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SAFETY DATA SHEET

1. Identification

Product identifier

Product No.:	Product name:	Common name(s), synonym(s)
367922	TUBE GLU PLH 13X75 4.0 PLBL GR	BD Vacutainer® Fluoride Blood Collection Tube for Glucose Determination

Other means of identification

SDS number: 088100181048

Recommended use and restriction on use

Recommended use: Scientific and industrial laboratory use. For In Vitro Diagnostic Use.

Restrictions on use: For External Use Only

Manufacturer/Importer/Supplier/Distributor Information

Manufacturer

Company Name: BD Diagnostics, Preanalytical Systems
Address: 1 Becton Drive
07417 Franklin Lakes, NJ USA
Telephone: 1 800 631 0174
Fax: 1 201 847 4866
Contact Person: Technical Services
E-mail: pas_tech_services@bd.com

Emergency telephone number: CHEMTREC 1 800 424 9300

2. Hazard(s) identification

Hazard Classification

Health Hazards

Acute toxicity (Oral)	Category 3
Acute toxicity (Dermal)	Category 4
Skin Corrosion/Irritation	Category 2
Serious Eye Damage/Eye Irritation	Category 2A

Label Elements

Hazard Symbol:





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Signal Word:	Danger
Hazard Statement:	H301: Toxic if swallowed. H312: Harmful in contact with skin. H315: Causes skin irritation. H319: Causes serious eye irritation.
Precautionary Statements	
Prevention:	P264: Wash thoroughly after handling. P270: Do not eat, drink or smoke when using this product. P280: Wear protective gloves/protective clothing/eye protection/face protection.
Response:	P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337+P313: If eye irritation persists: Get medical advice/attention. P302+P352: IF ON SKIN: Wash with plenty of water/... P332+P313: If skin irritation occurs: Get medical advice/attention. P301+P310: IF SWALLOWED: Immediately call a POISON CENTER/doctor/... P330: Rinse mouth. P312: Call a POISON CENTER/doctor if you feel unwell. P321: Specific treatment (see on this label). P363: Wash contaminated clothing before reuse.
Storage:	P405: Store locked up.
Disposal:	P501: Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.
Other hazards which do not result in GHS classification:	None.

3. Composition/information on ingredients

Mixtures

Chemical Identity	Common name and synonyms	CAS number	Content in percent (%)*
Sodium fluoride (NaF)	No data available.	7681-49-4	55.5%
Ethanedioic acid, potassium salt (1:2)	No data available.	583-52-8	44.5%

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



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4. First-aid measures

General information:	No recommendation given, but first aid may still be required in case of accidental exposure, inhalation or ingestion of this chemical. If in doubt, GET MEDICAL ATTENTION PROMPTLY!
Ingestion:	Not likely, due to the form of the product. If swallowed, rinse mouth with water (only if the person is conscious). Get medical attention immediately.
Inhalation:	Under normal conditions of intended use, this material is not expected to be an inhalation hazard.
Skin Contact:	Flush skin thoroughly with water. If skin irritation occurs: Get medical advice/attention. Call a POISON CENTER/doctor if you feel unwell. Due to the small packaging the risk of skin contact is minimal.
Eye contact:	In the event of contact with the eyes, rinse thoroughly with clean water. Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. Due to the small packaging the risk of eye contact is minimal.

Most important symptoms/effects, acute and delayed

Symptoms:	May cause skin and eye irritation. May cause abdominal pain with vomiting, nausea, diarrhea, or dizziness.
Hazards:	Low hazard for recommended handling by trained personnel.

Indication of immediate medical attention and special treatment needed

Treatment:	Get medical advice/attention if you feel unwell.
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5. Fire-fighting measures

General Fire Hazards:	No unusual fire or explosion hazards noted.
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Suitable (and unsuitable) extinguishing media

Suitable extinguishing media:	Water spray, fog, CO ₂ , dry chemical, or alcohol resistant foam.
Unsuitable extinguishing media:	None known.
Specific hazards arising from the chemical:	None known.

