



## SAFETY DATA SHEET WHITE-KNIGHT™ LIGHT GREY

According to Regulation (EC) No 1907/2006

### SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

#### 1.1. Product identifier

**Product name** WHITE-KNIGHT™ LIGHT GREY  
**Product No.** 7832

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

**Identified uses** Two component isocyanate based sealant.

#### 1.3. Details of the supplier of the safety data sheet

**Supplier** Garland Company UK Ltd,  
Unit 5, Glevum Works,  
Upton Street,  
Gloucester GL1 4LA  
UK  
Tel: 01452 330 646  
Fax: 01452 330 657  
email: info@garlandukltd.co.uk

#### 1.4. Emergency telephone number

01452 330646  
09:00 - 17:00 Monday to Friday

### SECTION 2: HAZARDS IDENTIFICATION

#### 2.1. Classification of the substance or mixture

**Classification (1999/45/EEC)** Xn;R20. R42/43. Xi;R36/37/38. N;R51/53.

##### Human health

Harmful by inhalation. Irritating to eyes, respiratory system and skin. May cause sensitisation by inhalation and skin contact.

##### Environment

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

##### Physical and Chemical Hazards

Can become flammable in use.

#### 2.2. Label elements

**Contains** d-LIMONENE  
TOLUENE-DIISOCYANATE

##### Labelling



Harmful



Dangerous for the environment

##### Risk Phrases

R20	Harmful by inhalation.
R36/37/38	Irritating to eyes, respiratory system and skin.
R42/43	May cause sensitisation by inhalation and skin contact.
R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

##### Safety Phrases

S23	Do not breathe vapour/spray.
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S26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S37	Wear suitable gloves.
S38	In case of insufficient ventilation, wear suitable respiratory equipment.
S45	In case of accident or if you feel unwell, seek medical advice immediately (show label where possible).
S24/25	Avoid contact with skin and eyes.
S57	Use appropriate containment to avoid environmental contamination.
S60	This material and its container must be disposed of as hazardous waste.
S61	Avoid release to the environment. Refer to special instructions/safety data sheets.
P4	Contains isocyanates. See information supplied by the manufacturer.
P15	Can become flammable in use.

### 2.3. Other hazards

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

### 3.2. Mixtures

<b>d-LIMONENE</b>	<b>5-10%</b>
<b>CAS-No.: 5989-27-5</b>	<b>EC No.: 227-813-5</b>
Classification (EC 1272/2008) Flam. Liq. 3 - H226 Skin Irrit. 2 - H315 Skin Sens. 1 - H317 Aquatic Acute 1 - H400 Aquatic Chronic 1 - H410	Classification (67/548/EEC) R10 R43 Xi;R38 N;R50/53
<b>POLYISOCYANATE RESIN</b>	<b>10-30%</b>
<b>CAS-No.: 9057-91-4</b>	<b>EC No.:</b>
Classification (EC 1272/2008) Acute Tox. 4 - H302 Acute Tox. 4 - H312 Acute Tox. 4 - H332 Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 STOT Single 3 - H335	Classification (67/548/EEC) Xn;R20/21/22. Xi;R36/37/38.
<b>STODDARD SOLVENT</b>	<b>5-10%</b>
<b>CAS-No.: 8052-41-3</b>	<b>EC No.: 232-489-3</b>
Classification (EC 1272/2008) Flam. Liq. 3 - H226 Asp. Tox. 1 - H304	Classification (67/548/EEC) Xn;R65. R10.
<b>TITANIUM DIOXIDE</b>	<b>1-5%</b>
<b>CAS-No.: 13463-67-7</b>	<b>EC No.: 236-675-5</b>
Classification (EC 1272/2008) Not classified.	Classification (67/548/EEC) Not classified.

