

Material Safety Data Sheet

DADE BEHRING

Dimension® system LIP Flex® reagent cartridge

MSDS no.

DEDM0013

1. Product and company identification

Product name : Dimension® system LIP Flex® reagent cartridge

Synonym : Lipase Flex® reagent cartridge
Dimension® clinical chemistry system Flex® reagent cartridge LIP

Code : DF55A

Material uses : Pharmaceutical industry: Diagnostic agents.

Product type : Liquid.

Manufactured/supplied : Dade Behring Inc.
Corporate Headquarters
1717 Deerfield Road
Deerfield, IL 60015-0778
1-847-267-5300

Dade Behring Canada Inc.
1200 Courtneypark Drive East
Mississauga, Ontario, Canada
L5T-1P2
(905) 564-7333
(800) 264-0083

Transportation: (800) 424-9300 (CHEMTREC)
Medical: (800) 228-5635 ext. 284 (Prosar)

2. Hazards identification

Physical state : Solid

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Emergency overview : Danger!
CAUSES EYE AND SKIN BURNS.
CAUSES SEVERE RESPIRATORY TRACT IRRITATION.
CONTAINS MATERIAL WHICH CAUSES DAMAGE TO THE FOLLOWING ORGANS:
LUNGS, RESPIRATORY TRACT, SKIN, EYE, LENS OR CORNEA.
MAY BE HARMFUL IF SWALLOWED.

Corrosive to eyes and skin. Causes burns. Severely irritating to the respiratory system. Avoid exposure - obtain special instructions before use. Do not breathe vapor or mist. Do not get in eyes or on skin or clothing. Contains material that can cause target organ damage. Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling.

Routes of entry : Absorbed through skin. Eye contact. Inhalation.

Potential acute health effects

Inhalation : Severely irritating to the respiratory system.

Ingestion : Harmful if swallowed. May cause burns to mouth, throat and stomach.

Skin : Corrosive to the skin.

Eyes : Corrosive to eyes.

Potential chronic health effects

Chronic effects : Contains material that can cause target organ damage.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Over-exposure signs/symptoms

2 . Hazards identification

- Inhalation** : Adverse symptoms may include the following:
respiratory tract irritation
coughing
- Ingestion** : Adverse symptoms may include the following:
stomach pains
- Skin** : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur
- Eyes** : Adverse symptoms may include the following:
pain
watering
redness

See toxicological information (section 11)

3 . Composition/information on ingredients

United States

<u>Name</u>	<u>CAS number</u>	<u>%</u>
sucrose	57-50-1	93.08
1,3-propanediol, 2-amino-2-(hydroxymethyl)-	77-86-1	21.1
1,3-propanediol, 2-amino-2-(hydroxymethyl)-, hydrochloride	1185-53-1	14.3
poly(oxy-1,2-ethanediyl), .alpha.-hydro-.omega.-hydroxy-	25322-68-3	5
sodium hydroxide	1310-73-2	4

Canada

<u>Name</u>	<u>CAS number</u>	<u>%</u>
sucrose	57-50-1	93.08
1,3-propanediol, 2-amino-2-(hydroxymethyl)-	77-86-1	21.1
sodium hydroxide	1310-73-2	4

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4 . First aid measures

- Eye contact** : Get medical attention immediately. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids.
- Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse.
- Inhalation** : Get medical attention immediately. Move exposed person to fresh air. Loosen tight clothing such as a collar, tie, belt or waistband. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. The exposed person may need to be kept under medical surveillance for 48 hours.
- Ingestion** : Move exposed person to fresh air. Loosen tight clothing such as a collar, tie, belt or waistband. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.

5 . Fire-fighting measures

Flammability of the product : Non-flammable.

Extinguishing media

In case of fire, use water spray (fog), foam or dry chemical.

Not suitable : None known.

5 . Fire-fighting measures

- Hazardous combustion products** : Decomposition products may include the following materials:
carbon oxides
nitrogen oxides
sulfur oxides
halogenated compounds
metal oxide/oxides
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6 . Accidental release measures

- Personal precautions** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Put on appropriate personal protective equipment (see section 8).
- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.
- Small spill** : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble or absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

7 . Handling and storage

- Handling** : Do not ingest. Do not get in eyes or on skin or clothing. Keep container closed. Use only with adequate ventilation. Avoid breathing vapor or mist. Wash thoroughly after handling.
- Storage** : Keep container tightly closed. Keep container in a cool, well-ventilated area.

