SECTION 1: Identification of the Substance/mixture and of the Company/Undertaking

Product Identifier 1.1.

MED-4159

Safety Data Sheet

Product form **Product Name** Synonyms

Mixture MED-4159 Silicone Dispersion

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

For professional use only.

1.2.2. Uses Advised Against

No additional information available

Details of the Supplier of the Safety Data Sheet 1.3.

According to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830 Revision date: 26/11/2018 Date of issue: 06/02/2015

NuSil Technology LLC 1050 Cindy Lane Carpinteria, California 93013 USA (805) 684-8780 ehs@nusil.com www.nusil.com

1.4. **Emergency Telephone Number**

:

Emergency Number

800-424-9300 CHEMTREC (in US); +1 703-527-3887 CHEMTREC (International and Maritime)

SECTION 2: Hazards Identification

Classification of the Substance or Mixture 2.1. Classification According to Regulation (EC) No. 1272/2008 [CLP] Flam. Liq. 3 H226 Eve Irrit. 2 H319 Skin Sens. 1 H317 STOT SE 3 H336 Asp. Tox. 1 H304 Full text of hazard classes and H-statements : see section 16 2.2. Labelling According to Regulation (EC) No. 1272/2008 [CLP]

Signal Word (CLP) Hazardous Ingredients

Hazard Statements (CLP)

Version: 4.0

NuSil



Safety Data Sheet According to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

According to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830			
	H319 - Causes serious eye irritation.		
	H336 - May cause drowsiness or dizziness.		
Precautionary Statements (CLP)	P210 - Keep away from heat, hot surfaces, sparks, open flames		
	and other ignition sources. No smoking.		
	P233 - Keep container tightly closed.		
	P240 - Ground and bond container and receiving equipment.		
	P241 - Use explosion-proof electrical, ventilating, and lighting		
	equipment.		
	P242 - Use non-sparking tools.		
	P243 - Take action to prevent static discharges.		
	P261 - Avoid breathing vapors, mist, or spray		
	P264 - Wash hands, forearms, and other exposed areas		
	thoroughly after handling		
	P271 - Use only outdoors or in a well-ventilated area.		
	P272 - Contaminated work clothing should not be allowed out		
	of the workplace.		
	P280 - Wear protective gloves, protective clothing, and eye		
	protection		
	P301+P310 - IF SWALLOWED: Immediately call a POISON CENTER		
	or doctor		
	P302+P352 - IF ON SKIN: Wash with plenty of water		
	P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all		
	contaminated clothing. Rinse skin with water .		
	P304+P340 - IF INHALED: Remove person to fresh air and keep		
	comfortable for breathing.		
	P305+P351+P338 - IF IN EYES: Rinse cautiously with water for		
	several minutes. Remove contact lenses, if present and easy to		
	do. Continue rinsing.		
	P312 - Call a POISON CENTRE or doctor if you feel unwell.		
	P321 - Specific treatment (see section 4 on this SDS)		
	P331 - Do NOT induce vomiting.		
	P333+P313 - If skin irritation or rash occurs: Get medical		
	advice/attention.		
	P337+P313 - If eye irritation persists: Get medical		
	advice/attention.		
	P362+P364 - Take off contaminated clothing and wash it before		
	reuse.		
	P370+P378 - In case of fire: Use appropriate media (see section		
	5) to extinguish		
	P403+P235 - Store in a well-ventilated place. Keep cool.		
	P405 - Store locked up.		
	P501 - Dispose of contents/container to hazardous or special		
	waste collection point, in accordance with local, regional,		
	national and/or international regulation.		
2.3. Other Hazards			
	Experiero may agarayato pro ovisting ovo skip, or rospiratory		
Other Hazards Not Contributing to the Classification	Exposure may aggravate pre-existing eye, skin, or respiratory		
	conditions.		

SECTION 3: Composition/Information on Ingredients

3.1. Substances

Not applicable

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Name	Product Identifier	%	Classification According to Regulation (EC) No. 1272/2008 [CLP]
Naphtha, petroleum, hydrotreated heavy	(CAS-No.) 64742-48-9 (EC-No.) 265-150-3 (EC Index-No.) 649-327-00-6	15 - 40	Flam. Liq. 3, H226 STOT SE 3, H336 Asp. Tox. 1, H304
Isopropyl alcohol	(CAS-No.) 67-63-0 (EC-No.) 200-661-7 (EC Index-No.) 603-117-00-0	5 - 10	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336
Benzene, 1,2,4- trimethyl-	(CAS-No.) 95-63-6 (EC-No.) 202-436-9 (EC Index-No.) 601-043-00-3	<3	Flam. Liq. 3, H226 Acute Tox. 4 (Inhalation:vapour), H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 Aquatic Chronic 2, H411
N-[3- (Trimethoxysilyl)propyl]-1,2-ethanediamine	(CAS-No.) 1760-24-3 (EC-No.) 217-164-6	<2	Acute Tox. 4 (Inhalation:dust,mist), H332 Eye Dam. 1, H318 Skin Sens. 1, H317

Full text of H-statements: see section 16

SECTION 4: First Aid Measures

Description of First-aid Measures 4.1.

