

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

1.1 product identifier

trade name **MethylTaq Plus 2X Master Mix**
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 of-
fice hours: Mon-Fri 09:00 AM - 05:00 PM

poison center		
country	name	telephone
United States	American Association of Poison Control Centers	1-800-222-1222

SECTION 2: Hazard(s) identification

2.1 classification of the substance or mixture

classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

section	hazard class	category	hazard class and category	hazard statement
A.10	acute toxicity (oral)	3	Acute Tox. 3	H301
A.8	specific target organ toxicity - single exposure	1	STOT SE 1	H370

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 acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

- signal word **danger**

- pictograms

GHS06, GHS08



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- hazard statements
 - H301 toxic if swallowed.
 - H370 causes damage to organs.
- precautionary statements
 - P260 do not breathe dust/fume/gas/mist/vapors/spray.
 - P264 wash thoroughly after handling.
 - P270 do not eat, drink or smoke when using this product.
 - P301+P310 if swallowed: Immediately call a poison center/doctor.
 - P307+P311 if exposed: Call a poison center/doctor.
 - P321 specific treatment (see on this label).
 - P330 rinse mouth.
 - P405 store locked up.
 - 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	≤ 2.5	Acute Tox. 2 / H300 Acute Tox. 3 / H311 Skin Irrit. 2 / H315 STOT SE 1 / H370	

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.

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4.3 indication of any immediate medical attention and special treatment needed

none

SECTION 5: Fire-fighting 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. coordinate 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 vapors/dust/aerosols/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.

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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 the effects

protect against external exposure, such as
frost

- packaging compatibilities
only packagings which are approved (e.g. acc. to the Dangerous Goods Regulations) 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/m ³	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)

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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 µg/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

appearance

physical state	liquid
color	colorless
odor	odorless

other safety parameters

pH (value)	not determined
melting point/freezing point	not determined
initial boiling point and boiling range	not determined
flash point	not determined
evaporation rate	not determined

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flammability (solid, gas)	not relevant, (fluid)
vapor pressure	not determined
density	not determined
vapor density	this information is not available
relative density	information on this property is not available
solubility(ies)	not determined
partition coefficient	
- n-octanol/water (log KOW)	this information is not available
auto-ignition temperature	not determined
viscosity	not determined
explosive properties	none
oxidizing properties	none
9.2 other information	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.

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SECTION 11: Toxicological information

11.1 information on toxicological effects

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 acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

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 sensitization

shall not be classified as a respiratory or skin sensitizer.

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

causes 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.

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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/packages

only packagings which are approved (e.g. acc. to DOT) 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

DOT	2810
IMDG-Code	2810
ICAO-TI	2810

14.2 UN proper shipping name

DOT	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)

DOT	6.1
IMDG-Code	6.1

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ICAO-TI	6.1
14.4 packing group	
DOT	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	there is no additional information.
14.7 transport in bulk according to Annex II of MARPOL and the IBC Code	the cargo is not intended to be carried in bulk.

Information for each of the UN Model Regulations


transport of dangerous goods by road or rail (49 CFR US DOT) - additional information

particulars in the shipper's declaration	UN2810, Toxic liquid, organic, n.o.s., (contains: Tetramethylammonium chloride), 6.1, III
danger label(s)	6.1
	
special provisions (SP)	IB3, T7, TP1, TP28
ERG No	153

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

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SECTION 15: Regulatory information

15.1 safety, health and environmental regulations specific for the product in question

industry or sector specific available guidance(s)

NPCA-HMIS® III

Hazardous Materials Identification System. American Coatings Association.

category	rating	description
Chronic	/	none
Health	2	temporary or minor injury may occur
Flammability	0	material that will not burn under typical fire conditions
Physical hazard	0	material that is normally stable, even under fire conditions, and will not react with water, polymerize, decompose, condense, or self-react. Non-explosive
Personal protection	-	

NFPA® 704

National Fire Protection Association: Standard System for the Identification of the Hazards of Materials for Emergency Response (United States).

category	degree of hazard	description
Flammability	0	material that will not burn under typical fire conditions
Health	2	material that, under emergency conditions, can cause temporary incapacitation or residual injury
Instability	0	material that is normally stable, even under fire conditions
Special hazard		

15.2 Chemical Safety Assessment

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

SECTION 16: Other information, including date of preparation or last revision

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
1.4		poison center: change in the listing (table)	yes

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section	former entry (text/value)	actual entry (text/value)	safety-relevant
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
9.1	explosive limits: not determined		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		DOT: 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		DOT: 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		DOT: 6.1	yes
14.3		IMDG-Code: 6.1	yes
14.3		ICAO-TI: 6.1	yes
14.4	packing group: III (substance presenting low danger)	packing group	yes
14.4		DOT: III	yes
14.4		IMDG-Code: III	yes
14.4		ICAO-TI: III	yes
14.7	index number: 2810		yes
14.7	proper shipping name: Toxic liquid, organic, n.o.s.		yes
14.7	class: 6.1		yes

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section	former entry (text/value)	actual entry (text/value)	safety-relevant
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
15.1	national regulations (United States)		yes
15.1	VOC content: Regulated Volatile Organic Compounds (VOC-EPA): Regulated Volatile Organic Compounds (VOC-Cal ARB):		yes
16		abbreviations and acronyms: change in the listing (table)	yes

abbreviations and acronyms

abbr.	descriptions of used abbreviations
49 CFR US DOT	49 CFR U.S. Department of Transportation
Acute Tox.	Acute toxicity
ATE	Acute Toxicity Estimate
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
DGR	Dangerous Goods Regulations (see IATA/DGR)
DNEL	Derived No-Effect Level
DOT	Department of Transportation (USA)
EmS	Emergency Schedule
ERG No	Emergency Response Guidebook - Number
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

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abbr.	descriptions of used abbreviations
IMDG	International Maritime Dangerous Goods Code
IMDG-Code	International Maritime Dangerous Goods Code
MARPOL	International Convention for the Prevention of Pollution from Ships (abbr. of "Marine Pollutant")
NPCA-HMIS® III	National Paint and Coatings Association: Hazardous Materials Identification System - HMIS® III, Third Edition
OSHA	Occupational Safety and Health Administration (United States)
PBT	Persistent, Bioaccumulative and Toxic
PNEC	Predicted No-Effect Concentration
RTECS	Registry of Toxic Effects of Chemical Substances (database of NIOSH with toxicological information)
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

OSHA Hazard Communication Standard (HCS), 29 CFR 1910.1200.

transport of dangerous goods by road or rail (49 CFR US DOT). 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.

disclaimer

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