

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 18.07.2017

Version number 6

Revision: 18.07.2017

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

1.1 Product identifier

Trade name: Nullifire FF197

MSDS code: A-N-FF197

1.2 Relevant identified uses of the substance or mixture and uses advised against

No further relevant information available.

Application of the substance / the mixture Sealant

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier:

tremco illbruck Productie B.V.

Vlietskade 1032, 4241 WC Arkel

T: +31 (0) 183568000, F: +31 (0) 183568100

msds@tremco-illbruck.com

Further information obtainable from:

tremco illbruck Ltd

Torrington Avenue, Coventry, CV4 9TJ

T: +44 (0) 2476855000, F: +44 (0) 2476469547

www.nullifire.com, protect@nullifire.com

1.4 Emergency telephone number:

During office hours tel.: +44 (0) 2476855000. At all other times please contact your national poisoning centre.

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Aerosol 1 H222-H229 Extremely flammable aerosol. Pressurised container: May burst if heated.

Acute Tox. 4 H332 Harmful if inhaled.

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2 H319 Causes serious eye irritation.

Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Skin Sens. 1 H317 May cause an allergic skin reaction.

Carc. 2 H351 Suspected of causing cancer.

STOT SE 3 H335 May cause respiratory irritation.

STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008

The product is classified and labelled according to the CLP regulation.

Hazard pictograms



GHS02 GHS07 GHS08

(Contd. on page 2)

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 18.07.2017

Version number 6

Revision: 18.07.2017

Trade name: Nullifire FF197

(Contd. of page 1)

- **Signal word** Danger
- **Contains:**
diphenylmethanediisocyanate, isomers and homologues
- **Hazard statements**
H222-H229 Extremely flammable aerosol. Pressurised container: May burst if heated.
H332 Harmful if inhaled.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317 May cause an allergic skin reaction.
H351 Suspected of causing cancer.
H335 May cause respiratory irritation.
H373 May cause damage to organs through prolonged or repeated exposure.
- **Precautionary statements**
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P251 Do not pierce or burn, even after use.
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P284 In case of inadequate ventilation wear respiratory protection.
P342+P311 If experiencing respiratory symptoms: Call a POISON CENTER/doctor.
P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.
- **Supplemental information:**
EUH204 Contains isocyanates. May produce an allergic reaction.
- **2.3 Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

- **3.2 Mixtures**
- **Description:** Active substance with propellant

· **Dangerous components:**

| | | |
|--|--|----------|
| CAS: 9016-87-9 | diphenylmethanediisocyanate, isomers and homologues Resp. Sens. 1, H334; Carc. 2, H351; STOT RE 2, H373; Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335 | 30- <50% |
| EC number: 911-815-4 Reg.nr.: 01-2119486772-26-xxxx | tris(2-chloro-1-methylethyl)phosphate Acute Tox. 4, H302 | 10- <20% |
| CAS: 115-10-6 EINECS: 204-065-8 Reg.nr.: 01-2119472128-37-xxxx | dimethyl ether Flam. Gas 1, H220; Press. Gas C, H280 | 5- <10% |
| CAS: 75-28-5 EINECS: 200-857-2 Reg.nr.: 01-2119485395-27-xxxx | isobutane Flam. Gas 1, H220; Press. Gas C, H280 | 1- <5% |

(Contd. on page 3)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 18.07.2017

Version number 6

Revision: 18.07.2017

Trade name: Nullifire FF197

(Contd. of page 2)

| | | |
|---|--|--------|
| CAS: 74-98-6 EINECS: 200-827-9 Reg.nr.: 01-2119486944-21-xxxx | propane Flam. Gas 1, H220; Press. Gas C, H280 | 1- <5% |
| CAS: 36483-57-5 EINECS: 253-057-0 | 2,2-dimethylpropan-1-ol, tribromo derivative Eye Irrit. 2, H319 | 1- <5% |

• **Additional information:**

While curing the following substances are formed and released by a reaction with atmospheric humidity:

Carbon dioxide

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:** Take affected persons out of danger area and lay down.

• **After inhalation:**

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

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

• **After skin contact:**

Immediately wash with water and soap and rinse thoroughly.

If symptoms persist consult doctor.

• **After eye contact:**

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

• **After swallowing:** Do not induce vomiting; call for medical help immediately.

• **4.2 Most important symptoms and effects, both acute and delayed**

Irritating to eyes, respiratory system and skin.

May cause an allergic skin reaction.

Harmful if inhaled.

May cause damage to organs through prolonged or repeated exposure.

