

CaberFix D4®

Product Safety Data Sheet

Health and Safety Data - Version 1.4

Product Code: CaberFix D4®

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

1.1. Product identifier

Product Name: CaberFix D4
A01282
Product Number: A01282,
FP-001397

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

1.3. Details of the supplier of the safety data sheet

Application: Adhesive

Company:

Norbord Europe Ltd.
Station Road
Cowie, Stirling
Scotland
FK7 7BQ
Tel: (+44)(0)1786 812 921

1.4. Emergency telephone number

Tel: (+44)(0)1786 812 921
Office hours. Ask for Health & Safety or Technical Manager.

2 Hazards identification

2.1 Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards: Not Classified

Health hazards: Acute Tox. 4 - H332

Skin Irrit. 2 - H315
Eye Irrit. 2 - H319
Resp. Sens. 1 - H334
Skin Sens. 1- H317
Carc. 2 - H351 STOT SE 3 - H335
STOT RE 2 - H373

2.2 Label elements

Pictogram



Signal word: Danger

Hazard statements:

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

Precautionary statements

P260 Do not breathe vapour/ spray.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
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+P313 IF exposed or concerned: Get medical advice/ attention.
P501 Dispose of contents/ container in accordance with national regulations.

Supplemental label information

RCH004a Persons already sensitised to diisocyanates may develop allergic reactions when using this product.
RCH004b Persons suffering from asthma, eczema or skin problems should avoid contact, including dermal contact, with this product.
RCH004c 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.
EUH204 Contains isocyanates. May produce an allergic reaction.

Contains DIPHENYLMETHANE-4,4'-DI-ISOCYANATE

Supplementary precautionary statements

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

P261 Avoid breathing vapour/ spray.

P264 Wash contaminated skin thoroughly after handling.

P271 Use only outdoors or in a well-ventilated area.

P272 Contaminated work clothing should not be allowed out of the workplace.

P284 [In case of inadequate ventilation] wear respiratory protection.

P302+P352 IF ON SKIN: Wash with plenty of water.

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

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

P314 Get medical advice/ attention if you feel unwell.

P321 Specific treatment (see medical advice on this label).

P332+P313 If skin irritation occurs: Get medical advice/ attention.

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

P337+P313 If eye irritation persists: Get medical advice/ attention.

P342+P311 If experiencing respiratory symptoms: Call a POISON CENTER/ doctor.

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

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

P405 Store locked up.

2.3. Other hazards

None.

3 Composition/information on ingredients

3.2. Mixtures

| | | |
|---|-----------------------------|--|
| DIPHENYLMETHANE-4,4'-DI-ISOCYANATE CAS number: 101-68-8 | EC number: 202-966-0 | 30-60% REACH registration number: 01-2119457014-47 |
| Classification Acute Tox. 4 - H332 Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 Resp. Sens. 1 - H334 Skin Sens. 1 - H317 Carc. 2 - H351 STOT SE 3 - H335 STOT RE 2 - H373 | | |
| 2,2'DIMORPHOLINYLDIETHYL ETHER CAS number: 6425-39-4 | EC number: 229-194-7 | <1% REACH registration number: 01-2119969278-20-0000 |
| Classification Eye Irrit. 2 - H319 | | |
| The full text for all hazard statements is displayed in Section 16. | | |

4 First Aid Measures

4.1. Description of first aid measures

General information Remove affected person from source of contamination.

Inhalation Move affected person to fresh air at once. Get medical attention if any discomfort continues.

Ingestion DO NOT induce vomiting. Get medical attention immediately.

Skin contact Remove contaminated clothing immediately and wash skin with soap and water. Get medical attention if any discomfort continues.

Eye contact Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Get medical attention if irritation persists after washing. Show this Safety Data Sheet to the medical personnel.

Protection of first aiders First aid personnel should wear appropriate protective equipment during any rescue.

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

General information The severity of the symptoms described will vary dependent on the concentration and the length of exposure.

Inhalation Irritation of nose, throat and airway. Coughing, chest tightness, feeling of chest pressure.

Ingestion May cause discomfort if swallowed.

Skin contact Prolonged skin contact may cause redness and irritation.

Eye contact Severe irritation, burning and tearing.

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

Notes for the doctor No specific recommendations. If in doubt, get medical attention promptly.

Specific treatments Treat symptomatically.

