

# Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878 Issue date: 12/11/2014 Revision date: 5/11/2023 Version: 2.1

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

# 1.1. Product identifier

Product form : Mixture

Product name : METHYLTRIACETOXYSILANE - 80:20 Blend

EC-No. : 224-221-9 CAS-No. : 4253-34-3 Product code : SIM6519.2

Formula : C7H12O6Si-C8H14O6Si

Synonyms : TRIACETOXYMETHYLSILANE-TRIACETOXYETHYLSILANE MIXTURE

Product group : Blend

Chemical family : ORGANOSILANE

# 1.2. Relevant identified uses of the substance or mixture and uses advised against

#### 1.2.1. Relevant identified uses

Use of the substance/mixture : Chemical intermediate

## 1.2.2. Uses advised against

No additional information available

## 1.3. Details of the supplier of the safety data sheet

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# 1.4. Emergency telephone number

Emergency number : CHEMTREC: 1-800-424-9300 (USA); +1 703-527-3887 (International)

## **SECTION 2: Hazards identification**

## 2.1. Classification of the substance or mixture

# Classification according to Regulation (EC) No. 1272/2008 [CLP]

Skin corrosion/irritation, Category 1, Sub-Category 1C H314
Serious eye damage/eye irritation, Category 1 H318

Full text of H- and EUH-statements: see section 16

# Adverse physicochemical, human health and environmental effects

No additional information available

# Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

## 2.2. Label elements

## Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP)



GHS05

Signal word (CLP) : Danger

Contains : Methyltriacetoxysilane; Ethyltriacetoxysilane Hazard statements (CLP) : H314 - Causes severe skin burns and eye damage.

Precautionary statements (CLP) : P280 - Wear protective gloves/protective clothing/eye protection/face protection.

P260 - Do not breathe dust, mist.

P264 - Wash hands thoroughly after handling.

P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing.

Rinse skin with water/shower.

P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove

contact lenses, if present and easy to do. Continue rinsing. P310 - Immediately call a POISON CENTER or doctor.

## 2.3. Other hazards

Other hazards which do not result in classification

Material may form a siloxane polymer on the skin, eyes or in the lungs. Acetic acid is liberated on contact with moisture and living tissue.

Contains no PBT/vPvB substances ≥ 0.1% assessed in accordance with REACH Annex XIII

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

# **SECTION 3: Composition/information on ingredients**

# 3.1. Substances

Not applicable

# 3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Methyltriacetoxysilane	CAS-No.: 4253-34-3 EC-No.: 224-221-9	78 – 82	Skin Corr. 1C, H314 Eye Dam. 1, H318
Ethyltriacetoxysilane	CAS-No.: 17689-77-9 EC-No.: 241-677-4	18 – 22	Acute Tox. 4 (Oral), H302 Skin Corr. 1C, H314 Eye Dam. 1, H318

Full text of H- and EUH-statements: see section 16

# **SECTION 4: First aid measures**

# 4.1. Description of first aid measures

First-aid measures general : Remove contaminated clothing and shoes. In case of accident or if you feel unwell, seek

medical advice immediately (show the label where possible). If possible show this sheet; if

not available show packaging or label.

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. If you feel unwell, seek

medical advice.

First-aid measures after skin contact : Wash with plenty of water/.... Get immediate medical advice/attention.

# Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

First-aid measures after eye contact : Immediately flush eyes thoroughly with water for at least 15 minutes. Remove contact

lenses, if present and easy to do. Continue rinsing. Get immediate medical advice/attention.

First-aid measures after ingestion : Never give anything by mouth to an unconscious person. Get medical advice/attention.

## 4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects : Causes severe skin burns and eye damage. Symptoms/effects after inhalation : May cause irritation to the respiratory tract.

Symptoms/effects after skin contact : Causes burns.

Symptoms/effects after eye contact : Causes serious eye damage. Symptoms/effects after ingestion : May be harmful if swallowed.

## 4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

# **SECTION 5: Firefighting measures**

# 5.1. Extinguishing media

Suitable extinguishing media : Alcohol-resistant foam. Carbon dioxide. Dry chemical. Use of high expansion foam (100:1)

is recommended to cover flames.