First-Aid Measures General	Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
First-Aid Measures After	When symptoms occur: go into open air and ventilate
Inhalation	suspected area. Obtain medical attention if breathing difficulty persists.
First-Aid Measures After Skin	Remove contaminated clothing. Drench affected area with
Contact	water for at least 15 minutes. Obtain medical attention if irritation develops or persists.
First-Aid Measures After Eye	Rinse cautiously with water for at least 15 minutes. Remove
Contact	contact lenses, if present and easy to do. Continue rinsing.
	Obtain medical attention.
First-Aid Measures After	Do NOT induce vomiting. Rinse mouth. Immediately call a
Ingestion	POISON CENTER or doctor/physician.
4.2. Most Important Symptom	is and Effects Both Acute and Delayed
Symptoms/Effects	Causes serious eye irritation. May cause drowsiness and
	dizziness. Skin sensitisation. May be fatal if swallowed and enters airways.
Symptoms/Effects After	High concentrations may cause central nervous system
Inhalation	depression such as dizziness, vomiting, numbness, drowsiness,
	headache, and similar narcotic symptoms.
Symptoms/Effects After Skin Contact	May cause an allergic skin reaction. Causes mild skin irritation.
Symptoms/Effects After Eye Contact	Contact causes severe irritation with redness and swelling of the conjunctiva.

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According to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830 Symptoms/Effects After Aspiration into the lungs can occur during ingestion or vomiting Ingestion and may cause lung injury. Chronic Symptoms Repeated exposure may cause skin dryness or cracking. Indication of Any Immediate Medical Attention and Special Treatment Needed 4.3. If exposed or concerned, get medical advice and attention. If medical advice is needed, have product container or label at hand. **SECTION 5: Firefighting Measures Extinguishing Media** 5.1. Suitable Extinguishing Media Dry chemical powder, alcohol-resistant foam, carbon dioxide (CO₂). Water may be ineffective but water should be used to keep fire-exposed container cool. Unsuitable Extinguishing Media Do not use a heavy water stream. A heavy water stream may spread burning liquid. Special Hazards Arising From the Substance or Mixture 5.2. Fire Hazard Flammable liquid and vapour. **Explosion Hazard** May form flammable or explosive vapour-air mixture. Reactivity Reacts violently with strong oxidisers. Increased risk of fire or explosion. Hazardous Decomposition Carbon oxides (CO, CO₂). Silicon oxides. Will decompose Products in Case of Fire above 150 °C (> 300 °F) releasing formaldehyde vapours. Formaldehyde is a potential carcinogen and can act as a skin and respiratory sensitizer. Formaldehyde can also cause respiratory and eye irritation. 5.3. Advice for Firefighters **Precautionary Measures Fire** Exercise caution when fighting any chemical fire. **Firefighting Instructions** Use water spray or fog for cooling exposed containers. In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion. Protection During Firefighting Do not enter fire area without proper protective equipment,

Other Information

SECTION 6: Accidental Release Measures

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

courses.

General Measures	Avoid breathing (vapor, mist, spray). Do not get in eyes, on skin, or on clothing. Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. No smoking. Use special care to avoid static electric charges.		
6.1.1. For Non-Emergency Personnel			
Protective Equipment	Use appropriate personal protective equipment (PPE).		
Emergency Procedures	Evacuate unnecessary personnel. Stop leak if safe to do so.		
6.1.2. For Emergency Responders	i de la construcción de la constru		
Protective Equipment	Equip cleanup crew with proper protection.		

including respiratory protection.

Do not allow run-off from fire fighting to enter drains or water

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According to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Emergency Procedures Upon arrival at the scene, a first responder is expected to recognize the presence of dangerous goods, protect oneself and the public, secure the area, and call for the assistance of trained personnel as soon as conditions permit. Ventilate area. Eliminate ignition sources.

6.2. Environmental Precautions

Prevent entry to sewers and public waters. Avoid release to the environment.

6.3. Methods and Materials for Containment and Cleaning Up

For Containment	Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. As an immediate precautionary measure, isolate spill or leak area in all directions.
Methods For Cleaning Up	Clean up spills immediately and dispose of waste safely. Transfer spilled material to a suitable container for disposal. Absorb and/or contain spill with inert material. Do not take up in combustible material such as: saw dust or cellulosic material. Use only non-sparking tools. Contact competent authorities after a spill.

6.4. Reference to Other Sections

See Section 8 for exposure controls and personal protection and Section 13 for disposal considerations.

SECTION 7: Handling And Storage

7.1. Precautions for Safe Handling

Additional Hazards When	Handle empty containers with care because residual vapours are flammable.
Processed Precautions for Safe Handling	Avoid contact with eyes, skin and clothing. Avoid breathing vapors, mist, spray. Take precautionary measures against static discharge. Use only non-sparking tools. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.
Hygiene Measures	Handle in accordance with good industrial hygiene and safety procedures.
7.2. Conditions for Safe Storag	ge, Including Any Incompatibilities
Technical Measures	Comply with applicable regulations. Take action to prevent static discharges. Ground and bond container and receiving equipment. Use explosion-proof electrical, ventilating, and lighting equipment.
Storage Conditions	Store in a dry, cool place. Keep/Store away from direct sunlight, extremely high or low temperatures and incompatible materials. Store in a well-ventilated place. Keep container tightly closed. Keep in fireproof place.
Incompatible Materials	Strong acids, strong bases, strong oxidizers.
7.3. Specific End Use(S)	

For professional use only.