5 Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media Extinguish with foam, carbon dioxide, dry powder or water fog.

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture
Specific hazards The product is non-combustible. Irritating gases or vapours. Not known.

Hazardous combustion products Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours. Oxides of carbon. Oxides of nitrogen.

5.3. Advice for firefighters

Protective actions during firefighting Containers close to fire should be removed or cooled with water. Do not allow water to contact any leaked material.

Special protective equipment for firefighters Wear chemical protective suit. Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

6 Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Wear protective clothing as described in Section 8 of this safety data sheet.

6.2. Environmental precautions

Environmental precautions Do not discharge into drains or watercourses or onto the ground.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Absorb spillage with non-combustible, absorbent material. Absorb spillage with non-combustible, absorbent material. Collect and place in suitable waste disposal containers and seal securely. Provide adequate ventilation. Contain spillage with sand, earth or other suitable non-combustible material. Avoid the spillage or runoff entering drains, sewers or watercourses.

6.4. Reference to other sections

Reference to other sections Wear protective clothing as described in Section 8 of this safety data sheet.

7 Handling and Storage

7.1. Precautions for safe handling

Usage precautions Avoid inhalation of vapours and spray/mists. Avoid contact with skin and eyes. Do not use in confined spaces without adequate ventilation and/or respirator. Spraying is permitted only in closed systems, spray cabinets or spray boxes with adequate ventilation.

Advice on general occupational hygiene Wash promptly with soap and water if skin becomes contaminated. Preventive industrial medical examinations should be carried out.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Store in closed original container at temperatures between 5°C and 25°C.

Storage class Chemical storage.

7.3. Specific end use(s)

Specific end use(s) The identified uses for this product are detailed in Section 1.2.

8 Exposure Controls/personal protection

8.1. Control parameters

Occupational exposure limits

DIPHENYLMETHANE-4,4'-DI-ISOCYANATE

Long-term exposure limit (8-hour TWA): WEL 0.02 mg/m³(Sen)

Short-term exposure limit (15-minute): WEL 0.07 mg/m³(Sen)

WEL = Workplace Exposure Limit

Ingredient comments WEL = Workplace Exposure Limits

8.2. Exposure controls

Protective equipment



Appropriate engineering controls Provide adequate ventilation. Avoid inhalation of vapours. Observe any occupational exposure limits for the product or ingredients.

Eye/face protection Wear chemical splash goggles.

Hand protection Nitrile rubber. It is recommended that gloves are made of the following material: Nitrile rubber. It should be noted that liquid may penetrate the gloves. Frequent changes are recommended. For exposure up to 8 hours, wear gloves made of the following material: Neoprene.

Other skin and body protection Wear suitable protective clothing as protection against splashing or contamination. Wear apron or protective clothing in case of contact.

Hygiene measures Use engineering controls to reduce air contamination to permissible exposure level. Wash hands after handling. When using do not eat, drink or smoke.

Respiratory protection If ventilation is inadequate, suitable respiratory protection must be worn. Wear a respirator fitted with the following cartridge: Combination filter, type A2/P3.

Environmental exposure controls Keep container tightly sealed when not in use.

| DIPHENYLMETHANE-4,4'-DI-ISOCYANATE (CAS: 101-68-8) | |
|--|---|
| DNEL | Workers - Inhalation; Short term systemic effects: 0.1 mg/m ³ Workers - Dermal; Short term local effects: 28.7 mg/cm ² Workers - Inhalation; Short term local effects: 0.1 mg/m ³ Workers - Inhalation; Long term systemic effects: 0.05 mg/m ³ Workers - Inhalation; Long term local effects: 0.05 mg/m ³ Consumer - Dermal; Short term systemic effects: 25 mg/kg bw/day Workers - Dermal; Short term systemic effects: 50 mg/kg bw/day Consumer - Oral; Short term systemic effects: 20 mg/kg bw/day Consumer - Dermal; Short term local effects: 17.2 mg/cm ² Consumer - Inhalation; Short term local effects: 0.05 mg/m ³ Consumer - Inhalation; Long term systemic effects: 0.025 mg/m ³ Consumer - Inhalation; Long term local effects: 0.025 mg/m ³ Consumer - Inhalation; Short term systemic effects: 0.05 mg/m ³ |
| DNEL | - Marine water; 0.1 mg/l - STP; 1 mg/l - Fresh water; 1 mg/l - Soil; 1 mg/kg |

