SAFETY DATA SHEET

1. Identification

Product identifier **BD Vacutainer® K2EDTA Tubes**

Other means of identification

Product code 362089, 364661, 364664, 367838, 368274, 368499, 365300, 365312, 365329, 365330, 365331, 365900, 366164, 366643, 367386, 367525, 367839, 367864, 367873, 367918, 367924, 367941, 367950, 367978, 368267, 368834, 368841, 368843, 368856, 368860

Recommended use Blood collection (In-Vitro Diagnostic) device for collecting blood samples for analysis

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Supplier

Company name Becton Dickinson UK Ltd.

Address The Danby Building, Edmund Halley Road
Oxford Science Park, OX4 4DQ, Oxford, United Kingdom

Telephone UK: +44 (0) 1752 701281
USA: 800-631-0174

e-mail pas_tech_services@bd.com

1.4. Emergency telephone number Chemtrec EU 703-527-3887 US 1-800-424-9300

2. Hazard(s) identification

Physical hazards Not classified.

Health hazards Acute toxicity, inhalation Category 4

OSHA defined hazards Not classified.

Label elements

Signal word Warning

Hazard statement Harmful if inhaled.

Precautionary statement

Prevention Avoid breathing vapors. Use only outdoors or in a well-ventilated area.

Response If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor if you feel unwell.

Storage Store away from incompatible materials.

Disposal Dispose of waste and residues in accordance with local authority requirements.

Hazard(s) not otherwise classified (HNOC) None known.

Supplemental information Low hazard for recommended handling by trained personnel.

3. Composition/information on ingredients

Substances

Chemical name	Common name and synonyms	CAS number	%
Dipotassium dihydrogen ethylenediaminetetraacetate		25102-12-9	100

Composition comments All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First-aid measures

Inhalation	No specific precautions due to the small quantities handled. However: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a poison center or doctor/physician if you feel unwell.
Skin contact	No specific precautions due to the small quantities handled. However: Wash skin thoroughly with soap and water. Get medical attention if irritation develops and persists.
Eye contact	No specific precautions due to the small quantities handled. However, rinse with water. Do not rub eye. Make sure to remove any contact lenses from the eyes before rinsing. Get medical attention if irritation develops and persists.
Ingestion	No specific precautions due to the small quantities handled. However: Rinse mouth thoroughly if dust is ingested. Get medical attention if any discomfort occurs.
Most important symptoms/effects, acute and delayed	Under normal conditions of intended use, this material does not pose a risk to health.
Indication of immediate medical attention and special treatment needed	Treat symptomatically.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media	Dry chemical. Foam.
Unsuitable extinguishing media	Carbon dioxide (CO2).
Specific hazards arising from the chemical	Explosion hazard: Avoid generating dust; fine dust dispersed in air in sufficient concentrations and in the presence of an ignition source is a potential dust explosion hazard. During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Selection of respiratory protection for firefighting: follow the general fire precautions indicated in the workplace. Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	Use standard firefighting procedures and consider the hazards of other involved materials. Containers close to fire should be removed or cooled with water.
General fire hazards	The product is not flammable.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Provide adequate ventilation. Avoid dust formation. Avoid inhalation of dust and contact with skin and eyes. Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration. Wear suitable protective clothing. See Section 8 of the SDS for Personal Protective Equipment.
Methods and materials for containment and cleaning up	Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Minimize dust generation and accumulation. Collect dust using a vacuum cleaner equipped with HEPA filter. For waste disposal, see section 13 of the SDS.
Environmental precautions	Avoid discharge into drains, water courses or onto the ground unless authorized by permit.

7. Handling and storage

Precautions for safe handling	No specific precautions due to the small quantities handled. However: Explosion-proof general and local exhaust ventilation. Minimize dust generation and accumulation. Provide adequate ventilation. Do not breathe dust. Do not get in eyes, on skin, or on clothing. Do not taste or swallow. When using, do not eat, drink or smoke. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Keep the workplace clean. Observe good industrial hygiene practices.
Conditions for safe storage, including any incompatibilities	Keep away from heat, sparks and open flame. Store in original tightly closed container. Store in a cool, dry place.

8. Exposure controls/personal protection

Occupational exposure limits	No exposure limits noted for ingredient(s).
Biological limit values	No biological exposure limits noted for the ingredient(s).
Appropriate engineering controls	No specific recommendation made, but protection against nuisance dust must be used when the general level exceeds 10 mg/m3.

Individual protection measures, such as personal protective equipment

Eye/face protection	It is a good industrial hygiene practice to minimize eye contact. Risk of contact: Wear dust goggles.
Skin protection	
Hand protection	Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove supplier.
Other	No skin protection is ordinarily required under normal conditions of use. In accordance with good industrial hygiene practices, precautions should be taken to avoid skin contact.
Respiratory protection	No protection is ordinarily required under normal conditions of use and with adequate ventilation. If engineering measures are not sufficient to maintain concentrations of dust particulates below the OEL, suitable respiratory protection must be worn. In the United States of America, if respirators are used, a program should be instituted to assure compliance with OSHA 29 CFR 1910.134.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations	Wash hands after handling and before eating. Keep away from food and drink.