Special protective equipment and precautions for firefighters



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Special fire fighting procedures: No unusual fire or explosion hazards noted.

Special protective equipment for fire-fighters: No specific precautions due to the small quantities handled. Use fire-extinguishing media appropriate for surrounding materials.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures: Use personal protective equipment. Avoid contact with spilled material. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.

Methods and material for containment and cleaning up: Sweep or scoop up and remove.

Environmental Precautions: Avoid release to the environment.

7. Handling and storage

Precautions for safe handling: Low hazard for recommended handling by trained personnel. Observe good laboratory hygiene practices.

Conditions for safe storage, including any incompatibilities: Store in a cool, dry place out of direct sunlight. Store at specified temperature.

8. Exposure controls/personal protection

Control Parameters

Occupational Exposure Limits

Chemical Identity	Type	Exposure Limit Values	Source
Sodium fluoride (NaF) - as F	TWA	2.5 mg/m ³	US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended (1989)
	TWA	2.5 mg/m ³	US. ACGIH Threshold Limit Values, as amended (12 2010)
	REL	2.5 mg/m ³	US. NIOSH: Pocket Guide to Chemical Hazards, as amended (2005)
	PEL	2.5 mg/m ³	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000), as amended (02 2006)
Sodium fluoride (NaF) - Dust.	TWA	2.5 mg/m ³	US. OSHA Table Z-2 (29 CFR 1910.1000), as amended (02 2006)
Sodium fluoride (NaF)	IDLH	250 mg/m ³	US. NIOSH. Immediately Dangerous to Life or Health (IDLH) Values, as amended (10 2017)
	IDLH	250 mg/m ³	US. NIOSH. Immediately Dangerous to Life or Health (IDLH) Values, as amended (10 2017)



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Biological Limit Values

Chemical Identity	Exposure Limit Values	Source
Sodium fluoride (NaF) (Fluoride: Sampling time: Prior to shift.)	2 mg/l (Urine)	ACGIH BEI (03 2013)
Sodium fluoride (NaF) (Fluoride: Sampling time: End of shift.)	3 mg/l (Urine)	ACGIH BEI (03 2013)

Appropriate Engineering Controls

Low hazard for recommended handling by trained personnel. Observe good industrial hygiene practices.

Individual protection measures, such as personal protective equipment

- General information:** No specific hygiene procedures noted, but good personal hygiene practices are always advisable, especially when working with chemicals.
- Eye/face protection:** It is a good industrial hygiene practice to minimize eye contact.
- Skin Protection**
- Hand Protection:** Use suitable protective gloves if risk of skin contact.
- Other:** It is a good industrial hygiene practice to minimize skin contact. Wear suitable protective clothing as protection against splashing or contamination.
- Respiratory Protection:** Not relevant, due to the form of the product. None should be needed.
- Hygiene measures:** Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance

- Physical state:** solid
- Form:** Powder
- Color:** White
- Odor:** Odorless
- Odor threshold:** No data available.
- pH:** No data available.
- Melting point/freezing point:** The physical-chemical properties of this material have not been fully investigated.
- Initial boiling point and boiling range:** The physical-chemical properties of this material have not been fully investigated.
- Flash Point:** Not applicable
- Evaporation rate:** No data available.



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Flammability (solid, gas):	No data available.
Upper/lower limit on flammability or explosive limits	
Flammability limit - upper (%):	No data available.
Flammability limit - lower (%):	No data available.
Explosive limit - upper (%):	No data available.
Explosive limit - lower (%):	No data available.
Vapor pressure:	The physical-chemical properties of this material have not been fully investigated.
Vapor density:	No data available.
Relative density:	The physical-chemical properties of this material have not been fully investigated.
Solubility(ies)	
Solubility in water:	The physical-chemical properties of this material have not been fully investigated.
Solubility (other):	Not applicable
Partition coefficient (n-octanol/water):	The physical-chemical properties of this material have not been fully investigated.
Auto-ignition temperature:	No data available.
Decomposition temperature:	No data available.
Viscosity:	Not determined.