Unsuitable extinguishing media : Water.

# 5.2. Special hazards arising from the substance or mixture

Fire hazard : Irritating fumes of acetic acid may develop when material is exposed to water or open flame.

## 5.3. Advice for firefighters

Firefighting instructions : Exercise caution when fighting any chemical fire.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

Avoid all eye and skin contact and do not breathe vapour and mist. Do not breathe dust.

# **SECTION 6: Accidental release measures**

# 6.1. Personal precautions, protective equipment and emergency procedures

#### 6.1.1. For non-emergency personnel

Protective equipment : Wear protective equipment as described in Section 8.

Emergency procedures : Evacuate unnecessary personnel.

#### 6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. Equip cleanup crew

with proper protection. For further information refer to section 8: "Exposure

controls/personal protection".

## 6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

# 6.3. Methods and material for containment and cleaning up

For containment : Contain any spills with dikes or absorbents to prevent migration and entry into sewers or

streams.

Methods for cleaning up : Clean up any spills as soon as possible, using an absorbent material to collect it.

## 6.4. Reference to other sections

See Section 8. Exposure controls and personal protection.

# Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

# **SECTION 7: Handling and storage**

# 7.1. Precautions for safe handling

Precautions for safe handling : Avoid all eye and skin contact and do not breathe vapour and mist. Do not breathe dust.

Provide local exhaust or general room ventilation to minimize exposure to dust.

Hygiene measures : Wash hands and other exposed areas with mild soap and water before eating, drinking or

smoking and when leaving work. Wash contaminated clothing before reuse.

# 7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep container tightly closed. Store locked up.

Incompatible materials : alcohols. Alkalis. Oxidizing agent.

Storage area : Store in a well-ventilated place. Store away from heat.

## 7.3. Specific end use(s)

No additional information available

# **SECTION 8: Exposure controls/personal protection**

## 8.1. Control parameters

#### 8.1.1 National occupational exposure and biological limit values

No additional information available

#### 8.1.2. Recommended monitoring procedures

No additional information available

#### 8.1.3. Air contaminants formed

No additional information available

#### 8.1.4. DNEL and PNEC

No additional information available

## 8.1.5. Control banding

No additional information available

#### 8.2. Exposure controls

## 8.2.1. Appropriate engineering controls

## Appropriate engineering controls:

Provide local exhaust or general room ventilation.

#### 8.2.2. Personal protection equipment

#### Personal protective equipment:

Avoid all unnecessary exposure. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

## 8.2.2.1. Eye and face protection

# Eye protection:

Chemical goggles or face shield. Contact lenses should not be worn

## 8.2.2.2. Skin protection

#### Skin and body protection:

Wear suitable protective clothing

# Hand protection:

Neoprene or nitrile rubber gloves

# 8.2.2.3. Respiratory protection

## Respiratory protection:

NIOSH-certified combination organic vapor/acid gas (yellow cartridge) respirator.

# Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

#### 8.2.2.4. Thermal hazards

No additional information available

#### 8.2.3. Environmental exposure controls

No additional information available

# **SECTION 9: Physical and chemical properties**

## 9.1. Information on basic physical and chemical properties

Physical state : Liquid Colour : Off-white.

Appearance : Liquid or crystalline solid.
Odour : Acrid. Acetic acid. Vinegar-like.

Boiling point : 87 - 88 °C @ 3 mm Hg (initial)

Flammability : Not available **Explosive limits** : Not available Lower explosion limit : Not available Upper explosion limit : Not available Flash point : 85 °C Auto-ignition temperature : Not available Decomposition temperature : Not available : Not available рΗ Viscosity, kinematic : Not available Solubility : Reacts with water. Partition coefficient n-octanol/water (Log Kow) : Not available

Partition coefficient n-octanol/water (Log Kow) : Not available
Vapour pressure : 9 mm Hg @ 94°C
Vapour pressure at 50°C : Not available
Density : Not available
Relative density : 1.17

Relative vapour density at 20°C : > 1

Particle characteristics : Not applicable

## 9.2. Other information

## 9.2.1. Information with regard to physical hazard classes

No additional information available

## 9.2.2. Other safety characteristics

VOC content : > 25 %

# **SECTION 10: Stability and reactivity**

# 10.1. Reactivity

No additional information available

# 10.2. Chemical stability

Stable in sealed containers stored under a dry inert atmosphere.