TOLUENE-DIISOCYANATE

&lt; 1%

CAS-No.: 26471-62-5

EC No.: 247-722-4

Classification (EC 1272/2008)

Acute Tox. 2 - H330

Skin Irrit. 2 - H315

Eye Irrit. 2 - H319

Resp. Sens. 1 - H334

Skin Sens. 1 - H317

Carc. 2 - H351

STOT Single 3 - H335

Aquatic Chronic 3 - H412

Classification (67/548/EEC)

Carc. Cat. 3;R40

T+;R26

R42/43

Xi;R36/37/38

R52/53

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

## SECTION 4: FIRST AID MEASURES

### 4.1. Description of first aid measures

#### **Inhalation**

Move the exposed person to fresh air at once. Get medical attention if any discomfort continues.

#### **Ingestion**

Rinse mouth thoroughly. Do not induce vomiting. If vomiting occurs, the head should be kept low so that stomach vomit doesn't enter the lungs. Get medical attention immediately!

#### **Skin contact**

Remove affected person from source of contamination. Remove contaminated clothing immediately and wash skin with soap and water. Get medical attention if any discomfort continues.

#### **Eye contact**

Make sure to remove any contact lenses from the eyes before rinsing. Promptly wash eyes with plenty of water while lifting the eye lids. Continue to rinse for at least 15 minutes and get medical attention.

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

#### **Inhalation.**

Frequent inhalation of vapours, may cause respiratory allergy.

#### **Ingestion**

Pneumonia may be the result if vomited material containing solvents reaches the lungs.

#### **Skin contact**

Prolonged contact may cause redness, irritation and dry skin. May cause allergic skin disorders in sensitive individuals.

#### **Eye contact**

Splashes may irritate.

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

The severity of the symptoms described will vary dependant of the concentration and the length of exposure.

## SECTION 5: FIREFIGHTING MEASURES

### 5.1. Extinguishing media

#### **Extinguishing media**

Extinguish with foam, carbon dioxide or dry powder.

#### **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

#### **Hazardous combustion products**

In case of fire, toxic gases (CO, CO<sub>2</sub>, NO<sub>x</sub>) may be formed.

#### **Unusual Fire & Explosion Hazards**

Vapours may ignite.

#### **Specific hazards**

In case of fire, toxic gases may be formed (CO<sub>x</sub>, NO<sub>x</sub>). Hydrocarbons.

### 5.3. Advice for firefighters

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## Special Fire Fighting Procedures

Avoid breathing fire vapours. Containers close to fire should be removed immediately or cooled with water. Keep run-off water out of sewers and water sources. Dike for water control.

## Protective equipment for fire-fighters

Self contained breathing apparatus and full protective clothing must be worn in case of fire.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

### 6.1. Personal precautions, protective equipment and emergency procedures

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

### 6.2. Environmental precautions

Do not allow to enter drains, sewers or watercourses. Spillages or uncontrolled discharges into watercourses must be IMMEDIATELY alerted to the Environmental Agency or other appropriate regulatory body.

### 6.3. Methods and material for containment and cleaning up

Extinguish all ignition sources. Avoid sparks, flames, heat and smoking. Ventilate. Stop leak if possible without risk. Absorb in vermiculite, dry sand or earth and place into containers. Containers with collected spillage must be properly labelled with correct contents and hazard symbol.

### 6.4. Reference to other sections

Wear protective clothing as described in Section 8 of this safety data sheet. See section 11 for additional information on health hazards. Collect and dispose of spillage as indicated in section 13.

## SECTION 7: HANDLING AND STORAGE

### 7.1. Precautions for safe handling

Read and follow manufacturer's recommendations. Eliminate all sources of ignition. Provide good ventilation. Avoid inhalation of vapours/spray and contact with skin and eyes. Persons susceptible to allergic reactions should not handle this product. Persons with impaired lung functions should not handle this preparation.

### 7.2. Conditions for safe storage, including any incompatibilities

Keep away from heat, sparks and open flame. Store in tightly closed original container in a dry, cool and well-ventilated place. Avoid contact with oxidising agents.

### Storage Class

Flammable liquid storage.

### 7.3. Specific end use(s)

The identified uses for this product are detailed in Section 1.2.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1. Control parameters

Name	STD	TWA - 8 Hrs		STEL - 15 Min		Notes
TITANIUM DIOXIDE	WEL		4 mg/m3			
TOLUENE-DIISOCYANATE	WEL		0.02 mg/m3(Sen)		0.07 mg/m3(Sen)	

WEL = Workplace Exposure Limit.