8 . Exposure controls/personal protection

Product name

Exposure limits

United States

sucrose

ACGIH (United States, 1996).

TWA: 10 mg/m³

ACGIH TLV (United States, 1/2006). Notes: 1996 Adoption Refers to Appendix A -- Carcinogens.

TWA: 10 mg/m³ 8 hour(s).

sodium hydroxide

ACGIH TLV (United States, 1/2006).

CEIL: 2 mg/m³

Canada

sucrose

ACGIH (United States, 1996).

TWA: 10 mg/m³

ACGIH TLV (United States, 1/2007).

TWA: 10 mg/m³ 8 hour(s).

sodium hydroxide

ACGIH TLV (United States, 1/2007).

C: 2 mg/m³

Consult local authorities for acceptable exposure limits.

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

Engineering measures : Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

8 . Exposure controls/personal protection

- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Personal protection**
- Respiratory** : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
- Hands** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
- Eyes** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts.
- Skin** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

9 . Physical and chemical properties

- Physical state** : Solid
- pH** : Basic.
- Melting/freezing point** : May start to solidify at the following temperature: 0°C (32°F) This is based on data for the following ingredient: water.
- Relative density** : Weighted average: 1.23 (Water = 1)
- Vapor pressure** : Highest known value: 2.4 kPa (18 mm Hg) (at 20°C) (water).
- Ionicity (in water)** : Amphoteric. (water).
- Solubility** : Easily soluble in the following materials: cold water.

10 . Stability and reactivity

- Stability** : The product is stable. Under normal conditions of storage and use, hazardous polymerization will not occur.
- Conditions to avoid** : No specific data.
- Materials to avoid** : No specific data.
- Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.
- Hazardous polymerization** : Will not occur.
- Conditions of reactivity**
- Flammability** : Slightly flammable in the presence of the following materials or conditions: oxidizing materials.
Non-flammable in the presence of the following materials or conditions: open flames, sparks and static discharge and heat.
- Explosibility** : Slightly explosive in the presence of the following materials or conditions: oxidizing materials.
Non-explosive in the presence of the following materials or conditions: open flames, sparks and static discharge.

11 . Toxicological information

United States

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
sucrose	LD50 Oral	Rat	29700 mg/kg	-
1,3-propanediol, 2-amino-2-(hydroxymethyl)-	LD50 Intravenous	Rat	1800 mg/kg	-
	LD50 Oral	Rat	5900 mg/kg	-

Chronic toxicity

Not available.

Carcinogenicity

Not available.

Classification

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
sucrose	A4	-	-	None.	-	-

Mutagenicity

Not available.

Teratogenicity

Not available.

Reproductive toxicity

Not available.

Canada

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
1,3-propanediol, 2-amino-2-(hydroxymethyl)-	LD50 Intravenous	Rat	1800 mg/kg	-
	LD50 Oral	Rat	5900 mg/kg	-
sucrose	LD50 Oral	Rat	29700 mg/kg	-

Chronic toxicity

Not available.

Carcinogenicity

Not available.

Classification

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
sucrose	A4	-	-	None.	-	-

Mutagenicity

Not available.

Teratogenicity

Not available.

Reproductive toxicity

Not available.

12 . Ecological information

Environmental effects : No known significant effects or critical hazards.

United States

Aquatic ecotoxicity

Product/ingredient name	Test	Result	Species	Exposure
poly(oxy-1,2-ethanediyl), α -hydro- ω -hydroxy-	-	Acute LC50 >20000000 ug/L Fresh water	Fish - Carassius carassius	96 hours
	-	Acute LC50 >20000000 ug/L Fresh water	Fish - Oncorhynchus mykiss	96 hours
	-	Acute LC50 >1000000 ug/L Fresh water	Fish - Salmo salar	96 hours
sodium hydroxide	-	Acute EC50 40.38 to 47.13 mg/L Fresh water	Daphnia - Ceriodaphnia dubia	48 hours
	-	Acute LC50 125000 ug/L Fresh water	Fish - Gambusia affinis	96 hours

Biodegradability

Not available.