9 Physical and Chemical Properties

| 9.1. Information on basic physical and chemical properties | |
|--|---|
| Appearance | Coloured liquid. |
| Colour | Various colours. |
| Odour | Musty (mouldy). |
| Odour threshold | Not available. |
| pH | Estimated value. pH (concentrated solution): 7-8 |
| Melting point | <10°C |
| Initial boiling point and range | 330°C |
| Flash point | >200°C |
| Evaporation rate | slow |
| Evaporation factor | Not available. |
| Flammability (solid, gas) | Not available. |
| Upper/lower flammability or explosive limits | Estimated value. : 0.6% - 11.5% |
| Other flammability | Not available. |
| Vapour pressure | Not available. 0.01 Pa @ °C |
| Vapour density | 8.5 |
| Relative density | 1.12 @ 20°C |
| Bulk density | Not available. |
| Solubility(ies) | Insoluble in water. Hardens in contact with water. |
| Partition coefficient | Not available. |
| Auto-ignition temperature | >600°C |
| Decomposition Temperature | Not available. |
| Viscosity | Kinematic viscosity > 20.5 mm ² /s. |
| Explosive properties | Not available. |
| Explosive under the influence of a flame | Not considered to be explosive. |
| Oxidising properties | Not available. |
| Comments | Information given is applicable to the product as supplied. |

| 9.2. Other information | |
|---------------------------|---------------------------|
| Other information | No information required. |
| Refractive index | Not available. |
| Particle size | Not available. |
| Molecular weight | Not available. |
| Volatility | Not available. |
| Saturation concentration | Not available. |
| Critical temperature | Not available. |
| Volatile organic compound | No information available. |

10 Stability and reactivity

10.1. Reactivity

Reactivity The product will harden into a solid mass in contact with water and moisture.

10.2. Chemical stability

Stability Stable at normal ambient temperatures and when used as recommended.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions Not applicable. May polymerise.

10.4. Conditions to avoid

Conditions to avoid Avoid contact with water.

10.5. Incompatible materials

Materials to avoid Strong oxidising agents.

10.6. Hazardous decomposition products

Hazardous decomposition products Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours. Oxides of carbon. Oxides of nitrogen.

11 Toxicological Information

11.1. Information on toxicological effects

Toxicological effects No information available.

Other health effects There is no evidence that the product can cause cancer.

Acute toxicity - inhalation

ATE inhalation (gases ppm) 11,842.11

ATE inhalation (vapours mg/l) 28.95

ATE inhalation (dusts/mists mg/l) 3.95

Skin corrosion/irritation

Animal data Irritating.

Serious eye damage/irritation

Serious eye damage/irritation Moderately irritating.

Respiratory sensitisation

Respiratory sensitisation Sensitising.

Skin sensitisation

Skin sensitisation Not determined.

Carcinogenicity

Carcinogenicity Suspected carcinogen based on limited evidence

Target organ for carcinogenicity No specific target organs known.

Reproductive toxicity

Reproductive toxicity - fertility Not available.

Reproductive toxicity – development This substance has no evidence of toxicity to reproduction.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure Morphological changes that are potentially reversible but provide clear evidence of marked organ dysfunction.

Aspiration hazard

Aspiration hazard Not anticipated to present an aspiration hazard, based on chemical structure.

General information No specific health hazards known.

Inhalation Irritating to respiratory system. May cause sensitisation by inhalation.

Ingestion May cause stomach pain or vomiting.

Skin contact Irritating to skin. May cause sensitisation by skin contact.

Eye contact Irritation of eyes and mucous membranes.

Acute and chronic health hazards May cause sensitisation by skin contact. The product contains small quantities of isocyanate. May cause respiratory allergy. May cause respiratory system irritation. May cause respiratory system irritation. Frequent inhalation of vapours may cause respiratory allergy.

Route of entry Inhalation Skin and/or eye contact Medical symptoms Irritation of eyes and mucous membranes. Coughing, chest tightness, feeling of chest pressure.

