SECTION 1: Identification

1.1. Identification

Product form : Mixture
Product name : Diamond Body

1.2. Recommended use and restrictions on use

Use of the substance/mixture : Protective coating

1.3. Supplier

Manufacturer
NGNT Material Sciences SA
Chem. du Mont-de-Brez 2
1405 Pomy
Switzerland
T +41 (0)58 300 1080

Importer
NGNT Material Sciences SA
Rockefeller Center - Concourse- Suite 2002
610 Fifth Avenue
New York NY 10185
United States
T +1 917 522 2111 (Hours: 10 AM - 5 PM)

1.4. Emergency telephone number

Emergency number : Phone number (US): 917 522 2111; Hours - 9 AM - 5 PM

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS US classification

Flammable liquids, Category 3	Flammable liquid and vapour.
Skin corrosion/irritation, Category 2	Causes skin irritation.
Serious eye damage/eye irritation, Category 2	Causes serious eye irritation.
Reproductive toxicity, Category 2	Suspected of damaging fertility or the unborn child.
Specific target organ toxicity – Single exposure, Category 1	Causes damage to organs.
Specific target organ toxicity – Repeated exposure, Category 1	Causes damage to organs through prolonged or repeated exposure.

2.2. GHS Label elements, including precautionary statements

GHS US labelling

Hazard pictograms (GHS US) :

Signal word (GHS US) : Danger
Hazard statements (GHS US) : Flammable liquid and vapour.
Causes skin irritation.
Causes serious eye irritation.
Suspected of damaging fertility or the unborn child.
Causes damage to organs.
Causes damage to organs through prolonged or repeated exposure.
Precautionary statements (GHS US) : Keep out of reach of children.
Obtain special instructions before use.
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Wear eye protection, protective gloves.
If exposed or concerned: Get medical advice/attention.

Store locked up.
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 which do not result in classification

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	GHS US classification
Methylmethoxy siloxane with methyl silsesquioxane	CAS-No.: 68037-85-4	0 – 55	Flam. Liq. 3
Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics	CAS-No.: 64742-48-9	<14,5	Flam. Liq. 3 STOT SE 3 Asp. Tox. 1
Methyltrimethoxysilane	CAS-No.: 1185-55-3	<8,6	Flam. Liq. 2
ethyl silicate	CAS-No.: 78-10-4	<8.6	Flam. Liq. 3 Acute Tox. 4 (Inhalation) Eye Irrit. 2 STOT SE 3
Dimethyl siloxane, 3-(2-aminoethyl)aminopropyldimethoxysiloxy-terminated	CAS-No.: 71750-80-6	<5	Skin Irrit. 2 Eye Irrit. 2
Dimethyl siloxane, HO-term Rxn methyltrimethoxysilane and aminoethylaminopropyltrimethoxysilane	CAS-No.: 69430-37-1	<4,1	Flam. Liq. 2 Skin Irrit. 2 Eye Irrit. 2
Bis(ethyl acetoacetato-O1',O3)bis(propan-2-olato)titanium	CAS-No.: 27858-32-8	<3,9	Flam. Liq. 3 Eye Irrit. 2 STOT SE 3
Stoddard solvent	CAS-No.: 8052-41-3	<3,1	Flam. Liq. 3 Skin Irrit. 2 STOT RE 1 Asp. Tox. 1
Propan-2-ol	CAS-No.: 67-63-0	<1,55	Flam. Liq. 2 Eye Irrit. 2 STOT SE 3
methanol	CAS-No.: 67-56-1	<1,1	Flam. Liq. 2 Acute Tox. 3 (Oral) Acute Tox. 3 (Dermal) Acute Tox. 3 (Inhalation) STOT SE 1
n-butyl acetate	CAS-No.: 123-86-4	<0,12	Flam. Liq. 3 STOT SE 3

Name	Product identifier	%	GHS US classification
Dimethoxydimethylsilane	CAS-No.: 1112-39-6	<0,103	Flam. Liq. 2 Repr. 2
ethylbenzene	CAS-No.: 100-41-4	<0,014	Flam. Liq. 2 Acute Tox. 4 (Inhalation) STOT RE 2 Asp. Tox. 1

Full text of hazard classes and H-statements : see section 16

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures general : IF exposed or concerned: Get medical advice/attention.

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.

First-aid measures after skin contact : Rinse skin with water/shower. Take off immediately all contaminated clothing. If skin irritation occurs: Get medical advice/attention.

First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

First-aid measures after ingestion : Call a poison center or a doctor if you feel unwell.

4.2. Most important symptoms and effects (acute and delayed)

Potential adverse human health effects and symptoms : Causes serious eye irritation.
Causes skin irritation.
Suspected of damaging fertility or the unborn child.
Causes damage to organs.
Causes damage to organs through prolonged or repeated exposure.

Symptoms/effects after skin contact : Irritation.

Symptoms/effects after eye contact : Eye irritation.

Chronic symptoms : Suspected of damaging fertility or the unborn child.
Causes damage to organs.
Causes damage to organs through prolonged or repeated exposure.

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically. Based on the assessment of risk of hazardous chemical agents, the competent person will settle the appropriate medical surveillance protocol, in accordance with the national legislation, in order to protect the health status of the workers.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.