SECTION 8: Exposure Controls/Personal Protection

8.1. Control Parameters

Isopropyl alcohol (67-63-0)		
Austria	MAK (mg/m³)	500 mg/m³ (short time value for large
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		casting, valid till 12/31/2013)
Austria	MAK (ppm)	200 ppm (short time value for large casting, valid till 12/31/2013)
Austria	MAK Short time value (mg/m³)	2000 mg/m³ (STEL for large casting valid till 12/31/2013)
Austria	MAK Short time value (ppm)	800 ppm (STEL for large casting valid till 12/31/2013)
Belgium	Limit value (mg/m³)	500 mg/m ³
Belgium	Limit value (ppm)	200 ppm
Belgium	Short time value (mg/m³)	1000 mg/m ³
Belgium	Short time value (ppm)	400 ppm
Bulgaria	OEL TWA (mg/m³)	980 mg/m ³
Bulgaria	OEL STEL (mg/m³)	1225 mg/m ³
Croatia	GVI (granična vrijednost izloženosti) (mg/m³)	999 mg/m³
Croatia	GVI (granična vrijednost izloženosti) (ppm)	400 ppm
Croatia	KGVI (kratkotrajna granična vrijednost izloženosti) (mg/m³)	1250 mg/m ³
Croatia	KGVI (kratkotrajna granična vrijednost izloženosti) (ppm)	500 ppm
Croatia	Croatia - BLV	50 mg/l Parameter: Acetone - Medium: blood - Sampling time: at the end of the shift 50 mg/l Parameter: Acetone - Medium: urine - Sampling time: at the end of the shift
Czech Republic	Expoziční limity (PEL) (mg/m³)	500 mg/m³
Czech Republic	OEL chemical category (CZ)	Potential for cutaneous absorption
Denmark	Grænseværdie (langvarig) (mg/m³)	490 mg/m ³
Denmark	Grænseværdie (langvarig) (ppm)	200 ppm
Estonia	OEL TWA (mg/m³)	350 mg/m ³
Estonia	OEL TWA (ppm)	150 ppm
Estonia	OEL STEL (mg/m ³)	600 mg/m ³
Estonia	OEL STEL (ppm)	250 ppm
Finland	HTP-arvo (8h) (mg/m³)	500 mg/m ³
Finland	HTP-arvo (8h) (ppm)	200 ppm
Finland	HTP-arvo (15 min)	620 mg/m ³
Finland	HTP-arvo (15 min) (ppm)	250 ppm
France	VLE (mg/m ³)	980 mg/m ³
France	VLE (ppm)	400 ppm
Germany	TRGS 900 Occupational exposure limit value (mg/m³)	500 mg/m ³ (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed)
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JUVUKIU	NPHV (priemerná) (ppm)	200 ppm
Slovakia		
Slovakia	NPHV (priemerná) (mg/m³)	Medium: urine - Sampling time: end of shift 500 mg/m ³
Romania	Romania - BLV	50 mg/l Parameter: Acetone -
Romania	OEL STEL (ppm)	203 ppm
Romania	OEL STEL (mg/m³)	500 mg/m ³
Romania	OEL TWA (ppm)	81 ppm
Romania	OEL TWA (mg/m³)	Carcinogen 200 mg/m ³
Portugal	OEL chemical category (PT)	A4 - Not Classifiable as a Human
Portugal	OEL STEL (ppm)	400 ppm
Portugal	OEL TWA (ppm)	200 ppm
Poland	NDSCh (mg/m ³)	1200 mg/m ³
Norway Poland	Grenseverdier (Korttidsverdi) (ppm) NDS (mg/m³)	125 ppm (value calculated) 900 mg/m³
Norway	Grenseverdier (Korttidsverdi) (mg/m3)	306,25 mg/m³ (value calculated)
Norway	Grenseverdier (AN) (ppm)	100 ppm
Norway	Grenseverdier (AN) (mg/m ³)	245 mg/m ³
Lithuania	TPRV (ppm)	250 ppm
Lithuania	TPRV (mg/m ³)	600 mg/m ³
Lithuania	IPRV (ppm)	150 ppm
Lithuania	IPRV (mg/m³)	350 mg/m ³
Latvia	OEL TWA (mg/m³)	350 mg/m ³
Ireland	OEL chemical category (IE)	Potential for cutaneous absorption
Ireland	OEL (15 min ref) (ppm)	400 ppm
Ireland	OEL (8 hours ref) (ppm)	200 ppm
Hungary	OEL chemical category (HU)	Potential for cutaneous absorption
Hungary	CK-érték	2000 mg/m ³
Hungary	AK-érték	500 mg/m ³
Greece	OEL STEL (ppm)	500 ppm
Greece	OEL STEL (mg/m³)	1225 mg/m ³
Greece	OEL TWA (ppm)	400 ppm
Greece	OEL TWA (mg/m³)	980 mg/m ³
		Medium: whole blood - Sampling time: end of shift 25 mg/l Parameter: Acetone - Medium: urine - Sampling time: end of shift
Germany Germany	TRGS 900 Occupational exposure limit value (ppm) TRGS 903 (BGW)	200 ppm (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed) 25 mg/I Parameter: Acetone -

Slovakia	(REACH) with its amendment Regulation (EU) 2015/830 NPHV (Hraničná) (mg/m ³)	1000 mg/m ³	
Slovenia	OEL TWA (mg/m ³)	500 mg/m ³	
Slovenia	OEL TWA (ppm)	200 ppm	
Slovenia	OEL STEL (mg/m³)	2000 mg/m ³	
Slovenia	OEL STEL (mg/m)	800 ppm	
Spain	VLA-ED (mg/m³)	500 mg/m ³ (the partial or complete commercialization or use of this substance as a phytosanitary or biocide compound is prohibited)	
Spain	VLA-ED (ppm)	200 ppm (the partial or complete commercialization or use of this substance as a phytosanitary or biocide compound is prohibited)	
Spain	VLA-EC (mg/m³)	1000 mg/m³	
Spain	VLA-EC (ppm)	400 ppm	
Spain	Spain - BLV	40 mg/l Parameter: Acetone - Medium: urine - Sampling time: end of workweek	
Sweden	nivågränsvärde (NVG) (mg/m³)	350 mg/m³	
Sweden	nivågränsvärde (NVG) (ppm)	150 ppm	
Sweden	kortidsvärde (KTV) (mg/m³)	600 mg/m³	
Sweden	kortidsvärde (KTV) (ppm)	250 ppm	
Switzerland	KZGW (mg/m³)	1000 mg/m³	
Switzerland	KZGW (ppm)	400 ppm	
Switzerland	MAK (mg/m³)	500 mg/m³	
Switzerland	MAK (ppm)	200 ppm	
Switzerland	Switzerland - BLV	25 mg/l Parameter: Acetone - Medium: urine - Sampling time: end of shift 25 mg/l Parameter: Acetone - Medium: whole blood - Sampling time: end of shift	
United Kingdom	WEL TWA (mg/m³)	999 mg/m³	
United Kingdom	WEL TWA (ppm)	400 ppm	
United Kingdom	WEL STEL (mg/m³)	1250 mg/m ³	
United Kingdom	WEL STEL (ppm)	500 ppm	
Benzene, 1,2,4-trimethyl- (95-63-6)			
EU	IOELV TWA (mg/m ³)	100 mg/m ³	
EU	IOELV TWA (ppm)	20 ppm	
Austria	MAK (mg/m ³)	100 mg/m ³	
Austria	MAK (ppm)	20 ppm	
Austria	MAK Short time value (mg/m³)	150 mg/m ³	
Austria	MAK Short time value (ppm)	30 ppm	
Bulgaria	OEL TWA (mg/m ³)	100 mg/m ³	

Bulgaria	06 (REACH) with its amendment Regulation (EU) 2015/830 OEL TWA (ppm)	20 ppm
Croatia	GVI (granična vrijednost izloženosti) (mg/m³)	100 mg/m ³
Croatia	GVI (granična vrijednost izloženosti) (ppm)	20 ppm
Cyprus	OEL TWA (mg/m³)	100 mg/m ³
Cyprus	OEL TWA (ppm)	20 ppm
Czech Republic	Expoziční limity (PEL) (mg/m³)	100 mg/m ³
Czech Republic	OEL chemical category (CZ)	Potential for cutaneous absorption
Denmark	Grænseværdie (langvarig) (mg/m³)	100 mg/m³
Denmark	Grænseværdie (langvarig) (ppm)	20 ppm
Estonia	OEL TWA (mg/m³)	100 mg/m ³
Estonia	OEL TWA (ppm)	20 ppm
Finland	HTP-arvo (8h) (mg/m ³)	100 mg/m ³
Finland	HTP-arvo (8h) (ppm)	20 ppm
France	VLE (mg/m³)	250 mg/m³ (restrictive limit)
France	VLE (ppm)	50 ppm (restrictive limit)
France	VME (mg/m³)	100 mg/m³ (restrictive limit)
France	VME (ppm)	20 ppm (restrictive limit)
France	France - BLV	600 mg/g creatinine Parameter: Total Dimethylbenzoic acids (after hydrolysis) in urine - Medium: urine - Sampling time: end of shift after several shits
Germany	TRGS 900 Occupational exposure limit value (mg/m³)	100 mg/m ³ (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed)
Germany	TRGS 900 Occupational exposure limit value (ppm)	20 ppm (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed)
Germany	TRGS 903 (BGW)	400 mg/g Parameter: Dimethylbenzoic acid - Medium: urine - Sampling time: end of shift (sum of all isomers after hydrolysis) 400 mg/g Parameter: Dimethylbenzoic acid - Medium: urine - Sampling time: end of several shifts (sum of all isomers after hydrolysis)
Gibraltar	Eight hours mg/m3	100 mg/m ³
Gibraltar	Eight hours ppm	20 ppm
Greece	OEL TWA (mg/m³)	125 mg/m ³
Greece	OEL TWA (ppm)	25 ppm

	100
	100 mg/m ³
OEL (8 hours ref) (mg/m ³) 100 mg/m ³	
OEL (8 hours ref) (ppm) 20 ppm	
OEL (15 min ref) (mg/m3)	300 mg/m³ (calculated)
OEL (15 min ref) (ppm)	60 ppm (calculated)
OEL TWA (mg/m³)	100 mg/m ³
OEL TWA (ppm)	20 ppm
OEL TWA (mg/m³)	100 mg/m ³
OEL TWA (ppm)	20 ppm
OEL TWA (mg/m³)	100 mg/m ³
OEL TWA (ppm)	20 ppm
OEL TWA (mg/m ³)	100 mg/m ³
	20 ppm
Grenswaarde TGG 8H (mg/m³)	100 mg/m ³
Grenswaarde TGG 15MIN (mg/m³)	200 mg/m³
Grenseverdier (AN) (mg/m ³)	100 mg/m ³
Grenseverdier (AN) (ppm)	20 ppm
Grenseverdier (Korttidsverdi)	
(mg/m3)	125 mg/m³ (value calculated)
Grenseverdier (Korttidsverdi)	
(ppm)	30 ppm (value calculated)
NDS (mg/m³)	100 mg/m ³
NDSCh (mg/m³)	170 mg/m ³
OEL TWA (mg/m³)	100 mg/m³ (indicative limit value)
OEL TWA (ppm)	20 ppm (indicative limit value)
OEL TWA (mg/m³)	100 mg/m ³
OEL TWA (ppm)	20 ppm
NPHV (priemerná) (mg/m³)	100 mg/m ³
NPHV (priemerná) (ppm)	20 ppm
NPHV (Hraničná) (mg/m³)	200 mg/m ³
OEL TWA (mg/m³)	100 mg/m ³
OEL TWA (ppm)	20 ppm
VLA-ED (mg/m ³)	100 mg/m³ (indicative limit value)
VLA-ED (ppm)	20 ppm (indicative limit value)
nivågränsvärde (NVG) (mg/m ³)	120 mg/m ³
nivågränsvärde (NVG) (ppm)	25 ppm
kortidsvärde (KTV) (mg/m ³)	170 mg/m ³
	35 ppm
	1-1-
treated heavy (64742-48-9)	1 · · ·
treated heavy (64742-48-9) NDS (mg/m³)	300 mg/m³ (varnish)
treated heavy (64742-48-9)	1
	OEL (8 hours ref) (ppm)OEL (15 min ref) (mg/m3)OEL (15 min ref) (ppm)OEL TWA (mg/m3)OEL TWA (ppm)OEL TWA (ppm)OEL TWA (ppm)OEL TWA (mg/m3)OEL TWA (mg/m3)OEL TWA (mg/m3)OEL TWA (ppm)OEL TWA (ppm)OEL TWA (ppm)OEL TWA (ppm)Grenswaarde TGG 8H (mg/m3)Grenseverdier (AN) (mg/m3)Grenseverdier (AN) (ppm)Grenseverdier (Korttidsverdi) (mg/m3)Grenseverdier (Korttidsverdi) (ppm)NDS (mg/m3)OEL TWA (ppm)NPHV (priemerná) (mg/m3)NPHV (priemerná) (mg/m3)OEL TWA (mg/m3)OEL TWA (mg/m3)OEL TWA (mg/m3)OEL TWA (mg/m3)OEL TWA (ppm)NPHV (priemerná) (mg/m3)OEL TWA (mg/m3)OE