Medical considerations Chronic respiratory and obstructive airway diseases.

| Toxicological information on ingredients. | | |
|---|--|---|
| DIPHENYLMETHANE-4,4'-DI-ISOCYANATE | | |
| Acute toxicity - oral | Acute toxicity oral (LD ₅₀ mg/kg) | 10,000.0 |
| | Species | Rat |
| | ATE oral (mg/kg) | 10,000.0 |
| Acute toxicity - dermal | Acute toxicity dermal (LD ₅₀ mg/kg) | 9,400.0 |
| | Species | Rabbit |
| | ATE dermal (mg/kg) | 9,400.0 |
| Acute toxicity - inhalation | Acute toxicity inhalation(LC ₅₀ dust/mist mg/l) | 0.49 |
| | Species | Rat |
| | ATE inhalation (vapours mg/l) | 11.0 |
| 2,2'DIMORPHOLINYLDIETHYL ETHER | | |
| Acute toxicity - oral | Notes (oral LD ₅₀) | No information available. |
| Acute toxicity - dermal | Notes (dermal LD ₅₀) | No information available. |
| Acute toxicity - inhalation | Notes (inhalation LC ₅₀) | No information available. |
| Skin corrosion/irritation | Skin corrosion/irritation | No information available. |
| Serious eye damage/irritation | Serious eye damage/irritation | No information available. |
| Respiratory sensitisation | Respiratory sensitisation | No information available. |
| Skin sensitisation | Skin sensitisation | No information available. |
| Carcinogenicity | IARC carcinogenicity | No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC. |
| | Inhalation | May be harmful if inhaled. Spray/mists may cause respiratory tract irritation. |
| | Ingestion | May be harmful if swallowed. |
| | Skin contact | May be absorbed through the skin. May be harmful in contact with skin. May cause skin irritation. |
| | Eye contact | May cause eye irritation. |

12 Ecological Information

Ecotoxicity The product is not expected to be hazardous to the environment.

12.1. Toxicity

Acute toxicity - fish LC₅₀, 96 hours: > 1000 mg/l, Freshwater fish

Acute toxicity – aquatic invertebrates EC₅₀, 48 hours: >500 mg/l, Daphnia magna

Acute toxicity - aquatic plants EC₅₀, 72 hours: ~ 1640 mg/l, Scenedesmus subspicatus

Ecological information on ingredients See below table.

| Ecological information on ingredients. | |
|--|--|
| DIPHENYLMETHANE-4,4'-DI-ISOCYANATE | |
| Acute toxicity - fish | LC ₅₀ , 96 hours: >1000 mg/l, Algae |
| Acute toxicity – aquatic invertebrates | EC ₅₀ , 24 hours: >1000 mg/l, Daphnia magna |
| Chronic toxicity – aquatic invertebrates | NOEC, 21 days: >10 mg/l, Daphnia magna |

12.2. Persistence and degradability

Persistence and degradability The product is not readily biodegradable.

Stability (hydrolysis) Reacts with water.

Biological oxygen demand < 10 g O₂/g substance

12.3. Bioaccumulative potential

Bioaccumulative potential The product does not contain any substances expected to be bioaccumulating.

Partition coefficient Not available.

Ecological information on ingredients.

DIPHENYLMETHANE-4,4'-DI-ISOCYANATE

Partition coefficient log Pow: 4.51

12.4. Mobility in soil

Mobility The product is non-volatile.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment This product does not contain any substances classified as PBT or vPvB.

12.6. Other adverse effects

Other adverse effects None known.

13 Disposal considerations

13.1. Waste treatment methods

General information Waste should be treated as controlled waste. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

Disposal methods Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

14 Transport information

General The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, ADR/RID).

14.1. UN number

Not applicable.

14.2. UN proper shipping name

Not applicable.

14.3. Transport hazard class(es)

No transport warning sign required.

14.4. Packing group

Not applicable.

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant
No.

14.6. Special precautions for user

Not applicable.

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

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not application.

15 Regulatory information

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

National regulations Health and Safety at Work etc. Act 1974 (as amended).

The Control of Substances Hazardous to Health Regulations 2002 (SI 2002 No. 2677) (as amended).

The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (SI 2009 No. 716).

Control of Substances Hazardous to Health Regulations 2002 (as amended).

EU legislation Commission Directive 91/322/EEC of 29 May 1991 on establishing indicative limit values by implementing Council Directive 80/1107/EEC on the protection of workers from the risks related to exposure to chemical, physical and biological agents at work.

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18

December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended).

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

16 Other information

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Revision 20

SDS number 20200

Hazard statements in full

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.

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

Store between Store between 5°C - 25°C

Contains SVHC NO