

R-2634 Part A

Safety Data Sheet

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

Revision date:
31/08/2016

Date of issue:
28/01/2014

Version: 3.0

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

1.1. Product identifier

Product form : Mixture
Product Name : R-2634 Part A
Synonyms : Electrically Conductive RTV Silicone

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 RFI and EMI shielding for electrical and aerospace applications.
For professional use only.

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

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

2.1. Classification of the substance or mixture

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

Not classified

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

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

EUH-statements : EUH208 - Contains Nickel(7440-02-0). May produce an allergic reaction
EUH210 - Safety data sheet available on request

2.3. Other Hazards

Other hazards not contributing to the classification : Exposure may aggravate those with pre-existing eye, skin, or respiratory conditions.

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

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

3.2. Mixture

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Nickel*	(CAS No) 7440-02-0 (EC no) 231-111-4 (EC index no) 028-002-00-7	60 - 65	Skin Sens. 1, H317 Carc. 2, H351 STOT RE 1, H372 Aquatic Chronic 3, H412
Silver	(CAS No) 7440-22-4 (EC no) 231-131-3	10 - 15	Not classified
Glass, oxide, chemicals*	(CAS No) 65997-17-3 (EC no) 266-046-0	5 - 10	Not classified

*Nickel powder has caused cancer and lung disease workers that inhale it over an extended period of time. Since this product is in a liquid form, the Nickel powder is not able to become airborne and cannot be inhaled. Thus, the hazards usually associated with Nickel are not applicable to this product.

*Finely divided Glass Oxide has caused cancer and lung disease in workers that inhale it over an extended period of time. Studies suggest, however, that these hazards are not associated with other routes of exposure. Since this product is in a liquid form, none of these components are able to become airborne and cannot be inhaled. Thus, the hazards usually associated with Glass Oxide are not applicable to this product.

Full text of H-phrases: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

- First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label if possible).
- First-aid measures after inhalation : Remove to fresh air and keep at rest in a position comfortable for breathing. Obtain medical attention if breathing difficulty persists.
- First-aid measures after skin contact : Rinse immediately with plenty of water. Obtain medical attention if irritation develops or persists.
- First-aid measures after eye contact : Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention.
- First-aid measures after ingestion : Do NOT induce vomiting. Rinse mouth. Immediately call a POISON CENTER or doctor/physician.

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

- Symptoms/injuries : Not expected to present a significant hazard under anticipated conditions of normal use.
- Symptoms/injuries after inhalation : May cause respiratory irritation.
- Symptoms/injuries after skin contact : May cause skin irritation.
- Symptoms/injuries after eye contact : May cause eye irritation.
- Symptoms/injuries after ingestion : Ingestion is likely to be harmful or have adverse effects.
- Chronic symptoms : None expected under normal conditions of use.

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

If you feel unwell, seek medical advice (show the label where possible).

SECTION 5: Firefighting measures

5.1. Extinguishing media

- Suitable extinguishing media : Use extinguishing media appropriate for surrounding fire.

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Unsuitable extinguishing media : Do not use a heavy water stream. Use of heavy stream of water may spread fire. Application of water stream to hot product may cause frothing and increase fire intensity.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Not considered flammable but may burn at high temperatures.

Explosion hazard : Product is not explosive.

Reactivity : Hazardous reactions will not occur under normal conditions.

5.3. Advice for firefighters

Precautionary measures fire : Exercise caution when fighting any chemical fire. Under fire conditions, hazardous fumes will be present.

Firefighting instructions : Use water spray or fog for cooling exposed containers.

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

Other information : Refer to Section 9 for flammability properties.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Avoid all contact with skin, eyes, or clothing. Avoid breathing (dust, vapour, mist, spray).

6.1.1. For non-emergency personnel

Protective equipment : Use appropriate personal protection equipment (PPE).

Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection.

Emergency procedures : Stop leak if safe to do so. Eliminate ignition sources. Ventilate area.

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 spills immediately and dispose of waste safely. Spills should be contained with mechanical barriers. Transfer spilled material to a suitable container for disposal. Contact competent authorities after a spill.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection. For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Hygiene measures : Handle in accordance with good industrial hygiene and safety procedures. 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 : Comply with applicable regulations.