5.2. Specific hazards arising from the chemical

Fire hazard : Flammable liquid and vapour.

Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Special protective equipment and precautions for fire-fighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Protective equipment : Wear recommended personal protective equipment.

Emergency procedures : Ventilate spillage area. No open flames, no sparks, and no smoking. Do not breathe vapours, spray, fume. Avoid contact with skin and eyes.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment. Do not let the product enter drainage system, surface and ground-water or soil. Contact local authorities in case of environmental release. Do not empty into drains.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters.

Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection". For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground/bond container and receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Flammable vapours may accumulate in the container. Use explosion-proof equipment. Wear personal protective equipment. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe vapours, spray. Avoid contact with skin and eyes.

Hygiene measures : Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Ground/bond container and receiving equipment.

Storage conditions : Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store locked up.

Incompatible materials : Oxidising agents.

Heat and ignition sources : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Storage area : Store in a dry, well ventilated place away from sources of heat, ignition and direct sunlight.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Propan-2-ol (67-63-0)	
USA - ACGIH - Occupational Exposure Limits	
Local name	2-Propanol

Propan-2-ol (67-63-0)	
ACGIH OEL TWA [ppm]	200 ppm
ACGIH OEL STEL [ppm]	400 ppm
Remark (ACGIH)	TLV® Basis: Eye & URT irr; CNS impair. Notations: A4 (Not classifiable as a Human Carcinogen); BEI
Regulatory reference	ACGIH 2021
USA - ACGIH - Biological Exposure Indices	
Local name	2-PROPANOL
BEI	40 mg/l Parameter: Acetone - Medium: urine - Sampling time: End of shift at end of workweek - Notations: B, Ns
Regulatory reference	ACGIH 2021
USA - OSHA - Occupational Exposure Limits	
Local name	Isopropyl alcohol
OSHA PEL TWA [1]	980 mg/m³
OSHA PEL TWA [2]	400 ppm
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1

ethylbenzene (100-41-4)	
USA - ACGIH - Occupational Exposure Limits	
Local name	Ethylbenzene
ACGIH OEL TWA [ppm]	20 ppm
Remark (ACGIH)	TLV® Basis: URT irr; kidney dam (nephropathy); cochlear impair. Notations: A3 (Confirmed Animal Carcinogen with Unknown Relevance to Humans); BEI
ACGIH chemical category	A3 – Confirmed Animal Carcinogen with Unknown Relevance to Human. Upper Respiratory Tract Irritant; kidney damage (nephropathy); cochlear impairment) (2010)
Regulatory reference	ACGIH 2021
USA - ACGIH - Biological Exposure Indices	
Local name	ETHYLBENZENE
BEI	0.15 g/g creatinine; sum of mandelic acid and phenylglyoxylic acid in urine at the end of the shift (Notation: Non specific).
Regulatory reference	ACGIH 2021
USA - OSHA - Occupational Exposure Limits	
Local name	Ethyl benzene
OSHA PEL TWA [1]	435 mg/m³
OSHA PEL TWA [2]	100 ppm
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1

methanol (67-56-1)	
USA - ACGIH - Occupational Exposure Limits	
Local name	Methanol
ACGIH OEL TWA [ppm]	200 ppm

methanol (67-56-1)	
ACGIH OEL STEL [ppm]	250 ppm
Remark (ACGIH)	TLV® Basis: Headache; eye dam; dizziness; nausea. Notations: Skin; BEI
ACGIH chemical category	Skin - potential significant contribution to overall exposure by the cutaneous route
Regulatory reference	ACGIH 2021
USA - OSHA - Occupational Exposure Limits	
Local name	Methyl alcohol
OSHA PEL TWA [1]	260 mg/m³
OSHA PEL TWA [2]	200 ppm
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1

ethyl silicate (78-10-4)	
USA - ACGIH - Occupational Exposure Limits	
Local name	Ethyl silicate
ACGIH OEL TWA [ppm]	10 ppm
Remark (ACGIH)	TLV® Basis: URT & eye irr; kidney dam
Regulatory reference	ACGIH 2021
USA - OSHA - Occupational Exposure Limits	
Local name	Ethyl silicate
OSHA PEL TWA [1]	850 mg/m³
OSHA PEL TWA [2]	100 ppm
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1

Methylmethoxy siloxane with methyl silsesquioxane (68037-85-4)
No additional information available

Monitoring methods	
Monitoring methods	The measurement of substances in the workplace must be carried out with standardized methods (e.g. UNI EN 689:2019: Workplace atmospheres - Guide for assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy; UNI EN 482:2015: Workplace explosure - General requirements for the performance of procedures for the measurement of chemical agents) or, failing that, with appropriate methods.

8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station. Appropriate risk management measures, that must be adopted at the workplace, have to be selected and applied, following the risks assessment carried out by the employer, in connection with his working activity. If the results of this evaluation show that the general and collective prevention measures are not sufficient to reduce the risk, and if you cannot prevent exposure to the mixture by other means, adequate personal protective equipment must be adopted, complying with the relevant technical national/international standards.

Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Personal protective equipment:
Wear recommended personal protective equipment.

