

Safety Data Sheet
acc. to OSHA HCS

Date Prepared: 07/22/2013

Reviewed On: 06/12/2013

1 Identification

- **Product Identifier**
- **Product Name:** Transport Reagent
(Affirm RT Transport System)
- **Catalog Number:** 446255
- **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.



GHS06 Skull and crossbones

Acute Tox. 3 H311 Toxic in contact with skin.

Acute Tox. 3 H331 Toxic if inhaled.



GHS08 Health hazard

STOT SE 1 H370 Causes damage to organs.

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



T; Toxic

R23/24/25: Toxic by inhalation, in contact with skin and if swallowed.



F; Highly flammable

R11: Highly flammable.

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· **Information concerning particular hazards for human and environment:**

This product contains dimethylsulfoxide freely penetrates the skin and may carry dissolved chemicals into the body.

· **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 GHS06 GHS08

· **Signal word** Danger

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

methanol

· **Hazard statements**

H225 Highly flammable liquid and vapour.

H311+H331 Toxic in contact with skin or if inhaled.

H370 Causes 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.

P261 Avoid breathing 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.

P271 Use only outdoors or in a well-ventilated area.

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

P361 Remove/Take off immediately all contaminated clothing.

P321 Specific treatment (see on this label).

P307+P311 IF exposed: Call a POISON CENTER or doctor/physician.

P311 Call a POISON CENTER or doctor/physician.

P322 Specific measures (see on this label).

P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P312 Call a POISON CENTER or doctor/physician if you feel unwell.

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P363 Wash contaminated clothing before reuse.
P370+P378 In case of fire: Use for extinction: CO2, powder or water spray.
P302+P352 IF ON SKIN: Wash with plenty of soap and water.
P405 Store locked up.
P403+P233 Store in a well-ventilated place. Keep container tightly closed.
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

· **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: 67-56-1 EINECS: 200-659-6	methanol	T R23/24/25-39/23/24/25; F R11	50.0%
CAS: 67-68-5 EINECS: 200-664-3	dimethyl sulfoxide		50.0%

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

4 First-aid measures

· **Description of first aid measures**

· **General information** Immediately remove contaminated clothing.

· **After inhalation** Supply fresh air or oxygen; and immediately call for a doctor.

· **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.

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- **Information for doctor** Show this product label or this MSDS.
- **Most important symptoms and effects, both acute and delayed**
Headache
Dizziness
- **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:** Use respiratory protective device.

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.
Keep respiratory protective device available.
- **Conditions for safe storage, including any incompatibilities**
- **Storage**
- **Requirements to be met by storerooms and receptacles:** < 30 °C
- **Information about storage in one common storage facility:**
Store away from oxidizing agents.

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- **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:**

67-56-1 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.
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
- **Body protection:** Protective work clothing (lab coat).

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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: 64 °C (147 °F)

· **Flash point:** 11 °C (52 °F)

· **Ignition temperature:** 270.0 °C (518 °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: 1.8 Vol %
Upper: 44.0 Vol %

· **Vapor pressure at 20 °C (68 °F):** 128.0 hPa (96 mm Hg)

· **Density at 20 °C (68 °F):** 0.945 g/cm³

· **Solubility in / Miscibility with
Water:**

Soluble

· Solvent content:

Organic solvents: 100.0 %

· **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:

Sulfur oxides (SO_x)
Carbon monoxide (CO) and carbon dioxide (CO₂)

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Formaldehyde

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11 Toxicological information

- **Information on toxicological effects**

- **Acute toxicity:**

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

- **67-56-1 methanol**

Oral	LD50	5628 mg/kg (rat)
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- **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: respiratory tract, eyes, kidneys, and skin.

- **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:

Toxic

- **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.

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.

- **Ecotoxicological effects:**

- **Other information:**

The ecological effects have not been thoroughly investigated, but currently none have been identified.

- **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.

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 · **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 # F003 (ignitable, toxic).

 · **Uncleaned packagings:**

 · **Recommendation:** Disposal must be made according to state and federal regulations.

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

14 Transport information

 · **UN-Number**

 · **DOT**

UN1993

 · **ADR, IMDG, IATA**

1993

 · **UN proper shipping name**

 · **DOT, IMDG, IATA**

FLAMMABLE LIQUID, N.O.S. (methanol)

 · **ADR**

1993 FLAMMABLE LIQUID, N.O.S. (methanol)

 · **Transport hazard class(es)**

 · **DOT**

 · **Class**

3 Flammable liquids.

 · **Label**

3

 · **ADR**

 · **Class**

3 (F1) Flammable liquids

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 · **Label** 3

 · **IMDG, IATA**

 · **Class** 3 Flammable liquids.
 · **Label** 3

 · **Packing group**

 · **DOT, ADR, IMDG, IATA** II

 · **Environmental hazards:**

 · **Marine pollutant:** No

 · **Special precautions for user** Warning: Flammable liquids

 · **Danger code (Kemler):** 33

 · **EMS Number:** F-E, S-E

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

 · **Transport/Additional information:**

 · **DOT**

 · **Remarks:** This product can be transported using the "small quantity" exception. This package conforms to 49 CFR 173.4 for domestic highway or rail transport only. The Hazard Class, Identification number, and Packing group listed above is for informational purposes only.

 · **IMDG**

 · **Remarks:** Limited quantity

 · **IATA**

 · **Remarks:** This product can be transported using the exception: Dangerous Goods in Excepted Quantities. The Hazard class, Identification number, and Packing group listed above is for informational purposes only.

 · **UN "Model Regulation":** UN1993, FLAMMABLE LIQUID, N.O.S., special provision 640D (METHANOL), 3, II

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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)**

67-56-1 | methanol

· **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:**

None of the ingredients is listed.

· **Carcinogenic categories**

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

None of the ingredients is listed.

· **GHS label elements**

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

· **Hazard pictograms**



GHS02 GHS06 GHS08

· **Signal word** Danger

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

methanol

· **Hazard statements**

H225 Highly flammable liquid and vapour.

H311+H331 Toxic in contact with skin or if inhaled.

H370 Causes 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.

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- P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P261 Avoid breathing 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.
P271 Use only outdoors or in a well-ventilated area.
P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P361 Remove/Take off immediately all contaminated clothing.
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P363 Wash contaminated clothing before reuse.
P370+P378 In case of fire: Use for extinction: CO₂, powder or water spray.
P302+P352 IF ON SKIN: Wash with plenty of soap and water.
P405 Store locked up.
P403+P233 Store in a well-ventilated place. Keep container tightly closed.
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

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*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*

US