DICHLOROSILANE, 25% in xylene

Safety Data Sheet SID3368.6

Date of issue: 02/02/2016 Revision date: 08/04/2019 Version: 1.2

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

1.1. Product identifier

Product form	:	Mixture
Physical state	:	Liquid
Product name	:	DICHLOROSILANE, 25% in xylene
Product code	:	SID3368.6
Formula	:	H2Cl2Si
Synonyms	:	SILICOMETHYLENE CHLORIDE
Chemical family	:	CHLOROSILANE

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

GELEST, INC.
11 East Steel Road
Morrisville, PA 19067
USA
T 215-547-1015 - F 215-547-2484 - (M-F): 8:00 AM - 5:30 PM EST
info@gelest.com - www.gelest.com

GELEST INC.
Fritz-Klatte-Strasse 8
65933 Frankfurt
Germany
T +49 (0) 69 3535106-500 - F +49 (0) 69 3535106-501 - (M-F): 8:00 AM - 4:00 PM
info@gelestde.com - www.gelestde.com

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]

Flammable liquids, Category 1	H224
Acute toxicity (inhalation:vapour) Category 2	H330
Skin corrosion/irritation, Category 1A	H314
Serious eye damage/eye irritation, Category 1	H318
Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation	H335
Hazardous to the aquatic environment — Acute Hazard, Category 1	H400

Full text of H statements : see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

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

Hazard pictograms (CLP) :

GHS02 GHS05 GHS06 GHS09

Signal word (CLP) : Danger

Hazardous ingredients : Xylene; Dichlorosilane

Hazard statements (CLP) : H224 - Extremely flammable liquid and vapour.
H314 - Causes severe skin burns and eye damage.
H330 - Fatal if inhaled.
H335 - May cause respiratory irritation.
H400 - Very toxic to aquatic life.

Precautionary statements (CLP) : P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P240 - Ground/bond container and receiving equipment.
P260 - Do not breathe vapours.
P264 - Wash hands thoroughly after handling.
P310 - Immediately call a POISON CENTER or doctor/physician

EUH-statements : EUH014 - Reacts violently with water.

2.3. Other hazards

Other hazards not contributing to the classification : NOTE: Material may form a siloxane polymer on the skin, eyes or in the lungs. Hydrogen chloride may be formed by reaction with water and moisture in air. The US OSHA PEL (TWA) for hydrogen chloride is 5 ppm.

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]
Dichlorosilane	(CAS-No.) 4109-96-0 (EC-No.) 223-888-3	75 - 80	Flam. Gas 1, H220 Press. Gas (Liq.), H280 Acute Tox. 2 (Inhalation), H330 Skin Corr. 1A, H314 Eye Dam. 1, H318 STOT SE 3, H335
Xylene	(CAS-No.) 1330-20-7 (EC-No.) 215-535-7 (EC Index-No.) 601-022-00-9	20 - 25	Flam. Liq. 3, H226 Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315

Full text of H-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. Get medical advice/attention if you feel unwell.

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

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 if you feel unwell.

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

Symptoms/effects : Causes severe skin burns and eye damage. May cause damage to organs through prolonged or repeated exposure.

Symptoms/effects after inhalation : Fatal if inhaled. May cause respiratory irritation. Danger of serious damage to health by prolonged exposure through inhalation.

Symptoms/effects after skin contact : Causes (severe) skin 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 : Extremely flammable liquid and vapour. Irritating fumes of hydrogen chloride and organic acid vapors may develop when material is exposed to water or open flame.

Explosion hazard : May form flammable/explosive vapour-air mixture. Explosions of partially hydrolyzed dichlorosilane dispersed on high surface area media have been reported.

5.3. Advice for firefighters

Firefighting instructions : Exercise caution when fighting any chemical fire. Use only dry media to extinguish flames. Water spray or fog should only be used to knock down hydrogen chloride vapors in areas downwind from the fire. In case of fire: stop leak if safe to do so.

