|---------------|
| · Flash point: | 29 °C (84 °F) |
|-----------------------|---------------|

| | |
|--------------------------------|-------------------|
| · Ignition temperature: | 425.0 °C (797 °F) |
|--------------------------------|-------------------|

| | |
|-------------------------|-------------------------------|
| · Auto igniting: | Product is not self igniting. |
|-------------------------|-------------------------------|

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

· Explosion limits:

| | |
|---------------|------------|
| Lower: | 7.0 Vol % |
| Upper: | 20.0 Vol % |

| | |
|-------------------------------------------|---------------------|
| · Vapor pressure at 25 °C (77 °F): | 59.0 hPa (44 mm Hg) |
|-------------------------------------------|---------------------|

| | |
|-------------------|----------------|
| · Density: | Not determined |
|-------------------|----------------|

· Solubility in / Miscibility with

| | |
|---------------|---------|
| Water: | Soluble |
|---------------|---------|

· Solvent content:

| | |
|--------------------------|--------|
| Organic solvents: | 30.0 % |
|--------------------------|--------|

| | |
|----------------------------|--------------------------------------------|
| · Other information | No further relevant information available. |
|----------------------------|--------------------------------------------|

US

(Contd. on page 6)

Safety Data Sheet
 acc. to OSHA HCS

Date Prepared: 07/22/2013

Reviewed On: 06/12/2013

Product Name: TB Methylene Blue
(TB Stain Set ZN)

(Contd. of page 5)

10 Stability and reactivity

- **Reactivity**
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
 No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:**
 Nitrogen oxides (NO_x)
 Carbon monoxide (CO) and carbon dioxide (CO₂)
 Hydrogen chloride (HCl)

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **LD/LC50 values that are relevant for classification:**

64-17-5 ethanol

| | | |
|------|------|------------------|
| Oral | LD50 | 3450 mg/kg (MOU) |
| | | 7060 mg/kg (rat) |

- **Primary irritant effect:**
- **on the skin:** No irritating effect.
- **on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Subacute to chronic toxicity:**
 Target organs: eyes, kidneys, liver, gastrointestinal tumors, blood, lymphomas.
 Target organs: thyroid, kidney, ureter or bladder tumors.
- **Additional toxicological information:**
 The product shows the following dangers according to internally approved calculation methods for preparations:
- **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.

US

(Contd. on page 7)

Safety Data Sheet
acc. to OSHA HCS

Date Prepared: 07/22/2013

Reviewed On: 06/12/2013

Product Name: TB Methylene Blue
(TB Stain Set ZN)

(Contd. of page 6)

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 1 (Self-assessment): slightly hazardous for water.
- **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 with solid waste.
Dispose of material in accordance with federal (40 CFR 261.3), state and local requirements.
RCRA hazardous waste - RCRA # D001 (ignitable).
- **Uncleaned packagings:**
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

- | | |
|----------------------------------|--------------------|
| · UN-Number | |
| · DOT | UN3316 |
| · ADR, IMDG, IATA | 3316 |
| · UN proper shipping name | |
| · DOT, IMDG, IATA | CHEMICAL KIT |
| · ADR | 3316 CHEMICAL KITS |

(Contd. on page 8)

US

Safety Data Sheet
 acc. to OSHA HCS

Date Prepared: 07/22/2013

Reviewed On: 06/12/2013

Product Name: TB Methylene Blue
(TB Stain Set ZN)

(Contd. of page 7)

 · **Transport hazard class(es)**

 · **DOT, IMDG, IATA**

 · **Class** 9 Miscellaneous dangerous substances and articles.

 · **Label** 9

 · **ADR**

 · **Class** 9 (M11) Miscellaneous dangerous substances and articles

 · **Label** 9

 · **Packing group**

 · **DOT, ADR, IMDG, IATA** III

 · **Environmental hazards:**

 · **Marine pollutant:** No

 · **Special precautions for user** Warning: Miscellaneous dangerous substances and articles

 · **EMS Number:** F-A,S-P

 · **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.

 · **UN "Model Regulation":** UN3316, CHEMICAL KITS, 9, III

15 Regulatory information

 · **Safety, health and environmental regulations/legislation specific for the substance or mixture**

 · **SARA Section 355 (extremely hazardous substances)**

None of the ingredients is listed.

 · **SARA Section 313 (specific toxic chemical listings)**

64-17-5 ethanol

67-56-1 methanol

(Contd. on page 9)

Safety Data Sheet
 acc. to OSHA HCS

Date Prepared: 07/22/2013

Reviewed On: 06/12/2013

Product Name: TB Methylene Blue
(TB Stain Set ZN)

(Contd. of page 8)

· TSCA (Toxic Substances Control Act)

All ingredients are listed.

· California Proposition 65 - Chemicals known to cause cancer

None of the ingredients is listed.

· California Proposition 65 - Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed.

· California Proposition 65 - Chemicals known to cause reproductive toxicity for males:

None of the ingredients is listed.

· California Proposition 65 - Chemicals known to cause developmental toxicity:

64-17-5 ethanol

· Carcinogenic categories
· TLV (Threshold Limit Value established by ACGIH)

64-17-5 ethanol

A4

· GHS label elements

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

· Hazard pictograms


GHS02

· Signal word Warning
· Hazard statements

H226 Flammable liquid and vapour.

· Precautionary statements

- P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
- P241 Use explosion-proof electrical/ventilating/lighting/equipment.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P240 Ground/bond container and receiving equipment.
- P233 Keep container tightly closed.
- P242 Use only non-sparking tools.
- P243 Take precautionary measures against static discharge.
- P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P370+P378 In case of fire: Use for extinction: CO2, powder or water spray.
- P403+P235 Store in a well-ventilated place. Keep cool.
- P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

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

US

(Contd. on page 10)

Safety Data Sheet
acc. to OSHA HCS

Date Prepared: 07/22/2013

Reviewed On: 06/12/2013

Product Name: TB Methylene Blue
(TB Stain Set ZN)

(Contd. of page 9)

16 Other information

To the best of our knowledge, the information contained herein is accurate. However, neither Becton, Dickinson and Company or any of its subsidiaries assumes any liabilities whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we can not guarantee that these are the only hazards that exist.

· Department issuing MSDS:

*Environmental, Health & Safety
Created by Michael J. Spinazzola*

· Contact: *Technical Service Representative***· Abbreviations and acronyms:**

*RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer
(Regulations Concerning the International Transport of Dangerous Goods by Rail)*

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

ICAO: International Civil Aviation Organization

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

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

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)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent