

Material Safety Data Sheet

Creation Date 09-Nov-2010

Revision Date 08-Jan-2013

Revision Number 9

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name	Master Mix including QPR, PCR, and Custom Products
Cat No.	AB-113X/X, AB-116X/X, AB-1318/A, AB-1318/B, AB-1319/A, AB-1319/B, AB-1283/A, AB-1283/B, AB-1322/A, AB-1322/B, AB-1323/A, AB-1323/B, AB-1158/A, AB-1158/B, AB-1159/A, AB-1159/B, AB-1219/A, AB-1219/B, AB-1220/A, AB-1220/B, AB-1285/A, AB-1285/B, AB-0575/XX/XX/XX/X, AB-0938/XX/XX/XX/X, AB-1147/XX/X, AB-0792, AB-0793, CM-203/Z, AB-413X, Ab-431X, AB-4322, AB-4323, AB-4219, AB-4220, AB-416X, AB-432X, AB-433X
Synonyms	No information available.
Recommended Use	For research use only
Company	Emergency Telephone Number
Thermo Fisher Scientific	Chemtrec US: (800) 424-9300
Abgene Products	Chemtrec EU: (202) 483-7616
V.A. Graiciuno 8	
LT-02241	
Lithuania	

2. HAZARDS IDENTIFICATION

WARNING!

Emergency Overview

Harmful if swallowed. May cause eye, skin, and respiratory tract irritation . The toxicological properties have not been fully investigated. Shipped on dry ice. Toxic to aquatic organisms.

Appearance Multiple Colors, Red, Blue, Colorless	Physical State Liquid	odor No information available
---	------------------------------	--------------------------------------

Target Organs Central nervous system (CNS), Respiratory system, Eyes

Potential Health Effects

Acute Effects

Principle Routes of Exposure

Eyes	May cause irritation
Skin	May cause irritation
Inhalation	May cause irritation of respiratory tract. May be harmful if inhaled.
Ingestion	Harmful if swallowed. May cause central nervous system effects. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Chronic Effects None known

See Section 11 for additional Toxicological information.

Aggravated Medical Conditions Central nervous system disorders. Preexisting eye disorders.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Haz/Non-haz

Component	CAS-No	Weight %
Water, Molecular Biology Reagent	7732-18-5	50-99
Reaction Buffer	NA	10-90
Sucrose	57-50-1	0-25
Dimethyl sulfoxide	67-68-5	0-10
DNA Polymerase	NA	1-10
SYBER Green	163795-75-3	0-1
Fluroscein	6417-85-2	0-1
Cresol Red	1733-12-6	0-1
Inert Blue Dye	NA	0-1
ROX reference dye	NA	0-0.5
Sodium azide	26628-22-8	0-0.1

4. FIRST AID MEASURES

Eye Contact	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing. If symptoms persist, call a physician.
Skin Contact	Remove and wash contaminated clothing before re-use. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.
Inhalation	Move to fresh air. Consult a physician. If breathing is irregular or stopped, administer artificial respiration. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with a respiratory medical device.
Ingestion	Rinse mouth. Drink plenty of water. If symptoms persist, call a physician. Do not induce vomiting.
Notes to Physician	Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Flash Point	Not applicable
Method	No information available.
Autoignition Temperature	No information available.
Explosion Limits	
Upper	No data available
Lower	No data available
Suitable Extinguishing Media	Substance is nonflammable; use agent most appropriate to extinguish surrounding fire..
Unsuitable Extinguishing Media	No information available.

Hazardous Combustion Products

No information available.

Sensitivity to mechanical impact
Sensitivity to static discharge

No information available.
No information available.

Specific Hazards Arising from the Chemical

Thermal decomposition can lead to release of irritating gases and vapors.

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

NFPA **Health 1** **Flammability 0** **Instability 0** **Physical hazards N/A**

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions

Use personal protective equipment. Ensure adequate ventilation. Avoid contact with skin, eyes and clothing.