## 10.3. Possibility of hazardous reactions

Reacts with water and moisture in air liberating acetic acid.

# 10.4. Conditions to avoid

Heat. Open flame. Sparks.

# Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

## 10.5. Incompatible materials

alcohols. Alkalis. Oxidizing agent.

# 10.6. Hazardous decomposition products

Acetic acid. Acetic anhydride. Organic acid vapors.

# **SECTION 11: Toxicological information**

# 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

METHYLTRIACETOXYSILANE-ETHYLTRIACETOXYSILANE 80:20 Blend (4253-34-3)		
LD50 oral rat	2060 mg/kg	
Methyltriacetoxysilane (4253-34-3)		
LD50 oral rat	1602 – 2850 mg/kg Source: International Uniform ChemicaL Information Database	
Ethyltriacetoxysilane (17689-77-9)		
LD50 oral rat	1462 mg/kg Source: OECD TG 401, OECD SIDS	
LC50 Inhalation - Rat (Vapours)	6.45 mg/l Source: NLM	

Skin corrosion/irritation : Causes severe skin burns.

Methyl	triacetox	ysilane	(4253-34-3)	

pH 2.78 Temp.: 20 °C

# Ethyltriacetoxysilane (17689-77-9)

pH 2.77 Temp.: 20 °C

Serious eye damage/irritation : Causes serious eye damage.

# Methyltriacetoxysilane (4253-34-3)

pH 2.78 Temp.: 20 °C

# Ethyltriacetoxysilane (17689-77-9)

pH 2.77 Temp.: 20 °C

Respiratory or skin sensitisation : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified
Reproductive toxicity : Not classified

# Methyltriacetoxysilane (4253-34-3)

NOAEL (animal/female, F1) ≥ 2500 mg/kg bodyweight Animal: rat, Animal sex: female

# Ethyltriacetoxysilane (17689-77-9)

LOAEL (animal/female, F1) > 731.67 mg/kg bodyweight Animal: , Animal sex: female

NOAEL (animal/female, F1) ≥ 2500 mg/kg bodyweight Animal: rat, Animal sex: female

STOT-single exposure : Not classified STOT-repeated exposure : Not classified

## Ethyltriacetoxysilane (17689-77-9)

NOAEL (subchronic, oral, animal/male, 90 days) ≥ 3417.23 mg/kg bodyweight Animal: , Animal sex: male

Aspiration hazard : Not classified

# Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

## 11.2. Information on other hazards

No additional information available

# **SECTION 12: Ecological information**

# 12.1. Toxicity

Hazardous to the aquatic environment, short-term

(acute)

erm : Not classified

Hazardous to the aquatic environment, long-term

: Not classified

(chronic)

(chronic)		
Methyltriacetoxysilane (4253-34-3)		
LC50 - Fish [1]	287.857 mg/l Source: Ecological Structure Activity Relationships	
EC50 - Crustacea [1]	> 500 mg/l Test organisms (species): Daphnia magna	
EC50 72h - Algae [1]	> 500 mg/l Test organisms (species): Raphidocelis subcapitata (previous names: Pseudokirchneriella subcapitata, Selenastrum capricornutum)	
EC50 96h - Algae [1]	21.487 mg/l Source: Ecological Structure Activity Relationships	
NOEC (chronic)	≥ 10 mg/l Test organisms (species): Daphnia magna Duration: '21 d'	
Ethyltriacetoxysilane (17689-77-9)		
LC50 - Fish [1]	251 mg/l Source: Semistatic,Directive 92/69/EEC,SIDS	
EC50 - Crustacea [1]	62 mg/l Source: Static,Directive 92/69/EEC,SIDS	
EC50 72h - Algae [1]	24.41 mg/l Test organisms (species): Raphidocelis subcapitata (previous names: Pseudokirchneriella subcapitata, Selenastrum capricornutum)	
NOEC (chronic)	≥ 100 mg/l Test organisms (species): Daphnia magna Duration: '21 d'	