Storage conditions : Store in a dry, cool and well-ventilated place. Keep container closed when not in use. Keep/Store away from direct sunlight, extremely high or low temperatures and incompatible materials.

Incompatible products : Strong acids. Strong bases. Strong oxidizers.

7.3. Specific end use(s)

No additional information available

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

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Nickel (7440-02-0)		
Austria	TEL TRK (mg/m ³)	0,5 mg/m ³ (dust, inhalable fraction)
Austria	OEL chemical category (AT)	Group A1 Carcinogen dust/aerosol, Respiratory sensitizer dust, Skin sensitizer
Belgium	Limit value (mg/m ³)	1 mg/m ³
Bulgaria	OEL TWA (mg/m ³)	0,05 mg/m ³
Bulgaria	Bulgaria - BEI	45 µg/l Parameter: Nickel - Medium: urine - Sampling time: after several shifts
Croatia	GVI (granična vrijednost izloženosti) (mg/m ³)	0,5 mg/m ³
Croatia	OEL chemical category (HR)	Carcinogen category 3
France	VME (mg/m ³)	1 mg/m ³ 1 mg/m ³ (metal gratings)
France	OEL chemical category (FR)	Carcinogen category 2
Germany	TRGS 900 Occupational exposure limit value (mg/m ³)	0,006 mg/m ³
Germany	TRGS 900 chemical category	Skin sensitization
Greece	OEL TWA (mg/m ³)	1 mg/m ³
USA ACGIH	ACGIH TWA (mg/m ³)	1,5 mg/m ³ (inhalable particulate matter)
Latvia	OEL TWA (mg/m ³)	0,05 mg/m ³
Spain	VLA-ED (mg/m ³)	1 mg/m ³ (manufacturing, commercialization and use restrictions according to REACH)
Spain	OEL chemical category (ES)	C1A, Sensitizer
Switzerland	VME (mg/m ³)	0,5 mg/m ³ (inhalable dust)
Switzerland	OEL chemical category (CH)	Category C2 carcinogen, Sensitizer
Switzerland	Switzerland - BEI	45 µg/l Parameter: Nickel - Medium: urine - Sampling time: end of shift, and after several shifts (for long-term exposures)
United Kingdom	WEL TWA (mg/m ³)	0,5 mg/m ³
United Kingdom	WEL STEL (mg/m ³)	1,5 mg/m ³ (calculated)
United Kingdom	WEL chemical category	Potential for cutaneous absorption
Czech Republic	Expoziční limity (PEL) (mg/m ³)	0,5 mg/m ³
Czech Republic	OEL chemical category (CZ)	Sensitizer
Czech Republic	Czech Republic - BEI	0,077 µmol/mmol Creatinine Parameter: Nickel - Medium: urine - Sampling time: discretionary 0,04 mg/g Kreatinin Parameter: Nickel - Medium: urine - Sampling time: discretionary
Denmark	Grænseværdie (langvarig) (mg/m ³)	0,05 mg/m ³ (dust and powder)
Estonia	OEL TWA (mg/m ³)	0,5 mg/m ³
Estonia	OEL chemical category (ET)	Sensitizer
Finland	HTP-arvo (8h) (mg/m ³)	0,01 mg/m ³
Finland	Finland - BEI	0,1 µmol/l Parameter: Nickel - Medium: urine - Sampling time: end of shift at end of workweek or exposure period
Hungary	MK-érték	0,1 mg/m ³
Hungary	OEL chemical category (HU)	Carcinogenic substance, Sensitizer

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Nickel (7440-02-0)		
Ireland	OEL (8 hours ref) (mg/m ³)	0,5 mg/m ³
Ireland	OEL (15 min ref) (mg/m ³)	1,5 mg/m ³ (calculated)
Lithuania	IPRV (mg/m ³)	0,5 mg/m ³
Lithuania	OEL chemical category (LT)	Carcinogen, Sensitizer
Norway	Grenseverdier (AN) (mg/m ³)	0,05 mg/m ³
Norway	Grenseverdier (Korttidsverdi) (mg/m ³)	0,05 mg/m ³
Norway	OEL chemical category (NO)	Carcinogen, Potential reproductive hazard, Sensitizing substance
Poland	NDS (mg/m ³)	0,25 mg/m ³
Romania	OEL TWA (mg/m ³)	0,1 mg/m ³
Romania	OEL STEL (mg/m ³)	0,5 mg/m ³
Romania	OEL chemical category (RO)	Substances likely to cause cancer
Romania	Romania - BEI	15 µg/l Parameter: Nickel - Medium: urine - Sampling time: end of shift
Slovakia	Slovakia - BEI	0,03 mg/l Parameter: Nickel - Medium: blood - Sampling time: end of exposure or work shift
Slovenia	OEL TWA (mg/m ³)	0,5 mg/m ³ (inhalable fraction)
Slovenia	OEL STEL (mg/m ³)	2 mg/m ³ (inhalable fraction)
Slovenia	OEL chemical category (SL)	Category 2
Sweden	nivågränsvärde (NVG) (mg/m ³)	0,5 mg/m ³ (total dust)
Sweden	OEL chemical category (SE)	Sensitizer
Portugal	OEL TWA (mg/m ³)	1,5 mg/m ³ (inhalable fraction)
Portugal	OEL chemical category (PT)	A5 - Not Suspected as a Human Carcinogen
Glass, oxide, chemicals (65997-17-3)		
Belgium	Limit value (mg/m ³)	10 mg/m ³ (dust and fiber)
Silver (7440-22-4)		
EU	IOELV TWA (mg/m ³)	0,1 mg/m ³
Austria	MAK (mg/m ³)	0,1 mg/m ³ (inhalable fraction)
Austria	MAK Short time value (mg/m ³)	0,1 mg/m ³ (inhalable fraction)
Austria	OEL - Ceilings (mg/m ³)	0,1 mg/m ³ (inhalable fraction)
Belgium	Limit value (mg/m ³)	0,1 mg/m ³
Bulgaria	OEL TWA (mg/m ³)	0,1 mg/m ³
Croatia	GVI (granična vrijednost izloženosti) (mg/m ³)	0,1 mg/m ³
Cyprus	OEL TWA (mg/m ³)	0,1 mg/m ³
France	VME (mg/m ³)	0,1 mg/m ³ (indicative limit)
Germany	TRGS 900 Occupational exposure limit value (mg/m ³)	0,1 mg/m ³ (inhalable fraction)
Greece	OEL TWA (mg/m ³)	0,1 mg/m ³
USA ACGIH	ACGIH TWA (mg/m ³)	0,1 mg/m ³ (dust and fume)
Italy	OEL TWA (mg/m ³)	0,1 mg/m ³
Latvia	OEL TWA (mg/m ³)	0,1 mg/m ³
Spain	VLA-ED (mg/m ³)	0,1 mg/m ³ (indicative limit value)
Switzerland	VLE (mg/m ³)	0,8 mg/m ³ (inhalable dust)
Switzerland	VME (mg/m ³)	0,1 mg/m ³ (inhalable dust)
Netherlands	Grenswaarde TGG 8H (mg/m ³)	0,1 mg/m ³


