CTC Control Cells

Version	Revision Date:	SDS Number:	Date of last issue: 2017/08/03
1.3	2018/01/09	100000011994	Date of first issue: 2015/12/15

SECTION 1. IDENTIFICATION

Substance name : CTC Control Cells
5496

Manufacturer or supplier's details

Company name of supplier : Menarini Silicon Biosystems, Inc

Address : 3401 Masons Mill Rd #100
Huntingdon Valley, PA 19006
USA US

Telephone : 1 (800) 381-4929

E-mail address Responsible/issuing person : Us-info@siliconbiosystems.com

Emergency telephone number : US: (303) 389-1805
International: +1 (303) 389-1805

Recommended use of the chemical and restrictions on use

Recommended use : Large Molecule Pharmaceutical intended for medical use
Assay reagent

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Not a hazardous substance or mixture.

GHS label elements

Not a hazardous substance or mixture.

Other hazards

Avoid direct contact and significant aerosol/dust exposure which has the remote possibilities of eliciting an allergic response. May cause sensitization of susceptible personse.
Health Hazards, Risk Group 1

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Chemical nature : Liquid

Hazardous components

No hazardous ingredients

SECTION 4. FIRST AID MEASURES

If inhaled : If breathed in, move person into fresh air.
Consult a physician.

In case of skin contact	:	Take off contaminated clothing and shoes immediately. Wash off immediately with plenty of water. If symptoms persist, call a physician. Wash contaminated clothing before re-use.
In case of eye contact	:	Rinse immediately with plenty of water, also under the eyelids, for at least 5 minutes. Remove contact lenses. If eye irritation persists, consult a specialist.
If swallowed	:	If swallowed, rinse mouth with water (only if the person is conscious). Call a physician immediately.
Most important symptoms and effects, both acute and delayed	:	No information available.
Notes to physician	:	Treat symptomatically.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media	:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Specific hazards during firefighting	:	Combustible material
Further information	:	No information available.
Special protective equipment for firefighters	:	In the event of fire, wear self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Special considerations for Biological Risk from any particular micro-organism is based on several factors including amount of infectious material present, infectious dose, mode of transmission, seriousness of illness, susceptibility of the host and availability of vaccines or drugs. In the event of an accidental release the emergency response team must respond based on a risk assessment and use personal protective equipment as appropriate. Avoid direct contact with broken glass, plastic and other sharps. Avoid splashes and spray formation. Evacuate personnel to safe areas. Avoid direct contact and significant aerosol exposure.
Environmental precautions	:	Should not be released into the environment. Do not flush into surface water or sanitary sewer system.

Methods and materials for containment and cleaning up	: Small spills: Gently cover the spill with an absorbent towel or pad. Wet absorbent pad with 10% bleach solution. Allow 30 minutes contact time. Large spills: Allow the dust/aerosol to settle for 30 minutes or use appropriate respiratory protection. Dam up. Soak up with inert absorbent material. Add bleach (5.25% sodium hypochlorite) solution to a final liquid concentration of 10% (1 part bleach, mixed with 9 parts liquid) to absorbent materials. Allow 30 minute contact time. Large spills + Small spills: Keep in suitable, closed containers for disposal. Treat recovered material as described in the section "Disposal considerations". Clean up with a 10% bleach (5.25% sodium hypochlorite) solution, 1 part bleach, mixed with 9 parts water is recommended for cleaning of surfaces and equipment. Clean spill location and adjacent surfaces thoroughly with ethanol or water with detergent. Special consideration may need to be evaluated based on specific hazards.

SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion	: No data available
Advice on safe handling	: Avoid splashes. Avoid formation of aerosol. Do not heat the product. Avoid inhalation, ingestion and contact with skin and eyes. Use personal protective equipment as required.
Conditions for safe storage	: To maintain product quality, do not store in heat or direct sunlight. Store in original container. Keep container tightly closed in a dry and well-ventilated place. Keep away from heat. Keep frozen. Keep locked up.
Recommended storage temperature	: -20 °C

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Contains no substances with occupational exposure limit values.

Engineering measures : The work area should be installed in accordance with the

requirements of Biosafety level 1 (BSL1)
All personal protective equipment should be based on a risk assessment. Consult a Environment Health Safety expert if necessary.

Personal protective equipment

Respiratory protection : Engineering controls should always be the primary method of controlling exposures.
There is remote possibility that this product could be aerosolized and inhaled in the workplace.
If respiratory protective equipment is needed for certain activities, the type as well as the corresponding protection factor will depend upon the risk assessment and air concentrations, hazards, physical and warning properties of substances present.
No personal respiratory protective equipment normally required.

Hand protection

Remarks : No special precautions required.

Eye protection : No special precautions required.

Skin and body protection : No special precautions required.

