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Status	Item Num	Catalog	Mfg	Abby	MSD	Description	Description 2
DMF	001180	366470	BDVAC	43		TUBE, BLD VAC STR GRY 7ML(100B	X; 6470
	001309	366471	BDVAC	43		TUBE, BLD VAC STR GRY 5ML(100B	X; 6471
	146220	366383	BDVAC	43		TUBE, BLOOD VAC STR GRY 3ML(10	0BX) 6383
DMF	190810	367725	BDVAC	43		TUBE, BLOOD CCLL VAC STR GRY 7	ML (100/BX
DMF	193853	367722	BDVAC	43		TUBE, VAC STR GRAY 3ML (100/BX	)
DMF	205015	367723	BDVAC	43		TUBE, VAC/HEMOGARD STR LT GRAY	7ML(100BX
DGM	205016	369724	BDVAC	43		TUBE, VAC/HEMOGARD 5ML LT GRAY	100/BX)
DMF	205017	367726	BDVAC	43		TUBE, VAC/HEMOGARD STR LT GRAY	7ML(100BX
	320512	367922	BDVAC	43		TUBE, VAC/HEMOGARD PLUS LT GRY	4ML (100/BX)
	321841	367921	BDVAC	43		TUBE, VAC/HEMOGARD PLUS LT GRY	2ML (100/BX)
	321842	367925	BDVAC	43		TUBE, VAC/HEMOGARD PLUS LT GRY	6ML (100/BX)
DMF	374571	367001	BDVAC	43		TUBE, FLUORIDE 10ML (100/BX 10	BX/CS)
DGM	492935	368587	BDVAC	43		BLOOD COLLECTION KIT, 4LTR 13"	X75" (1000/CS;
	509065	367921	BDVAC	43		TUBE, VAC/HEMOGARD+ LT GRY 2ML	(L*WESTAT)(100/BX)
	512320	368587	BDVAC	43		TUBE, VAC GLUC PLAS GRY 13X75M	M 4ML (10/PK)



Material Safety Data Sheet
acc. to ISO/DIS 11014

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Printing Date: 2005-Sep-27

Printing Date: Reviewed on

Product Name: BD Vacutainer® Tubes containing Potassium Oxalate and Sodium Fluoride

1 Identification of substance:

- **Product Details:**

MSDS Number: VS60300-12

Issue Date: September 26, 2005

Supersedes: VS60300-11

ECO No.: ECO36115

- **Product Name:** BD Vacutainer® Tubes containing Potassium Oxalate and Sodium Fluoride

- **Catalog Numbers:** 366383, 366470, 366471, 366659, 367001, 367722, 367723, 367725, 367726, 367921, 367922, 367925, 367934, 367935, 368033, 368034, 368150, 368387, 368920, 368921, 369724 Discontinued: 360016, 360017, 360018, 360019, 366428, 367002, 367730, 367731, 606659

- **Manufacturer/Supplier:**

BD Diagnostics, Preanalytical Systems

1 Becton Drive

Franklin Lakes, NJ, 07417-1885

- **Information Department:**

BD Diagnostics, Preanalytical Systems Technical Service, (800) 631-0174

- **Emergency Information:**

In case of a chemical emergency, spill, fire, exposure, or accident contact ChemTrec at (800) 424-9300.

2 Composition/Data on components:

- **Description:**

Chemical name: Potassium oxalate and Sodium fluoride

Synonyms: Potassium oxalate – Oxalic acid; Dipotassium salt

Sodium fluoride – Disodium difluoride; Natrium fluoride; Fluoridine; Floracide

- **CAS No.:**

Potassium oxalate: 583-52-8

Sodium fluoride: 7681-49-4

- **Quantity:**

Potassium oxalate: 2.9 - 46.0 mg

Sodium fluoride: 3.7 - 115.0 mg

- **Exposure limits:**

Sodium fluoride: NIOSH REL*: TWA 2.5 mg/m³

OSHA PEL*: TWA 2.5 mg/m³



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3 Hazards identification:

- **Hazard description:**

Extremely irritating and corrosive to the skin. Severely irritating to the eyes. Contact may cause burns to skin and eyes. Inhalation of dusts is harmful and may be fatal. May cause severe irritation of the respiratory tract. Symptoms of inhalation overexposure include nausea, vomiting, and severe irritation to mucous membranes and respiratory system. Toxic if swallowed. May be fatal. Symptoms include headache, nausea, vomiting, gastrointestinal irritation and convulsions. May have caustic effect on mouth, esophagus, and stomach. Soluble oxalates can cause kidney damage. Repeated exposure can lead to increased bone density, calcium deposits in ligaments, mottled tooth enamel, circulatory failure and nervous system irregularities. Avoid contact with skin and eyes. Do not inhale or swallow.