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Silver (7440-22-4)		
United Kingdom	WEL TWA (mg/m ³)	0,1 mg/m ³
United Kingdom	WEL STEL (mg/m ³)	0,3 mg/m ³ (calculated)
Czech Republic	Expoziční limity (PEL) (mg/m ³)	0,1 mg/m ³
Denmark	Grænseværdie (langvarig) (mg/m ³)	0,01 mg/m ³ (dust and powder)
Estonia	OEL TWA (mg/m ³)	0,1 mg/m ³
Finland	HTP-arvo (8h) (mg/m ³)	0,1 mg/m ³
Hungary	AK-érték	0,1 mg/m ³
Hungary	CK-érték	0,4 mg/m ³ (Substances with European indicative limits (96/94/EC, 2000/39/EC, 2006/15/EC, 2009/161/EU), which currently has no peak limit concentration. In these cases, Annex 3.1. should be used exercised)
Ireland	OEL (8 hours ref) (mg/m ³)	0,1 mg/m ³ (metallic)
Ireland	OEL (15 min ref) (mg/m ³)	0,3 mg/m ³ (calculated)
Lithuania	IPRV (mg/m ³)	0,1 mg/m ³
Malta	OEL TWA (mg/m ³)	0,1 mg/m ³ (metallic)
Norway	Grænseverdier (AN) (mg/m ³)	0,1 mg/m ³ (metal dust and fume)
Norway	Grænseverdier (Korttidsverdi) (mg/m ³)	0,3 mg/m ³ (metal dust and fume)
Poland	NDS (mg/m ³)	0,05 mg/m ³ (inhalable fraction)
Romania	OEL TWA (mg/m ³)	0,1 mg/m ³
Slovakia	NPHV (priemerná) (mg/m ³)	0,1 mg/m ³
Slovenia	OEL TWA (mg/m ³)	0,01 mg/m ³
Sweden	nivågränsvärde (NVG) (mg/m ³)	0,1 mg/m ³ (total dust)
Portugal	OEL TWA (mg/m ³)	0,01 mg/m ³ (indicative limit value)

8.2. Exposure controls

- Appropriate engineering controls : Ensure adequate ventilation, especially in confined areas. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure all national/local regulations are observed.
- Personal protective equipment : Protective goggles. Gloves. Protective clothing.
- 
- Materials for protective clothing : Chemically resistant materials and fabrics.
- Hand protection : Wear chemically resistant protective gloves.
- Eye protection : Chemical goggles or safety glasses.
- Skin and body protection : Wear suitable protective clothing.
- Respiratory protection : Use an approved respirator or self-contained breathing apparatus whenever exposure may exceed established Occupational Exposure Limits.
- Environmental exposure controls : Do not allow the product to be released into the environment.
- Other information : When using, do not eat, drink or smoke.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

- Physical state : Liquid
- Appearance : Brownish Gray
- Colour : No data available

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Odour	: No data available
Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: > 275 °C (527 °F)
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
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
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: Not applicable

9.2. Other information

VOC content : < 5 %

SECTION 10: Stability and reactivity

10.1. Reactivity

Hazardous reactions will not occur under normal conditions.

10.2. Chemical stability

Stable under recommended handling and storage conditions (see section 7).

10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures. Ignition sources. Incompatible materials.

10.5. Incompatible materials

Strong acids, strong bases, strong oxidizers.

10.6. Hazardous decomposition products

Thermal decomposition generates: Carbon oxides (CO, CO₂). Silicon oxides. Oxides of nickel. Oxides of silver.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

Nickel (7440-02-0)	
LD50 oral rat	> 9000 mg/kg
Silver (7440-22-4)	
LD50 oral rat	> 2000 mg/kg

Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitisation	: Not classified.
	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 (single exposure)	: Not classified
Specific target organ toxicity (repeated exposure)	: Not classified.
Aspiration hazard	: Not classified
Potential adverse human health effects and symptoms	: Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

12.1. Toxicity

Nickel (7440-02-0)	
LC50 fish 1	100 mg/l (Exposure time: 96 h - Species: Brachydanio rerio)
EC50 Daphnia 1	121,6 µg/l (Exposure time: 48h - Species: Ceriodaphnia dubia [static])
LC50 fish 2	15,3 mg/l
EC50 Daphnia 2	1 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])
EC50 other aquatic organisms 2	0,174 (0,174 - 0,311) mg/l (Exposure time: 96 h - Species: Pseudokirchneriella subcapitata [static])
Silver (7440-22-4)	
LC50 fish 1	0,00155 - 0,00293 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])
EC50 Daphnia 1	0,00024 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])
LC50 fish 2	0,0062 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [flow-through])
NOEC chronic fish	390 ng/l (Exposure time: 28d - Species: Pimephales promelas)

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

No additional information available

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

Waste disposal recommendations : Dispose of waste material in accordance with all local, regional, national, and international regulations.

Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

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

14.1. UN number

Not regulated for transport

14.2. UN proper shipping name

Not applicable

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14.3. Transport hazard class(es)

Not applicable

14.4. Packing group

Not applicable

14.5. Environmental hazards

Other information : No supplementary information available.

14.6. Special precautions for user

14.6.1. Overland transport

No additional information available

14.6.2. Transport by sea

No additional information available

14.6.3. Air transport

No additional information available

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

VOC content : < 5 %

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:

Section	Section Header	Change	Date Changed
1	Identification of the substance/mixture and of the company/undertaking	Modified	31/08/2016
2	Hazards identification	Modified. Removed DSD/DPD information.	31/08/2016
3	Composition/information on ingredients	Modified. Removed components not required to be listed. Removed DSD/DPD information.	31/08/2016
15.1	EU-Regulations	Modified	31/08/2016

Revision date : 31/08/2016

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

Full text of H- and EUH-statements:

Aquatic Chronic 3	Hazardous to the aquatic environment — Chronic Hazard, Category 3
Carc. 2	Carcinogenicity, Category 2
Skin Sens. 1	Sensitisation — Skin, Category 1
STOT RE 1	Specific target organ toxicity — Repeated exposure, Category 1
H317	May cause an allergic skin reaction

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H351	Suspected of causing cancer
H372	Causes damage to organs through prolonged or repeated exposure
H412	Harmful to aquatic life with long lasting effects
EUH208	Contains . May produce an allergic reaction
EUH210	Safety data sheet available on request

Nusil EU GHS SDS

We believe that the information contained herein is current as of the date of this Safety Data Sheet, and is offered in good faith. Since the use of this information and of these opinions and the conditions of the use of the product are not within the control of Nusil Technology, it is the user's obligation to determine the conditions of safe use of the product.

R-2634 Part B

Safety Data Sheet

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

Revision date:
31/08/2016

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28/01/2014

Version: 2.0

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

1.1. Product identifier

Product form : Mixture
Product Name : R-2634 Part B
Synonyms : Curing Agent

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

1.3. Details of the supplier of the safety data sheet

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

2.1. Classification of the substance or mixture

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

Skin Corr. 1C	H314
Eye Dam. 1	H318
Skin Sens. 1	H317
Muta. 2	H341
Repr. 1B	H360
STOT SE 1	H370
STOT RE 1	H372
Aquatic Acute 1	H400
Aquatic Chronic 1	H410

Full text of hazard classes and 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) :



Signal word (CLP) : Danger
Hazardous ingredients : Dibutyltin dilaurate
Hazard statements (CLP) : H314 - Causes severe skin burns and eye damage
H317 - May cause an allergic skin reaction

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according to Regulation (EC) No. 453/2010

Precautionary statements (CLP)	<p>H341 - Suspected of causing genetic defects H360 - May damage fertility or the unborn child H370 - Causes damage to organs H372 - Causes damage to organs through prolonged or repeated exposure H410 - Very toxic to aquatic life with long lasting effects</p> <p>P201 - Obtain special instructions before use P202 - Do not handle until all safety precautions have been read and understood P260 - Do not breathe mist, spray, vapours P264 - Wash hands, forearms and face thoroughly after handling P270 - Do not eat, drink or smoke when using this product P272 - Contaminated work clothing should not be allowed out of the workplace P273 - Avoid release to the environment P280 - Wear eye protection, face protection, protective clothing, protective gloves P301+P330+P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting 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/shower 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 P308+P311 - If exposed or concerned: Call a POISON CENTER/doctor P310 - Immediately call a POISON CENTER or doctor P314 - Get medical advice/attention if you feel unwell P321 - Specific treatment (see Section 4 on this SDS) P333+P313 - If skin irritation or rash occurs: Get medical advice/attention P362+P364 - Take off contaminated clothing and wash it before reuse P391 - Collect spillage P405 - Store locked up P501 - Dispose of contents/container in accordance with local, regional, national, and international regulations</p>
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2.3. Other Hazards

Other hazards not contributing to the classification

: Exposure may aggravate those with pre-existing eye, skin, or respiratory conditions.

