

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

- **1.1 Product identifier**
- **Trade name:** PERFECTLY GREEN WETBOND
- *Product Group* 1K adhesive for artificial turf
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
- **Product category** PC1 Adhesives, sealants
- **Application of the substance / the mixture** Adhesives
- Details of the supplier of the safety data sheet
- Perfectly Green Ltd
- Unit 8 Ridgewood Industrial Park
- Uckfield
- East Sussex
- TN22 5QE
- Tel: 01825 729259
- sales@perfectlygreen.co.uk

SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS08 health hazard

Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Carc. 2 H351 Suspected of causing cancer.



GHS07

Skin Irrit. 2 H315 Causes skin irritation.
Eye Irrit. 2 H319 Causes serious eye irritation.
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 CLP regulation.
- *Hazard pictograms*



GHS07



GHS08

- *Signal word* Danger
- *Hazard-determining components of labelling:*
Polypropylenglycol, Diphenylmethandiisocyanat Polymer
diphenylmethane-4,4'-di-isocyanate
diphenylmethane-2,4'-diisocyanate
Hydrocarbons, C9-unsaturated, polymerized
- *Hazard statements*
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.

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H335 May cause respiratory irritation.

- **Precautionary statements**

- P101 If medical advice is needed, have product container or label at hand.
- P102 Keep out of reach of children.
- P103 Read label before use.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P284 In case of inadequate ventilation wear respiratory protection.
- P302+P352 IF ON SKIN: Wash with plenty of water.
- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P337+P313 If eye irritation persists: Get medical advice/attention.
- P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
- P405 Store locked up.
- P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Additional information:**

- EUH204 Contains isocyanates. May produce an allergic reaction.

- **Results of PBT and vPvB assessment**

- PBT: Not applicable.
- vPvB: Not applicable.

SECTION 3: Composition/information on ingredients

- **3.2 Chemical characterisation: Mixtures**

- **Description:** Mixture of substances listed below with nonhazardous additions.

- **Dangerous components:**

CAS: 39420-98-9	Polypropylenglycol, Diphenylmethandiisocyanat Polymer Resp. Sens. 1, H334 Skin Sens. 1, H317	25-50%
	Hydrocarbons, C9-unsaturated, polymerized Skin Sens. 1, H317 Aquatic Chronic 3, H412	2.5-10%
CAS: 101-68-8 EINECS: 202-966-0	diphenylmethane-4,4'-di-isocyanate 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	2.5-10%
CAS: 5873-54-1 EINECS: 227-534-9	diphenylmethane-2,4'-diisocyanate 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	2.5-10%
CAS: 1305-78-8 EINECS: 215-138-9	calcium oxide Eye Dam. 1, H318	≤ 2.5%

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

SECTION 4: First aid measures

- **4.1 Description of first aid measures**

- **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:**

If skin irritation continues, consult a doctor.

Immediately wash with water and soap and rinse thoroughly.

- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.

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

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- **4.2 Most important symptoms and effects, both acute and delayed**
Allergic reactions
Irritation
- **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.
- **5.2 Special hazards arising from the substance or mixture**
Burning releases carbon monoxide, carbon dioxide, oxides of nitrogen, isocyanate vapors and traces of hydrogen cyanide. In the event of fire and/or explosion do not breathe fumes.
- **5.3 Advice for firefighters**
- **Protective equipment:**
Do not inhale explosion gases or combustion gases.
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.
Ensure adequate ventilation
Wear protective clothing.
- **6.2 Environmental precautions:**
Do not allow product to reach sewage system or any water course.
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
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.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**
Avoid contact with the eyes and skin.
Prevent formation of aerosols.
Use only in well ventilated areas.
- **Information about fire - and explosion protection:** No special measures required.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- *Requirements to be met by storerooms and receptacles:* No special requirements.
- *Information about storage in one common storage facility:* Not required.
- *Further information about storage conditions:* Keep container tightly sealed.
- **7.3 Specific end use(s)** No further relevant information available.

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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:**

101-68-8 diphenylmethane-4,4'-di-isocyanate

WEL	Short-term value: 0.07 mg/m ³ Long-term value: 0.02 mg/m ³ Sen; as -NCO
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5873-54-1 diphenylmethane-2,4'-diisocyanate

WEL	Short-term value: 0.07 mg/m ³ Long-term value: 0.02 mg/m ³ Sen; as -NCO
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1305-78-8 calcium oxide

WEL	Long-term value: 2 mg/m ³
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· **DNELs**

5873-54-1 diphenylmethane-2,4'-diisocyanate

Dermal	DNEL	50 mg/kg (worker)
Inhalative	DNEL	0.1 mg/cm ³ (worker)

· **PNECs**

5873-54-1 diphenylmethane-2,4'-diisocyanate

PNEC aqua	0.1 mg/l (marinewater)
PNEC soil	1 mg/kg (soil)

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

· **8.2 Exposure controls**

· **Personal protective equipment:**

· *General protective and hygienic measures:*

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.

· *Respiratory protection:*

Not necessary if room is well-ventilated.
Use suitable respiratory protective device in case of insufficient ventilation.

· *Protection of hands:* Not required.