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.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Eliminate every possible source of ignition. Use special care to avoid static electric charges.

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".

Emergency procedures : Stop release.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters. Avoid release to the environment.

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. Sweep or shovel spills into appropriate container for disposal. Collect spillage. Use only non-sparking tools.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed : Handle empty containers with care because residual vapours are flammable. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Vapors can ignite spontaneously if heated. (See Autoignition Temperature).

Precautions for safe handling : Avoid all eye and skin contact and do not breathe vapour and mist. Ground/bond container and receiving equipment. Open carefully. Take precautionary measures against static discharge. Use only outdoors or in a well-ventilated area. Use only non-sparking tools.

Hygiene measures : Wash contaminated clothing before reuse. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Proper grounding procedures to avoid static electricity should be followed. Use explosion-proof electrical equipment.

Storage conditions : Keep container tightly closed. Store in sealed containers under dry inert atmosphere. Containers can generate pressure during storage. Keep in a cool place. Store locked up.

Incompatible materials : Acids. alcohols. Oxidizing agent. Moisture. Water.

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

DICHLOROSILANE, 25% in xylene		
Latvia	OEL TWA (mg/m³)	1 mg/m³
Lithuania	IPRV (mg/m³)	1 mg/m³

Xylene (1330-20-7)		
EU	IOELV TWA (mg/m³)	221 mg/m³ (pure)
EU	IOELV TWA (ppm)	50 ppm (pure)
EU	IOELV STEL (mg/m³)	442 mg/m³ (pure)
EU	IOELV STEL (ppm)	100 ppm (pure)
Austria	MAK (mg/m³)	221 mg/m³ (all isomers)
Austria	MAK (ppm)	50 ppm (all isomers)
Austria	MAK Short time value (mg/m³)	442 mg/m³ (all isomers)
Austria	MAK Short time value (ppm)	100 ppm (all isomers)
Belgium	Limit value (mg/m³)	221 mg/m³
Belgium	Limit value (ppm)	50 ppm
Belgium	Short time value (mg/m³)	442 mg/m³
Belgium	Short time value (ppm)	100 ppm
Bulgaria	OEL TWA (mg/m³)	221 mg/m³ (pure)
Bulgaria	OEL TWA (ppm)	50 ppm (pure)
Bulgaria	OEL STEL (mg/m³)	442 mg/m³ (pure)
Bulgaria	OEL STEL (ppm)	100 ppm (pure)
Cyprus	OEL TWA (mg/m³)	221 mg/m³
Cyprus	OEL TWA (ppm)	50 ppm
Cyprus	OEL STEL (mg/m³)	442 mg/m³
Cyprus	OEL STEL (ppm)	100 ppm
France	VLE (mg/m³)	442 mg/m³ (restrictive limit)
France	VLE (ppm)	100 ppm (restrictive limit)
France	VME (mg/m³)	221 mg/m³ (restrictive limit)
France	VME (ppm)	50 ppm (restrictive limit)
Germany	TRGS 900 Occupational exposure limit value (mg/m³)	440 mg/m³ (all isomers)
Germany	TRGS 900 Occupational exposure limit value (ppm)	100 ppm (all isomers)
Germany	TRGS 903 Biological limit value	1.5 mg/l (Medium: whole blood - Time: end of shift - Parameter: Xylene (all isomers)) 2000 mg/l (Medium: urine - Time: end of shift - Parameter: Methylhippuric(tolur-)acid (all isomers))
Gibraltar	Eight hours mg/m3	221 mg/m³ (pure)
Gibraltar	Eight hours ppm	50 ppm (pure)
Gibraltar	Short-term mg/m3	442 mg/m³ (pure)
Gibraltar	Short-term ppm	100 ppm (pure)
Greece	OEL TWA (mg/m³)	435 mg/m³
Greece	OEL TWA (ppm)	100 ppm
Greece	OEL STEL (mg/m³)	650 mg/m³
Greece	OEL STEL (ppm)	150 ppm
Italy - Portugal - USA ACGIH	ACGIH TWA (ppm)	100 ppm
Italy - Portugal - USA ACGIH	ACGIH STEL (ppm)	150 ppm
Italy	OEL TWA (mg/m³)	221 mg/m³ (pure)
Italy	OEL TWA (ppm)	50 ppm (pure)
Italy	OEL STEL (mg/m³)	442 mg/m³ (pure)