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

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according to Regulation (EC) No. 453/2010

3.2. Mixture

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Dibutyltin dilaurate	(CAS No) 77-58-7 (EC no) 201-039-8	50	Skin Corr. 1C, H314 Eye Dam. 1, H318 Skin Sens. 1, H317 Muta. 2, H341 Repr. 1B, H360 STOT SE 1, H370 STOT RE 1, H372 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

Full text of H-phrases: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

- First-aid measures general : Never give anything by mouth to an unconscious person. If exposed or concerned: Get medical advice/attention.
- First-aid measures after inhalation : When symptoms occur: go into open air and ventilate suspected area. Remove to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician.
- First-aid measures after skin contact : Remove contaminated clothing. Drench affected area with water for at least 15 minutes. Obtain medical attention if irritation develops or persists. Wash contaminated clothing before reuse.
- First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing for at least 60 minutes. Immediately call a POISON CENTER or doctor/physician.
- First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor/physician.

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

- Symptoms/injuries : Causes irritation. Causes serious eye damage. Exposure may produce an allergic reaction. Causes damage to organs. There are potential chronic health effects to consider.
- Symptoms/injuries after inhalation : May cause respiratory irritation.
- Symptoms/injuries after skin contact : Redness, pain, swelling, itching, burning, dryness, and dermatitis. May cause an allergic skin reaction.
- Symptoms/injuries after eye contact : Causes severe irritation which will progress to chemical burns.
- Symptoms/injuries after ingestion : Ingestion is likely to be harmful or have adverse effects.
- Chronic symptoms : Causes damage to organs through prolonged or repeated exposure. May damage fertility or the unborn child. Suspected of causing genetic defects.

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

If medical advice is needed, have product container or label at hand.

SECTION 5: Firefighting measures

5.1. Extinguishing Media

- Suitable extinguishing media : Use extinguishing media appropriate for surrounding fire.
- Unsuitable extinguishing media : Do not use a heavy water stream. Use of heavy stream of water may spread fire. Application of water stream to hot product may cause frothing and increase fire intensity.

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5.2. Special Hazards Arising From the Substance or Mixture

- Fire hazard : Not considered flammable but may burn at high temperatures.
- Explosion hazard : Product is not explosive.
- Reactivity : Hazardous reactions will not occur under normal conditions.

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.
- Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.
- Other information : Refer to Section 9 for flammability properties.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

- General measures : Avoid all contact with skin, eyes, or clothing. Avoid breathing (vapor, mist, spray).

6.1.1. For non-emergency personnel

- Protective equipment : Use appropriate personal protection equipment (PPE).
- Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

- Protective equipment : Equip cleanup crew with proper protection.
- Emergency procedures : Stop leak if safe to do so. Eliminate ignition sources. Ventilate area.

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 : Clear up spills immediately and dispose of waste safely. Spills should be contained with mechanical barriers. Transfer spilled material to a suitable container for disposal. Contact competent authorities after a spill.

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

- Hygiene measures : Handle in accordance with good industrial hygiene and safety procedures. 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 : Comply with applicable regulations.
- Storage conditions : Store in a dry, cool and well-ventilated place. Keep container closed when not in use. Keep/Store away from direct sunlight, extremely high or low temperatures and incompatible materials.
- Incompatible products : 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

