



SAFETY DATA SHEET WHITE-KNIGHT™ 7829

According to Regulation (EU) No 453/2010

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

1.1. Product identifier

Product name WHITE-KNIGHT™ 7829
Product No. 7829

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

07973 837 713 (24 hours)

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. Harmful: may cause lung damage if swallowed. 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

d-LIMONENE	10-30%
CAS-No.: 5989-27-5	EC No.: 227-813-5
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
POLYISOCYANATE RESIN	10-30%
CAS-No.: 9057-91-4	EC No.:
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.
STODDARD SOLVENT	5-10%
CAS-No.: 8052-41-3	EC No.: 232-489-3
Classification (EC 1272/2008) Flam. Liq. 3 - H226 Asp. Tox. 1 - H304	Classification (67/548/EEC) Xn;R65. R10.
TITANIUM DIOXIDE	5-10%
CAS-No.: 13463-67-7	EC No.: 236-675-5
Classification (EC 1272/2008) Not classified.	Classification (67/548/EEC) Not classified.

TOLUENE-DIISOCYANATE

< 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, CO₂, NO_x) may be formed.

Unusual Fire & Explosion Hazards

Vapours may ignite.

Specific hazards

In case of fire, toxic gases may be formed (CO_x, NO_x). Hydrocarbons.

5.3. Advice for firefighters

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.

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	White.
Odour	Hydrocarbon.
Initial boiling point and boiling range	~ 153.3°C
Relative density	1.26
Vapour density (air=1)	7
Evaporation rate	0.1 (EtEt=1)
Flash point (°C)	41°C
Flammability Limit - Lower(%)	0.7%
Flammability Limit - Upper(%)	10.7%

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, CO₂, NO_x) 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

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

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

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

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 3

Supersedes date 06-2008

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.