enabling technologies in the life sciences

SAFETY DATA SHEET

Document Type AGHS - OSHA GHS Revision date 21-Jul-2016 Version 3

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product name Phusion® High-Fidelity PCR Master Mix with GC Buffer

M0532 **Product No**

Recommended use of the chemical and restrictions on use

This product is for research and development only Recommended use

No information available Uses advised against

Details of the supplier of the safety data sheet

Supplier Address New England BioLabs

> 240 County Road Ipswich, MA 01938

USA

978-927-5054 **Company Phone Number**

800-632-5227 (toll free)

Telefax 978-921-1350 E-mail address info@neb.com

Emergency telephone number

Emergency telephone 978-927-5054

800-632-5227 (toll free)

9:00am - 5:00pm Monday-Friday EST

2. HAZARDS IDENTIFICATION

Classification

Not a dangerous substance or mixture according to the Globally Harmonized System (GHS)

Label elements

Emergency Overview

The product contains no substances which at their given concentration, are considered to be hazardous to health.

Appearance Colorless Physical state Liquid Odor Mild

Hazards not otherwise classified (HNOC)

Other information

Note: No data available

Product name Phusion® High-Fidelity PCR Master Mix with GC

Buffer

Page 1/8 Product No M0532

Specification No No information available

3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixture

Chemical Name	CAS No	Weight-%	Trade Secret
Trade Secret	Proprietary	1 - 5	*

The product contains no substances which at their given concentration, are considered to be hazardous to health.

4. FIRST AID MEASURES

First aid measures

General advice

Immediate medical attention is required. In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible). Remove from exposure, lie down. Do not breathe dust/fume/gas/mist/vapors/spray.

Eye contact

Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.

Skin contact

Wash skin with soap and water.

Inhalation

Remove to fresh air.

Ingestion

Clean mouth with water and drink afterwards plenty of water.

Most important symptoms and effects, both acute and delayed

No information available.

Indication of any immediate medical attention and special treatment needed

Note to physicians

Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media

CAUTION: Use of water spray when fighting fire may be inefficient.

Specific hazards arising from the chemical

No information available.

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions

Ensure adequate ventilation, especially in confined areas.

Product name Phusion® High-Fidelity PCR Master Mix with GC Buffer

Page 2/8

Personal protective equipment [PPE]

Use personal protection recommended in Section 8.

Environmental precautions

See Section 12 for additional Ecological Information.

Methods and material for containment and cleaning up

Methods for containment

Prevent further leakage or spillage if safe to do so.

Methods for cleaning up

Soak up with inert absorbent material. Pick up and transfer to properly labeled containers. This material and its container must be disposed of as hazardous waste.

7. HANDLING AND STORAGE

Precautions for safe handling

Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Storage temperature

Refer to www.neb.com for specific information.

Storage Conditions

Keep/store only in original container.

Incompatible materials

None known based on information supplied.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Exposure Guidelines

This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Trade Secret	-	TWA: 15 mg/m ³ mist, total	=
		particulate	
		TWA: 5 mg/m ³ mist, respirable	
		fraction	
		(vacated) TWA: 10 mg/m³ mist,	
		total particulate	
		(vacated) TWA: 5 mg/m ³ mist,	
		respirable fraction	

Other information

Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

Appropriate engineering controls

Showers. Eyewash stations.

Individual protection measures, such as personal protective equipment

Eye/face protection

Wear safety glasses with side shields (or goggles).

Skin and body protection

Product name Phusion® High-Fidelity PCR Master Mix with GC Buffer Page 3/8

Wear suitable protective clothing and gloves.

Respiratory protection

Use in well ventilated areas.

General hygiene considerations

Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state Liquid Colorless **Appearance** Mild Odor

Property Remarks • Method

pН Refer to www.neb.com for specific information

Melting point / freezing point No information available Boiling point / boiling range No information available Flash point No information available **Evaporation rate** No information available Flammability (solid, gas) No information available Flammability Limit in Air No information available

Upper flammability limit Lower flammability limit

Vapor pressure No information available Vapor density No information available Relative density No information available Specific gravity No information available Water solubility No information available Solubility in other solvents No information available No information available Partition coefficient No information available **Autoignition temperature Decomposition temperature** No information available Kinematic viscosity No information available Dynamic viscosity No information available **Explosive properties** No information available No information available

Other information

Oxidizing properties

Softening point No information available Molecular weight No information available VOC content (%) No information available **Density** No information available **Bulk density** No information available

10. STABILITY AND REACTIVITY

Reactivity

No data available.

Chemical stability

Stable under normal conditions.

Possibility of hazardous reactions

Can react briskly with oxidizers - danger of explosion.

Product name Phusion® High-Fidelity PCR Master Mix with GC Buffer

Page 4/8

Conditions to avoid

Incompatible materials. Ignition sources. Heat.

Incompatible materials

Strong oxidizing agents.

Hazardous decomposition products

Thermal decomposition can lead to release of irritating and toxic gases and vapors. Carbon monoxide. Carbon dioxide (CO2).