Hand protection:
Protective gloves

Eye protection:
Safety glasses

Skin and body protection:
Wear suitable protective clothing

Respiratory protection:
[In case of inadequate ventilation] wear respiratory protection.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Liquid
Appearance	:	Liquid.
Colour	:	No data available
Odour	:	light solvent smell
Odour threshold	:	No data available
pH	:	No data available
Melting point	:	Not applicable
Freezing point	:	No data available
Boiling point	:	No data available
Flash point	:	No data available
Relative evaporation rate (butylacetate=1)	:	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 (Log Pow)	:	No data available
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity, kinematic	:	No data available
Viscosity, dynamic	:	No data available
Explosive limits	:	No data available
Explosive properties	:	No data available
Oxidising properties	:	No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Flammable liquid and vapour.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

10.5. Incompatible materials

Oxidizing agent.

10.6. Hazardous decomposition products

Toxic fumes may be released.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (dermal) : Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (inhalation) : Not classified (Based on available data, the classification criteria are not met)

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics (64742-48-9)	
LD50 oral rat	> 5000 mg/kg Read-across
LD50 dermal rat	> 2000 mg/kg bodyweight Read-across
LC50 Inhalation - Rat	> 5000 mg/m³ Read-across

Bis(ethyl acetoacetato-O1',O3)bis(propan-2-olato)titanium (27858-32-8)	
LD50 oral rat	23020 mg/kg bodyweight
LD50 dermal rabbit	12870 mg/kg bodyweight
ATE US (oral)	23020 mg/kg bodyweight
ATE US (dermal)	12870 mg/kg bodyweight

Stoddard solvent (8052-41-3)	
LD50 oral rat	> 5000 mg/kg bodyweight
LD50 dermal rabbit	> 3000 mg/kg bodyweight
LC50 Inhalation - Rat	> 5.5 mg/l air

Propan-2-ol (67-63-0)	
LD50 oral rat	5840 mg/kg
LD50 dermal rabbit	> 12800 mg/kg
LC50 Inhalation - Rat	25000 mg/m³
ATE US (oral)	5840 mg/kg bodyweight
ATE US (vapours)	25 mg/l/4h
ATE US (dust,mist)	25 mg/l/4h

ethylbenzene (100-41-4)	
LD50 oral rat	3500 mg/kg
LD50 dermal rabbit	15500 mg/kg

ethylbenzene (100-41-4)	
ATE US (oral)	3500 mg/kg bodyweight
ATE US (dermal)	15500 mg/kg bodyweight
ATE US (gases)	4500 ppmv/4h
ATE US (vapours)	17.2 mg/l/4h
ATE US (dust,mist)	1.5 mg/l/4h

methanol (67-56-1)	
ATE US (oral)	100 mg/kg bodyweight
ATE US (dermal)	300 mg/kg bodyweight
ATE US (gases)	700 ppmv/4h
ATE US (vapours)	3 mg/l/4h
ATE US (dust,mist)	0.5 mg/l/4h
Additional data	Methanol- In humans, transient central nervous system (CNS) effects appear above blood methanol levels of 200 mg/L and serious ocular symptoms appear above 500 mg/L. The minimal acute methanol dose to humans that can result in death is considered to be 300 to 1,000 mg/kg by ingestion, and fatalities have occurred in untreated patients with initial methanol blood levels in the range of 1,500- 2,000 mg/L

n-butyl acetate (123-86-4)	
LD50 oral rat	10760 mg/kg bodyweight
LD50 dermal rabbit	> 14112 mg/kg bodyweight
ATE US (oral)	10760 mg/kg bodyweight

Methyltrimethoxysilane (1185-55-3)	
LD50 oral rat	11685 mg/kg bodyweight
LD50 dermal rabbit	9500 mg/kg bodyweight
ATE US (oral)	11685 mg/kg bodyweight
ATE US (dermal)	9500 mg/kg bodyweight
ATE US (vapours)	42.1 mg/l/4h

Dimethoxydimethylsilane (1112-39-6)	
LD50 oral rat	2000 – 5000 mg/kg
ATE US (oral)	2000 mg/kg bodyweight

ethyl silicate (78-10-4)	
LD50 oral rat	> 2500 mg/kg bodyweight
ATE US (gases)	4500 ppmv/4h
ATE US (vapours)	16.83 mg/l/4h
ATE US (dust,mist)	1.5 mg/l/4h

Methylmethoxy siloxane with methyl silsesquioxane (68037-85-4)	
LD50 oral rat	> 10000 mg/kg