Xylene (1330-20-7)		
Italy	OEL STEL (ppm)	100 ppm (pure)
Latvia	OEL TWA (mg/m³)	221 mg/m³
Latvia	OEL TWA (ppm)	50 ppm
USA OSHA	OSHA PEL (TWA) (mg/m³)	435 mg/m³
USA OSHA	OSHA PEL (TWA) (ppm)	100 ppm
Spain	VLA-ED (mg/m³)	221 mg/m³ (indicative limit value)
Spain	VLA-ED (ppm)	50 ppm (indicative limit value)
Spain	VLA-EC (mg/m³)	442 mg/m³
Spain	VLA-EC (ppm)	100 ppm
Switzerland	KZGW (mg/m³)	870 mg/m³
Switzerland	KZGW (ppm)	200 ppm
Switzerland	MAK (mg/m³)	435 mg/m³
Switzerland	MAK (ppm)	100 ppm
Netherlands	Grenswaarde TGG 8H (mg/m³)	210 mg/m³
Netherlands	Grenswaarde TGG 15MIN (mg/m³)	442 mg/m³
United Kingdom	WEL TWA (mg/m³)	220 mg/m³
United Kingdom	WEL TWA (ppm)	50 ppm
United Kingdom	WEL STEL (mg/m³)	441 mg/m³
United Kingdom	WEL STEL (ppm)	100 ppm
Czech Republic	Expoziční limity (PEL) (mg/m³)	200 mg/m³
Denmark	Grænseværdie (langvarig) (mg/m³)	109 mg/m³
Denmark	Grænseværdie (langvarig) (ppm)	25 ppm
Finland	HTP-arvo (8h) (mg/m³)	220 mg/m³
Finland	HTP-arvo (8h) (ppm)	50 ppm
Finland	HTP-arvo (15 min)	440 mg/m³
Finland	HTP-arvo (15 min) (ppm)	100 ppm
Hungary	AK-érték	221 mg/m³
Hungary	CK-érték	442 mg/m³
Ireland	OEL (8 hours ref) (mg/m³)	221 mg/m³
Ireland	OEL (8 hours ref) (ppm)	50 ppm
Ireland	OEL (15 min ref) (mg/m3)	442 mg/m³
Ireland	OEL (15 min ref) (ppm)	100 ppm
Lithuania	IPRV (mg/m³)	200 mg/m³
Lithuania	IPRV (ppm)	50 ppm
Lithuania	TPRV (mg/m³)	450 mg/m³
Lithuania	TPRV (ppm)	100 ppm
Malta	OEL TWA (mg/m³)	221 mg/m³ (pure)
Malta	OEL TWA (ppm)	50 ppm (pure)
Malta	OEL STEL (mg/m³)	442 mg/m³ (pure)
Malta	OEL STEL (ppm)	100 ppm (pure)
Norway	Grenseverdier (AN) (mg/m³)	108 mg/m³
Norway	Grenseverdier (AN) (ppm)	25 ppm
Norway	Grenseverdier (Korttidsverdi) (mg/m3)	135 mg/m³
Norway	Grenseverdier (Korttidsverdi) (ppm)	37.5 ppm
Poland	NDS (mg/m³)	100 mg/m³
Romania	OEL TWA (mg/m³)	221 mg/m³
Romania	OEL TWA (ppm)	50 ppm
Romania	OEL STEL (mg/m³)	442 mg/m³
Romania	OEL STEL (ppm)	100 ppm
Slovakia	NPHV (priemerná) (mg/m³)	221 mg/m³
Slovakia	NPHV (priemerná) (ppm)	50 ppm