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Inhalation

Avoid breathing vapors or mists. May cause irritation of respiratory tract.

Eye contact

Redness. May cause slight irritation.

Skin contact

Prolonged contact may cause redness and irritation. Repeated exposure may cause skin dryness or cracking.

Ingestion

May cause drowsiness or dizziness. Ingestion causes burns of the upper digestive and respiratory tracts. Symptoms include burning sensation, coughing, wheezing, shortness of breath, headache, nausea, and vomiting.

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Trade Secret	= 2600 mg/kg (Rat)	-	-

Information on toxicological effects

Symptoms No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation Mild
Serious eye damage/eye irritation Mild
Irritation Mild
Corrosivity Mild

Sensitization

Skin No information available Respiratory No information available Germ cell mutagenicity No information available Carcinogenicity No information available

Reproductive toxicity
Developmental toxicity
No information available

Target organ effects Eyes, Kidneys, Respiratory system, Skin.

Neurological effectsNo information availableOther adverse effectsNo information availableAspiration hazardNo information available

Numerical measures of toxicity - Product information

Product name Phusion® High-Fidelity PCR Master Mix with GC Buffer Page 5/8 Product No M0532

The following values are calculated based on chapter 3.1 of the GHS document . mg/kg mg/l

12. ECOLOGICAL INFORMATION

Marine pollutant

No information available

Ecotoxicity

No information available

1.50833 % of the mixture consists of component(s) of unknown hazards to the aquatic environment

Chemical Name	Algae/aquatic plants	Fish	Toxicity to	Crustacea
			microorganisms	
Trade Secret	2500: 72 h Desmodesmus	1060: 96 h Lepomis	-	825: 48 h Daphnia magna
	subspicatus mg/L EC50	macrochirus mg/L LC50		mg/L EC50 83: 48 h
		static 750 - 1020: 96 h		Daphnia magna mg/L EC50
		Pimephales promelas mg/L		Static
		LC50 static		
Trade Secret	-	51 - 57: 96 h Oncorhynchus	-	500: 24 h Daphnia magna
		mykiss mL/L LC50 static		mg/L EC50
Trade Secret	-	32.2 - 41.9: 96 h	-	423: 24 h Daphnia magna
		Oncorhynchus mykiss mg/L		mg/L EC50 14: 48 h
		LC50 flow-through 460 -		Daphnia magna mg/L LC50
		1000: 96 h Leuciscus idus		
		mg/L LC50 static 480: 96 h		
		Brachydanio rerio mg/L		
		LC50 flow-through 250: 96 h		
		Brachydanio rerio mg/L		
		LC50 420: 96 h Brachydanio		
		rerio mg/L LC50 semi-static		
		100: 96 h Pimephales		
		promelas mg/L LC50 5.2 -		
		8.2: 96 h Oncorhynchus		
		mykiss mg/L LC50 static 18:		
		96 h Cyprinus carpio mg/L		
		LC50 123 - 128: 96 h		
		Poecilia reticulata mg/L		
		LC50 semi-static 126: 96 h		
		Poecilia reticulata mg/L		
		LC50		
Trade Secret	2200: 72 h Desmodesmus	4210: 96 h Gambusia affinis	-	140: 48 h Daphnia magna
	subspicatus mg/L EC50	mg/L LC50 static 1970 -		mg/L EC50 Static 1400: 24 h
		3880: 96 h Pimephales		Daphnia magna mg/L EC50
		promelas mg/L LC50 static		
Trade Secret	1.01: 72 h Desmodesmus	44.2 - 76.5: 96 h Pimephales	-	113: 48 h Daphnia magna
	subspicatus mg/L EC50	promelas mg/L LC50 static		mg/L EC50 Static
		34 - 62: 96 h Lepomis		
		macrochirus mg/L LC50		

Persistence and degradability

No information available

Bioaccumulation

No information available

Mobility

No information available

Other adverse effects

Ozone No information available

Product name Phusion® High-Fidelity PCR Master Mix with GC Buffer Page 6/8

Ozone depletion potential (ODP)

No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Relevant Information

Keep out of drains, sewers, ditches and waterways.

Disposal considerations

Use a licensed professional waste disposal service to dispose of this product. Product may be dissolved in a combustible solvent or absorbed onto a combustible material and burned by a chemical incinerator.

Contaminated packaging

Empty containers must be tripled rinsed prior to disposal.

14. TRANSPORT INFORMATION

DOT Not regulated

15. REGULATORY INFORMATION

International Inventories

TSCA

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

US Federal Regulations

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Product name Phusion® High-Fidelity PCR Master Mix with GC Buffer Page 7/8

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. OTHER INFORMATION

NFPAHealth hazards 0Flammability 0Instability 0Special Hazard -HMISHealth hazards 0Flammability 0Physical hazards 0Personal protection -

Prepared by EH&S Manager 978-927-5054

Prepared by New England BioLabs Issue date No data available

Revision note SDS is valid 3 years from revision date. Contact info@neb.com for latest revision.

Disclaimer

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End of Safety Data Sheet