Skin corrosion/irritation	:	Causes skin irritation. Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics: several studies have been carried out on this group of substances; the results showed that this substance is not irritating to the skin Bis(ethyl acetoacetato-O1',O3)bis(propan-2-olato)titanium: mild skin irritation was observed in guinea pigs Dimethyl siloxane, 3-(2-aminoethyl)aminopropyldimethoxysiloxy-terminated: a short contact may cause skin irritation with local redness. The exposure to Stoddard solvent caused moderate to severe erythema and oedema according to the Draize test after 24 h of skin contact. The test substance is irritating to skin. Propan-2-ol. In skin irritation studies, irritation was not observed following patch application (occlusive) of undiluted chemical for four hours to intact and abraded skin of rabbits and guinea pigs. Ethylbenzene is moderately irritating; after reviewing of the available data, RAC concluded that no classification for irritation is necessary (2012). Methanol. In vivo test on rabbit: no adverse effect observed (not irritating). n-butyl acetate is not irritating Methyltrimethoxysilane: only mild effects were observed (test on rabbits); the substance is not classified. Dimethoxydimethylsilane is not irritating to the skin (read-across) Ethyl silicate is slightly irritating to the skin of rabbits, but does not meet the criteria for classification as irritant.
Serious eye damage/irritation	:	Causes serious eye irritation. Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics are not irritating to the eyes (read across from supporting substances, test on rabbits). Bis(ethyl acetoacetato-O1',O3)bis(propan-2-olato)titanium: the substance is considered to be an eye irritant (weight of evidence) Dimethyl siloxane, 3-(2-aminoethyl)aminopropyldimethoxysiloxy-terminated is irritating to the eyes Stoddard solvent was administered to one eye of six New Zealand White rabbits to assess for ocular irritation. Irritation subsided and all animals were clear of ocular irritation within 7 days after treatment. These findings do not warrant classification of Stoddard solvent as an ocular irritant. Propan-2-olo: In an eye irritation study (OECD TG 405), the undiluted chemical was applied to the conjunctival sac of three male and three female New Zealand White rabbits. While conjunctival responses included redness, chemosis (oedema of the conjunctiva), and clear/white discharge, corneal opacity, stippling and corneal ulceration were also noted. Ethylbenzene is moderately irritating; after reviewing of the available data, RAC concluded that no classification for irritation is necessary (2012). Methanol. In six rabbits, mild to moderate conjunctivitis and oedema as well as mild iritis were produced after instillation of 0.1 mL undiluted methanol into the eyes. Average scores after 24, 48, and 72 h were approximately two for conjunctival redness and less than one for other effects. Primary irritation subsided although redness of the conjunctivae persisted after 72 hours (OECD, 2004). n-butyl acetate is not irritating Methyltrimethoxysilane: only mild effects were observed (test on rabbits); the substance is not classified. Dimethoxydimethylsilane is only slightly irritating. Ethyl silicate: vapours of ethyl silicate are irritating to the eyes and to the respiratory tract

Respiratory or skin sensitisation : Not classified (Based on available data, the classification criteria are not met)

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics: there are studies on guinea pigs (read across from supporting substances) which show that the substance is not a skin sensitizer. Based on the skin sensitization tests, it is presumed that there is no respiratory sensitization potential (specific studies were not performed).

Bis(ethyl acetoacetato-O1',O3)bis(propan-2-olato)titanium: the substance is not considered to be a skin sensitizer

Stoddard solvent showed no evidence of being a skin sensitizer when tested using the Buehler test in a reliable study conducted in accordance with OECD Guidelines 406. The study was GLP compliant.

Propan-2-ol is not a skin sensitizer

Ethylbenzene is not a skin or respiratory sensitizer.

Skin sensitization: Methanol is not considered to be a skin sensitizer in guinea pigs. Respiratory sensitization: Methanol is not considered to be a respiratory sensitiser in guinea pigs.

N-butyl acetate resulted not a skin sensitizer in the mouse ear swelling test.

Methyltrimethoxysilane: two recent studies conducted in guinea pigs showed that the substance doesn't cause skin sensitization.

Germ cell mutagenicity : Not classified (Based on available data, the classification criteria are not met)

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics: all the in vivo and in vitro studies were negative

Bis(ethyl acetoacetato-O1',O3)bis(propan-2-olato)titanium: the substance was not mutagenic in a bacterial reverse mutagenetic test (test on Salmonella Typhimurium)

Mutagenicity testing in vitro results for Stoddard solvent has been reported in several studies using bacterial and mammalian cells. There was no indication of genotoxicity in any of the studies.

Mutagenicity testing in vivo showed no evidence of genotoxicity.

Ethylbenzene: based on various in-vivo and in-vitro tests, the substance is not considered to be mutagenic

Methanol. In the in-vitro tests and in-vivo tests carried out, no genotoxic potential was detectable N-butyl acetate: all the tests performed were negative; the substance is not genotoxic.

Methyltrimethoxysilane: based on the available data, the substance is not classified for genetic toxicity

Dimethoxydimethylsilane: all the studies carried out are negative

Ethyl silicate: tests in vitro show that the substance does not induce mutations or chromosome aberrations in mammals cells

Carcinogenicity : Not classified (Based on available data, the classification criteria are not met)

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics are highly unlikely to be carcinogenic

No experimental animal data has been reported concerning the carcinogenic properties of Stoddard solvent. The carcinogenic properties of petrochemical products are usually ascribed to the content of benzene or polyaromatic hydrocarbons (PAH), especially benzo[a]pyrene. The content of benzene in theStoddard solventis lower than 0.1 w/w%.

Propan-2-ol is not carcinogenic

Methanol. There was no evidence of carcinogenic potential in rats and mice that inhaled the chemical at concentrations up to 1.3 mg/L for 24 and 18 months, respectively. The weight of evidence suggests that methanol is not carcinogenic (OECD, 2004).

Propan-2-ol (67-63-0)	
IARC group	3 - Not classifiable

Reproductive toxicity : Suspected of damaging fertility or the unborn child.

