diagenode
Innovating Epigenetics Solutions

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH)

MethylTaq Plus 2X Master Mix

version number: GHS 2.0
replaces version of: 2020-05-04 (GHS 1)

revision: 2021-01-26

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 product identifier

trade name	**MethylTaq Plus 2X Master Mix**
registration number (REACH)	not relevant (mixture)
product code(s)	C09010012

1.2 relevant identified uses of the substance or mixture and uses advised against

relevant identified uses	for research use only, not for use in diagnostic or therapeutic procedures.

1.3 details of the supplier of the safety data sheet

Diagenode SA
LIEGE SCIENCE PARK Rue du Bois Saint-Jean, 3
4102 Seraing
Belgium

telephone: +32 4 364 20 50

1.4 emergency telephone number

emergency information service	+32 4 364 20 50 this number is only available during the following office hours: Mon-Fri 09:00 AM - 05:00 PM

poison centre

country	name	telephone
United Kingdom	National Poisons Information Service	111

SECTION 2: Hazards identification

2.1 classification of the substance or mixture

classification according to Regulation (EC) No 1272/2008 (CLP)

section	hazard class	category	hazard class and category	hazard statement
3.10	acute toxicity (oral)	3	Acute Tox. 3	H301
3.8	specific target organ toxicity - single exposure	2	STOT SE 2	H371

for full text of abbreviations: see SECTION 16.

the most important adverse physicochemical, human health and environmental effects

immediate effects can be expected after short-term exposure.

2.2 label elements

labelling according to Regulation (EC) No 1272/2008 (CLP)

- signal word: danger
- pictograms

GHS06, GHS08

- hazard statements

H301	toxic if swallowed.
H371	may cause damage to organs.

- precautionary statements

P260	do not breathe dust/fume/gas/mist/vapours/spray.
P264	wash thoroughly after handling.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER/doctor.
P308+P311	IF exposed or concerned: Call a POISON CENTER/doctor.
P321	specific treatment (see on this label).
P501	dispose of contents/container to industrial combustion plant.

- hazardous ingredients for labelling Tetramethylammonium chloride

2.3 other hazards

of no significance

SECTION 3: Composition/information on ingredients

3.1 substances

not relevant (mixture)

3.2 mixtures

description of the mixture

name of substance	identifier	wt%	classification acc. to GHS	pictograms
Tetramethylammonium chloride	CAS No 75-57-0 EC No 200-880-8	≤ 2.5	Acute Tox. 2 / H300 Acute Tox. 3 / H311 Skin Irrit. 2 / H315 STOT SE 1 / H370 Aquatic Chronic 2 / H411	

name of substance	Specific Conc. Limits	M-Factors	ATE	exposure route
Tetramethylammonium chloride	-	-	5 $^{mg}/_{kg}$ 200 $^{mg}/_{kg}$	oral dermal

for full text of abbreviations: see SECTION 16.

SECTION 4: First aid measures

4.1 description of first aid measures

general notes

do not leave affected person unattended. remove victim out of the danger area. keep affected person warm, still and covered. take off immediately all contaminated clothing. in all cases of doubt, or when symptoms persist, seek medical advice. in case of unconsciousness place person in the recovery position. Never give anything by mouth.

following inhalation

if breathing is irregular or stopped, immediately seek medical assistance and start first aid actions. provide fresh air.

following skin contact

wash with plenty of soap and water.

following eye contact

remove contact lenses, if present and easy to do. Continue rinsing. irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart.

following ingestion

rinse mouth with water (only if the person is conscious). do NOT induce vomiting.

4.2 most important symptoms and effects, both acute and delayed

symptoms and effects are not known to date.