Xylene (1330-20-7)		
Slovakia	NPHV (Hraničná) (mg/m³)	442 mg/m³
Sweden	nivågränsvärde (NVG) (mg/m³)	221 mg/m³
Sweden	nivågränsvärde (NVG) (ppm)	50 ppm
Sweden	kortidsvärde (KTV) (mg/m³)	442 mg/m³
Sweden	kortidsvärde (KTV) (ppm)	100 ppm
Canada (Quebec)	VECD (mg/m³)	651 mg/m³
Canada (Quebec)	VECD (ppm)	150 ppm
Canada (Quebec)	VEMP (mg/m³)	434 mg/m³
Canada (Quebec)	VEMP (ppm)	100 ppm
Australia	TWA (mg/m³)	350 mg/m³
Australia	TWA (ppm)	80 ppm
Australia	STEL (mg/m³)	655 mg/m³
Australia	STEL (ppm)	150 ppm
Portugal	OEL TWA (mg/m³)	221 mg/m³ (indicative limit value)
Portugal	OEL TWA (ppm)	50 ppm (indicative limit value)
Portugal	OEL STEL (mg/m³)	442 mg/m³ (indicative limit value)
Portugal	OEL STEL (ppm)	100 ppm (indicative limit value)
Portugal	OEL chemical category (PT)	A4 - Not Classifiable as a Human Carcinogen,skin - potential for cutaneous exposure indicative limit value

8.2. Exposure controls

Appropriate engineering controls:

Provide local exhaust or general room ventilation.

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.

Hand protection:

Neoprene or nitrile rubber gloves

Eye protection:

Chemical goggles or face shield. (Viton recommended). Contact lenses should not be worn

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

Where exposure through inhalation may occur from use, respiratory protection equipment is recommended. NIOSH-certified combination organic vapor/acid gas (yellow cartridge) respirator.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Liquid
Appearance	:	Clear liquid.
Molecular mass	:	101.01 g/mol
Colour	:	Straw.
Odour	:	Acrid. Similar to hydrogen chloride.
Odour threshold	:	No data available
Refractive index	:	No additional information available
pH	:	No data available
Relative evaporation rate (butylacetate=1)	:	40
Melting point	:	No data available
Freezing point	:	-128 °C
Boiling point	:	8.3 °C (initial)
Flash point	:	-13 °C
Auto-ignition temperature	:	55 °C
Decomposition temperature	:	No data available

Flammability (solid, gas)	:	Extremely flammable liquid and vapour.
Vapour pressure	:	No data available
Relative vapour density at 20 °C	:	> 1
Relative density	:	0.94
% Volatiles	:	> 75 %
Solubility	:	Reacts violently with water.
Log Pow	:	No data available
Log Kow	:	No data available
Viscosity, kinematic	:	No data available
Viscosity, dynamic	:	No data available
Explosive properties	:	No data available
Oxidising properties	:	No data available
Explosive limits	:	No data available

9.2. Other information

No additional information available

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 hydrogen chloride. Platinum, platinum and iron salts and other Lewis acids can cause generation of flammable hydrogen gas in the presence of moisture. Forms impact sensitive explosive mixtures with potassium permanganate.

10.4. Conditions to avoid

Heat. Open flame. Sparks.

10.5. Incompatible materials

alcohols. Acids. Moisture. Oxidizing agent. Water.

10.6. Hazardous decomposition products

Hydrogen chloride. Organic acid vapors.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified. Fatal if inhaled.