Protective measures : The type of protective equipment must be selected based on the Environmental Health and Safety risk assessment. Consult a Environmental Health and Safety expert if necessary.

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice.
Remove gloves and wash hands when work with material is completed. Do not reuse gloves.
Contaminated work clothing should not be allowed out of the workplace.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : Vial

Colour : clear, light yellow, to, amber

Odour : No data available

pH : 7.0

Melting point/range : No data available

Boiling point/boiling range : No data available

Flash point : No data available

Evaporation rate	:	No data available
Flammability (solid, gas)	:	No information available.
Upper explosion limit	:	No data available
Lower explosion limit	:	No data available
Vapour pressure	:	No data available
Relative vapour density	:	No data available
Relative density	:	No data available
Density	:	No data available
Solubility(ies)		
Water solubility	:	No data available
Solubility in other solvents	:	No data available
Partition coefficient: n-octanol/water	:	No data available
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Explosive properties	:	No data available
Oxidizing properties	:	No data available
Conductivity	:	No data available
	:	No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	None reasonably foreseeable.
Chemical stability	:	Stable under recommended storage conditions.
Possibility of hazardous reactions	:	No dangerous reaction known under conditions of normal use.
Conditions to avoid	:	To avoid thermal decomposition, do not overheat. Exposure to light.
Incompatible materials	:	No data available
Hazardous decomposition products	:	None known.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Product:

Acute oral toxicity	:	Remarks: No data available Acute toxicity estimate: > 5,000 mg/kg Method: Calculation method
Acute inhalation toxicity	:	Remarks: No data available
Acute dermal toxicity	:	Remarks: No data available
Acute toxicity (other routes of administration)	:	Remarks: No data available

Skin corrosion/irritation

Product:

Remarks: No data available

Serious eye damage/eye irritation

Product:

Remarks: No data available

Respiratory or skin sensitisation

No data available

Germ cell mutagenicity

Product:

Genotoxicity in vitro	:	Remarks: No data available
Genotoxicity in vivo	:	Remarks: No data available

Carcinogenicity

Product:

Remarks: No data available

Reproductive toxicity

Product:

Effects on fertility	:	Remarks: No data available
Effects on foetal development	:	Remarks: No data available

STOT - single exposure

Product:

Remarks: No data available

STOT - repeated exposure

No data available

Repeated dose toxicity

No data available

Aspiration toxicity

No data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:

Toxicity to fish	:	Remarks: No data available
Toxicity to daphnia and other aquatic invertebrates	:	Remarks: No data available
Toxicity to bacteria	:	Remarks: No data available

Persistence and degradability

Product:

Biodegradability	:	Remarks: No data available

Bioaccumulative potential

Product:

Bioaccumulation	:	Remarks: No data available

Mobility in soil

Product:

Distribution among environmental compartments	:	Remarks: No data available

Other adverse effects

Product:

Results of PBT and vPvB assessment	:	Remarks: No data available
Ozone-Depletion Potential	:	Regulation: 40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances Remarks: This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the

U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

Additional ecological information : Should not be released into the environment.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : In accordance with National, Federal, State and Local regulations.
Decontaminate all waste before disposal (steam sterilization, chemical disinfection and/or incineration).

SECTION 14. TRANSPORT INFORMATION

International Regulations

UNRTDG

UN number	:	GENETICALLY MODIFIED MICRO-ORGANISMS
Proper shipping name	:	
Class	:	9
Packing group	:	Not assigned by regulation
Labels	:	9

IATA-DGR

UN/ID No.	:	UN 3245
Proper shipping name	:	Genetically modified micro-organisms
Class	:	9
Packing group	:	Not assigned by regulation
Labels	:	3245
Packing instruction (cargo aircraft)	:	959
Packing instruction (EQ)	:	E0
Packing instruction (passenger aircraft)	:	959

IMDG-Code

UN number	:	UN 3245
Proper shipping name	:	GENETICALLY MODIFIED MICRO-ORGANISMS
Class	:	9
Packing group	:	Not assigned by regulation
Labels	:	9
EmS Code	:	F-A, S-T
Marine pollutant	:	no

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

National Regulations

SECTION 15. REGULATORY INFORMATION

Clean Air Act

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).
This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).
This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).
This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCMI Intermediate or Final VOC's (40 CFR 60.489).

Clean Water Act

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.
This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.
This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

Massachusetts Right To Know

No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know

Fetal Bovine Serum	Not Assigned	70 - 90 %
Sodium chloride (NaCl)	7647-14-5	10 - 20 %

New Jersey Right To Know

Fetal Bovine Serum	Not Assigned	70 - 90 %
Sodium chloride (NaCl)	7647-14-5	10 - 20 %

California Prop 65 : This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

Other regulations : Restricted to professional users.
For use by laboratories for research.