4.3 indication of any immediate medical attention and special treatment needed

none

SECTION 5: Firefighting measures

5.1 extinguishing media

suitable extinguishing media

water spray, BC-powder, carbon dioxide (CO2)

unsuitable extinguishing media

water jet

5.2 special hazards arising from the substance or mixture

5.3 advice for firefighters

in case of fire and/or explosion do not breathe fumes. co-ordinate firefighting measures to the fire surroundings. do not allow firefighting water to enter drains or water courses. collect contaminated firefighting water separately. fight fire with normal precautions from a reasonable distance.

SECTION 6: Accidental release measures

6.1 personal precautions, protective equipment and emergency procedures

for non-emergency personnel

remove persons to safety.

for emergency responders

wear breathing apparatus if exposed to vapours/dust/spray/gases.

6.2 environmental precautions

keep away from drains, surface and ground water. retain contaminated washing water and dispose of it.

6.3 methods and material for containment and cleaning up

advice on how to contain a spill

covering of drains

advice on how to clean up a spill

wipe up with absorbent material (e.g. cloth, fleece). collect spillage: sawdust, kieselgur (diatomite), sand, universal binder

appropriate containment techniques

use of adsorbent materials.

other information relating to spills and releases

place in appropriate containers for disposal. ventilate affected area.

6.4 reference to other sections

personal protective equipment: see section 8. incompatible materials: see section 10. disposal considerations: see section 13.

SECTION 7: Handling and storage

7.1 precautions for safe handling

recommendations

- measures to prevent fire as well as aerosol and dust generation

use local and general ventilation. use only in well-ventilated areas.

advice on general occupational hygiene

wash hands after use. do not eat, drink and smoke in work areas. remove contaminated clothing and protective equipment before entering eating areas. never keep food or drink in the vicinity of chemicals. never place chemicals in containers that are normally used for food or drink. keep away from food, drink and animal feedingstuffs.

7.2 conditions for safe storage, including any incompatibilities

control of effects

protect against external exposure, such as

frost

- packaging compatibilities

only packagings which are approved (e.g. acc. to ADR) may be used.

7.3 specific end use(s)

see section 16 for a general overview.

SECTION 8: Exposure controls/personal protection

8.1 control parameters

this information is not available.

relevant DNELs of components of the mixture

name of substance	CAS No	endpoint	threshold level	protection goal, route of exposure	used in	exposure time
Tetramethylammonium chloride	75-57-0	DNEL	2.9 mg/m³	human, inhalatory	worker (industry)	chronic - systemic effects
Tetramethylammonium chloride	75-57-0	DNEL	0.4 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects

relevant PNECs of components of the mixture

name of substance	CAS No	endpoint	threshold level	organism	environmental compartment	exposure time
Tetramethylammonium chloride	75-57-0	PNEC	0.6 µg/l	aquatic organisms	freshwater	short-term (single instance)
Tetramethylammonium chloride	75-57-0	PNEC	0.06 µg/l	aquatic organisms	marine water	short-term (single instance)
Tetramethylammonium chloride	75-57-0	PNEC	6 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
Tetramethylammonium chloride	75-57-0	PNEC	35 µg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
Tetramethylammonium chloride	75-57-0	PNEC	3.5 µg/kg	aquatic organisms	marine sediment	short-term (single instance)

relevant PNECs of components of the mixture

name of substance	CAS No	endpoint	threshold level	organism	environmental compartment	exposure time
Tetramethylammonium chloride	75-57-0	PNEC	6.6 $\mu g/_{kg}$	terrestrial organisms	soil	short-term (single instance)

8.2 exposure controls

appropriate engineering controls

general ventilation.

individual protection measures (personal protective equipment)

eye/face protection

wear eye/face protection.

skin protection

- hand protection

wear suitable gloves. chemical protection gloves are suitable, which are tested according to EN 374. check leak-tightness/ impermeability prior to use. in the case of wanting to use the gloves again, clean them before taking off and air them well. for special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

- other protection measures

take recovery periods for skin regeneration. preventive skin protection (barrier creams/ointments) is recommended. wash hands thoroughly after handling.

respiratory protection

in case of inadequate ventilation wear respiratory protection.

environmental exposure controls

use appropriate container to avoid environmental contamination. keep away from drains, surface and ground water.