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Tin organic compounds		
Austria	MAK (mg/m ³)	0,1 mg/m ³ (except tri-n-Butyltin compounds-inhalable fraction)
Austria	MAK Short time value (mg/m ³)	0,2 mg/m ³ (except tri-n-Butyltin compounds-inhalable fraction)
Belgium	Limit value (mg/m ³)	0,1 mg/m ³
Belgium	Short time value (mg/m ³)	0,2 mg/m ³
Bulgaria	OEL TWA (mg/m ³)	0,1 mg/m ³
France	VLE (mg/m ³)	0,2 mg/m ³
France	VME (mg/m ³)	0,1 mg/m ³
Italy-Portugal-USA ACGIH	ACGIH TWA (mg/m ³)	0,1 mg/m ³
Italy-Portugal-USA ACGIH	ACGIH STEL (mg/m ³)	0,2 mg/m ³
Spain	VLA-ED (mg/m ³)	0,1 mg/m ³
Spain	VLA-EC (mg/m ³)	0,2 mg/m ³
United Kingdom	WEL TWA (mg/m ³)	0,1 mg/m ³ (except Cyhexatin)
United Kingdom	WEL STEL (mg/m ³)	0,2 mg/m ³ (except Cyhexatin)
Czech Republic	Expoziční limity (PEL) (mg/m ³)	0,1 mg/m ³
Denmark	Grænseværdie (langvarig) (mg/m ³)	0,1 mg/m ³ (except Tri-n-butyltin compounds)
Finland	HTP-arvo (8h) (mg/m ³)	0,1 mg/m ³
Finland	HTP-arvo (15 min)	0,3 mg/m ³
Hungary	AK-érték	0,1 mg/m ³
Hungary	CK-érték	0,4 mg/m ³
Ireland	OEL (8 hours ref) (mg/m ³)	0,1 mg/m ³
Ireland	OEL (15 min ref) (mg/m ³)	0,2 mg/m ³
Lithuania	IPRV (mg/m ³)	0,1 mg/m ³
Lithuania	TPRV (mg/m ³)	0,2 mg/m ³
Norway	Gjennomsnittsverdier (AN) (mg/m ³)	0,1 mg/m ³
Norway	Gjennomsnittsverdier (Korttidsverdi) (mg/m ³)	0,3 mg/m ³
Romania	OEL TWA (mg/m ³)	0,05 mg/m ³
Romania	OEL STEL (mg/m ³)	0,15 mg/m ³
Slovakia	NPHV (priemerná) (mg/m ³)	0,1 mg/m ³
Slovakia	NPHV (Hraničná) (mg/m ³)	0,2 mg/m ³
Sweden	nivågränsvärde (NVG) (mg/m ³)	0,1 mg/m ³ (total dust)
Sweden	kortidsvärde (KTV) (mg/m ³)	0,2 mg/m ³ (total dust)
Portugal	OEL TWA (mg/m ³)	0,1 mg/m ³
Portugal	OEL STEL (mg/m ³)	0,2 mg/m ³
Portugal	OEL chemical category (PT)	A4 - Not Classifiable as a Human Carcinogen, skin - potential for cutaneous exposure

8.2. Exposure controls

Appropriate engineering controls

: Ensure adequate ventilation, especially in confined areas. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure all national/local regulations are observed.

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Personal protective equipment	: Protective goggles. Gloves. Protective clothing. Insufficient ventilation: wear respiratory protection.
Materials for protective clothing	: Chemically resistant materials and fabrics.
Hand protection	: Wear chemically resistant protective gloves.
Eye protection	: Chemical safety goggles.
Skin and body protection	: Wear suitable protective clothing. Wash contaminated clothing before reuse.
Respiratory protection	: If exposure limits are exceeded or irritation is experienced, approved respiratory protection should be worn.
Other information	: When using, do not eat, drink or smoke.



SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Odour	: Slight
Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: 235 °C (455 °F)
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative Density	: 1,05
Solubility	: No data available
Partition coefficient: n-octanol/water	: 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

Hazardous reactions will not occur under normal conditions.

10.2. Chemical stability

Stable under recommended handling and storage conditions (see section 7).

10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

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10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures. Ignition sources. Incompatible materials.

10.5. Incompatible materials

Strong acids. Strong bases. Strong oxidizers.

10.6. Hazardous decomposition products

Carbon oxides (CO, CO₂). Silicon oxides. When heated, material emits irritating and harmful fumes.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

Dibutyltin dilaurate (77-58-7)	
LD50 oral	175 mg/kg
LD50 dermal rat	> 2 g/kg

Skin corrosion/irritation : Causes severe skin burns and eye damage.

Serious eye damage/irritation : Causes serious eye damage.

Respiratory or skin sensitisation : May cause an allergic skin reaction.

Germ cell mutagenicity : Suspected of causing genetic defects.