Stoddard solvent (8052-41-3)	
Additional data	It is concluded that the substance Stoddard solvent does not meet the criteria to be classified for human health hazards for Reproductive toxicity

Propan-2-ol (67-63-0)	
Additional data	Propan-2-ol: The substance is considered not to be toxic for the reproduction.

ethylbenzene (100-41-4)	
Additional data	No adverse effects for reproduction were observed

methanol (67-56-1)	
Additional data	Methanol. Based on the data available, the chemical is not considered to have reproductive or developmental toxicity in humans. No impairment of fertility or reproductive performance was reported in male and female rats exposed to the chemical, unless at very high doses. No epidemiological studies in humans have been located to demonstrate that there is a link between methanol exposure and an increased incidence of fetal malformations or developmental impairment.

n-butyl acetate (123-86-4)	
Additional data	N-butyl acetate did not show adverse effects on fertility and developmental toxicity

Methyltrimethoxysilane (1185-55-3)	
Additional data	No adverse effects for reproduction were observed

Dimethoxydimethylsilane (1112-39-6)	
Additional data	Animal studies have shown that the substance interferes with fertility

STOT-single exposure : Causes damage to organs.

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics (64742-48-9)	
STOT-single exposure	May cause drowsiness or dizziness.

Bis(ethyl acetoacetato-O1',O3)bis(propan-2-olato)titanium (27858-32-8)	
STOT-single exposure	May cause drowsiness or dizziness.

Propan-2-ol (67-63-0)	
STOT-single exposure	May cause drowsiness or dizziness.
Additional data	Propan-2-ol may cause drowsiness or dizziness after inhalation (single exposure)

ethylbenzene (100-41-4)	
Additional data	Ethylbenzene is moderately irritating; after reviewing of the available data, RAC concluded that no classification for irritation is necessary (2012).

methanol (67-56-1)	
STOT-single exposure	Causes damage to organs.
Additional data	Methanol: exposure to excessive vapour causes eye irritation, drowsiness, headache and fatigue; exposure to high concentrations can cause damages to the optic nerve and central nervous system depression. Ingestion may cause eye damages.

n-butyl acetate (123-86-4)	
STOT-single exposure	May cause drowsiness or dizziness.
Additional data	n-butyl acetate may cause drowsiness or dizziness after inhalation (single exposure)

ethyl silicate (78-10-4)	
STOT-single exposure	May cause respiratory irritation.
Additional data	Ethyl silicate: vapours of ethyl silicate are irritating to the eyes and to the respiratory tract

STOT-repeated exposure : Causes damage to organs through prolonged or repeated exposure.

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics (64742-48-9)	
NOAEL (oral, rat, 90 days)	≥ 5000 mg/kg bodyweight/day

Stoddard solvent (8052-41-3)	
NOAEL (oral, rat, 90 days)	1056 mg/kg bodyweight
NOAEL (dermal, rat/rabbit, 90 days)	2000 mg/kg bodyweight
STOT-repeated exposure	Causes damage to organs through prolonged or repeated exposure.

ethylbenzene (100-41-4)	
NOAEL (oral, rat, 90 days)	75 mg/kg bodyweight (OECD 408)
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.
Additional data	Prolonged or repeated exposure via oral route or via inhalation to ethylbenzene may damage hearing

methanol (67-56-1)	
Additional data	Methanol. In studies with rodents, methanol produced only slight toxicity effects. In monkeys, instead, methanol produced neurological effects such us slight peripheral nerve damage, very slight degeneration of the optic nerve, coma and lethality. In these animals, methanol also produced liver and kidney effects. A study published by the National Institute for Occupational Safety and Health (NIOSH) stated that a group of workers exposed to 0.48–4.0 mg/L (99% methanol) had increased symptoms relevant to methanol toxicity such as headache, dizziness, and eye irritation compared with a non-exposed control group at the same workplace.

n-butyl acetate (123-86-4)	
LOAEL (oral, rat, 90 days)	500 mg/kg bodyweight
NOAEL (oral, rat, 90 days)	125 mg/kg bodyweight

Methyltrimethoxysilane (1185-55-3)	
Additional data	No significant adverse effects were observed following repeated dose exposure to the substance.

Aspiration hazard : Not classified (Based on available data, the classification criteria are not met)
Viscosity, kinematic : No data available

Likely routes of exposure : Isopropanol is readily absorbed and distributed throughout the body in animals and humans following ingestion, inhalation, and dermal application. Isopropanol is metabolised to acetone predominantly by the enzyme alcohol dehydrogenase in both animals and humans. A minor metabolic pathway is the conjugation of isopropanol by glucuronic acid and the conjugate has been detected in the urine in animals and humans. The majority of the absorbed chemical is exhaled as acetone, carbon dioxide and unmetabolised chemical, with smaller amounts excreted in the urine and less again in the faeces. Elimination half-lives of 2.5–3 hours and 6.4 hours in blood of humans have been reported in two studies following ingestion of the chemical.

Methanol is readily absorbed by inhalation, ingestion and dermal contact and distributes rapidly throughout the body (organs and tissues). The metabolism of methanol occurs mainly in the liver in mammals, by sequential oxidative steps to formaldehyde, formic acid and carbon dioxide. In humans and monkeys, the conversion to formaldehyde is mediated by alcohol dehydrogenase. Primates accumulate formate at lower doses of methanol than some other species. Studies indicate that formate is the methanol metabolite responsible for methanol toxicity resulting in systemic clinical signs, metabolic acidosis, and ophthalmic effects in primates. Metabolism in humans, rodents, and monkeys contributes up to 98% of the clearance, with more than 90% of the administered dose exhaled as carbon dioxide. Renal and pulmonary excretion contributes only about 2–3%. Kinetic studies in methanol poisoned patients showed that the half-life of formate in blood is 3,4 hours.