## 12.2. Persistence and degradability

No additional information available

# 12.3. Bioaccumulative potential

Methyltriacetoxysilane (4253-34-3)	
Partition coefficient n-octanol/water (Log Pow)	0.25 Source: OECD Screening Information Data Set

## 12.4. Mobility in soil

Methyltriacetoxysilane (4253-34-3)	
Mobility in soil	35.19 Source: Quantitative Structure Activity Relation

# 12.5. Results of PBT and vPvB assessment

No additional information available

# 12.6. Endocrine disrupting properties

No additional information available

# 12.7. Other adverse effects

Other adverse effects : This substance may be hazardous to the environment.

# Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

# **SECTION 13: Disposal considerations**

# 13.1. Waste treatment methods

Sewage disposal recommendations : Do not dispose of waste into sewer.

Product/Packaging disposal recommendations : Incinerate. Dispose in a safe manner in accordance with local/national regulations. Dispose

of contents/container to licensed waste disposal facility..

Ecology - waste materials : Avoid release to the environment.

# **SECTION 14: Transport information**

In accordance with ADR / IMDG / IATA / ADN / RID

ADR	IMDG	IATA	ADN	RID
14.1. UN number or ID n	14.1. UN number or ID number			
UN 1760	UN 1760	UN 1760	UN 1760	UN 1760
14.2. UN proper shippin	g name			
CORROSIVE LIQUID, N.O.S.	CORROSIVE LIQUID, N.O.S.	Corrosive liquid, n.o.s.	CORROSIVE LIQUID, N.O.S.	CORROSIVE LIQUID, N.O.S.
Transport document descr	iption			
UN 1760 CORROSIVE LIQUID, N.O.S. (METHYLTRIACETOXYSIL ANE- ETHYLTRIACETOXYSILA NE 80:20 Blend), 8, III, (E)	UN 1760 CORROSIVE LIQUID, N.O.S. (METHYLTRIACETOXYSIL ANE- ETHYLTRIACETOXYSILA NE 80:20 Blend), 8, III	UN 1760 Corrosive liquid, n.o.s. (METHYLTRIACETOXYSIL ANE- ETHYLTRIACETOXYSILA NE 80:20 Blend), 8, III	UN 1760 CORROSIVE LIQUID, N.O.S. (METHYLTRIACETOXYSIL ANE- ETHYLTRIACETOXYSILA NE 80:20 Blend), 8, III	UN 1760 CORROSIVE LIQUID, N.O.S. (METHYLTRIACETOXYSIL ANE- ETHYLTRIACETOXYSILA NE 80:20 Blend), 8, III
14.3. Transport hazard o	class(es)			
8	8	8	8	8
8	8	8	8	8
14.4. Packing group	14.4. Packing group			
III	III	III	III	III
14.5. Environmental hazards				
Dangerous for the environment: No	Dangerous for the environment: No Marine pollutant: No	Dangerous for the environment: No	Dangerous for the environment: No	Dangerous for the environment: No
No supplementary information	n available			

# 14.6. Special precautions for user

### Overland transport

Classification code (ADR) : C9
Special provisions (ADR) : 274
Limited quantities (ADR) : 5I
Excepted quantities (ADR) : E1

Packing instructions (ADR) : P001, IBC03, LP01, R001

Mixed packing provisions (ADR) : MP19
Portable tank and bulk container instructions (ADR) : T7
Portable tank and bulk container special provisions : TP1, TP28

(ADR)

Tank code (ADR) : L4BN

# Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Vehicle for tank carriage : AT
Transport category (ADR) : 3
Special provisions for carriage - Packages (ADR) : V12
Hazard identification number (Kemler No.) : 80

Orange plates : T

80 1760

Tunnel restriction code (ADR) : E

#### Transport by sea

: 223, 274 Special provisions (IMDG) Limited quantities (IMDG) : 5 L Excepted quantities (IMDG) : E1 : P001, LP01 Packing instructions (IMDG) IBC packing instructions (IMDG) : IBC03 Tank instructions (IMDG) : T7 : TP1, TP28 Tank special provisions (IMDG) EmS-No. (Fire) : F-A EmS-No. (Spillage) : S-B Stowage category (IMDG) : A : SW2 Stowage and handling (IMDG)

Properties and observations (IMDG) : Causes burns to skin, eyes and mucous membranes.