Biosafety Regulations and Guidelines:
OSHA Bloodborne Pathogen Standard 29 CFR 1910.1030 and the OSHA Standard Interpretation on Applicability of 1910.1030 to Establish Human Cell Lines;
U.S. Department of Health and Human Services Public Health Services, Biosafety in Microbiological and Biomedical Laboratories (BMBL) - 5th ed., HHS Publication No. (CDC) 21-1112

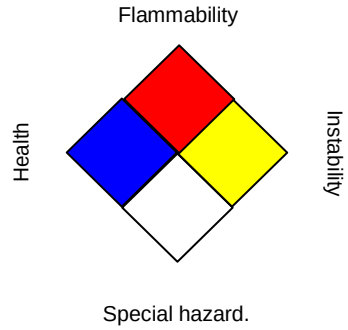
CTC Control Cells

Version	Revision Date:	SDS Number:	Date of last issue: 2017/08/03
1.3	2018/01/09	100000011994	Date of first issue: 2015/12/15

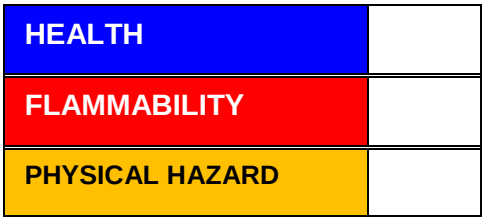
SECTION 16. OTHER INFORMATION

Further information

NFPA:



HMIS III:



0 = not significant, 1 =Slight,
2 = Moderate, 3 = High
4 = Extreme, * = Chronic

Revision Date : 2018/01/09

Date and Number Formats

This document uses the following notation for printing dates and numbers:

Date:	Dec 31th, 2012	as	2012/12/31
Numbers:	123456,78	as	123,456.78

The information provided in 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 guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered 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 materials or in any process, unless specified in the text.

US / EN

Histopaque Matrix for Control Cells

Version	Revision Date:	SDS Number:	Date of last issue: 2017/08/02
1.39	2018/01/09	100000010980	Date of first issue: 2015/02/04

SECTION 1. IDENTIFICATION

Product name : Histopaque Matrix for Control Cells
Substance name : Histopaque Matrix for Control Cells

Manufacturer or supplier's details

Company name of supplier : Menarini Silicon Biosystems, Inc.

Address : 3401 Masons Mill Rd #100
Huntingdon Valley, PA 19006
USA

Telephone : 1 (800) 381-4929
E-mail address Responsible/issuing person : Us-info@siliconbiosystems.com

Emergency telephone number : US : (303)-389-1805
International: +1 (303)-389-1805

Recommended use of the chemical and restrictions on use

Recommended use : Assay reagent

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Not a hazardous substance or mixture.

GHS label elements

Not a hazardous substance or mixture.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Chemical nature : Liquid

Hazardous components

Chemical name	CAS-No.	Concentration (%)
sodium azide	26628-22-8	>= 0.1 - < 1

SECTION 4. FIRST AID MEASURES

If inhaled : If breathed in, move person into fresh air.
Consult a physician.

In case of skin contact	:	Take off contaminated clothing and shoes immediately. Wash off with plenty of water. If symptoms persist, call a physician.
In case of eye contact	:	Rinse immediately with plenty of water, also under the eyelids, for at least 5 minutes. Remove contact lenses. If eye irritation persists, consult a specialist.
If swallowed	:	If swallowed, rinse mouth with water (only if the person is conscious). Call a physician immediately.
Most important symptoms and effects, both acute and delayed	:	No information available.
Notes to physician	:	Treat symptomatically.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media	:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Specific hazards during firefighting	:	No information available.
Further information	:	No information available.
Special protective equipment for firefighters	:	In the event of fire, wear self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	In the event of an accidental release the emergency response team must respond based on a risk assessment and use personal protective equipment as appropriate.
Environmental precautions	:	Should not be released into the environment.
Methods and materials for containment and cleaning up	:	Large spills: Dam up. Soak up with inert absorbent material. Keep in properly labelled containers. Small spills: Gently cover the spill with an absorbent towel or pad. Large spills + Small spills: Keep in suitable, closed containers for disposal. Treat recovered material as described in the section "Disposal considerations".

SECTION 7. HANDLING AND STORAGE

Advice on protection against	:	No data available

fire and explosion

Advice on safe handling : To avoid thermal decomposition, do not overheat.
Avoid inhalation, ingestion and contact with skin and eyes.
Use personal protective equipment as required.

Conditions for safe storage : To maintain product quality, do not store in heat or direct sunlight.
Store in original container.
Keep containers tightly closed in a dry, cool and well-ventilated place.
Keep away from heat and sources of ignition.
Keep locked up.
Keep refrigerated.