Primary Route of entry: Dermal, eyes, inhalation, and ingestion.

- **Health effects:**

Acute Exposure Effects:

Skin: Extremely irritating and corrosive to the skin. May cause burns.

Eyes: Severely irritating to the eyes. May cause burns.

Inhalation: Harmful if inhaled and may be fatal. Symptoms of inhalation overexposure include nausea, vomiting, and severe irritation to mucous membranes and respiratory system.

Ingestion: Toxic if swallowed. May be fatal. Symptoms include headache, nausea, vomiting, gastrointestinal irritation and convulsions. May have caustic effect on mouth, esophagus, and stomach.

Repeated Exposure Effects:

Chronic inhalation and ingestion can lead to increased bone density, calcium deposits in ligaments, mottled tooth enamel, circulatory failure and nervous system irregularities. Soluble oxalates can cause kidney damage. Chronic exposure to Sodium fluoride may cause developmental and fetal effects, which may be delayed. Animal studies have reported development of tumors.

Medical conditions which might be aggravated:

Pre-existing skin disorders or eye problems, impaired liver, kidney or respiratory function, diabetes insipidus or renal impairment.

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



Health = 3

Fire = 9

Reactivity = 1

Specific Hazard = 0

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



Health = 3

Flammability = 0

Reactivity = 1

Special = 0



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4 First aid measures:

General information:

After skin contact: Immediately flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing. Wash clothing and thoroughly clean shoes before reuse. Get immediate medical attention.

After eye contact: Immediately flush with plenty of water for at least 15 minutes while holding eyelids apart. Get immediate medical attention.

After inhalation: Immediately move the exposed person to fresh air. If breathing is difficult, give oxygen. If breathing has stopped, give artificial respiration. Get immediate medical attention.

After Swallowing: Do NOT induce vomiting. Give victim large quantities of water to dilute. Never give anything by mouth to an unconscious person. Get immediate medical attention.

Information for doctor: Show this label

5 Fire fighting measures:

- **Suitable extinguishing agents:** Use extinguishing media appropriate for surrounding fire.
- **Protective equipment:** Firefighters should wear proper protective equipment and self-contained breathing apparatus with full face piece operated in positive pressure mode.

6 Accidental release measures:

- **Person-related safety precautions:** Avoid overexposure. Wear suitable protective clothing.
- **Measures for environmental protection:** Spill should be contained with sand or other inert material and gathered into a suitable retaining area. Use water spray to reduce dust.
- **Measures for cleaning/collecting:** Vacuum or sweep up material and place into suitable disposal container. Provide adequate ventilation. Avoid generating dust. Wash site thoroughly with water. Do not allow to enter sewer.
- **Additional information:** See Section 7 for information on safe handling
See Section 8 for information on personal protection equipment
See Section 13 for information on disposal

7 Handling and storage:

Handling:

Information for safe handling: Follow routine safe handling procedures.

Information about protection against explosions and fires: Avoid contact with incompatible material, minimize dust generation and accumulation. Material must be handled with adequate ventilation.

Storage:



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Requirements to be met by storerooms and receptacles: Keep container closed when not in use. Store in a cool, dry, well-ventilated area out of direct sunlight. Store away from incompatible substances.

Information about storage in one common storage facility: Keep container closed when not in use. Store in a cool, dry, well-ventilated area out of direct sunlight. Store away from incompatible substances, such as strong acids, alkalis, and oxidizing agents.

Further information about storage conditions: Not applicable

8 Exposure controls and personal protection:

- **Additional information about design of technical systems:** Use general or local exhaust ventilation to reduce exposure.
- **Components with limit values that require monitoring at the workplace:** This product does not contain any relevant quantities of material with critical values that require monitoring in the workplace.
- **Additional information:** N/A

• **Personal Protective Equipment:**

General protective and hygienic measures: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Avoid contact with eyes, skin, and clothing. Avoid ingestion and inhalation. Use with adequate ventilation. Provide eye bath and safety shower.