• **Information for doctor:** No further relevant information available.

• **Hazards** No further relevant information available.

• **4.3 Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

SECTION 5: Firefighting measures

• **5.1 Extinguishing media**

• **Suitable extinguishing agents:**

CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

• **For safety reasons unsuitable extinguishing agents:** Water with full jet

• **5.2 Special hazards arising from the substance or mixture**

Formation of toxic gases is possible during heating or in case of fire.

Carbon monoxide (CO)

Carbon dioxide

Nitrogen oxides (NO_x)

Under certain fire conditions, traces of other toxic gases cannot be excluded, e.g.:

Hydrogen cyanide (HCN)

(Contd. on page 4)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 18.07.2017

Version number 6

Revision: 18.07.2017

Trade name: Nullifire FF197

(Contd. of page 3)

- **5.3 Advice for firefighters**
- **Protective equipment:** Wear self-contained respiratory protective device.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
Avoid contact with the eyes and skin.
Ensure adequate ventilation
- **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
Do not flush with water or aqueous cleansing agents
- **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.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.
Avoid contact with the eyes and skin.
Do not breathe vapour.
Wear suitable protective clothing and gloves.
Keep away from sources of ignition - No smoking.
- **Information about fire - and explosion protection:**
Do not spray onto a naked flame or any incandescent material.
Protect against electrostatic charges.
Pressurised container: protect from sunlight and do not expose to temperatures exceeding 50°C, i.e. electric lights. Do not pierce or burn, even after use.
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
The usual precautionary measures are to be adhered to when handling chemicals.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**
Observe official regulations on storing packagings with pressurised containers.
- **Information about storage in one common storage facility:**
Store away from water.
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- **Further information about storage conditions:**
Store in cool, dry conditions in well sealed receptacles.
Protect from heat and direct sunlight.
- **7.3 Specific end use(s)** No further relevant information available.

GB

(Contd. on page 5)

Trade name: Nullifire FF197

(Contd. of page 4)

SECTION 8: Exposure controls/personal protection

· **Additional information about design of technical facilities:** No further data; see item 7.

· 8.1 Control parameters

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

9016-87-9 diphenylmethanediisocyanate, isomers and homologues

| | |
|-----|---|
| WEL | Short-term value: 0.07 mg/m ³ Long-term value: 0.02 mg/m ³ Sen; as -NCO |
|-----|---|

115-10-6 dimethyl ether

| | |
|-----|---|
| WEL | Short-term value: 958 mg/m ³ , 500 ppm Long-term value: 766 mg/m ³ , 400 ppm |
|-----|---|

· **Additional information:** The lists valid during the making were used as basis.

· 8.2 Exposure controls

· **Personal protective equipment:**

· **General protective and hygienic measures:**

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

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

Do not inhale gases / fumes / aerosols.

· **Respiratory protection:**

This product should not be used under conditions of poor ventilation unless a protective mask with an appropriate gas filter (i.e. type A1 according to standard EN 14387) is used.

· **Protection of hands:**



Protective gloves

· **Material of gloves**

Nitrile rubber, NBR

Recommended thickness of the material: ≥ 0.4 mm

Butyl rubber, BR

Recommended thickness of the material: ≥ 0.7 mm

· **Penetration time of glove material**

For the mixture of chemicals mentioned below the penetration time has to be at least 480 minutes (Permeation according to EN 374 Part 3: Level 6).

· **Eye protection:**



Tightly sealed goggles

· **Body protection:** Protective work clothing

GB

(Contd. on page 6)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 18.07.2017

Version number 6

Revision: 18.07.2017

Trade name: Nullifire FF197

(Contd. of page 5)

SECTION 9: Physical and chemical properties**· 9.1 Information on basic physical and chemical properties****· General Information****· Appearance:**

Form: Aerosol
Colour: According to product specification

· Odour: Characteristic**· Odour threshold:** Not determined.**· pH-value:** Not determined.**· Melting point/freezing point:** Not applicable, as aerosol.**· Initial boiling point and boiling range:** Not applicable, as aerosol.**· Flash point:** -97°C**· Flammability (solid, gas):** Not applicable.**· Ignition temperature:****Decomposition temperature:** Not determined.**· Auto-ignition temperature:** Product is not selfigniting.**· Explosive properties:** Product is not explosive. However, formation of explosive air/vapour mixtures are possible.**· Explosion limits:**

Lower: 3.0 Vol %
Upper: 18.6 Vol %

· Vapour pressure: Not determined.**· Density at 20°C:** 1.06 g/cm³**· Relative density** Not determined.**· Vapour density** Not determined.**· Evaporation rate** Not applicable.**· Solubility in / Miscibility with water:**

Insoluble.