Potential adverse human health effects and symptoms : Causes serious eye irritation.
Causes skin irritation.
Suspected of damaging fertility or the unborn child.
Causes damage to organs.
Causes damage to organs through prolonged or repeated exposure

Symptoms/effects after skin contact : Irritation.

Symptoms/effects after eye contact : Eye irritation.

Chronic symptoms : Suspected of damaging fertility or the unborn child.
Causes damage to organs
Causes damage to organs through prolonged or repeated exposure

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics (64742-48-9)	
LC50 - Fish [1]	LL50 >1000 mg/L, Oncorhynchus mykiss
EC50 - Crustacea [1]	LL50 >1000 mg/L, Daphnia magna
NOEC chronic algae	NOELR =100 mg/L, Pseudokirchneriella subcapitata

Bis(ethyl acetoacetato-O1',O3)bis(propan-2-olato)titanium (27858-32-8)	
LC50 - Fish [1]	9640 mg/l Pimephales promelas
EC50 - Crustacea [1]	> 100 mg/l Daphnia magna (Water flea)

Stoddard solvent (8052-41-3)	
LC50 - Fish [1]	2.5 mg/l Oncorhynchus mykiss
NOEC (chronic)	0.1 mg/l Daphnia magna

Propan-2-ol (67-63-0)	
LC50 - Fish [1]	9640 mg/l Pimephales promelas
EC50 - Crustacea [1]	10000 mg/l Daphnia magna (Water flea)

Propan-2-ol (67-63-0)	
NOEC chronic algae	1800 mg/l Scenedesmus quadricauda

ethylbenzene (100-41-4)	
LC50 - Fish [1]	4.2 mg/l Oncorhynchus mykiss (Rainbow trout)
EC50 - Crustacea [1]	1.8 mg/l Daphnia magna (Water flea)
NOEC chronic crustacea	0.96 mg/l Ceriodaphnia dubia
NOEC (additional information)	Toxicity to microorganisms: EC50=96 mg/L/24h

methanol (67-56-1)	
LC50 - Fish [1]	15400 mg/l Lepomis macrochirus (Bluegill)
EC50 - Crustacea [1]	> 10000 mg/l Daphnia magna (Water flea)
NOEC chronic fish	15800 mg/l Oryzias latipes (Ricefish)
NOEC chronic crustacea	208 mg/l Daphnia magna (Water flea)
Additional ecotoxicological information	Toxicity data on soil micro- and macro organisms: EC50 activated sludge = 19800 mg/L IC50 activated sludge >1000 mg/L IC50 Nitrosamonas = 880 mg/L Toxic limit concentration Pseudomonas, Microcystis aeruginosa. = 530 - 6600 mg/L

n-butyl acetate (123-86-4)	
LC50 - Fish [1]	18 mg/l Pimephales promelas
EC50 - Crustacea [1]	44 mg/l Daphnia magna (Water flea)
NOEC chronic crustacea	23 mg/l Daphnia magna; read across: isobutyl acetate
NOEC chronic algae	196 mg/l Desmodesmus subspicatus

Methyltrimethoxysilane (1185-55-3)	
LC50 - Fish [1]	> 110 mg/l Oncorhynchus mykiss (Rainbow trout)
EC50 - Crustacea [1]	> 500 mg/l Daphnia magna (Water flea)
NOEC chronic crustacea	≥ 100 mg/l Daphnia magna (Water flea)

Dimethoxydimethylsilane (1112-39-6)	
LC50 - Fish [1]	> 126 mg/l Oncorhynchus mykiss (Rainbow trout)
EC50 - Crustacea [1]	> 119 mg/l Daphnia magna (Water flea)
NOEC chronic crustacea	> 12.6 mg/l Daphnia magna (Water flea)

ethyl silicate (78-10-4)	
LC50 - Fish [1]	> 245 mg/l Brachydanio rerio (zebra-fish)
EC50 - Crustacea [1]	> 75 mg/l Daphnia magna (Water flea)
NOEC chronic fish	> 245 mg/l Brachydanio rerio (zebra-fish)
NOEC chronic crustacea	≥ 75 mg/l Daphnia magna (Water flea)

12.2. Persistence and degradability

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics (64742-48-9)	
Persistence and degradability	readily biodegradable.

Bis(ethyl acetoacetato-O1',O3)bis(propan-2-olato)titanium (27858-32-8)	
Persistence and degradability	readily biodegradable.

Stoddard solvent (8052-41-3)	
Persistence and degradability	Readily biodegradable.

Propan-2-ol (67-63-0)	
Persistence and degradability	readily biodegradable.

ethylbenzene (100-41-4)	
Persistence and degradability	readily biodegradable.

methanol (67-56-1)	
Persistence and degradability	Methanol is readily biodegradable. It does not undergo hydrolysis. Volatilization is not a significant removal process from the aquatic compartment. Methanol is degraded in the atmosphere by photochemical, hydroxyl-radical dependent reactions.

n-butyl acetate (123-86-4)	
Persistence and degradability	readily biodegradable.