DICHLOROSILANE, 25% in xylene	
ATE CLP (vapours)	0.616 mg/l/4h

Xylene (1330-20-7)	
LD50 oral rat	3500 mg/kg ; 4300 mg/kg
LD50 dermal rabbit	1700 mg/kg
LC50 inhalation rat (mg/l)	29.08 mg/l/4h
ATE CLP (oral)	3500 mg/kg bodyweight
ATE CLP (dermal)	1700 mg/kg bodyweight
ATE CLP (vapours)	11 mg/l/4h
ATE CLP (dust,mist)	29.08 mg/l/4h
LCLo Inhalation man	10,000ppm/6H

Dichlorosilane (4109-96-0)	
LC50 inhalation mouse	144 ppm/4h
LC50 inhalation rat	215 ppm
ATE CLP (gases)	100 ppmv/4h
ATE CLP (vapours)	0.5 mg/l/4h
ATE CLP (dust,mist)	0.05 mg/l/4h

Skin corrosion/irritation	:	Causes severe skin burns and eye damage.
Serious eye damage/irritation	:	Causes serious eye damage.
Respiratory or skin sensitisation	:	Not classified
Germ cell mutagenicity	:	Not classified
Carcinogenicity	:	Not classified

Xylene (1330-20-7)	
IARC group	3 - Not classifiable

Reproductive toxicity : Not classified
STOT-single exposure : May cause respiratory irritation.
STOT-repeated exposure : Not classified
Aspiration hazard : Not classified
Symptoms/effects after inhalation : Fatal if inhaled. May cause respiratory irritation. Danger of serious damage to health by prolonged exposure through inhalation.
Symptoms/effects after skin contact : Causes (severe) skin burns.
Symptoms/effects after eye contact : Causes serious eye damage.
Symptoms/effects after ingestion : May be harmful if swallowed.
Reason for classification : Expert judgment

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Very toxic to aquatic life.
Acute aquatic toxicity : Very toxic to aquatic life.
Chronic aquatic toxicity : Not classified

Xylene (1330-20-7)	
LC50 fish 1	13.4 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
EC50 Daphnia 1	3.82 mg/l (Exposure time: 48 h - Species: water flea)
LC50 fish 2	2.661 - 4.093 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [static])
EC50 Daphnia 2	0.6 mg/l (Exposure time: 48 h - Species: Gammarus lacustris)

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

Xylene (1330-20-7)	
BCF fish 1	0.6 - 15
Log Pow	2.77 - 3.15

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Sewage disposal recommendations : Do not dispose of waste into sewer.
Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to licensed waste disposal facility.
Additional information : Handle empty containers with care because residual vapours are flammable.
Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

14.1. UN number

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

14.1. UN number

UN-No. (ADR) : 2988
UN-No. (IMDG) : 2988
UN-No. (IATA) : 2988
UN-No. (ADN) : 2988
UN-No. (RID) : 2988

14.2. UN proper shipping name

Proper Shipping Name (ADR) : CHLOROSILANES, WATER-REACTIVE, FLAMMABLE, CORROSIVE, N.O.S.

Proper Shipping Name (IMDG)	:	CHLOROSILANES, WATER-REACTIVE, FLAMMABLE, CORROSIVE, N.O.S.
Proper Shipping Name (IATA)	:	Chlorosilanes, water-reactive, flammable, corrosive, n.o.s.
Proper Shipping Name (ADN)	:	CHLOROSILANES, WATER-REACTIVE, FLAMMABLE, CORROSIVE, N.O.S.
Proper Shipping Name (RID)	:	CHLOROSILANES, WATER-REACTIVE, FLAMMABLE, CORROSIVE, N.O.S.
Transport document description (ADR)	:	UN 2988 CHLOROSILANES, WATER-REACTIVE, FLAMMABLE, CORROSIVE, N.O.S. (DICHLOROSILANE, 25% in xylene), 4.3 (3+8), I, (B/E), ENVIRONMENTALLY HAZARDOUS
Transport document description (IMDG)	:	UN 2988 CHLOROSILANES, WATER-REACTIVE, FLAMMABLE, CORROSIVE, N.O.S. (DICHLOROSILANE, 25% in xylene), 4.3 (3+8), I, MARINE POLLUTANT/ENVIRONMENTALLY HAZARDOUS
Transport document description (IATA)	:	UN 2988 Chlorosilanes, water-reactive, flammable, corrosive, n.o.s. (DICHLOROSILANE, 25% in xylene), 4.3, I, ENVIRONMENTALLY HAZARDOUS
Transport document description (ADN)	:	UN 2988 CHLOROSILANES, WATER-REACTIVE, FLAMMABLE, CORROSIVE, N.O.S. (DICHLOROSILANE, 25% in xylene), 4.3 (3+8), I, ENVIRONMENTALLY HAZARDOUS
Transport document description (RID)	:	UN 2988 CHLOROSILANES, WATER-REACTIVE, FLAMMABLE, CORROSIVE, N.O.S. (DICHLOROSILANE, 25% in xylene), 4.3 (3+8), I, ENVIRONMENTALLY HAZARDOUS