### 8.2. Exposure controls

#### Protective equipment



#### Engineering measures

Provide adequate ventilation.

#### Respiratory equipment

If ventilation is insufficient, suitable respiratory protection must be provided.

#### Hand protection

Use protective gloves. The most suitable glove must be chosen in consultation with the gloves supplier, who can inform about the breakthrough time of the glove material.

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## Eye protection

Wear approved safety goggles.

## Other Protection

Wear appropriate clothing to prevent any possibility of liquid contact and repeated or prolonged vapour contact.

## Hygiene measures

Promptly remove any clothing that becomes contaminated. Wash promptly with soap & water if skin becomes contaminated. When using do not eat, drink or smoke. Wash hands after handling.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1. Information on basic physical and chemical properties

Appearance	Liquid
Colour	Light Grey.
Odour	Hydrocarbon.
Initial boiling point and boiling range	~ 153.3°C
Relative density	1.26
Vapour density (air=1)	7.0
Evaporation rate	0.1 (EtEt=1)
Flash point (°C)	41°C
Flammability Limit - Lower(%)	10.7%
Flammability Limit - Upper(%)	0.7%

### 9.2. Other information

Volatile Organic Compound (VOC) 220 g/litre

## SECTION 10: STABILITY AND REACTIVITY

### 10.1. Reactivity

Strong oxidising substances.

### 10.2. Chemical stability

Stable under normal temperature conditions and recommended use.

### 10.3. Possibility of hazardous reactions

Not available.

### Hazardous Polymerisation

Will not polymerise.

### 10.4. Conditions to avoid

Avoid contact with strong oxidisers. Avoid heat, flames and other sources of ignition.

### 10.5. Incompatible materials

#### Materials To Avoid

Strong oxidising substances.

### 10.6. Hazardous decomposition products

In case of fire, toxic gases (CO, CO<sub>2</sub>, NO<sub>x</sub>) may be formed. Hydrocarbons.

## SECTION 11: TOXICOLOGICAL INFORMATION

### 11.1. Information on toxicological effects

#### Inhalation

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

#### Ingestion

May cause discomfort if swallowed.

#### Skin contact

Irritating to skin. May cause sensitisation by skin contact.

#### Eye contact

Irritating to eyes.

#### Medical Considerations

Skin disorders and allergies. Chronic respiratory and obstructive airway diseases.

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<b>Name</b>	<b>d-LIMONENE</b>
<b>Toxic Dose 1 - LD 50</b>	4,400 mg/kg (oral rat)
<b>Toxic Dose 2 - LD 50</b>	> 2 mg/kg (skin-rbt)
<b>Name</b>	<b>TOLUENE-DIISOCYANATE</b>
<b>Toxic Dose 1 - LD 50</b>	3,360 mg/kg (oral rat)
<b>Toxic Dose 2 - LD 50</b>	> 9400 mg/kg (skin-rbt)
<b>Toxic Conc. - LC 50</b>	0.1 mg/l/4h (inh-rat)
<b>Name</b>	<b>STODDARD SOLVENT</b>
<b>Toxic Dose 1 - LD 50</b>	> 2000 mg/kg (oral rat)
<b>Toxic Conc. - LC 50</b>	> 5500 mg/l/4h (inh-rat)
<b>Name</b>	<b>POLYISOCYANATE RESIN</b>
<b>Toxicological information</b>	
No information available.	
<b>Name</b>	<b>TITANIUM DIOXIDE</b>
<b>Toxic Dose 1 - LD 50</b>	>10000 mg/kg (oral rat)
<b>Toxic Dose 2 - LD 50</b>	> 10000 mg/kg (skin-rbt)
<b>Toxic Conc. - LC 50</b>	> 3.56 mg/l/4h (inh-rat)

## SECTION 12: ECOLOGICAL INFORMATION

### Ecotoxicity

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

#### 12.1. Toxicity

#### 12.2. Persistence and degradability

##### Degradability

No data available.