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Switzerland	KZGW (ppm)	100 ppm
Switzerland	MAK (mg/m³)	300 mg/m³
Switzerland	MAK (ppm)	50 ppm

8.2. Exposure Controls

Appropriate Engineering Controls Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilation, especially in confined areas. Ensure all national/local regulations are observed. Gas detectors should be used when flammable gases or vapors may be released. Proper grounding procedures to avoid static electricity should be followed. Use explosion-proof equipment. Gloves. Protective clothing. Protective goggles. Insufficient ventilation: wear respiratory protection.



Materials for Protective Clothing

Personal Protective Equipment

Hand Protection Eye Protection Skin and Body Protection Respiratory Protection Chemically resistant materials and fabrics. Wear fire/flame resistant/retardant clothing. Wear protective gloves. Chemical safety goggles. Wear suitable protective clothing. If exposure limits are exceeded or irritation is experienced, approved respiratory protection should be worn. In case of inadequate ventilation, oxygen deficient atmosphere, or where exposure levels are not known wear approved respiratory protection. When using, do not eat, drink or smoke.

Other Information

SECTION 9: Physical and Chemical Hazards

9.1. Information on Basic Physical and Chemical Properties

	a onennear ropenies
Physical State	Liquid
Colour	Colourless
Odour	Solvent
Odour Threshold	No data available
рН	No data available
Evaporation Rate	No data available
Melting Point	No data available
Freezing Point	No data available
Boiling Point	150 - 205 °C (302 - 401 °F)
Flash Point	40 °C (104 °F)
Auto-Ignition Temperature	No data available
Decomposition Temperature	No data available
Flammability (Solid, Gas)	Not applicable
Vapour Pressure	No data available
Relative Vapour Density At 20 °C	No data available
Relative Density	No data available
Solubility	No data available
Partition Coefficient n-Octanol/Water	No data available
Viscosity, Kinematic	No data available
Viscosity, Dynamic	No data available
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Explosive Properties Oxidising Properties Explosive Limits No data available No data available No data available

9.2. Other Information

No additional information available

SECTION 10: Stability and Reactivity

10.1. Reactivity

Reacts violently with strong oxidisers. Increased risk of fire or explosion.

10.2. Chemical Stability

Flammable liquid and vapour. May form flammable or explosive vapour-air mixture.

10.3. Possibility Of Hazardous Reactions

Hazardous polymerization will not occur.

10.4. Conditions To Avoid

Direct sunlight, extremely high or low temperatures, heat, hot surfaces, sparks, open flames, incompatible materials, and other ignition sources.

10.5. Incompatible Materials

Strong acids, strong bases, strong oxidizers.

10.6. Hazardous Decomposition Products

None expected under normal conditions of use.

SECTION 11: Toxicological Information

11.1. Information On Toxicological Effects

Acute Toxicity

Not classified

Isopropyl alcohol (67-63-0)		
LD50 Oral	4384 mg/kg	
LD50 Dermal Rabbit	12956 mg/kg (16.4 mL/kg bw)	
LC50 Inhalation Rat	72600 mg/m³ (Exposure time: 4 h)	
Benzene, 1,2,4-trimethyl- (95-63-6)		
LD50 Oral Rat	6000 mg/kg	
LD50 Oral	5000 mg/kg	
LD50 Dermal Rabbit	> 3160 mg/kg	
LC50 Inhalation Rat	18 g/m³ (Exposure time: 4 h)	
LC50 Inhalation Rat	10,8 mg/l/4h	
N-[3-(TrimethoxysilyI)propyI]-1,2-et	hanediamine (1760-24-3)	
LD50 Oral Rat	2295 mg/kg	
LD50 Dermal Rabbit	> 2000 mg/kg	
LC50 Inhalation Rat	> 1,49 mg/l/4h	
Naphtha, petroleum, hydrotreated heavy (64742-48-9)		
LD50 Oral Rat	> 6000 mg/kg	
LD50 Dermal Rabbit	> 3160 mg/kg	
LC50 Inhalation Rat	> 8500 mg/m³ (Exposure time: 4 h)	
Skin Corrosion/Irritation Eye Damage/Irritation	Not classified Causes serious eye irritation.	
Respiratory or Skin Sensitization	May cause an allergic skin reaction.	