Recommended storage temperature : 2 - 8 °C

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
sodium azide	26628-22-8	C	0.1 ppm (HN3)	NIOSH REL
		C (Vapour)	0.11 ppm (Hydrazoic acid)	ACGIH
		C	0.1 ppm (Ammonia)	OSHA P0
		C	0.29 mg/m3 (Sodium azide)	ACGIH
		C	0.3 mg/m3 (Sodium azide)	NIOSH REL
		C	0.3 mg/m3 (Sodium azide)	OSHA P0
		C	0.1 ppm 0.3 mg/m3	CAL PEL

Engineering measures : All personal protective equipment should be based on a risk assessment. Consult a Environment Health Safety expert if necessary.

Personal protective equipment

Respiratory protection : Engineering controls should always be the primary method of controlling exposures.
If respiratory protective equipment is needed for certain activities, the type as well as the corresponding protection factor will depend upon the risk assessment and air concentrations, hazards, physical and warning properties of substances present.
No personal respiratory protective equipment normally re-

quired.

Hand protection

Remarks	:	Disposable gloves
Eye protection	:	No special precautions required.
Skin and body protection	:	No special precautions required.
Protective measures	:	The type of protective equipment must be selected based on the Environmental Health and Safety risk assessment. Consult a Environmental Health and Safety expert if necessary.
Hygiene measures	:	Handle in accordance with good industrial hygiene and safety practice.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	liquid
Colour	:	clear
Solubility(ies)		
Water solubility	:	soluble

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	None reasonably foreseeable.
Chemical stability	:	Stable under recommended storage conditions.
Possibility of hazardous reactions	:	No dangerous reaction known under conditions of normal use.
Conditions to avoid	:	To avoid thermal decomposition, do not overheat.
Incompatible materials	:	Strong acids and strong bases Strong oxidizing agents Reducing agents
Hazardous decomposition products	:	None known.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Product:

Acute oral toxicity	:	Acute toxicity estimate: > 5,000 mg/kg Method: Calculation method

Components:

sodium azide

Acute oral toxicity : LD50 (Rat): 27 mg/kg

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

No data available

Respiratory or skin sensitisation

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

IARC	No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
OSHA	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
NTP	No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity

No data available

STOT - single exposure

No data available

STOT - repeated exposure

No data available

Repeated dose toxicity

No data available

Aspiration toxicity

No data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

sodium azide

Toxicity to fish : LC50 (Lepomis macrochirus (Bluegill sunfish)): 0.7 mg/l

Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia pulex (Water flea)): 4.2 mg/l
Exposure time: 96 h

Toxicity to algae : IC50: 272 mg/l

Toxicity to bacteria : EC50 (Photobacterium phosphoreum): 38.5 mg/l

Persistence and degradability

No data available

Bioaccumulative potential

No data available

Mobility in soil

No data available

Other adverse effects

Product:

Ozone-Depletion Potential : Regulation: 40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances
Remarks: This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : In accordance with National, Federal, State and Local regulations.

Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.

SECTION 14. TRANSPORT INFORMATION

International Regulations

UNRTDG
Not regulated as a dangerous good

IATA-DGR
Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

National Regulations

49 CFR

Not regulated as a dangerous good

SECTION 15. REGULATORY INFORMATION

Clean Air Act

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).
This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).
This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).
This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCMI Intermediate or Final VOC's (40 CFR 60.489).

Clean Water Act

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.
This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.
This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

Massachusetts Right To Know

sodium azide	26628-22-8	0.1 - 1 %

Pennsylvania Right To Know

water	7732-18-5	90 - 100 %
Albumins, blood serum	9048-46-8	5 - 10 %
sodium azide	26628-22-8	0.1 - 1 %

New Jersey Right To Know

water	7732-18-5	90 - 100 %
Albumins, blood serum	9048-46-8	5 - 10 %

California Prop 65 This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

Other regulations : Restricted to professional users.

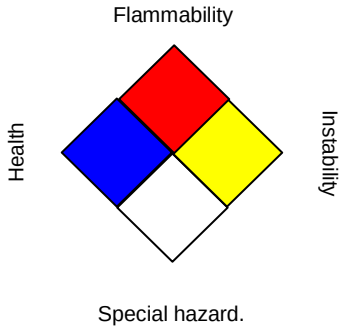
Histopaque Matrix for Control Cells

Version	Revision Date:	SDS Number:	Date of last issue: 2017/08/02
1.39	2018/01/09	100000010980	Date of first issue: 2015/02/04

SECTION 16. OTHER INFORMATION

Further information

NFPA:



HMIS III:

HEALTH	
FLAMMABILITY	
PHYSICAL HAZARD	

0 = not significant, 1 =Slight,
2 = Moderate, 3 = High
4 = Extreme, * = Chronic

Revision Date : 2018/01/09

Date and Number Formats

This document uses the following notation for printing dates and numbers:

Date:	Dec 31th, 2012	as	2012/12/31
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US / EN