Environmental Precautions

Prevent entry into waterways, sewers, basements or confined areas.. Do not flush into surface water or sanitary sewer system.

Methods for Containment and Clean Up

Soak up with inert absorbent material. Keep in suitable, closed containers for disposal.. Do not flush down the drain. Sodium azide may react with plumbing systems to form highly explosive compounds.

7. HANDLING AND STORAGE

Handling

Avoid contact with skin. No information available.. Do not breathe dust. Do not take internally. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors).

Storage

Keep container tightly closed in a dry and well-ventilated place. Keep out of the reach of children.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Measures

Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH IDLH
Sucrose	TWA: 10 mg/m ³	(Vacated) TWA: 15 mg/m ³ (Vacated) TWA: 5 mg/m ³ TWA: 15 mg/m ³ TWA: 5 mg/m ³	TWA: 10 mg/m ³ TWA: 5 mg/m ³
Sodium azide	Ceiling: 0.29 mg/m ³ Ceiling: 0.11 ppm	Skin (Vacated) Ceiling: 0.1 ppm (Vacated) Ceiling: 0.3 mg/m ³	Ceiling: 0.1 ppm Ceiling: 0.3 mg/m ³

Component	Quebec	Mexico OEL (TWA)	Ontario TWAEV
Sucrose	TWA: 10 mg/m ³	TWA: 10 mg/m ³ STEL: 20 mg/m ³	TWA: 10 mg/m ³
Sodium azide	Ceiling: 0.11 ppm Ceiling: 0.3 mg/m ³		CEV: 0.29 mg/m ³ CEV: 0.11 ppm

NIOSH IDLH: Immediately Dangerous to Life or Health

Personal Protective Equipment

- Eye/face Protection
- Skin and body protection
- Respiratory Protection

Tightly fitting safety goggles.
Wear appropriate protective gloves and clothing to prevent skin exposure
Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid
Appearance	Multiple Colors, Red, Blue, Colorless
odor	No information available
Odor Threshold	No information available.
pH	Not applicable
Vapor Pressure	No information available.
Vapor Density	No information available.
Viscosity	No information available.
Boiling Point/Range	Not applicable
Melting Point/Range	No information available.
Decomposition temperature	No information available.
Flash Point	Not applicable
Evaporation Rate	No information available.
Specific Gravity	No information available.
Solubility	No information available.
log Pow	No data available

10. STABILITY AND REACTIVITY

Stability

Stable under normal conditions.

Conditions to Avoid	Excess heat.
Incompatible Materials	Metals
Hazardous Decomposition Products	Thermal decomposition can lead to release of irritating gases and vapors
Hazardous Polymerization	Hazardous polymerization does not occur.
Hazardous Reactions .	None under normal processing.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Product Information No acute toxicity information is available for this product

Component Information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation (Dust)
Water, Molecular Biology Reagent	90 mL/kg (Rat)	Not listed	Not listed
Sucrose	29700 mg/kg (Rat)	Not listed	Not listed
Dimethyl sulfoxide	14500 mg/kg (Rat)	40 g/kg (Rat)	Not listed
Sodium azide	27 mg/kg (Rat)	20 mg/kg (Rabbit) 50 mg/kg (Rat)	Not listed

Irritation No information available.

Toxicologically Synergistic Products No information available.

Chronic Toxicity

Carcinogenicity There are no known carcinogenic chemicals in this product

Sensitization No information available.

Mutagenic Effects No information available.

Reproductive Effects No information available.

Developmental Effects No information available.

Teratogenicity No information available.

Other Adverse Effects The toxicological properties have not been fully investigated.. See actual entry in RTECS for complete information.