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Germ Cell Mutagenicity	Not classified	
Carcinogenicity	Not classified	
Reproductive Toxicity		Not classified
Specific Target Organ Toxicity (Sin	ngle Exposure)	May cause drowsiness or dizziness.
Specific Target Organ Toxicity (Re	peated Exposure)	Not classified
Aspiration Hazard	May be fatal if swall	owed and enters airways.

SECTION 12: Ecological Information

12.1. Toxicity

Isopropyl alcohol (67-63-0) LCS0 Fish 1 9640 mg/l (Exposure time: 96 h - Species: Pimephales promelas filow-through)) EC50 Daphnia 1 13299 mg/l (Exposure time: 48 h - Species: Daphnia magna) EC50 Other Aquatic Organisms 1 1000 mg/l (Exposure time: 96 h - Species: Desmodesmus subspicatus) LC50 Fish 2 11130 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static]) EC50 Other Aquatic Organisms 2 1000 mg/l (Exposure time: 72 h - Species: Desmodesmus subspicatus) Benzene, 1,2,4-trimethyl- (95-63-5) 1000 mg/l (Exposure time: 72 h - Species: Daphnia magna) LC50 Fish 1 7,19 (7,19 - 8,28) mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through]) EC50 Daphnia 1 6,14 mg/l (Exposure time: 72 h - Species: Daphnia magna) NF3-(FirmethoxysilyI)propyl)-1,2-ett-mediamine (1760-24-3) 1000 mg/l (Exposure time: 72 h - Species: Daphnia magna) LC50 Fish 1 597 mg/l (Species: Danio rerio) 1000 mg/l (Exposure time: 72 h - Species: Pimephales promelas subcapitata) NOEC Chronic Fish 344 mg/l 1000 mg/l (Exposure time: 72 h - Species: Piseudokirchneriella subcapitata Exposure time: 96h) NOEC Chronic Fish 344 mg/l 1000 mg/l (Exposure time: 72 h - Species: Pimephales promelas [flow-through]) IC50 Fish 1 200 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-t	Ecology - General	Harmful to aquatic life.
[flow-through])EC50 Daphnia 113299 mg/l [Exposure time: 48 h - Species: Daphnia magna]EC50 Other Aquatic Organisms 11000 mg/l [Exposure time: 96 h - Species: Desmodesmus subspicatus]LC50 Fish 211130 mg/l [Exposure time: 96 h - Species: Pimephales promelas [static])EC50 Other Aquatic Organisms 21000 mg/l [Exposure time: 72 h - Species: Desmodesmus subspicatus]Benzene, 1,2,4-trimethyl- (95-63-6)1000 mg/l [Exposure time: 72 h - Species: Desmodesmus subspicatus]EC50 Daphnia 17,19 (7,19 - 8,28) mg/l [Exposure time: 96 h - Species: Pimephales promelas [flow-through])EC50 Daphnia 16,14 mg/l [Exposure time: 48 h - Species: Daphnia magna]N-[3-[Timethoxysily])propyl]-1,2-eth-anediamine [1760-24-3]LC50 Fish 1597 mg/l (Species: Danio rerio)EC50 Daphnia 181 mg/lErC50 (Algae)8.8 mg/l (Exposure time: 72 h - Species: Pseudokirchneriella subcapitata)NOEC Chronic Fish344 mg/lNOEC Chronic Crustacea35 mg/lNOEC Chronic Algae3.1 mg/l (Pseudokirchnerella subcapitata Exposure time: 96 h)Naphtha, petroleum, hydrotreated heavy (64742-48-9)LC50 Fish 1200 mg/l (Exposure time: 96 h - Species: Pimephales promelas)NED-4159Persistence and DegradabilityNot established. 12.2. Persistence and Degradability Not established. 13. Bioaccumulative potentia Not established.Isopropyl alcohol (67-63-0)Log PowLog Pow0,05 (at 25 °C)Benzene, 1,2,4-trimethyl- (95-63-6)-	Isopropyl alcohol (67-63-0)	
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LC50 Fish 1597 mg/l (Species: Danio rerio)EC50 Daphnia 181 mg/lErC50 (Algae)8,8 mg/l (Exposure time: 72 h - Species: Pseudokirchneriella subcapitata)NOEC Chronic Fish344 mg/lNOEC Chronic Crustacea35 mg/lNOEC Chronic Algae3,1 mg/l (Pseudokirchnerella subcapitata Exposure time: 96h)Naphtha, petroleum, hydrotreated heavy (64742-48-9)LC50 Fish 12200 mg/l (Exposure time: 96 h - Species: Pimephales promelas) 12.2. Persistence and Degradability MED-4159Persistence and DegradabilityMED-4159Bioaccumulative potentialIsopropyl alcohol (67-63-0)Log Pow0,05 (at 25 °C)Benzene, 1,2,4-trimethyl- (95-63-6)	EC50 Daphnia 1	6,14 mg/l (Exposure time: 48 h - Species: Daphnia magna)
EC50 Daphnia 181 mg/lEC50 (Algae)8,8 mg/l (Exposure time: 72 h - Species: Pseudokirchneriella subcapitata)NOEC Chronic Fish344 mg/lNOEC Chronic Crustacea35 mg/lNOEC Chronic Algae3,1 mg/l (Pseudokirchnerella subcapitata Exposure time: 96h)Naphtha, petroleum, hydrotreated heavy (64742-48-9)LC50 Fish 12200 mg/l (Exposure time: 96 h - Species: Pimephales promelas) 12.2. Persistence and Degradability MED-4159Persistence and DegradabilityNot established. 12.3. Bioaccumulative Potential Isopropyl alcohol (67-63-0)Log Pow0,05 (at 25 °C)Benzene, 1,2,4-trimethyl- (95-63-6)	N-[3-(TrimethoxysilyI)propyl]-1,2-et	hanediamine (1760-24-3)
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Naphtha, petroleum, hydrotreated heavy (64742-48-9) LC50 Fish 1 2200 mg/l (Exposure time: 96 h - Species: Pimephales promelas) 12.2. Persistence and Degradability MED-4159 Persistence and Degradability Not established. 12.3. Bioaccumulative Potential MED-4159 Bioaccumulative potential Not established. Isopropyl alcohol (67-63-0) Log Pow 0,05 (at 25 °C) Benzene, 1,2,4-trimethyl- (95-63-6)	NOEC Chronic Crustacea	35 mg/l
LC50 Fish 1 2200 mg/l (Exposure time: 96 h - Species: Pimephales promelas) 12.2. Persistence and Degradability MED-4159 Persistence and Degradability Not established. 12.3. Bioaccumulative Potential MED-4159 Bioaccumulative potential Not established. Isopropyl alcohol (67-63-0) Log Pow 0,05 (at 25 °C) Benzene, 1,2,4-trimethyl- (95-63-6)	NOEC Chronic Algae	3,1 mg/l (Pseudokirchnerella subcapitata Exposure time: 96h)
12.2. Persistence and Degradability MED-4159 Persistence and Degradability Not established. 12.3. Bioaccumulative Potential MED-4159 Bioaccumulative potential Not established. Isopropyl alcohol (67-63-0) Log Pow 0,05 (at 25 °C) Benzene, 1,2,4-trimethyl- (95-63-6)	Naphtha, petroleum, hydrotreate	d heavy (64742-48-9)
MED-4159Persistence and DegradabilityNot established.I2.3. Bioaccumulative PotentialMED-4159Bioaccumulative potentialNot established.Isopropyl alcohol (67-63-0)0,05 (at 25 °C)Benzene, 1,2,4-trimethyl- (95-63-6)	LC50 Fish 1	2200 mg/l (Exposure time: 96 h - Species: Pimephales promelas)
Persistence and DegradabilityNot established.12.3. Bioaccumulative PotentialNot established.MED-4159Bioaccumulative potentialNot established.Bioaccumulative potentialNot established.Isopropyl alcohol (67-63-0)0,05 (at 25 °C)Benzene, 1,2,4-trimethyl- (95-63-6)	12.2. Persistence and Degrado	ıbility
12.3. Bioaccumulative Potential MED-4159 Bioaccumulative potential Not established. Isopropyl alcohol (67-63-0) Log Pow 0,05 (at 25 °C) Benzene, 1,2,4-trimethyl- (95-63-6)	MED-4159	
MED-4159Bioaccumulative potentialNot established.Isopropyl alcohol (67-63-0)0,05 (at 25 °C)Benzene, 1,2,4-trimethyl- (95-63-6)	Persistence and Degradability	Not established.
Bioaccumulative potentialNot established.Isopropyl alcohol (67-63-0)0,05 (at 25 °C)Log Pow0,05 (at 25 °C)Benzene, 1,2,4-trimethyl- (95-63-6)	12.3. Bioaccumulative Potentia	
Isopropyl alcohol (67-63-0) Log Pow 0,05 (at 25 °C) Benzene, 1,2,4-trimethyl- (95-63-6)	MED-4159	
Log Pow 0,05 (at 25 °C) Benzene, 1,2,4-trimethyl- (95-63-6)	Bioaccumulative potential	Not established.
Benzene, 1,2,4-trimethyl- (95-63-6)	Isopropyl alcohol (67-63-0)	
	Log Pow	0,05 (at 25 °C)
Log Pow 3,63	Benzene, 1,2,4-trimethyl- (95-63-6)	
	Log Pow	3,63