Methyltrimethoxysilane (1185-55-3)	
Persistence and degradability	Not biodegradable.

Dimethoxydimethylsilane (1112-39-6)	
Persistence and degradability	Not readily biodegradable.

ethyl silicate (78-10-4)	
Persistence and degradability	readily biodegradable.

12.3. Bioaccumulative potential

Stoddard solvent (8052-41-3)	
Partition coefficient n-octanol/water (Log Kow)	5.01

Propan-2-ol (67-63-0)	
Bioaccumulative potential	Isopropanol. The potential of bioconcentration in aquatic organisms is not expected to be significant, based on an estimated BCF value of 1.0.

ethylbenzene (100-41-4)	
Bioaccumulative potential	Based on log Kow <=3, the substance has a low potential for bioaccumulation.

methanol (67-56-1)	
Bioaccumulative potential	Methanol does not significantly bioaccumulate in fish. Experimental BCFs of < 10 in fish species, including Cyprinus carpio and Leuciscus idus, have been reported.

n-butyl acetate (123-86-4)	
Bioaccumulative potential	Low bioaccumulation potential.

Methyltrimethoxysilane (1185-55-3)	
Bioaccumulative potential	Low bioaccumulation potential.

Dimethoxydimethylsilane (1112-39-6)	
Bioaccumulative potential	Based on log Kow <=3, the substance has a low potential for bioaccumulation.

tetraethyl silicate; ethyl silicate (78-10-4)	
Bioaccumulative potential	Low bioaccumulation potential.

12.4. Mobility in soil

Propan-2-ol (67-63-0)	
Mobility in soil	A low potential for adsorption is expected because of its log Pow<3 and the ready biodegradability
ethylbenzene (100-41-4)	
Mobility in soil	Ethylbenzene is expected to have a moderate mobility in soil; volatilization from dry soil surfaces is expected
methanol (67-56-1)	
Mobility in soil	Methanol. The low octanol/water partition coefficient value of -0.7 suggest a high mobility in soil.
n-butyl acetate (123-86-4)	
Mobility in soil	n-butyl acetate is expected to have a very high mobility in soil (Koc value of 19, estimated)
ethyl silicate (78-10-4)	
Mobility in soil	Based on a Kow=1 (estimated), ethyl silicate is expected to have a very high mobility in soil. The substance is also expected to volatilize from dry soil surfaces (based on the vapour pressure)

12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Disposal methods

Regional legislation (waste) : Disposal must be done according to official regulations.
Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.
Additional information : Flammable vapours may accumulate in the container.
Ecology - waste materials : Avoid release to the environment. Do not empty into drains.

SECTION 14: Transport information

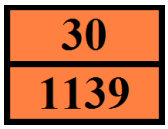
In accordance with DOT / TDG / IMDG / IATA

ADR	IMDG	IATA	RID
14.1. UN number or ID number			
UN 1139	UN 1139	UN 1139	UN 1139
14.2. UN proper shipping name			
COATING SOLUTION	COATING SOLUTION	Coating solution	COATING SOLUTION
Transport document description			
UN 1139 COATING SOLUTION, 3, III, (D/E), ENVIRONMENTALLY HAZARDOUS	UN 1139 COATING SOLUTION, 3, III, MARINE POLLUTANT/ENVIRONMENTALLY HAZARDOUS	UN 1139 Coating solution, 3, III, ENVIRONMENTALLY HAZARDOUS	UN 1139 COATING SOLUTION, 3, III, ENVIRONMENTALLY HAZARDOUS

ADR	IMDG	IATA	RID
14.3. Transport hazard class(es)			
3	3	3	3
			
14.4. Packing group			
III	III	III	III
14.5. Environmental hazards			
Dangerous for the environment: Yes	Dangerous for the environment: Yes Marine pollutant: Yes	Dangerous for the environment: Yes	Dangerous for the environment: Yes
No supplementary information available			

14.6. Special precautions for user

Overland transport

Classification code (ADR)	:	F1
Limited quantities (ADR)	:	5l
Excepted quantities (ADR)	:	E1
Packing instructions (ADR)	:	P001, IBC03, LP01, R001
Mixed packing provisions (ADR)	:	MP19
Portable tank and bulk container instructions (ADR)	:	T2
Portable tank and bulk container special provisions (ADR)	:	TP1
Tank code (ADR)	:	LGBF
Vehicle for tank carriage	:	FL
Transport category (ADR)	:	3
Special provisions for carriage - Packages (ADR)	:	V12
Special provisions for carriage - Operation (ADR)	:	S2
Hazard identification number (Kemler No.)	:	30
Orange plates	:	
Tunnel restriction code (ADR)	:	D/E
EAC code	:	•3Y

Transport by sea

Special provisions (IMDG)	:	955
Limited quantities (IMDG)	:	5 L
Excepted quantities (IMDG)	:	E1
Packing instructions (IMDG)	:	P001, LP01
IBC packing instructions (IMDG)	:	IBC03
Tank instructions (IMDG)	:	T2
Tank special provisions (IMDG)	:	TP1
EmS-No. (Fire)	:	F-E
EmS-No. (Spillage)	:	S-E
Stowage category (IMDG)	:	A
Properties and observations (IMDG)	:	Miscibility with water depends upon the composition.