· Partition coefficient: n-octanol/water: Not determined.**· Viscosity:****Dynamic:** Not determined.**Kinematic:** Not determined.**· Solvent content:****VOC (EU)** 179.5 g/l**VOC (EC)** 16.90 %**· 9.2 Other information** No further relevant information available.**SECTION 10: Stability and reactivity****· 10.1 Reactivity** No further relevant information available.

(Contd. on page 7)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 18.07.2017

Version number 6

Revision: 18.07.2017

Trade name: Nullifire FF197

(Contd. of page 6)

- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions**
Flammable.
Danger of bursting.
- **10.4 Conditions to avoid**
Water / moisture.
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:**
Formation of toxic gases is possible during heating or in case of fire.
Carbon monoxide and carbon dioxide
Nitrogen oxides (NOx)
Under certain fire conditions, traces of other toxic gases cannot be excluded, e.g.:
Hydrogen cyanide (prussic acid)

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity**
Harmful if inhaled.

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

9016-87-9 diphenylmethanediisocyanate, isomers and homologues

| | | |
|------------|----------|------------------------|
| Oral | LD50 | >10,000 mg/kg (rat) |
| Dermal | LD50 | >10,000 mg/kg (rabbit) |
| Inhalative | LC50/4 h | 1.5 mg/L (rat) |

- **Primary irritant effect:**
- **Skin corrosion/irritation**
Causes skin irritation.
- **Serious eye damage/irritation**
Causes serious eye irritation.
- **Respiratory or skin sensitisation**
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause an allergic skin reaction.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity**
Suspected of causing cancer.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure**
May cause respiratory irritation.
- **STOT-repeated exposure**
May cause damage to organs through prolonged or repeated exposure.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

GB

(Contd. on page 8)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 18.07.2017

Version number 6

Revision: 18.07.2017

Trade name: Nullifire FF197

(Contd. of page 7)

SECTION 12: Ecological information

· 12.1 Toxicity

· Aquatic toxicity:

9016-87-9 diphenylmethanediisocyanate, isomers and homologues

| | |
|-----------|---------------------------------|
| LC0/96 h | >1,000 mg/L (brachydanio rerio) |
| EC50/24 h | >1,000 mg/L (daphnia magna) |
| NOEC/21 d | >10 mg/L (daphnia magna) |

· 12.2 Persistence and degradability

 No further relevant information available.

· Other information:

 The product is not easily biodegradable.

· 12.3 Bioaccumulative potential

 No further relevant information available.

· 12.4 Mobility in soil

 No further relevant information available.

· Additional ecological information:

· General notes:

Do not allow product to reach ground water, water course or sewage system.

Danger to drinking water if even small quantities leak into the ground.

· 12.5 Results of PBT and vPvB assessment

· PBT:

 Not applicable.

· vPvB:

 Not applicable.

· 12.6 Other adverse effects

 No further relevant information available.

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.

Cured product can be deposited together with domestic waste. Observe the specific related regulations of local authorities.

This material and its container must be disposed of as hazardous waste.

Do not allow product to reach sewage system or any water course.

Do not pierce or burn, even after use.

· Waste disposal key:

 UK (WM3) : HP3 HP4 HP5 HP7 HP13

· European waste catalogue

| | |
|-----------|---|
| 16 05 04* | gases in pressure containers (including halons) containing hazardous substances |
| 08 05 01* | waste isocyanates |

· Uncleaned packaging:

· Recommendation:

Packagings that may not be cleansed are to be disposed of in the same manner as the product.

Dispose of packaging according to regulations on the disposal of packagings.

SECTION 14: Transport information

· 14.1 UN-Number

· ADR, IMDG, IATA

UN1950

(Contd. on page 9)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 18.07.2017

Version number 6

Revision: 18.07.2017

Trade name: Nullifire FF197

(Contd. of page 8)