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR) : 4.3 (3, 8)

Danger labels (ADR) : 4.3, 3, 8

:

IMDG

Transport hazard class(es) (IMDG) : 4.3 (3, 8)

Danger labels (IMDG) : 4.3, 3, 8

:

IATA

Transport hazard class(es) (IATA) : 4.3 (3, 8)

Hazard labels (IATA) : 4.3, 3, 8

:

ADN

Transport hazard class(es) (ADN) : 4.3 (3, 8)

Danger labels (ADN) : 4.3, 3, 8

:

RID

Transport hazard class(es) (RID) : 4.3 (3, 8)

Danger labels (RID) : 4.3, 3, 8

: 

14.4. Packing group

Packing group (ADR)	:	I
Packing group (IMDG)	:	I
Packing group (IATA)	:	I
Packing group (ADN)	:	I
Packing group (RID)	:	I

14.5. Environmental hazards

Dangerous for the environment	:	Yes
Marine pollutant	:	Yes
Other information	:	No supplementary information available

14.6. Special precautions for user

- Overland transport

Classification code (ADR)	:	WFC
Special provisions (ADR)	:	549
Limited quantities (ADR)	:	0
Excepted quantities (ADR)	:	E0
Packing instructions (ADR)	:	P401
Special packing provisions (ADR)	:	B4
Mixed packing provisions (ADR)	:	MP2
Portable tank and bulk container instructions (ADR)	:	T14
Portable tank and bulk container special provisions (ADR)	:	TP2, TP7
Tank code (ADR)	:	L10DH
Tank special provisions (ADR)	:	TU14, TU26, TE21, TM2, TM3
Vehicle for tank carriage	:	FL
Transport category (ADR)	:	0
Special provisions for carriage - Packages (ADR)	:	V1
Special provisions for carriage - Loading, unloading and handling (ADR)	:	CV23
Special provisions for carriage - Operation (ADR)	:	S2, S20
Hazard identification number (Kemler No.)	:	X338
Orange plates	:	X338 2988
Tunnel restriction code (ADR)	:	B/E
EAC code	:	4WE
APP code	:	A(fl)

- Transport by sea

Limited quantities (IMDG)	:	0
Excepted quantities (IMDG)	:	E0
Packing instructions (IMDG)	:	P401
Special packing provisions (IMDG)	:	PP31
Tank instructions (IMDG)	:	T14
Tank special provisions (IMDG)	:	TP2, TP7, TP13
EmS-No. (Fire)	:	F-G
EmS-No. (Spillage)	:	S-N
Stowage category (IMDG)	:	D
Stowage and handling (IMDG)	:	SW2, H1

Segregation (IMDG)	:	SG5, SG7, SG8, SG13, SG25, SG26
Properties and observations (IMDG)	:	Colourless, very volatile liquids, flammable and corrosive, with a pungent odour. Immiscible with water. React violently with water or steam to produce heat which may lead to self-ignition; toxic and corrosive fumes will be evolved. May react vigorously in contact with oxidizing substances. Cause burns to skin, eyes and mucous membranes.