Endocrine Disruptor Information No information available

12. ECOLOGICAL INFORMATION

Ecotoxicity

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
Dimethyl sulfoxide	EC50 96h 12350 - 25500 mg/L	40 g/L LC50 96 h 33-37 g/L LC50 96 h	= 16000 mg/L EC50 Pseudomonas putida 16 h = 32 g/L EC50 Tetrahymena pyriformis 24 h = 77 mg/L EC50 Photobacterium phosphoreum 5 min	EC50 24h 7000 mg/L
Sodium azide	Not listed	0.8 mg/L LC50 96 h 0.7 mg/L LC50 96 h 5.46 mg/L LC50 96 h	Not listed	Not listed

Persistence and Degradability No information available

Bioaccumulation/ Accumulation No information available

Mobility

Component	log Pow
Dimethyl sulfoxide	-2.03

13. DISPOSAL CONSIDERATIONS

Waste Disposal Methods Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification

14. TRANSPORT INFORMATION

DOT

UN-No UN1845
Proper Shipping Name CARBON DIOXIDE, SOLID
Hazard Class 9
Packing Group III

TDG

UN-No UN1845
Proper Shipping Name CARBON DIOXIDE, SOLID
Hazard Class 9
Packing Group III

IATA

14. TRANSPORT INFORMATION

UN-No UN1845
Proper Shipping Name CARBON DIOXIDE, SOLID
Hazard Class 9
Packing Group III

IMDG/IMO

UN-No UN1845
Proper Shipping Name CARBON DIOXIDE, SOLID
Hazard Class 9
Packing Group III

15. REGULATORY INFORMATION

International Inventories

Component	TSCA	DSL	NDSL	EINECS	ELINCS	NLP	PICCS	ENCS	AICS	CHINA	KECL
Water, Molecular Biology Reagent	X	X	-	-	-		X	-	X	X	X
Sucrose	X	X	-	200-334-9	-		X	-	X	X	X
Dimethyl sulfoxide	X	X	-	200-664-3	-		X	X	X	X	X
SYBER Green	-	-	-	-	-		-	-	-	X	-
Fluorescein	X	X	-	229-143-9	-		-	X	X	X	-
Cresol Red	X	-	-	217-064-2	-		X	-	-	-	-
Sodium azide	X	X	-	247-852-1	-		X	X	X	X	X

Legend:

X - Listed

E - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.

F - Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.

N - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.

P - Indicates a commenced PMN substance

R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.

S - Indicates a substance that is identified in a proposed or final Significant New Use Rule

T - Indicates a substance that is the subject of a Section 4 test rule under TSCA.

XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B)).

Y1 - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.

Y2 - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

U.S. Federal Regulations

TSCA 12(b) Not applicable

SARA 313

Component	CAS-No	Weight %	SARA 313 - Threshold Values %
Sodium azide	26628-22-8	0-0.1	1.0

SARA 311/312 Hazardous Categorization

Acute Health Hazard	Yes
Chronic Health Hazard	No
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

Clean Water Act

Not applicable

Clean Air Act

Not applicable

OSHA

Not applicable

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Component	Hazardous Substances RQs	CERCLA EHS RQs
Sodium azide	1000 lb	1000 lb

California Proposition 65

This product does not contain any Proposition 65 chemicals.

State Right-to-Know

Component	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Sucrose	X	-	X	-	X
Dimethyl sulfoxide	-	X	-	-	-
Sodium azide	X	X	X	-	X

U.S. Department of Transportation

Reportable Quantity (RQ): Y

DOT Marine Pollutant N

DOT Severe Marine Pollutant N

U.S. Department of Homeland Security

This product does not contain any DHS chemicals.

Other International Regulations

Mexico - Grade No information available

Canada

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

WHMIS Hazard Class

E Corrosive material



16. OTHER INFORMATION

Prepared By Regulatory Affairs
Thermo Fisher Scientific
Email: EMSDS.RA@thermofisher.com

Creation Date 09-Nov-2010

Print Date 08-Jan-2013

Revision Summary "****", and red text indicates revision

Disclaimer

The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of MSDS