· **14.2 UN proper shipping name**

- **ADR** 1950 AEROSOLS
- **IMDG** AEROSOLS
- **IATA** AEROSOLS, flammable

· **14.3 Transport hazard class(es)**

· **ADR**



- **Class** 2 5F Gases.
- **Label** 2.1

· **IMDG, IATA**



- **Class** 2.1
- **Label** 2.1

· **14.4 Packing group**

- **ADR, IMDG, IATA** Void

· **14.5 Environmental hazards:**

- **Marine pollutant:** No

· **14.6 Special precautions for user**

- **Danger code (Kemler):** -
- **EMS Number:** F-D,S-U
- **Stowage Code** SW1 Protected from sources of heat.
SW22 For AEROSOLS with a maximum capacity of 1 litre: Category A. For AEROSOLS with a capacity above 1 litre: Category B. For WASTE AEROSOLS: Category C, Clear of living quarters.
- **Segregation Code** SG69 For AEROSOLS with a maximum capacity of 1 litre: Segregation as for class 9. Stow "separated from" class 1 except for division 1.4. For AEROSOLS with a capacity above 1 litre: Segregation as for the appropriate subdivision of class 2. For WASTE AEROSOLS: Segregation as for the appropriate subdivision of class 2.

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

Not applicable.

(Contd. on page 10)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 18.07.2017

Version number 6

Revision: 18.07.2017

Trade name: Nullifire FF197

(Contd. of page 9)

· **Transport/Additional information:**

· **ADR**
 · **Limited quantities (LQ)** 1L
 · **Excepted quantities (EQ)** Code: E0
 Not permitted as Excepted Quantity
 · **Transport category** 2
 · **Tunnel restriction code** D
 · **Remarks:** - Special provisions: 190, 327, 344, 625 (3.3)
 - Special provisions for carriage: V14 (7.2.4); CV9, CV12 (7.5.11); S2 (8.5)

· **IMDG**
 · **Limited quantities (LQ)** 1L
 · **Excepted quantities (EQ)** Code: E0
 Not permitted as Excepted Quantity
 · **Remarks:** - Special provisions: 63, 190, 277, 327, 344, 959 (3.3)

· **IATA**
 · **Remarks:** - Special provisions: A145, A167, A802 (4.4)

· **UN "Model Regulation":** UN 1950 AEROSOLS, 2.1

SECTION 15: Regulatory information

· **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

"CLP" Regulation (EC) No 1272/2008 (OJ L 353, 31.12.2008, p.1).

"REACH" Regulation (EC) No 1907/2006 (OJ L 396, 30.12.2006, p.1, with subsequent amendments).

COMMISSION REGULATION (EU) 2015/830 of 28 May 2015.

HSE EH40/2005 Workplace Exposure Limits (as amended)

· **Directive 2012/18/EU**

· **Qualifying quantity (tonnes) for the application of lower-tier requirements** 150.000 t 150.000 t

· **Qualifying quantity (tonnes) for the application of upper-tier requirements** 500.000 t 500.000 t

· **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3

· **National regulations:**

· **Information about limitation of use:**

Employment restrictions concerning juveniles must be observed.

Employment restrictions concerning pregnant and lactating women must be observed.

· **Other regulations, limitations and prohibitive regulations**

· **Substances of very high concern (SVHC) according to REACH, Article 57** Not applicable.

· **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.

(Contd. on page 11)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 18.07.2017

Version number 6

Revision: 18.07.2017

Trade name: Nullifire FF197

(Contd. of page 10)

· **Relevant phrases**

- H220 Extremely flammable gas.
- H280 Contains gas under pressure; may explode if heated.
- H302 Harmful if swallowed.
- H304 May be fatal if swallowed and enters airways.
- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.
- H319 Causes serious eye irritation.
- H332 Harmful if inhaled.
- H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- H335 May cause respiratory irritation.
- H351 Suspected of causing cancer.
- H361f Suspected of damaging fertility.
- H373 May cause damage to organs through prolonged or repeated exposure.
- H413 May cause long lasting harmful effects to aquatic life.

· **Previous Revision Date: 13-04-2011 (UK)**

· **Abbreviations and acronyms:**

- ADR: Accord européen sur le transport 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)
- LC50: Lethal concentration, 50 percent
- LD50: Lethal dose, 50 percent
- PBT: Persistent, Bioaccumulative and Toxic
- SVHC: Substances of Very High Concern
- vPvB: very Persistent and very Bioaccumulative
- Flam. Gas 1: Flammable gases – Category 1
- Aerosol 1: Aerosols – Category 1
- Press. Gas C: Gases under pressure – Compressed gas
- Acute Tox. 4: Acute toxicity – Category 4
- Skin Irrit. 2: Skin corrosion/irritation – Category 2
- Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
- Resp. Sens. 1: Respiratory sensitisation – Category 1
- Skin Sens. 1: Skin sensitisation – Category 1
- Carc. 2: Carcinogenicity – Category 2
- STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
- STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2

· *** Data compared to the previous version altered.**