SECTION 9: Physical and chemical properties

9.1 information on basic physical and chemical properties

physical state	liquid
colour	colourless
odour	odourless
melting point/freezing point	not determined
boiling point or initial boiling point and boiling range	not determined
flammability	non-combustible
lower and upper explosion limit	not determined
flash point	not determined
auto-ignition temperature	not determined

decomposition temperature	not relevant
pH (value)	not determined
kinematic viscosity	not determined
solubility(ies)	not determined

partition coefficient

partition coefficient n-octanol/water (log value)	this information is not available

vapour pressure	not determined

density and/or relative density

density	not determined

particle characteristics	no data available

9.2 other information

information with regard to physical hazard classes	hazard classes acc. to GHS (physical hazards): not relevant
other safety characteristics	there is no additional information

SECTION 10: Stability and reactivity

10.1 reactivity

concerning incompatibility: see below "Conditions to avoid" and "Incompatible materials".

10.2 chemical stability

see below "Conditions to avoid".

10.3 possibility of hazardous reactions

no known hazardous reactions.

10.4 conditions to avoid

there are no specific conditions known which have to be avoided.

10.5 incompatible materials

there is no additional information.

10.6 hazardous decomposition products

reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known. hazardous combustion products: see section 5.

SECTION 11: Toxicological information

11.1 information on hazard classes as defined in Regulation (EC) No 1272/2008

test data are not available for the complete mixture.

classification procedure

the method for classification of the mixture is based on ingredients of the mixture (additivity formula).

classification according to GHS (1272/2008/EC, CLP)

acute toxicity

toxic if swallowed.

- acute toxicity estimate (ATE)

oral 250 $^{mg}/_{kg}$

acute toxicity estimate (ATE) of components of the mixture

name of substance	CAS No	exposure route	ATE
Tetramethylammonium chloride	75-57-0	oral	5 $^{mg}/_{kg}$
Tetramethylammonium chloride	75-57-0	dermal	200 $^{mg}/_{kg}$

skin corrosion/irritation

shall not be classified as corrosive/irritant to skin.

serious eye damage/eye irritation

shall not be classified as seriously damaging to the eye or eye irritant.

respiratory or skin sensitisation

shall not be classified as a respiratory or skin sensitiser.

germ cell mutagenicity

shall not be classified as germ cell mutagenic.

carcinogenicity

shall not be classified as carcinogenic.

reproductive toxicity

shall not be classified as a reproductive toxicant.

specific target organ toxicity - single exposure

may cause damage to organs.

specific target organ toxicity - repeated exposure

shall not be classified as a specific target organ toxicant (repeated exposure).

aspiration hazard

shall not be classified as presenting an aspiration hazard.

11.2 information on other hazards

there is no additional information.

SECTION 12: Ecological information

12.1 toxicity

shall not be classified as hazardous to the aquatic environment.

12.2 persistence and degradability

data are not available.

12.3 bioaccumulative potential

data are not available.

12.4 mobility in soil

data are not available.

12.5 results of PBT and vPvB assessment

data are not available.

12.6 endocrine disrupting properties

information on this property is not available.

12.7 other adverse effects

data are not available.

SECTION 13: Disposal considerations

13.1 waste treatment methods

sewage disposal-relevant information

do not empty into drains. avoid release to the environment. Refer to special instructions/safety data sheets.

waste treatment of containers/packagings

it is a dangerous waste; only packagings which are approved (e.g. acc. to ADR) may be used. completely emptied packages can be recycled. handle contaminated packages in the same way as the substance itself.

remarks

please consider the relevant national or regional provisions. waste shall be separated into the categories that can be handled separately by the local or national waste management facilities.

