



since 1895

SAFETY DATA SHEET

(Conforming to 1907/2006/EC)

Product Name:	WHITE KNIGHT® METAL PRIMER	SDS Reference	
Version No. 3	Previous issue date January 2013	Revision date	01-06-2015

1. IDENTIFICATION OF SUBSTANCE / PREPARATION AND COMPANY

1.1 Product Name	White Knight® Metal Primer (Product No. 7841)		
1.2 Relevant Use(s)/misuse(s)	Multiprimer		
1.3 SDS Supplier	The Garland Company UK Ltd Unit 5 Glevum Works Upton Street, Gloucester GL1 4LA, UK	Telephone: 01452 330646 Mobile: 07887 923 121 Website: www.garlandukltd.co.uk	
1.4 Emergency Telephone	44 (0)1452 330646 (Office hours)	Competent person e-mail: trevor@rising-hsande.co.uk	

2. HAZARDS IDENTIFICATION

2.1 CLASSIFICATION OF THE MIXTURE

2.1.1 Classification according to Regulation (EC) No 1272/2008 (CLP/GHS)

Flam. Liq. H226
Asp. Tox. 1 H304
Skin Irrit. 2 H315
Skin Sens. 1 H317
Eye Irrit. 2 H319
Resp. Sens. 1 H334
Carc. 2 H351
Repr. 2 H361
STOT RE 2 H373
Aquatic Chronic 2 H411

2.1.2 Additional information

See section 16 for full text of H statements.

2.2 LABELLING ELEMENTS

2.2.1 Labelling in accordance with EC Regulation No 1272/2008 (CLP/GHS)

Pictogram(s):



Signal word

DANGER

Hazard statement(s)	H226 FLAMMABLE LIQUID AND VAPOUR 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. H334 MAY CAUSE ALLERGY OR ASTHMA SYMPTOMS OR BREATHING DIFFICULTIES IF INHALED. H351 SUSPECTED OF CAUSING CANCER H361 SUSPECTED OF DAMAGING FERTILITY OR THE UNBORN CHILD H373 MAY CAUSE DAMAGE TO ORGANS THROUGH PROLONGED OR REPEATED EXPOSURE.
Precautionary statement(s)	H411 TOXIC TO AQUATIC LIFE WITH LONG LASTING EFFECTS, P202 DO NOT HANDLE UNTIL ALL SAFETY PRECAUTIONS HAVE BEEN READ AND UNDERSTOOD P280 WEAR PROTECTIVE GLOVES/PROTECTIVE CLOTHING/EYE PROTECTION/FACE PROTECTION. P302+352 IF ON SKIN: WASH WITH PLENTY OF SOAP AND WATER. P304+340 IF INHALED: REMOVE TO FRESH AIR AND KEEP AT REST IN A POSITION COMFORTABLE FOR BREATHING. P305+351+338 IF IN EYES: RINSE CAUTIOUSLY WITH WATER FOR SEVERAL MINUTES. REMOVE CONTACT LENSES, IF PRESENT AND EASY TO DO. CONTINUE RINSING. P308+313 IF EXPOSED OR CONCERNED: GET MEDICAL ADVICE/ATTENTION. P501 DISPOSE OF CONTENTS/CONTAINER TO HAZARDOUS OR SPECIAL WASTE COLLECTION SITE IN ACCORDANCE WITH LOCAL / REGIONAL / NATIONAL OR INTERNATIONAL REGULATIONS

2.3 OTHER HAZARDS

THE PREPARATION CONTAINS SUBSTANCES THAT HAVE A WORKPLACE EXPOSURE LIMIT (WEL)

3. COMPOSITION / INFORMATION ON INGREDIENTS**Chemical Characterisation**

MIXTURE

<u>Chemical name</u>	<u>CAS-No</u>	<u>EINECS/ELINCS</u>	<u>Classification</u>	<u>Concentration</u>
DIPHENYLMETHANE-4,4'-DI-ISOCYANATE	101-68-8	202-966-0	Skin Irrit. 2 H315; Skin Sens. 1 H317; Eye Irrit. 2 H319; Acute Tox. 4 H332; Resp. Sens. 1 H334; Carc. 2 H351; Repr. 2 H361; STOT RE 2 H373	5-10%
ALUMINIUM POWDER (STABILIZED)	7429-90-5	231-072-3	Flam. Sol. 1 H228; Water-react. 2 H261	10-30%
LOW BOILING POINT NAPHTHA - UNSPECIFIED - SOLVENT (<0.1% BENZENE)	64742-95-6	265-199-0	Flam. Liq. 1 H224; Asp. Tox. H304; Skin Irrit. 2 H315; STOT SE 3 H335; STOT SE 3 H336; Aquatic Chronic 2 H411	30-60%
METHYLENEDIPHENYL DIISOCYANATE (mixture of 2,2' and 2,4')	26447-40-5	247-714-0	Acute Tox. 4 H332; Skin Irrit. 2 H315; Skin Sens. 1 H317; Eye Irrit. 2 H319; Resp. Sens. 1 H334; STOT SE 3 H335; Carc. 2 H351; STOT RE 2 H373;	1-5%