- Air transport

PCA Excepted quantities (IATA)	:	E0
PCA Limited quantities (IATA)	:	Forbidden
PCA limited quantity max net quantity (IATA)	:	Forbidden
PCA packing instructions (IATA)	:	Forbidden
PCA max net quantity (IATA)	:	Forbidden
CAO packing instructions (IATA)	:	480
CAO max net quantity (IATA)	:	1L
ERG code (IATA)	:	4FW

- Inland waterway transport

Classification code (ADN)	:	WFC
Special provisions (ADN)	:	549
Limited quantities (ADN)	:	0
Excepted quantities (ADN)	:	E0
Equipment required (ADN)	:	PP, EP, EX, A
Ventilation (ADN)	:	VE01
Provisions for handling and stowage of the cargo (ADN)	:	HA08
Number of blue cones/lights (ADN)	:	1

- Rail transport

Classification code (RID)	:	WFC
Special provisions (RID)	:	549
Limited quantities (RID)	:	0
Excepted quantities (RID)	:	E0
Packing instructions (RID)	:	P401
Special packing provisions (RID)	:	RR7
Mixed packing provisions (RID)	:	MP2
Portable tank and bulk container instructions (RID)	:	T14
Portable tank and bulk container special provisions (RID)	:	TP2, TP7
Tank codes for RID tanks (RID)	:	L10DH
Special provisions for RID tanks (RID)	:	TU14, TU26, TU38, TE21, TE22, TM2, TM3
Transport category (RID)	:	0
Special provisions for carriage – Packages (RID)	:	W1
Special provisions for carriage - Loading, unloading and handling (RID)	:	CW23
Hazard identification number (RID)	:	X338

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

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

Contains no REACH substances with Annex XVII restrictions

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

Contains no substance subject to REGULATION (EU) No 649/2012 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 4 July 2012 concerning the export and import of hazardous chemicals.

Substance(s) are not subject to Regulation (EC) No 850/2004 of the European Parliament and of the Council of 29 April 2004 on persistent organic pollutants and amending Directive 79/117/EEC.

Contains no REACH Annex XIV substances

% Volatiles : > 75 %

15.1.2. National regulations

Germany

Reference to AwSV : Water hazard class (WGK) 1, Slightly hazardous to water (Classification according to AwSV, Annex 1)

12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

Netherlands

SZW-lijst van kankerverwekkende stoffen : None of the components are listed

SZW-lijst van mutagene stoffen : None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding : None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid : None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling : Xylene is listed

Denmark

Class for fire hazard : Class I-1

Store unit : 1 liter

Classification remarks : F+ <Flam. Liq. 1; Pyr. Liq. Not classified>; Emergency management guidelines for the storage of flammable liquids must be followed

Danish National Regulations : Young people below the age of 18 years are not allowed to use the product

Pregnant/breastfeeding women working with the product must not be in direct contact with the product

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

Other information : Prepared by safety and environmental affairs.

Full text of H- and EUH-statements:

Acute Tox. 2 (Inhalation)	Acute toxicity (inhal.), Category 2
Acute Tox. 2 (Inhalation:vapour)	Acute toxicity (inhalation:vapour) Category 2
Acute Tox. 4 (Dermal)	Acute toxicity (dermal), Category 4
Acute Tox. 4 (Inhalation)	Acute toxicity (inhal.), Category 4
Aquatic Acute 1	Hazardous to the aquatic environment — Acute Hazard, Category 1
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Flam. Gas 1	Flammable gases, Category 1
Flam. Liq. 1	Flammable liquids, Category 1
Flam. Liq. 3	Flammable liquids, Category 3
Press. Gas (Liq.)	Gases under pressure : Liquefied gas
Skin Corr. 1A	Skin corrosion/irritation, Category 1A
Skin Irrit. 2	Skin corrosion/irritation, Category 2
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation
H220	Extremely flammable gas.
H224	Extremely flammable liquid and vapour.
H226	Flammable liquid and vapour.
H280	Contains gas under pressure; may explode if heated.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.

H315	Causes skin irritation.
H318	Causes serious eye damage.
H330	Fatal if inhaled.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H400	Very toxic to aquatic life.
EUH014	Reacts violently with water.

SDS EU (REACH Annex II) - Custom