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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

Other Information

Avoid release to the environment.

SECTION 13: Disposal Considerations

13.1. Waste Treatment Methods

Product/Packaging Disposal	Dispose of contents/container in accordance with local,
Recommendations	regional, national, and international regulations.
Additional Information	Handle empty containers with care because residual vapours are flammable.
Ecology - Waste Materials	Avoid release to the environment. This material is hazardous to the aquatic environment. Keep out of sewers and waterways.

SECTION 14: Transport Information

The shipping description(s) stated herein were prepared in accordance with certain assumptions at the time the SDS was authored, and can vary based on a number of variables that may or may not have been known at the time the SDS was issued.

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

		,	1	
ADR	IMDG	IATA	ADN	RID
14.1. UN Numbe	r			
1993	1993	1993	1993	1993
14.2. UN Proper S	Shipping Name			
FLAMMABLE	FLAMMABLE	FLAMMABLE	FLAMMABLE	FLAMMABLE
liquid, n.o.s.				
(CONTAINS:	(CONTAINS:	(CONTAINS:	(CONTAINS:	(CONTAINS:
Isopropyl alcohol;				
Naphtha,	Naphtha,	Naphtha,	Naphtha,	Naphtha,
petroleum,	petroleum,	petroleum,	petroleum,	petroleum,
hydrotreated	hydrotreated	hydrotreated	hydrotreated	hydrotreated
heavy)	heavy)	heavy)	heavy)	heavy)
14.3. Transport H	azard Class(Es)			
3	3	3	3	3
				3
14.4. Packing Gr	oup			
III	III		III	III
14.5. Environmer	ntal Hazards			
Dangerous for				
the environment :				
No	No	No	No	No
	Marine pollutant :			
	No			
14/ Special Dre	anutions For Llear			