#### Air transport

PCA Excepted quantities (IATA) : E1 PCA Limited quantities (IATA) : Y841 PCA limited quantity max net quantity (IATA) : 1L PCA packing instructions (IATA) : 852 PCA max net quantity (IATA) : 5L CAO packing instructions (IATA) : 856 CAO max net quantity (IATA) : 60L Special provisions (IATA) : A3 ERG code (IATA) : 8L

### Inland waterway transport

Classification code (ADN) : C9
Special provisions (ADN) : 274
Limited quantities (ADN) : 5 L
Excepted quantities (ADN) : E1
Carriage permitted (ADN) : T
Equipment required (ADN) : PP, EP
Number of blue cones/lights (ADN) : 0

### Rail transport

Classification code (RID) : C9
Special provisions (RID) : 274
Limited quantities (RID) : 5L
Excepted quantities (RID) : E1

Packing instructions (RID) : P001, IBC03, LP01, R001

Mixed packing provisions (RID) : MP19
Portable tank and bulk container instructions (RID) : T7
Portable tank and bulk container special provisions : TP1, TP28

(RID)

Tank codes for RID tanks (RID) : L4BN
Transport category (RID) : 3
Special provisions for carriage – Packages (RID) : W12
Colis express (express parcels) (RID) : CE8
Hazard identification number (RID) : 80

# Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

## 14.7. Maritime transport in bulk according to IMO instruments

Not applicable

## **SECTION 15: Regulatory information**

## 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

#### 15.1.1. EU-Regulations

## **REACH Annex XVII (Restriction List)**

EU restriction list (REACH Annex XVII)		
Reference code	Applicable on	Entry title or description
3(b)	METHYLTRIACETOXYSI LANE- ETHYLTRIACETOXYSIL ANE 80:20 Blend; Ethyltriacetoxysilane	Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10

## **REACH Annex XIV (Authorisation List)**

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

#### **REACH Candidate List (SVHC)**

Contains no substance(s) listed on the REACH Candidate List

#### **PIC Regulation (Prior Informed Consent)**

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

## **POP Regulation (Persistent Organic Pollutants)**

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

# Ozone Regulation (1005/2009)

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 1005/2009 on substances that deplete the ozone layer)

#### VOC Directive (2004/42)

VOC content : > 25 %

# **Explosives Precursors Regulation (2019/1148)**

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

#### **Drug Precursors Regulation (273/2004)**

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

#### 15.1.2. National regulations

No additional information available

# 15.2. Chemical safety assessment

No additional information available

#### **SECTION 16: Other information**

# Abbreviations and acronyms:

Abbreviations: ND: Not Determined, No Data; NA: Not Applicable; LD: Lethal Dose; LC: Lethal Concentration; ATE: Acute Toxicity Estimates; H: hour; °: °C unless otherwise stated; mm: millimeters Hg, torr; PEL: permissible exposure level; TWA: time weighted average; TLV: threshold limit value; TG: Test Guideline; NIOSH: National Institute for Occupational Safety and Health; IARC: International Agency for Research on Cancer; NTP: National Toxicology Program; HMIS: Hazardous Material Information System; CAS No.: Chemcial Abstract Service Registration Number; EC No.: European Commission Registration Number; EC Index No.: European Commission Index Number; OECD: The Organisation for Economic Co-operation and Development; GHS: The Globally Harmonized System of Classification and Labelling; APF: Assigned Protection Factor

# Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Other information

: Prepared by safety and environmental affairs.

Full text of H- and EUH-statements:		
Acute Tox. 4 (Oral) Acute toxicity (oral), Category 4		
Eye Dam. 1	Serious eye damage/eye irritation, Category 1	
H302	Harmful if swallowed.	
H314	Causes severe skin burns and eye damage.	
H318	Causes serious eye damage.	
Skin Corr. 1C	Skin corrosion/irritation, Category 1, Sub-Category 1C	

SDS EU (REACH Annex II) - Custom v22

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