10. Stability and reactivity

Reactivity:	Stable under normal temperature conditions and recommended use.
Chemical Stability:	Material is stable under normal conditions.
Possibility of hazardous reactions:	None under normal conditions.
Conditions to avoid:	None known. None under normal conditions.
Incompatible Materials:	No common materials and contaminants with which the material may reasonably come into contact.
Hazardous Decomposition Products:	Not likely, due to the form of the product.

11. Toxicological information

General information: Under normal conditions of intended use, this material does not pose a risk to health.

Information on likely routes of exposure

Ingestion: Expected to be a low ingestion hazard.



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- Inhalation:** Under normal conditions of intended use, this material is not expected to be an inhalation hazard.
- Skin Contact:** Due to the small packaging the risk of skin contact is minimal.
- Eye contact:** Due to the small packaging the risk of eye contact is minimal.

Symptoms related to the physical, chemical and toxicological characteristics

- Ingestion:** No specific symptoms noted. However, ingestion may cause nausea, headache, dizziness and intoxication.
- Inhalation:** No specific symptoms noted.
- Skin Contact:** Causes skin irritation.
- Eye contact:** Causes serious eye irritation.

Information on toxicological effects

Acute toxicity (list all possible routes of exposure)

- Oral**
Product: ATEmix: 173.66 mg/kg
- Dermal**
Product: ATEmix: 1,100 mg/kg
- Inhalation**
Product: No data available.

- Repeated dose toxicity**
Product: No data available.

- Skin Corrosion/Irritation**
Product: No data available.

- Serious Eye Damage/Eye Irritation**
Product: No data available.

- Specified substance(s):**
Sodium fluoride (NaF) Possibly Irritating

- Respiratory or Skin Sensitization**
Product: No data available.

- Specified substance(s):**
Sodium fluoride (NaF) Skin sensitization:, in vivo (Guinea pig): Non sensitising



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Carcinogenicity

Product: No data available.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:

No carcinogenic components identified

US. National Toxicology Program (NTP) Report on Carcinogens:

No carcinogenic components identified

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050), as amended:

No carcinogenic components identified

Germ Cell Mutagenicity

In vitro

Product: No data available.

In vivo

Product: No data available.

Reproductive toxicity

Product: No data available.

Specific Target Organ Toxicity - Single Exposure

Product: No data available.

Specific Target Organ Toxicity - Repeated Exposure

Product: No data available.

Aspiration Hazard

Product: No data available.

Other effects: No data available.

12. Ecological information

Ecotoxicity:

Acute hazards to the aquatic environment:

Fish

Product: No data available.

Specified substance(s):

Sodium fluoride (NaF) LC 50 (Fathead minnow (*Pimephales promelas*), 96 h): 124 - 194 mg/l Mortality
LC 50 (Various, 48 h): 299 mg/l Other, Weight of Evidence study



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LC 50 (Various, 96 h): 340 mg/l Other, Weight of Evidence study
LC 50 (Various, 96 h): 108 mg/l Other, Weight of Evidence study

Aquatic Invertebrates

Product: No data available.

Specified substance(s):

Sodium fluoride (NaF) EC 50 (Daphnia magna; Daphnia sp., 96 h): 10.5 mg/l Other, Supporting study
EC 50 (Trichoptera aquatic larvae, 96 h): 26 - 48 mg/l Experimental result, Key study
EC 50 (Daphnia magna; Daphnia sp., 48 h): 270 mg/l Other, Supporting study
LC 50 (Water flea (Daphnia magna), 48 h): 335 mg/l Intoxication

Chronic hazards to the aquatic environment:

Fish

Product: No data available.

Aquatic Invertebrates

Product: No data available.

