

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 14.08.2023

Version number 3

Revision: 14.08.2023

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

1.1 Product identifier**Trade name: 311 TopCoat - Component B****Article number:** 311-B**UFI:** J6M8-P0D4-T001-737G**1.2 Relevant identified uses of the substance or mixture and uses advised against***No further relevant information available.***Application of the substance / preparation** *Lacquer***1.3 Details of the supplier of the safety data sheet****Manufacturer/Supplier:***Forbo Eurocol Nederland B.V.**Industrieweg 1-2**NL-1521 NA Wormerveer Holland**Tel. +31 75 6271600 - Fax +31 75 6283564**E-mail address: info.eurocol@forbo.com**Website: www.eurocol.com***1.4 Emergency telephone number:***In case of emergency please contact the Dutch National Poison Control, telephone number: 0031-(0)88-755 8000 (This number is only accessible to the physician treating the patient and only in case of accidental poisoning).*

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture**Classification according to Regulation (EC) No 1272/2008***Acute Tox. 4 H332 Harmful if inhaled.**Skin Sens. 1 H317 May cause an allergic skin reaction.**STOT SE 3 H335 May cause respiratory irritation.***2.2 Label elements****Labelling according to Regulation (EC) No 1272/2008***The product is classified and labelled according to the GB CLP regulation.***Hazard pictograms**

GHS07

Signal word *Warning***Hazard-determining components of labelling:***Aliphatic polyisocyanate*

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- **Hazard statements**

H332 Harmful if inhaled.

H317 May cause an allergic skin reaction.

H335 May cause respiratory irritation.

- **Precautionary statements**

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P280 Wear protective gloves.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P312 Call a POISON CENTER/doctor if you feel unwell.

P333+P313 If skin irritation or rash occurs: Get medical advice/attention.

P362+P364 Take off contaminated clothing and wash it before reuse.

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Additional information:**

From 24 August 2023, adequate training must be undertaken prior to industrial or commercial use.

Contains isocyanates. May produce an allergic reaction.

- **2.3 Other hazards**

- **Results of PBT and vPvB assessment**

- **PBT:** *Not applicable.*

- **vPvB:** *Not applicable.*

- **Determination of endocrine-disrupting properties**

The product does not contain substances with endocrine disrupting properties.

SECTION 3: Composition/information on ingredients

- **3.2 Mixtures**

- **Description:** *Polyisocyanate-prepolymer on a diphenylmethan-diisocyanate base (solvent-free)*

- **Dangerous components:**

CAS: 28182-81-2	Aliphatic polyisocyanate	>50-100%
NLP: 500-060-2	⚠ Acute Tox. 4, H332; Skin Sens. 1, H317; STOT SE 3, H335, EUH204	
CAS: 666723-27-9	Aliphatic polyisocyanate	>10-25%
	⚠ Acute Tox. 3, H331; ⚠ Skin Sens. 1, H317; STOT SE 3, H335; Aquatic Chronic 3, H412, EUH204	

- **Additional information:** *For the wording of the listed hazard phrases refer to section 16.*

SECTION 4: First aid measures

- **4.1 Description of first aid measures**

- **General information:**

Involve doctor immediately.

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

- **After inhalation:**

Supply fresh air and to be sure call for a doctor.

In case of unconsciousness place patient stably in side/recovery position for transportation.

- **After skin contact:** *Wash immediately with water and soap and rinse thoroughly.*

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- **After eye contact:** *Rinse opened eye for several minutes under running water.*
- **After swallowing:** *Drink plenty of water and provide fresh air. Call a doctor immediately.*
- **4.2 Most important symptoms and effects, both acute and delayed**
No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed**
Symptomatic treatment.

SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:**
Carbon dioxide
Foam
Fire-extinguishing powder
For lager fires also sprayed water.
Use fire extinguishing methods suitable to surrounding conditions.
- **5.2 Special hazards arising from the substance or mixture**
In case of fire, the following can be released:
Carbon monoxide (CO)
Carbon dioxide
Nitrogen oxides (NO_x)
Isocyanate fumes
Hydrogen cyanide (HCN)
(Traces)
Further harmful conflagration gases and fumes
- **5.3 Advice for firefighters**
- **Protective equipment:**
Wear self-contained respiratory protective device.
Wear fully protective suit.
Mouth respiratory protective device.
- **Additional information**
Collect contaminated fire fighting water separately. It must not enter the sewage system.
Cool endangered receptacles with water spray.
Ensure adequate means of retaining the water used for extinguishing.
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Ensure adequate ventilation
Keep away from ignition sources.
- **6.2 Environmental precautions:**
Do not allow to penetrate the ground/soil.
Dilute with plenty of water.
- **6.3 Methods and material for containment and cleaning up:**
Remove mechanically: Cover remains with damp, liquid-binding material (e.g. sawdust, chemical binders on a calcium silicate-hydrate base, sand). After approx. 1 hour, take up and place in refuse container. Don not close (CO₂-development!) Keep damp and allow to stand in a safe place outdoors for several days.
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

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Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

· **6.4 Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

Do not close waste container tight; CO2 development!

SECTION 7: Handling and storage

· **7.1 Precautions for safe handling**

Ensure good ventilation/exhaustion at the workplace.

Use only in well ventilated areas.

Prevent formation of aerosols.

Product may not come in contact with water.

· **Information about fire - and explosion protection:**

Fumes can combine with air to form an explosive mixture.

· **7.2 Conditions for safe storage, including any incompatibilities**

· **Storage:**

· **Requirements to be met by storerooms and receptacles:**

Store in a cool, but frost-proof location.

Store only in the original receptacle.

Prevent any seepage into the ground.

· **Information about storage in one common storage facility:**

Suitable material for containers and pipes: Light metals and their alloys.

· **Further information about storage conditions:**

Recommended storage temperature between 15 and 25 °C.

Store receptacle in a well ventilated area.

Protect from humidity and water.

Protect from frost.

Keep container tightly sealed.

· **7.3 Specific end use(s)** *No further relevant information available.*

SECTION 8: Exposure controls/personal protection

· **8.1 Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:**

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

· **DNELs**

28182-81-2 Aliphatic polyisocyanate

Inhalative	DNEL Inhalative long terme	0.5 /mg/kg (wrk)
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· **PNECs**

28182-81-2 Aliphatic polyisocyanate

PNEC mg/kg	532 mg/kg (Soil)
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	266.7 mg/kg (Fresh Water Sediment)
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· **Additional information:** *The lists valid during manufacture were used as basis.*

· **8.2 Exposure controls**

· **Appropriate engineering controls** *Use only in well-ventilated areas.*

· **Individual protection measures, such as personal protective equipment**

· **General protective and hygienic measures:**

The handling of this product is not recommended for persons with respiratory system and skin hypersensitivity (asthma, chronic bronchitis, chronic skin disease).

The usual precautionary measures are to be adhered to when handling chemicals.

Use skin protection cream for skin protection.

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

· **Respiratory protection:**

In case of a risk of inhaling, wear half mask with combination filter for organic vapours and particles.

Filter A/P2

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

· **Hand protection**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material is dependant on the penetration times, rates of diffusion and degradation.

· **Material of gloves**

The selection of suitable gloves does not only depend on the material, but also on further aspects of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Nitrile rubber

Butyl rubber, BR

· **Penetration time of glove material**

The determined penetration times according to EN 16523-1:2015 were not determined under field conditions.

A maximum wear time is therefore recommended corresponding to 50% of the stated penetration time.

The exact break through time has to be established by the manufacturer of the protective gloves and has to be observed.

· **Eye/face protection** *Tightly sealed goggles by risk of splashing.*

· **Body protection:** *Protective work clothing*

SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**

· **General Information**

· **Colour:**

Colourless

· **Odour:**

Odourless

· **Odour threshold:**

Not determined.

· **Melting point/freezing point:**

Undetermined.