Carcinogenicity : Not classified

Reproductive toxicity : May damage fertility or the unborn child.

Specific target organ toxicity (single exposure) : Causes damage to organs.

Specific target organ toxicity (repeated exposure) : Causes damage to organs through prolonged or repeated exposure.

Aspiration hazard : Not classified

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Toxic to aquatic life with long lasting effects. Toxic to aquatic life.

Dibutyltin dilaurate (77-58-7)	
EC50 Daphnia 1	0,463 mg/l (Daphnia magna)

12.2. Persistence and degradability

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Persistence and degradability	Not established. May cause long-term adverse effects in the environment.

Dibutyltin dilaurate (77-58-7)	
Persistence and degradability	Not readily biodegradable.

12.3. Bioaccumulative potential

R-2634 Part B	
Bioaccumulative potential	Not established.

Dibutyltin dilaurate (77-58-7)	
Log Pow	4,44

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.

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SECTION 13: Disposal considerations

13.1. Waste treatment methods

- Waste disposal recommendations : Dispose of waste material in accordance with all local, regional, national, and international regulations.
- Ecology - waste materials : This material is hazardous to the aquatic environment. Keep out of sewers and waterways.

SECTION 14: Transport information

The transport classification does not apply to packages smaller than 0.5L (16.9 ounces)

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

14.1. UN number

UN-No. (ADR) : 3082

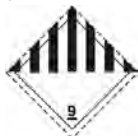
14.2. UN proper shipping name

Proper Shipping Name (ADR) : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Transport document description (ADR) : UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Dibutyltin dilaurate), 9, III, (E)

14.3. Transport hazard class(es)

Class (ADR) : 9

Danger labels (ADR) : 9



14.4. Packing group

Packing group (ADR) : III

14.5. Environmental hazards

Dangerous for the environment :
Marine pollutant :



Other information : No supplementary information available.

14.6. Special precautions for user

14.6.1. Overland transport

Hazard identification no. (Kemler No.) : 90

Classification code (ADR) : M6

Orange plates :



Special provisions (ADR) : 274, 335, 601

Transport category (ADR) : 3

Tunnel restriction code (ADR) : E

Limited quantities (ADR) : 5I

Excepted quantities (ADR) : E1

EAC code : •3Z

14.6.2. Transport by sea

MFAG-No : 171

14.6.3. Air transport

 No additional information available

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

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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

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:

Section	Section Header	Change	Date Changed
1.3	Details of the supplier of the safety data sheet	Modified	31/08/2016
2	Hazards identification	Reclassified product. Removed DSD/DPD information.	31/08/2016
2.3	Other Hazards	Modified	31/08/2016
3	Composition/information on ingredients	Changed component classifications. Removed not classified components and components below cutoffs. Removed DSD/DPD information.	31/08/2016
14	Transport information	Added transport classification and exemption information.	31/08/2016
15.1.1	EU-Regulations	Modified	31/08/2016

Revision date : 31/08/2016

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

Full text of H- and EUH-statements:

Aquatic Acute 1	Hazardous to the aquatic environment — Acute Hazard, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment — Chronic Hazard, Category 1
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Muta. 2	Germ cell mutagenicity, Category 2
Repr. 1B	Reproductive toxicity, Category 1B
Skin Corr. 1C	Skin corrosion/irritation, Category 1C
Skin Sens. 1	Sensitisation — Skin, Category 1
STOT RE 1	Specific target organ toxicity — Repeated exposure, Category 1
STOT SE 1	Specific target organ toxicity — single exposure, Category 1
H314	Causes severe skin burns and eye damage
H317	May cause an allergic skin reaction
H318	Causes serious eye damage
H341	Suspected of causing genetic defects
H360	May damage fertility or the unborn child
H370	Causes damage to organs
H372	Causes damage to organs through prolonged or repeated exposure
H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects

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We believe that the information contained herein is current as of the date of this Safety Data Sheet, and is offered in good faith. Since the use of this information and of these opinions and the conditions of the use of the product are not within the control of NuSil Technology, it is the user's obligation to determine the conditions of safe use of the product.



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