Specified substance(s):

Sodium fluoride (NaF) EC 50 (Various): 10 - 48 mg/l Other, Supporting study
NOAEL (Daphnia magna, 21 d): 3.7 mg/l Experimental result, Key study
NOAEL (Daphnia magna, 21 d): 14.1 mg/l Experimental result, Key study

Toxicity to Aquatic Plants

Product: No data available.

Persistence and Degradability

Biodegradation

Product: No data available.

BOD/COD Ratio

Product: No data available.

Bioaccumulative potential

Bioconcentration Factor (BCF)

Product: No data available.

Specified substance(s):



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Sodium fluoride (NaF) Bioconcentration Factor (BCF): 30 Aquatic sediment Other, Key study
Bioconcentration Factor (BCF): 7.5 Aquatic sediment Other, Key study
Bioconcentration Factor (BCF): 27 - 62 Aquatic sediment Other, Key study
Bioconcentration Factor (BCF): 53 - 58 Aquatic sediment Other, Key study
Bioconcentration Factor (BCF): < 2 Aquatic sediment Other, Key study

Partition Coefficient n-octanol / water (log Kow)

Product: Log Kow: The physical-chemical properties of this material have not been fully investigated.

Mobility in soil: No data available.

Known or predicted distribution to environmental compartments

Sodium fluoride (NaF) No data available.
Ethanedioic acid, potassium salt (1:2) No data available.

Other adverse effects: No data available.

13. Disposal considerations

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

Contaminated Packaging: No data available.

14. Transport information

DOTUN Number: Not regulated.
UN Proper Shipping Name: Not regulated.
Transport Hazard Class(es)
Class: Not regulated.
Label(s): Not regulated.
Packing Group: Not regulated.
Marine Pollutant: Not regulated.
Limited quantity Not regulated.
Excepted quantity Not regulated.

Special precautions for user: Not regulated.



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IMDG

UN Number: Not regulated.
UN Proper Shipping Name: Not regulated.
Transport Hazard Class(es)
Class: Not regulated.
Subsidiary risk: Not regulated.
EmS No.: Not regulated.
Packing Group: Not regulated.
Environmental Hazards
Marine Pollutant: Not regulated.

Special precautions for user: Not regulated.

IATA

UN Number: Not regulated.
Proper Shipping Name: Not regulated.
Transport Hazard Class(es):
Class: Not regulated.
Subsidiary risk: Not regulated.
Packing Group: Not regulated.
Environmental Hazards
Marine pollutant: Not regulated.

Special precautions for user: Not regulated.

15. Regulatory information

US Federal Regulations

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

None present or none present in regulated quantities.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050), as amended

None present or none present in regulated quantities.

CERCLA Hazardous Substance List (40 CFR 302.4):

<u>Chemical Identity</u>	<u>Reportable quantity</u>
Sodium fluoride (NaF)	1000 lbs.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Immediate (Acute) Health Hazards
Acute toxicity (any route of exposure)
Skin Corrosion or Irritation
Serious eye damage or eye irritation

SARA 302 Extremely Hazardous Substance

None present or none present in regulated quantities.



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SARA 304 Emergency Release Notification

None present or none present in regulated quantities.

SARA 311/312 Hazardous Chemical

Chemical Identity

Threshold Planning Quantity

SARA 313 (TRI Reporting)

None present or none present in regulated quantities.

Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3)

Chemical Identity

Reportable quantity

Sodium fluoride (NaF)

Reportable quantity: 1000 lbs.

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

None present or none present in regulated quantities.

US State Regulations

US. California Proposition 65

No ingredient requiring a warning under CA Prop 65.

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

Chemical Identity

Sodium fluoride (NaF)

US. Massachusetts RTK - Substance List

Chemical Identity

Sodium fluoride (NaF)

US. Pennsylvania RTK - Hazardous Substances

Chemical Identity

Sodium fluoride (NaF)

US. Rhode Island RTK

Chemical Identity

Sodium fluoride (NaF)

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

Issue Date: 04/17/2020

Version #: 15.1

Revision Information:

Further Information: No data available.



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