Breathing equipment: None where adequate ventilation conditions exist. For conditions where dust is apparent and engineering controls are not feasible, a NIOSH/MSHA approved respirator is recommended. If concentration exceeds capacity of respirator, a self-contained breathing apparatus is recommended.

Protection of hands: Wear appropriate protective gloves to prevent skin exposure.

Eye protection: Use chemical safety goggles

Body protection: Wear appropriate protective clothing to prevent skin exposure.

09 Physical and chemical properties:

• **General Information:**

Form: Crystalline powder

Color: White

Odor: Odorless

• **Change in condition:**

Melting point/Melting range: Not determined

Boiling point/Boiling range: Not determined

• **Flash point:** Not determined

• **Flammability (solid, gaseous):** Not determined

• **Danger of explosion:** Not determined

• **Vapor pressure:** Not determined

• **Density:** Not determined

• **Solubility in/Miscibility w/H₂O:** Not determined

• **pH-value:** Not applicable

Organic solvents: Not applicable



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- **Solids content:** Not available

10 Stability and reactivity:

- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Materials to be avoided:** Strong acids, strong oxidizing agents, and glass.
- **Dangerous reactions:** Will not occur
- **Dangerous products of decomposition:** Hydrogen fluoride, carbon monoxide, carbon dioxide

11 Toxicological information:

- **Acute toxicity:**
Eye: Severely irritating to the eyes.
Skin: Extremely irritating and corrosive to the skin.
Inhalation: Harmful if inhaled and may be fatal.
Ingestion: Toxic if swallowed. May be fatal.
- **Primary irritant effect:**
On the skin: Extremely irritating and corrosive to the skin.
On the eye: Severely irritating to the eyes.
- **Sensitization:** Not established
- **Additional toxicological information:**
Chronic: Chronic inhalation and ingestion can lead to increased bone density, calcium deposits in ligaments, mottled tooth enamel, circulatory failure and nervous system irregularities. Soluble oxalates can cause kidney damage. Chronic exposure to Sodium fluoride may cause developmental and fetal effects, which may be delayed. Animal studies have reported development of tumors.

12 Ecological information:

- **Ecotoxicological effects:** No data is available on the universe effects of this material on the environment. Neither COD nor BOD data are available.
- **Other information:** N/A
- **General notes:** N/A

13 Disposal considerations:

- **Product:**
Recommendation
Disposal should be done in accordance with local, state and federal regulations.
Disposal must be made according to the regulations found in 40 CFR 261.
This product is not a RCRA hazardous waste.
- **Uncleaned packagings:**
Recommendation
Disposal should be done in accordance with local, state and federal regulations.



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Disposal must be made according to the regulations found in 40 CFR 261.

This product is not a RCRA hazardous waste.

Recommended cleansing agent

Water, if necessary with cleansing agents

▪ **General notes:**

14 Transport information:

- **DOT regulations:** Not regulated
- **Land transport ADR/RID (cross-border):** Not regulated
- **Maritime transport IMDG:** Not regulated
- **Air transport ICAO-TI und IATA-DGR:** Not regulated

15 Regulations:

- **SARA Section 355 (extremely hazardous substances):** Substances not listed
- **SARA Section 302 (extremely hazardous substances):** Sodium fluoride
- **SARA Section 304 (Reportable Quantity (RQ) under CERCLA):** 1,000 lbs (100% Sodium fluoride)
- **Section 313 (specific toxic chemical listings):** Substances not listed
- **TSCA (Toxic Substances Control Act) Inventory:** Substances listed
- **California Proposition 65 – Chemicals Known to Cause Cancer:** Substances not listed
- **California Proposition 65 – Chemicals Known to Cause Reproductive Toxicity:** Substances not listed
- **Carcinogenicity categories**
 - IARC (International Agency for Research on Cancer):** Substances not listed
 - NTP (National Toxicology Program):** Substances not listed
 - TLV (Threshold Limit Value established by ACGIH):** Substances not listed
 - MAK (German Maximum Workplace Concentration):** Not Available
- **Product related hazard information:** The product is not subject to OSHA classification according to internal calculation methods for preparations. When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.
- **National regulations:** N/A
- **Water hazard class:** N/A

16 Other information:

To the best of our knowledge, the information contained herein is accurate. However, neither BD 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 cannot guarantee that these are the only hazards that exist.

- **Department issuing MSDS:** Regulatory Affairs