SECTION 14: Transport information

14.1 UN number

ADR/RID/ADN	2810
IMDG-Code	2810
ICAO-TI	2810

14.2 UN proper shipping name

ADR/RID/ADN	TOXIC LIQUID, ORGANIC, N.O.S.
IMDG-Code	TOXIC LIQUID, ORGANIC, N.O.S.
ICAO-TI	Toxic liquid, organic, n.o.s.
technical name (hazardous ingredients)	Tetramethylammonium chloride

14.3 transport hazard class(es)

ADR/RID/ADN	6.1
IMDG-Code	6.1

ICAO-TI	6.1

14.4 packing group

ADR/RID/ADN	III
IMDG-Code	III
ICAO-TI	III

14.5 environmental hazards

non-environmentally hazardous acc. to the dangerous goods regulations

14.6 special precautions for user

provisions for dangerous goods (ADR) should be complied within the premises.

14.7 maritime transport in bulk according to IMO instruments

the cargo is not intended to be carried in bulk.

Information for each of the UN Model Regulations

transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN) - additional information

classification code	T1
danger label(s)	6.1

special provisions (SP)	274, 614, 802(ADN)
excepted quantities (EQ)	E1
limited quantities (LQ)	5 L
transport category (TC)	2
tunnel restriction code (TRC)	E
hazard identification No	60
Emergency Action Code	2X

International Maritime Dangerous Goods Code (IMDG) - additional information

marine pollutant	-
danger label(s)	6.1

special provisions (SP)	223, 274
excepted quantities (EQ)	E1
limited quantities (LQ)	5 L
EmS	F-A, S-A
stowage category	A

International Civil Aviation Organization (ICAO-IATA/DGR) - additional information

danger label(s)	6.1

special provisions (SP)	A3, A4, A137
excepted quantities (EQ)	E1
limited quantities (LQ)	2 L

SECTION 15: Regulatory information

15.1 safety, health and environmental regulations/legislation specific for the substance or mixture

15.2 Chemical Safety Assessment

chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

indication of changes (revised safety data sheet)

section	former entry (text/value)	actual entry (text/value)	safety-relevant
1.1	product code(s): K09721018/K09821018	product code(s): C09010012	yes
1.3	details of the supplier of the safety data sheet: Diagenode SA LIEGE SCIENCE PARK Rue du Bois Saint-Jean, 3 4102 Seraing Belgium telephone: +32 4 364 20 50 e-mail: info@diagenode.com	details of the supplier of the safety data sheet: Diagenode SA LIEGE SCIENCE PARK Rue du Bois Saint-Jean, 3 4102 Seraing Belgium telephone: +32 4 364 20 50	yes
2.3	other hazards	other hazards: of no significance	yes
2.3	results of PBT and vPvB assessment: this mixture does not contain any substances that are assessed to be a PBT or a vPvB.		yes
3.2		mixtures: change in the listing (table)	yes
3.2		mixtures: change in the listing (table)	yes
9.1	appearance		yes
9.1	other safety parameters		yes
9.1	flammability (solid, gas): not relevant, (fluid)	flammability: non-combustible	yes
9.1	evaporation rate: not determined		yes
9.1		decomposition temperature: not relevant	yes
9.1		kinematic viscosity: not determined	yes

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section	former entry (text/value)	actual entry (text/value)	safety-relevant
9.1		density and/or relative density	yes
9.1	vapour density: this information is not available		yes
9.1	relative density: information on this property is not available		yes
9.1	viscosity: not determined		yes
9.1	explosive properties: none		yes
9.1	oxidising properties: none		yes
9.1		particle characteristics: no data available	yes
9.2	other information: there is no additional information	other information	yes
9.2		information with regard to physical hazard classes: hazard classes acc. to GHS (physical hazards): not relevant	yes
9.2		other safety characteristics: there is no additional information	yes
11.2		information on other hazards: there is no additional information.	yes
12.6	other adverse effects: data are not available.	endocrine disrupting properties: information on this property is not available.	yes
14.1	UN number: 2810	UN number	yes
14.1		ADR/RID/ADN: 2810	yes
14.1		IMDG-Code: 2810	yes
14.1		ICAO-TI: 2810	yes
14.2	UN proper shipping name: TOXIC LIQUID, ORGANIC, N.O.S.	UN proper shipping name	yes
14.2		ADR/RID/ADN: TOXIC LIQUID, ORGANIC, N.O.S.	yes
14.2		IMDG-Code: TOXIC LIQUID, ORGANIC, N.O.S.	yes
14.2		ICAO-TI: Toxic liquid, organic, n.o.s.	yes
14.3	class: 6.1 (toxic substances)		yes
14.3		ADR/RID/ADN: 6.1	yes
14.3		IMDG-Code: 6.1	yes