14.6. Special Precautions For User

No additional information available

Safety Data Sheet According to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

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 substance on the REACH candidate list

Contains no REACH Annex XIV substances

Isopropyl alcohol (67-63-0)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

Benzene, 1,2,4-trimethyl- (95-63-6)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

N-[3-(TrimethoxysilyI)propyl]-1,2-ethanediamine (1760-24-3)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

Naphtha, petroleum, hydrotreated heavy (64742-48-9)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

15.1.2. National Regulations

No additional information available

15.2. Chemical Safety Assessment

No chemical safety assessment has been carried out

SECTION 16: Other Information

Indication of Changes No additional information available

Date of Preparation or Latest Revision	26/11/2018
Data Sources	Information and data obtained and used in the authoring of this safety data sheet could come from database subscriptions, official government regulatory body websites, product/ingredient manufacturer or supplier specific information, and/or resources that include substance specific data and classifications according to GHS or their subsequent adoption of GHS.
Other Information	According to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Full Text of H- and EUH-statements:

Acute Tox. 4 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 4
Acute Tox. 4 (Inhalation:vapour)	Acute toxicity (inhalation:vapour) Category 4
Aquatic Chronic 2	Hazardous to the aquatic environment — Chronic
	Hazard, Category 2
Asp. Tox. 1	Aspiration hazard, Category 1
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2

Safety Data Sheet

According to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Flam. Liq. 2	Flammable liquids, Category 2
Flam. Liq. 3	Flammable liquids, Category 3
Skin Irrit. 2	Skin corrosion/irritation, Category 2
Skin Sens. 1	Skin sensitisation, Category 1
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Narcosis
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H411	Toxic to aquatic life with long lasting effects.

Abbreviations and Acronyms

ACGIH – American Conference of Governmental Industrial Hygienists ADN – European Agreement Concerning the International Carriage of Dangerous Goods by Inland Waterways ADR - European Agreement Concerning the International Carriage of Dangerous Goods by Road ATE - Acute Toxicity Estimate BCE - Bioconcentration Factor BEI - Biological Exposure Indices (BEI) BOD - Biochemical Oxygen Demand CAS No. - Chemical Abstracts Service Number CLP - Classification, Labeling and Packaging Regulation (EC) No 1272/2008 COD - Chemical Oxygen Demand - European Community EC50 - Median Effective Concentration EEC - European Economic Community

- EINECS European Inventory of Existing Commercial Chemical Substances
- EmS-No. (Fire) IMDG Emergency Schedule Fire
- EmS-No. (Spillage) IMDG Emergency Schedule Spillage
- European Union
- FrC.50 FC.50 in Terms of Reduction Growth Rate GHS - Globally Harmonized System of Classification and Labeling of Chemicals
- IARC International Agency for Research on Cance IATA International Air Transport Association
- IBC Code International Bulk Chemical Code
- IMDG International Maritime Dangerous Goods
- IPRV Ilgalaikio Poveikio Ribinis Dydis
- IOELV Indicative Occupational Exposure Limit Value
- IC50 Median Lethal Concentration
- LD50 Median Lethal Dose
- LOAEL Lowest Observed Adverse Effect Level LOEC - Lowest-Observed-Effect Concentration
- Log Koc Soil Organic Carbon-water Partitioning Coefficient
- Log Kow Octanol/water Partition Coefficient
- Log Pow Ratio of the equilibrium concentration (C) of a dissolved substance in a twophase system consisting of two largely immiscible solvents, in this case octanol and water
- MAK Maximum Workplace Concentration/Maximum Permissible Concentration
- MARPOL International Convention for the Prevention of Pollution NDS - Naiwyzsze Dopuszczalne Stezenie NDSCh - Najwyzsze Dopuszczalne Stezenie Chwilowe NDSP - Najwyzsze Dopuszczalne Stezenie Pulapowe NOAEL - No-Observed Adverse Effect Level NOEC - No-Observed Effect Concentration NRD - Nevirsytings Ribinis Dydis NTP – National Toxicology Program OEL - Occupational Exposure Limits PBT - Persistent, Bioaccumulative and Toxic PEL - Permissible Exposure Limit pH – Potential Hydrogen REACH – Registration, Evaluation, Authorisation, and Restriction of Chemicals RID – Regulations Concerning the International Carriage of Dangerous Goods by Rail SADT - Self Accelerating Decomposition Temperature SDS - Safety Data Sheet STEL - Short Term Exposure Limit TA-Luft - Technische Anleitung zur Reinhaltung der Luft TEL TRK – Technical Guidance Concentrations ThOD – Theoretical Oxygen Demand TLM - Median Tolerance Limit TLV - Threshold Limit Value TPRD - Trumpalaikio Poveikio Ribinis Dydis TRGS 510 - Technische Regel für Gefahrstoffe 510 - Lagerung von Gefahrstoffen in ortsbeweglichen Behältern TRGS 552 – Technische Regeln für Gefahrstoffe - N-Nitrosamine TRGS 900 - Technische Regel für Gefahrstoffe 900 – Arbeitsplatzgrenzwerte TRGS 903 - Technische Regel für Gefahrstoffe 903 - Biologische Grenzwerte TSCA - Toxic Substances Control Act TWA - Time Weighted Average VOC – Volatile Organic Compounds VLA-EC - Valor Límite Ambiental Exposición de Corta Duración VLA-ED - Valor Límite Ambiental Exposición Diaria VLE – Valeur Limite D'exposition VME – Valeur Limite De Moyenne Exposition vPvB - Verv Persistent and Verv Bioaccumulative WEL – Workplace Exposure Limit WGK - Wassergefährdungsklasse

Nusil FU GHS SDS

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According to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

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