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· Boiling point or initial boiling point and boiling range	<i>Undetermined.</i>
· Flammability	<i>Not applicable.</i>
· Lower and upper explosion limit	
· Lower:	<i>Not determined.</i>
· Upper:	<i>Not determined.</i>
· Flash point:	185 °C
· Ignition temperature:	~445 °C
· Decomposition temperature:	ca. 181 °C
· pH	<i>Not determined.</i>
· Viscosity:	
· Kinematic viscosity	<i>Not determined.</i>
· Dynamic:	<i>Not determined.</i>
· Solubility	
· water:	<i>Fully miscible.</i>
· Partition coefficient n-octanol/water (log value)	<i>Not determined.</i>
· Vapour pressure at 20 °C:	5 hPa
· Density and/or relative density	
· Density at 20 °C:	1.15 g/cm ³
· Relative density	<i>Not determined.</i>
· Vapour density	<i>Not determined.</i>
· Particle characteristics	<i>Not applicable.</i>

· 9.2 Other information	
· Appearance:	
· Form:	<i>Fluid</i>
· Important information on protection of health and environment, and on safety.	
· Auto-ignition temperature:	<i>Product is not self-igniting.</i>
· Explosive properties:	<i>Product does not present an explosion hazard.</i>
· Solvent separation test:	<3 %
· Solvent content:	
· VOC(EC%)	0.0 %
· Solids content:	100.0 %
· Change in condition	
· Evaporation rate	<i>Not determined.</i>

· Information with regard to physical hazard classes	
· Explosives	<i>Void</i>
· Flammable gases	<i>Void</i>
· Aerosols	<i>Void</i>
· Oxidising gases	<i>Void</i>
· Gases under pressure	<i>Void</i>
· Flammable liquids	<i>Void</i>
· Flammable solids	<i>Void</i>
· Self-reactive substances and mixtures	<i>Void</i>
· Pyrophoric liquids	<i>Void</i>
· Pyrophoric solids	<i>Void</i>

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· Self-heating substances and mixtures	Void
· Substances and mixtures, which emit flammable gases in contact with water	Void
· Oxidising liquids	Void
· Oxidising solids	Void
· Organic peroxides	Void
· Corrosive to metals	Void
· Desensitised explosives	Void

SECTION 10: Stability and reactivity

- **10.1 Reactivity** *No further relevant information available.*
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:** *To avoid thermal decomposition do not overheat.*
- **10.3 Possibility of hazardous reactions**
*Exothermic reaction with amines and alcohols.
Danger of bursting.*
- **10.4 Conditions to avoid** *No further relevant information available.*
- **10.5 Incompatible materials:**
*Amines
Water
Alcohols*
- **10.6 Hazardous decomposition products:**
*None if used properly.
None if stored properly.*

SECTION 11: Toxicological information

- **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**
- **Acute toxicity**
Harmful if inhaled.

- **LD/LC50 values relevant for classification:**

28182-81-2 Aliphatic polyisocyanate

Oral	LD50	>2,500 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rat)
		>2,000 mg/kg (rabbit)
Inhalative	LC50/4 h	0.39 mg/kg (rat)

- **Skin corrosion/irritation** *Dries skin out.*
- **Serious eye damage/irritation** *Based on available data, the classification criteria are not met.*
- **Respiratory or skin sensitisation**
May cause an allergic skin reaction.
- **Germ cell mutagenicity** *Based on available data, the classification criteria are not met.*
- **Carcinogenicity** *Based on available data, the classification criteria are not met.*
- **Reproductive toxicity** *Based on available data, the classification criteria are not met.*
- **STOT-single exposure**
May cause respiratory irritation.

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- **STOT-repeated exposure** *Based on available data, the classification criteria are not met.*
- **Aspiration hazard** *Based on available data, the classification criteria are not met.*
- **Additional toxicological information:**
Special characteristics/effects of isocyanates: In case of over-exposure - especially when spraying isocyanate based varnishes without protective measures - there is a danger of a concentration-dependent, irritating effect on eyes, nose, throat, and respiratory tract. The delayed appearance of symptoms and the development of hypersensitivity (trouble breathing, cough, asthma) are possible. For hypersensitive persons, reaction may be triggered by very low isocyanate concentrations, also below the TLV value. In case of prolonged contact with skin, tanning and irritating effects are possible.
- **11.2 Information on other hazards**

- **Endocrine disrupting properties**

None of the ingredients is listed.

SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** *No further relevant information available.*
- **12.2 Persistence and degradability** *No further relevant information available.*
- **12.3 Bioaccumulative potential** *No further relevant information available.*
- **12.4 Mobility in soil** *No further relevant information available.*
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** *Not applicable.*
- **vPvB:** *Not applicable.*
- **12.6 Endocrine disrupting properties**
The product does not contain substances with endocrine disrupting properties.
- **12.7 Other adverse effects**
- **Additional ecological information:**
- **General notes:** *Do not discharge into ground water, in surface water or in the sewer system.*

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system. Not hardened material must be disposed of as hazardous waste according to official regulations. Hardened product remains may be disposed of as building rubble or put into household garbage.

- **European waste catalogue**

08 05 01*	waste isocyanates
HP5	Specific Target Organ Toxicity (STOT)/Aspiration Toxicity
HP13	Sensitising

- **Uncleaned packaging:**
- **Recommendation:** *Disposal must be made according to official regulations.*
- **Recommended cleansing agents:** *Warm water, if necessary together with cleansing agents.*

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SECTION 14: Transport information

· 14.1 UN number or ID number · ADR, ADN, IMDG, IATA	Void
· 14.2 UN proper shipping name · ADR, ADN, IMDG, IATA	Void
· 14.3 Transport hazard class(es) · ADR, ADN, IMDG, IATA · Class	Void
· 14.4 Packing group · ADR, IMDG, IATA	Void
· 14.5 Environmental hazards: · Marine pollutant:	No
· 14.6 Special precautions for user	Not applicable.
· 14.7 Maritime transport in bulk according to IMO instruments	Not applicable.
· Transport/Additional information:	Not classified as hazardous under transport regulations.
· UN "Model Regulation":	Void

SECTION 15: Regulatory information

· 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
· Directive 2012/18/EU
· Named dangerous substances - ANNEX I <i>None of the ingredients is listed.</i>
· REGULATION (EC) No 1907/2006 ANNEX XVII <i>Conditions of restriction: 3</i>
· DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II
<i>None of the ingredients is listed.</i>
· REGULATION (EU) 2019/1148
· Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))
<i>None of the ingredients is listed.</i>
· Annex II - REPORTABLE EXPLOSIVES PRECURSORS
<i>None of the ingredients is listed.</i>
· Regulation (EC) No 273/2004 on drug precursors
<i>None of the ingredients is listed.</i>
· Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors
<i>None of the ingredients is listed.</i>

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- **National regulations:**
- **Waterhazard class:** *Water hazard class 1 (Self-assessment): slightly hazardous for water.*
- **15.2 Chemical safety assessment:** *A Chemical Safety Assessment has not been carried out.*

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Relevant phrases**

*H317 May cause an allergic skin reaction.
 H331 Toxic if inhaled.
 H332 Harmful if inhaled.
 H335 May cause respiratory irritation.
 H412 Harmful to aquatic life with long lasting effects.
 EUH204 Contains isocyanates. May produce an allergic reaction.*

- **Department issuing SDS:** *R&D department*

- **Contact:** *Ing. T.W. Breeuwer*

- **Abbreviations and acronyms:**

*ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
 IMDG: International Maritime Code for Dangerous Goods
 IATA: International Air Transport Association
 GHS: Globally Harmonised System of Classification and Labelling of Chemicals
 EINECS: European Inventory of Existing Commercial Chemical Substances
 ELINCS: European List of Notified Chemical Substances
 CAS: Chemical Abstracts Service (division of the American Chemical Society)
 VOC: Volatile Organic Compounds (USA, EU)
 DNEL: Derived No-Effect Level (UK REACH)
 PNEC: Predicted No-Effect Concentration (UK REACH)
 LC50: Lethal concentration, 50 percent
 LD50: Lethal dose, 50 percent
 PBT: Persistent, Bioaccumulative and Toxic
 vPvB: very Persistent and very Bioaccumulative
 Acute Tox. 3: Acute toxicity – Category 3
 Acute Tox. 4: Acute toxicity – Category 4
 Skin Sens. 1: Skin sensitisation – Category 1
 STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
 Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3*