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section	former entry (text/value)	actual entry (text/value)	safety-relevant
14.3		ICAO-TI: 6.1	yes
14.4	packing group: III (substance presenting low danger)	packing group	yes
14.4		ADR/RID/ADN: III	yes
14.4		IMDG-Code: III	yes
14.4		ICAO-TI: III	yes
14.7	UN number: 2810		yes
14.7	proper shipping name: TOXIC LIQUID, ORGANIC, N.O.S.		yes
14.7	class: 6.1		yes
14.7	packing group: III		yes
14.7	UN number: 2810		yes
14.7	proper shipping name: TOXIC LIQUID, ORGANIC, N.O.S.		yes
14.7	class: 6.1		yes
14.7	packing group: III		yes
14.7	UN number: 2810		yes
14.7	proper shipping name: Toxic liquid, organic, n.o.s.		yes
14.7	class: 6.1		yes
14.7	packing group: III		yes
16		abbreviations and acronyms: change in the listing (table)	yes
16	key literature references and sources for data: Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures. Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU.transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).	key literature references and sources for data: Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures. Regulation (EC) No. 1907/2006 (REACH), amended by 2020/878/EU.transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).	yes

abbreviations and acronyms

abbr.	descriptions of used abbreviations
Acute Tox.	Acute toxicity
ADN	Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways)
ADR	Accord européen relatif au transport international des marchandises dangereuses par route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
ADR/RID/ADN	European Agreements concerning the International Carriage of Dangerous Goods by Road/Rail/Inland Waterways (ADR/RID/ADN)
Aquatic Chronic	Hazardous to the aquatic environment - chronic hazard
ATE	Acute Toxicity Estimate
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures
DGR	Dangerous Goods Regulations (see IATA/DGR)
DNEL	Derived No-Effect Level
EC No	The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union)
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
EmS	Emergency Schedule
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
IATA	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)
ICAO	International Civil Aviation Organization
ICAO-TI	Technical instructions for the safe transport of dangerous goods by air
IMDG	International Maritime Dangerous Goods Code
IMDG-Code	International Maritime Dangerous Goods Code
index No	The Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008
NLP	No-Longer Polymer
PBT	Persistent, Bioaccumulative and Toxic
PNEC	Predicted No-Effect Concentration
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail)
Skin Corr.	Corrosive to skin
Skin Irrit.	Irritant to skin
STOT SE	Specific target organ toxicity - single exposure
vPvB	Very Persistent and very Bioaccumulative

key literature references and sources for data

Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures. Regulation (EC) No. 1907/2006 (REACH), amended by 2020/878/EU.

transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

classification procedure

physical and chemical properties: the classification is based on tested mixture.
health hazards, environmental hazards: the method for classification of the mixture is based on ingredients of the mixture (additivity formula).

list of relevant phrases (code and full text as stated in chapter 2 and 3)

code	text
H300	Fatal if swallowed.
H301	Toxic if swallowed.
H311	Toxic in contact with skin.
H315	Causes skin irritation.
H370	Causes damage to organs.
H371	May cause damage to organs.
H411	Toxic to aquatic life with long lasting effects.

disclaimer

this information is based upon the present state of our knowledge. this SDS has been compiled and is solely intended for this product.