Canada

Aquatic ecotoxicity

Product/ingredient name	Test	Result	Species	Exposure
sodium hydroxide	-	Acute EC50 40.38 to 47.13 mg/L Fresh water	Daphnia - Ceriodaphnia dubia	48 hours
	-	Acute LC50 125000 ug/L Fresh water	Fish - Gambusia affinis	96 hours

Biodegradability

Not available.


13 . Disposal considerations

Waste disposal : The generation of waste should be avoided or minimized wherever possible. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

14 . Transport information

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
DOT Classification	1824	sodium hydroxide solution (sodium hydroxide)	8	III		-

14 . Transport information

TDG Classification	1824	SODIUM HYDROXIDE, SOLUTION (sodium hydroxide)	8	III		-
ADR/RID Class	1824	Sodium hydroxide solution (sodium hydroxide)	8	III		-
IMDG Class	1824	Sodium hydroxide solution (sodium hydroxide)	8	III		-
IATA-DGR Class	1824	Sodium hydroxide solution (sodium hydroxide)	8	III		-

PG* : Packing group

15 . Regulatory information**United States****HCS Classification**: Corrosive material
Target organ effects**U.S. Federal regulations**: **United States inventory (TSCA 8b):** Not determined.
SARA 302/304/311/312 extremely hazardous substances: No products were found.
SARA 302/304 emergency planning and notification: No products were found.
SARA 302/304/311/312 hazardous chemicals: sucrose; sodium hydroxide
SARA 311/312 MSDS distribution - chemical inventory - hazard identification: sucrose: Delayed (chronic) health hazard; sodium hydroxide: Immediate (acute) health hazard
Clean Water Act (CWA) 307: No products were found.
Clean Water Act (CWA) 311: sodium hydroxide
Clean Air Act (CAA) 112 accidental release prevention: No products were found.
Clean Air Act (CAA) 112 regulated flammable substances: No products were found.
Clean Air Act (CAA) 112 regulated toxic substances: No products were found.**State regulations**: Rhode Island Hazardous Substances: sucrose
Pennsylvania RTK Hazardous Substances: sucrose: (generic environmental hazard); sodium hydroxide: (environmental hazard, generic environmental hazard)
Minnesota: sucrose; poly(oxy-1,2-ethanediyl), .alpha.-hydro-.omega.-hydroxy-
Massachusetts Substances: sucrose; sodium hydroxide
New Jersey: sodium hydroxide**United States inventory (TSCA 8b)**: **United States inventory (TSCA 8b):** Not determined.**Canada****WHMIS (Canada)**

: Not a WHMIS controlled material.

Canadian lists

: CEPA DSL: water; sucrose; 1,3-propanediol, 2-amino-2-(hydroxymethyl)-; 1,3-propanediol, 2-amino-2-(hydroxymethyl)-, hydrochloride; poly(oxy-1,2-ethanediyl), .alpha.-hydro-.omega.-hydroxy-; sodium hydroxide

Canada inventory: **Canada inventory:** Not determined.

This product has been classified according to the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

16 . Other information

Label requirements : CAUSES EYE AND SKIN BURNS.
CAUSES SEVERE RESPIRATORY TRACT IRRITATION.
CONTAINS MATERIAL WHICH CAUSES DAMAGE TO THE FOLLOWING ORGANS:
LUNGS, RESPIRATORY TRACT, SKIN, EYE, LENS OR CORNEA.
MAY BE HARMFUL IF SWALLOWED.

The customer is responsible for determining the PPE code for this material.

EU regulations

Hazard symbol or symbols :



Risk phrases : R34- Causes burns.

Safety phrases : S26- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S36/37/39- Wear suitable protective clothing, gloves and eye/face protection.
S45- In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

International regulations

International lists

: **Australia inventory (AICS)**: All components are listed or exempted.
China inventory (IECSC): Not determined.
Korea inventory (KECI): Not determined.
Philippines inventory (PICCS): Not determined.
Japan inventory (ENCS): Not determined.

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Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability 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.