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3. COMPOSITION / INFORMATION ON INGREDIENTS

PREPOLYMER BASED ON
AROMATIC POLYISOCYANATE

67815-87-6

247-714-0

Skin Irrit. 2 H315; Eye
Irrit. 2 H319; STOT SE 3
H335; Carc. 2 H351;
STOT RE 2 H373;
Aquatic Chronic 3 H412

30-60%

4. FIRST AID MEASURES

4.1 Description of measures

Inhalation

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

Skin contact

Immediately clean areas of skin affected with plenty of water. If necessary, seek medical advice.

Eye contact

Immediately wash out eye thoroughly with plenty of water until irritation subsides. If necessary (e.g. irritation persists), consult an eye specialist/ophthalmologist.

Ingestion

Allow the patient to vomit on his own accord. Give copious water to drink; If necessary, seek medical advice.

4.2 Most important effects/symptoms

Vapours may cause drowsiness and dizziness. Skin and respiratory sensitisation are possible.

4.3 Immediate/special treatment

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

5. FIRE FIGHTING MEASURES

5.1 Extinguishing media

To suit local surroundings (e.g. foam, carbon dioxide, dry powder). Do not use water jet.

5.2 Special hazards

If heated, vapours/gases hazardous to health (e.g. CO, NOx, isocyanates) may be formed. Fire creates: Carbon dioxide (CO2), hydrogen cyanide (HCN). Vapours are heavier than air and may spread near ground to sources of ignition. The product is flammable, and heating may generate vapours which may form explosive vapour/air mixtures.

5.3 Advice for fire fighters

Wear self-contained breathing apparatus. Containers close to fire should be removed or cooled with water.

Avoid run-off water entering the drains (e.g. use barriers)

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions

Adhere to personal protective measures. Do not inhale vapours.

6.2 Environmental precautions

Do not allow to get into waste water or waterways; if this occurs, inform the relevant water authority at once.

6.3 Methods and materials for cleaning up

Adhere to personal protective measures. Remove sources of ignition. Stop leak if possible without risk. DO NOT touch spilled material! If leakage cannot be stopped, Take up with absorbent material, e.g. sand, sawdust, into tightly closed containers. Label container and dispose of as prescribed.

6. ACCIDENTAL RELEASE MEASURES

6.4 Reference to other sections See section 8 for personal protective equipment.

7. HANDLING & STORAGE

7.1 Precautions for safe handling Handle in accordance with good hygiene and safety practice. Read and follow manufacturer's recommendations. Avoid inhalation of vapours. Eliminate all sources of ignition.

7.2 Conditions for safe storage Keep containers tightly closed and in cool, dry, well-ventilated areas.

7.3. Specific end use(s) See 1.2

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Controls parameters Occupational Exposure Limits (WELs) have been assigned (EH40/2011).

LTEL (8 hour TWA):	0.01	mg/m ³	Data for diphenylmethane-4,4'-di-isocyanate ^{SEN}
STEL (15 min)	0.07	mg/m ³	Data for diphenylmethane-4,4'-di-isocyanate ^{SEN}
LTEL (8 hour TWA):	0.02	mg/m ³	Data methylenediphenyl diisocyanate (mixture of 2,2' and 2,4') ^{SEN}
STEL (15 min)	0.07	mg/m ³	Data methylenediphenyl diisocyanate (mixture of 2,2' and 2,4') ^{SEN}

^{SEN} Capable of causing occupational asthma.

8.2 Exposure controls

Engineering controls Provide adequate ventilation (e.g. local exhaust ventilation).
Avoid the build-up of electrostatic charges

Personal protection Observe normal standards for handling chemicals.
Do not eat, drink or smoke in the working area
Those with a history of sensitisation should take appropriate protective measures
Avoid inhalation of vapours/spray
Wash hands before breaks and after work.
Wear personal protective equipment appropriate to the task (see below)

Eye protection Safety goggles (i.e. EN 166 approved)

Skin protection Suitable gloves (also consider your own risk assessment; e.g. breakthrough times, rates of diffusion and degradation, tasks undertaken)

Respiratory protection If ventilation is insufficient, wear a NIOSH/OSHA respirator

Other protection Protective overall

**9. PHYSICAL AND CHEMICAL PROPERTIES****9.1 Basic physical and chemical properties**

Physical form Liquid.

Colour Silver

Odour Petroleum.