9. Physical and chemical properties

Appearance	
Physical state	Liquid.
Form	Crystalline.
Color	White.
Odor	Odorless.
Odor threshold	Not applicable.
pH	Not applicable.
Melting point/freezing point	485.6 °F (252 °C)
Initial boiling point and boiling range	Decomposes.
Flash point	Not applicable.
Evaporation rate	Not available.
Flammability (solid, gas)	Fine particles may form explosive mixtures with air.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not applicable.
Flammability limit - upper (%)	Not applicable.
Vapor pressure	Not applicable.
Vapor density	Not applicable.
Relative density	Not available.
Solubility(ies)	
Solubility (water)	108 g/l (20°C, pH: 5.3)
Partition coefficient (n-octanol/water)	Log Pow: -4.3 (25°C, pH: 4.5)
Auto-ignition temperature	Not applicable.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Explosive properties	Not explosive.
Molecular formula	C10H16N2O8.2H2O.2K
Oxidizing properties	Not oxidizing.

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.

Conditions to avoid	Avoid dust formation.
Incompatible materials	None known.
Hazardous decomposition products	Thermal decomposition: > 150°C.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Harmful if inhaled. Dust may irritate respiratory system.
Skin contact	Dust may irritate skin.
Eye contact	Dust may irritate the eyes.
Ingestion	May cause discomfort if swallowed.
Symptoms related to the physical, chemical and toxicological characteristics	Under normal conditions of intended use, this material does not pose a risk to health.

Information on toxicological effects

Acute toxicity Harmful if inhaled.

Components	Species	Test Results
Dipotassium dihydrogen ethylenediaminetetraacetate (CAS 25102-12-9)		
Acute		
Oral		
LD50	Rat	3735 mg/kg, (Male)
		3690 mg/kg, (Female)

Skin corrosion/irritation	Based on available data, the classification criteria are not met.
Serious eye damage/eye irritation	Based on available data, the classification criteria are not met.

Respiratory or skin sensitization

Respiratory sensitization	Due to lack of data the classification is not possible.
Skin sensitization	Due to lack of data the classification is not possible.
Germ cell mutagenicity	Based on available data, the classification criteria are not met.
Carcinogenicity	Due to lack of data the classification is not possible.

IARC Monographs. Overall Evaluation of Carcinogenicity

Not listed.

NTP Report on Carcinogens

Not listed.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Reproductive toxicity	Due to lack of data the classification is not possible.
Specific target organ toxicity - single exposure	Due to lack of data the classification is not possible.
Specific target organ toxicity - repeated exposure	Due to lack of data the classification is not possible.
Aspiration hazard	Based on available data, the classification criteria are not met.
Chronic effects	No other specific chronic health impact noted.
Further information	No additional adverse health effects noted.

12. Ecological information

Ecotoxicity The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Components		Species	Test Results
Dipotassium dihydrogen ethylenediaminetetraacetate (CAS 25102-12-9)			
Aquatic			
Crustacea	EC0	Daphnia magna	310 mg/l, 24 hours

Components		Species	Test Results
	EC100	Daphnia magna	1250 mg/l, 24 hours
	EC50	Daphnia magna	610 - 625 mg/l, 24 hours

Persistence and degradability Expected to be readily biodegradable.

Bioaccumulative potential Based on available data, the classification criteria are not met.

Mobility in soil No data available.

Mobility in general The product is slightly soluble in water.

Other adverse effects The product is not volatile but may be spread by dust-raising handling.

13. Disposal considerations

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazardous waste code The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not established.

15. Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - Yes
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical Yes

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

US state regulations

US. Massachusetts RTK - Substance List

Not regulated.

US. New Jersey Worker and Community Right-to-Know Act

Not listed.

US. Pennsylvania Worker and Community Right-to-Know Law

Not listed.

US. Rhode Island RTK

Not regulated.

US. California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	Yes
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	No
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	No

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date 15-September-2015

Revision date -

Version # 01

HMIS® ratings Health: 2
Flammability: 1
Physical hazard: 0

NFPA ratings

List of abbreviations

LD50: Lethal Dose, 50%.
EC0: Effective Concentration 0%.
EC50: Effective Concentration, 50%.
EC100: Effective Concentration 100%.

References	REACH dossier for substance. ACGIH Documentation of the Threshold Limit Values and Biological Exposure Indices US. IARC Monographs on Occupational Exposures to Chemical Agents IARC Monographs. Overall Evaluation of Carcinogenicity
Disclaimer	BD Diagnostics Preanalytical Systems cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.
This SDS contains revisions in the following section(s):	1, 2, 3, 4, 6, 7, 8, 9, 10, 11, 12, 15, 16.