Air transport

PCA Excepted quantities (IATA)	:	E1
PCA Limited quantities (IATA)	:	Y344
PCA limited quantity max net quantity (IATA)	:	10L
PCA packing instructions (IATA)	:	355
PCA max net quantity (IATA)	:	60L
CAO packing instructions (IATA)	:	366
CAO max net quantity (IATA)	:	220L
Special provisions (IATA)	:	A3
ERG code (IATA)	:	3L

Rail transport

Classification code (RID)	:	F1
Limited quantities (RID)	:	5L
Excepted quantities (RID)	:	E1
Packing instructions (RID)	:	P001, IBC03, LP01, R001
Mixed packing provisions (RID)	:	MP19
Portable tank and bulk container instructions (RID)	:	T2
Portable tank and bulk container special provisions (RID)	:	TP1
Tank codes for RID tanks (RID)	:	LGBF
Transport category (RID)	:	3
Special provisions for carriage – Packages (RID)	:	W12
Colis express (express parcels) (RID)	:	CE4
Hazard identification number (RID)	:	30

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

Not applicable

SECTION 15: Regulatory information

15.1. US Federal regulations

Commercial status of components according to the United States Environmental Protection Agency's Toxic Substances Control Act (TSCA):

Name	CAS-No.	Listing	Commercial status	Flags
Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics	64742-48-9	Present	Active	
Bis(ethyl acetoacetato-O1',O3)bis(propan-2-olato)titanium	27858-32-8	Present	Active	
Dimethyl siloxane, 3-(2-aminoethyl)aminopropyldimethoxysiloxy-terminated	71750-80-6	Present	Active	XU
Stoddard solvent	8052-41-3	Present	Active	
Propan-2-ol	67-63-0	Present	Active	
ethylbenzene	100-41-4	Present	Active	
Dimethyl siloxane, HO-term Rxn methyltrimethoxysilane and aminoethylaminopropyltrimethoxysilane	69430-37-1	Present	-	
methanol	67-56-1	Present	Active	
n-butyl acetate	123-86-4	Present	Active	

Name	CAS-No.	Listing	Commercial status	Flags
Methyltrimethoxysilane	1185-55-3	Present	Active	
Dimethoxydimethylsilane	1112-39-6	Present	Active	
tetraethyl silicate; ethyl silicate	78-10-4	Present	-	
Methylmethoxy siloxane with methyl silsesquioxane	68037-85-4	Present	Active	XU

Propan-2-ol (67-63-0)

Subject to reporting requirements of United States SARA Section 313

ethylbenzene (100-41-4)

Subject to reporting requirements of United States SARA Section 313
Listed on EPA Hazardous Air Pollutant (HAPS)

CERCLA RQ	1000 lb

methanol (67-56-1)

Subject to reporting requirements of United States SARA Section 313
Listed on EPA Hazardous Air Pollutant (HAPS)

CERCLA RQ	5000 lb

n-butyl acetate (123-86-4)

Not subject to reporting requirements of the United States SARA Section 313

CERCLA RQ	5000 lb

15.2. International regulations

CANADA

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics (64742-48-9)

Listed on the Canadian DSL (Domestic Substances List)

Bis(ethyl acetoacetato-O1',O3)bis(propan-2-olato)titanium (27858-32-8)

Listed on the Canadian DSL (Domestic Substances List)

Dimethyl siloxane, 3-(2-aminoethyl)aminopropyldimethoxysiloxy-terminated (71750-80-6)

Listed on the Canadian DSL (Domestic Substances List)

Stoddard solvent (8052-41-3)

Listed on the Canadian DSL (Domestic Substances List)

Propan-2-ol (67-63-0)

Listed on the Canadian DSL (Domestic Substances List)

ethylbenzene (100-41-4)

Listed on the Canadian DSL (Domestic Substances List)

methanol (67-56-1)

Listed on the Canadian DSL (Domestic Substances List)

n-butyl acetate (123-86-4)

Listed on the Canadian DSL (Domestic Substances List)

Methyltrimethoxysilane (1185-55-3)

Listed on the Canadian DSL (Domestic Substances List)

Dimethoxydimethylsilane (1112-39-6)

Listed on the Canadian NDSL (Non-Domestic Substances List)

Methylmethoxy siloxane with methyl silsesquioxane (68037-85-4)

Listed on the Canadian NDSL (Non-Domestic Substances List)

EU-Regulations

No additional information available

National regulations

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics (64742-48-9)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

Stoddard solvent (8052-41-3)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

Propan-2-ol (67-63-0)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

ethylbenzene (100-41-4)

Listed on IARC (International Agency for Research on Cancer)
Listed on INSQ (Mexican National Inventory of Chemical Substances)

methanol (67-56-1)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

n-butyl acetate (123-86-4)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

Methyltrimethoxysilane (1185-55-3)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

15.3. US State regulations

WARNING: This product can expose you to ethylbenzene, which is known to the State of California to cause cancer, and methanol, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

SECTION 16: Other information

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Data sources	:	ECHA Database. SDS suppliers. ChemIDPlus database. PubChem Database.
Training advice	:	Training instructions: Comply with the provisions of Directive 98/24/EC and subsequent amendments and national implementations.

Safety Data Sheet (SDS), USA

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.