9. PHYSICAL AND CHEMICAL PROPERTIES

Odour threshold	Not determined		
pH	Not determined		
Boiling pt / range	Not determined	°C	
Melting pt / range	Not determined	°C	
Flash point	41.6 °C		
Flammability	Not determined		
Thermal decomposition	Not applicable		
Evaporation rate	0.2 (ether = 1)		
Explosion limits		Lower: 0.9	Upper: 7.0
Auto-ignition temperature	Not determined		
Decomposition temp.	Not applicable		
Specific gravity	1.12		
Vapour pressure	<10 mm Hg		
Vapour density	4.1		
Viscosity	Not determined		
Water solubility	immiscible		
Explosive properties	Not determined		
Oxidising properties	Not determined		
Partition coeff. Log_{Oct/water}	Not determined		
9.2 Other information	Volatile By Vol. (%): 49; Volatile Organic Compound (VOC) 407 g/litre		

10. STABILITY AND REACTIVITY

10.1 Reactivity	Avoid contact with: Water Reaction with: Acids. Strong alkalis. Oxidising materials.
10.2 Chemical stability	Stable under normal conditions of handling.
10.3 Hazardous reactions	Will not polymerise.
10.4 Conditions to avoid	Avoid excessive heat for prolonged periods of time.
10.5 Incompatible material	Strong acids. Strong alkalis. Water, steam, water mixtures. Strong oxidising substances.
10.6 Hazardous decomposition products	If heated, vapours/gases hazardous to health (e.g. CO, NO _x , isocyanates) may be formed. High temperatures generate: Carbon dioxide (CO ₂). Hydrogen cyanide (HCN).

11. TOXICOLOGICAL INFORMATION**11.1 information on toxicological effects**

11. TOXICOLOGICAL INFORMATION

Acute toxicity	LD ₅₀ rat (oral)	>2000	mg/kg	diphenylmethane-4,4'-di-isocyanate **
	LC ₅₀ rabbit (derm)	>9400	mg/kg	diphenylmethane-4,4'-di-isocyanate **
	LD ₅₀ rat (oral)	>5000	mg/kg	low boiling point naphtha - unspecified - solvent **
	LC ₅₀ rabbit (derm)	>2000	mg/kg	low boiling point naphtha - unspecified - solvent ** ** REACH dossier information
Dermal compatibility	No data available. May cause skin irritation			
Mucous membrane compatibility	No data available. May cause eye irritation			
Further information	Diphenylmethane-4,4'-di-isocyanate may cause skin and respiratory sensitisation (REACH dossier information)			

12. ECOLOGICAL INFORMATION

12.1 Toxicity	LC ₅₀ Fish (Red killifish)	>3000	mg/l	diphenylmethane-4,4'-di-isocyanate ** 96hr
	EC ₅₀ Daphnia magna	129.7	mg/l	diphenylmethane-4,4'-di-isocyanate ** 24hr
	EC ₅₀ Daphnia magna	4.5	mg/l	methylenediphenyl diisocyanate ** 24 hrs ** REACH dossier information
12.2 Degradability	Not determined			
12.3 Bioaccumulative potential	Not determined for product. log Pow 4.51 @ 22 °C (diphenylmethane-4,4'-di-isocyanate, REACH dossier information)			
12.4 Mobility in soil	Not determined			
12.5 PBT/vPvB assessment	Not determined			
12.6 Other adverse effects	Do not allow to get into waste water or waterways; if this occurs, inform the relevant water authority at once.			

13. DISPOSAL CONSIDERATIONS**13.1 Waste treatment measures**

Advice on disposal	In accordance with national and local authority regulations, e.g. The Hazardous Waste (England & Wales) Regulations 2005. Treat empty containers in the same way as the product or if possible wash out thoroughly and recycle.
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14. TRANSPORT INFORMATION

14.1 United Nations number ADR, IMDG, IATA	UN 1263
14.2 Proper shipping name ADR, IMDG, IATA	PAINT
14.3 Transport class(s) ADR, IMDG, IATA	3
14.4 Packing group ADR, IMDG, IATA	III
14.5 Environmental hazards ADR, IMDG, IATA	The product SHOULD be marked as a marine pollutant
14.6 Special procedures ADR, IMDG, IATA	None known.
14.7 Transport in bulk ADR, IMDG, IATA	Not applicable



15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations	The product is classified in accordance with EC Regulation 1272/2008 (CLP), Other regulatory information and provisions are not applicable for this product.
15.2 Chemical safety assessment	Not applicable

16. OTHER INFORMATION**Further information**

The SDS has been revised in accordance with EC Regulation 1272/2008 (CLP)

Hazard statements referred to in sections 2-15

H226: Flammable liquid and vapour
H228: Flammable solid.
H261: In contact with water releases flammable gases.
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.
H336: May cause drowsiness or dizziness.
H351: Suspected of causing cancer
H361: Suspected of damaging fertility or the unborn child
H373: May cause damage to organs through prolonged or repeated exposure.
H411: Toxic to aquatic life with long lasting effects,
H412: Harmful to aquatic life with long lasting effects

Sources of data Other suppliers' safety data sheets

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