· *Material of gloves*

Butyl rubber, BR
Nitrile rubber, NBR
Natural rubber, NR

· *Eye protection:*



Tightly sealed goggles

· *Body protection:* Protective work clothing

SECTION 9: Physical and chemical properties

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

· **General Information**

· *Appearance:*

Form: Fluid

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· <i>Colour:</i>	Green
· <i>Odour:</i>	Characteristic
· <i>Odour threshold:</i>	Not determined.
· pH-value:	Not determined.
· Change in condition	
<i>Melting point/Melting range:</i>	Undetermined.
<i>Boiling point/Boiling range:</i>	Undetermined.
· Flash point:	201 °C
· Flammability (solid, gaseous):	Not applicable.
· Ignition temperature:	520 °C
· <i>Decomposition temperature:</i>	Not determined.
· Self-igniting:	Product is not selfigniting.
· Danger of explosion:	Product does not present an explosion hazard.
· Explosion limits:	
<i>Lower:</i>	Not determined.
<i>Upper:</i>	Not determined.
· Vapour pressure:	Not determined.
· Density at 20 °C:	1.43 g/cm ³
· <i>Relative density</i>	Not determined.
· <i>Vapour density</i>	Not determined.
· <i>Evaporation rate</i>	Not determined.
· Solubility in / Miscibility with water:	Not miscible or difficult to mix.
· Partition coefficient (n-octanol/water):	Not determined.
· Viscosity:	
<i>Dynamic at 20 °C:</i>	80000 mPas
<i>Kinematic:</i>	Not determined.
· Solvent content:	
<i>Organic solvents:</i>	0.0 %
<i>VOC EU</i>	0.00 %
<i>Solids content:</i>	49.0 %
· 9.2 Other information	No further relevant information available.

SECTION 10: Stability and reactivity

- **10.1 Reactivity**
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions**
Exothermic reaction with amines and alcohols; reacts with water forming CO₂; in closed containers, risk of bursting owing to increase of pressure.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No dangerous reactions known.
- **10.6 Hazardous decomposition products:** No dangerous decomposition products known.

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SECTION 11: Toxicological information

· 11.1 Information on toxicological effects

· Acute toxicity:

· LD/LC50 values relevant for classification:

101-68-8 diphenylmethane-4,4'-di-isocyanate

Oral	LD50	> 2000 mg/kg (Ratte) (Richtlinie 84/449/EWG, B.1)
Dermal	LD50	>9400 mg/kg (rab) (OECD- Prüfrichtlinie 402)
Inhalative	LC50/ 4h	0.368 mg/l (Ratte)

5873-54-1 diphenylmethane-2,4'-diisocyanate

Oral	LD50	> 2000 mg/kg (Ratte) (Richtlinie 84/449/EWG, B.1)
Dermal	LD50	> 9400 mg/kg (rab) (OECD- Prüfrichtlinie 402)
Inhalative	LC50	0.31 mg/l (Ratte) (4h, Aerosol)

· Specific symptoms in biological assay:

101-68-8 diphenylmethane-4,4'-di-isocyanate

Irritation of skin	coorosion/ irritation to skin	(worker)
Irritation of eyes	serious damage to eye /- irriation	(rab)

· Primary irritant effect:

· on the skin: Irritant to skin and mucous membranes.

· on the eye: Irritating effect.

· Sensitisation:

Sensitisation possible through inhalation.

Sensitisation possible through skin contact.

· **Additional toxicological information:**

The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:

Harmful

Irritant

· **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)**

Carc. 2

SECTION 12: Ecological information

· 12.1 Toxicity

· Aquatic toxicity:

101-68-8 diphenylmethane-4,4'-di-isocyanate

EC50	>1000 mg/l (Daphnia magna Wasserfloh) (OECD- Prüfrichtlinie 202)
LC50/ 96h	>1000 mg/l (Danio rerio (Zebrabärbling)) (OECD- Prüfrichtlinie 203)
NOEC	>10 mg/l (Daphnia magna Wasserfloh) (OECD- Prüfrichtlinie 202 (Fortpflanzung))

5873-54-1 diphenylmethane-2,4'-diisocyanate

EC50	> 1000 mg/l (Daphnia magna Wasserfloh)
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· **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.

· **Additional ecological information:**

· General notes:

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

· **12.5 Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

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- **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.
- **Uncleaned packaging:**
- *Recommendation:* Disposal must be made according to official regulations.

SECTION 14: Transport information

- **14.1 UN-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 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.
- **UN "Model Regulation":** -

SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
 - **National regulations:**
 - *Technical instructions (air):*
- | Class | Share in % |
|-------|------------|
| I | 2,5-10 |
| III | ≤ 2,5 |
- **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*
- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.
- H318 Causes serious eye damage.
- 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.

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H373 May cause damage to organs through prolonged or repeated exposure.
H412 Harmful to aquatic life with long lasting effects.

- **Department issuing MSDS:** Technical Department
- **Contact:** Dr. Frank Gahlmann +49-(0)2739-301165 gahlmann@stauf.de
- **Abbreviations and acronyms:**
 - Acute Tox. 4: Acute toxicity, Hazard Category 4
 - Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
 - Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1
 - Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2
 - Resp. Sens. 1: Sensitisation - Respirat., Hazard Category 1
 - Skin Sens. 1: Sensitisation - Skin, Hazard Category 1
 - Carc. 2: Carcinogenicity, Hazard Category 2
 - STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3
 - STOT RE 2: Specific target organ toxicity - Repeated exposure, Hazard Category 2
 - Aquatic Chronic 3: Hazardous to the aquatic environment - Chronic Hazard, Category 3

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