#### 12.3. Bioaccumulative potential

##### Bioaccumulative potential

No data available on bioaccumulation.

#### 12.4. Mobility in soil

##### Mobility:

The product is insoluble in water.

#### 12.5. Results of PBT and vPvB assessment

Not available.

#### 12.6. Other adverse effects

Not determined.

<b>Name</b>	<b>d-LIMONENE</b>
<b>LC 50, 96 Hrs, Fish mg/l</b>	71.4 - 852
<b>EC 50, 48 Hrs, Daphnia, mg/l</b>	11 - 33
<b>Name</b>	<b>TOLUENE-DIISOCYANATE</b>
<b>LC 50, 96 Hrs, Fish mg/l</b>	133 - 4170
<b>EC 50, 48 Hrs, Daphnia, mg/l</b>	12.5
<b>Name</b>	<b>STODDARD SOLVENT</b>
<b>Ecotoxicity</b>	
No data on possible environmental effects have been found.	
<b>Name</b>	<b>POLYISOCYANATE RESIN</b>
<b>Ecotoxicity</b>	
No data on possible environmental effects have been found.	
<b>Name</b>	<b>TITANIUM DIOXIDE</b>
<b>LC 50, 96 Hrs, Fish mg/l</b>	240 - 370

## SECTION 13: DISPOSAL CONSIDERATIONS

### 13.1. Waste treatment methods

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Dispose of waste and residues in accordance with local authority requirements. Recover and reclaim or recycle, if practical.

## SECTION 14: TRANSPORT INFORMATION

### 14.1. UN number

UN No. (ADR/RID/ADN)	1263
UN No. (IMDG)	1263
UN No. (ICAO)	1263

### 14.2. UN proper shipping name

Proper Shipping Name	PAINT
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### 14.3. Transport hazard class(es)

ADR/RID/ADN Class	3
ADR/RID/ADN Class	Class 3: Flammable liquids.
ADR Label No.	3
IMDG Class	3
ICAO Class/Division	3
Transport Labels	



### 14.4. Packing group

ADR/RID/ADN Packing group	III
IMDG Packing group	III
ICAO Packing group	III

### 14.5. Environmental hazards

Environmentally Hazardous Substance/Marine Pollutant



### 14.6. Special precautions for user

EMS	F-E, S-E
Emergency Action Code	•3YE
Hazard No. (ADR)	30
Tunnel Restriction Code	(D/E)

### 14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not applicable.

## SECTION 15: REGULATORY INFORMATION

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

#### Statutory Instruments

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

#### Approved Code Of Practice

Classification and Labelling of Substances and Preparations Dangerous for Supply.

#### Guidance Notes

Workplace Exposure Limits EH40.

**EU Legislation**

Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 with amendments.

**15.2. Chemical Safety Assessment**

No chemical safety assessment has been carried out.

**SECTION 16: OTHER INFORMATION**

**Revision Comments**

Transport classification updated. Format updated in accordance with Regulation (EU) No. 453/2010.

**Revision Date** 04-2011

**Revision** 4

**Supersedes date** 08-2010

**Risk Phrases In Full**

R10	Flammable.
R20/21/22	Harmful by inhalation, in contact with skin and if swallowed.
R52/53	Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R65	Harmful: may cause lung damage if swallowed.
R36/37/38	Irritating to eyes, respiratory system and skin.
R38	Irritating to skin.
R40	Limited evidence of a carcinogenic effect.
R42/43	May cause sensitisation by inhalation and skin contact.
R43	May cause sensitisation by skin contact.
NC	Not classified.
R26	Very toxic by inhalation.
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**Hazard Statements In Full**

H319	Causes serious eye irritation.
H315	Causes skin irritation.
H330	Fatal if inhaled.
H226	Flammable liquid and vapour.
H332	Harmful if inhaled.
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H412	Harmful to aquatic life with long lasting effects.
H304	May be fatal if swallowed and enters airways.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317	May cause an allergic skin reaction.
H335	May cause respiratory irritation.
H351	Suspected of causing cancer.
H410	Very toxic to aquatic life with long lasting effects.
H400	Very toxic to aquatic life.