

**Safety data sheet**  
according to 1907/2006/EC, Article 31

Printing date 29.06.2017

Revision: 29.06.2017

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

For professional use only

- **1.1 Product identifier** For professional use only
- **Trade name:** *Armourclad Standard Sealer*
- **1.2 Relevant identified uses of the substance or mixture and uses advised against** *Surface Coating*
- **Application of the substance / the mixture**  
*Surface Coating*  
*Surface Coating*
- **1.3 Details of the supplier of the safety data sheet**
- **Supplier:**  
*HMG PAINTS LIMITED*  
*RIVERSIDE WORKS, COLLYHURST ROAD,*  
*MANCHESTER. M40 7RU*  
*UNITED KINGDOM*  
*TEL: +44 (0)161 205 7631*  
*EMAIL: sales@hmgpaint.com*
- **Further information obtainable from:** *sales@hmgpaint.com*
- **1.4 Emergency telephone number:** *+44 (0)161 205 7631 (Business hours)*

**SECTION 2: Hazards identification**

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**  
*Flam. Liq. 3 H226 Flammable liquid and vapour.*  
*Skin Irrit. 2 H315 Causes skin irritation.*  
*Eye Irrit. 2 H319 Causes serious eye irritation.*  
*Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.*  
*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**



GHS02



GHS07



GHS08

- **Signal word** *Danger*
- **Hazard-determining components of labelling:**  
*diphenylmethanediisocyanate, isomeres and homologues*  
*diphenylmethane-4,4'-di-isocyanate*  
*diphenylmethane-2,4'-diisocyanate*  
*diphenylmethane-2,2'-diisocyanate*
- **Hazard statements**  
*H226 Flammable liquid and vapour.*  
*H315 Causes skin irritation.*

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*H319 Causes serious eye irritation.**H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.**H335 May cause respiratory irritation.***Precautionary statements***P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.**P241 Use explosion-proof electrical/ventilating/lighting equipment.**P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.**P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.**P405 Store locked up.**P501 Dispose of contents/container in accordance with local/regional/national/international regulations.***Additional information:***Contains isocyanates. May produce an allergic reaction.***2.3 Other hazards****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: 90989-38-1 EINECS: 292-694-9	Xylene (mixed isomers) ⚠ Flam. Liq. 3, H226; ⚠ Asp. Tox. 1, H304; ⚠ Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315	25-50%
CAS: 9016-87-9	diphenylmethanediisocyanate, isomeres and homologues ⚠ Resp. Sens. 1, H334; ⚠ Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335	10-25%
CAS: 101-68-8 EINECS: 202-966-0	diphenylmethane-4,4'-di-isocyanate ⚠ Resp. Sens. 1, H334; ⚠ Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335	2.5-10%
CAS: 5873-54-1 EINECS: 227-534-9	diphenylmethane-2,4'-diisocyanate ⚠ Resp. Sens. 1, H334; ⚠ Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335	≤ 2.5%
CAS: 2536-05-2 EINECS: 219-799-4	diphenylmethane-2,2'-diisocyanate ⚠ Resp. Sens. 1, H334; ⚠ Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335	≤ 2.5%

*Additional information: For the wording of the listed hazard phrases refer to section 16.***SECTION 4: First aid measures****4.1 Description of first aid measures****After inhalation:***In case of unconsciousness place patient stably in side position for transportation.**Supply fresh air; consult doctor in case of complaints.***After skin contact:***Immediately wash with water and soap and rinse thoroughly. Remove contaminated clothing.***After eye contact:***Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.***After swallowing:***Do not induce vomiting; call for medical help immediately and show safety datasheet or label.*

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- **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed** Treat symptomatically.

### **SECTION 5: Firefighting measures**

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:**  
CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **5.2 Special hazards arising from the substance or mixture** No further relevant information available.
- **5.3 Advice for firefighters**
- **Protective equipment:** Put on breathing apparatus

### **SECTION 6: Accidental release measures**

- **6.1 Personal precautions, protective equipment and emergency procedures**  
Wear protective equipment. Keep unprotected persons away.
- **6.2 Environmental precautions:**  
Prevent seepage into sewage system, workpits and cellars.  
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**  
Hygiene measures:  
Wash hands before breaks and at the end of workday.  
Use protective skin cream before handling the product.  
Keep receptacles tightly sealed.  
Ensure good ventilation/extraction at the workplace.
- **Information about fire - and explosion protection:**  
Keep ignition sources away - Do not smoke.  
Protect against electrostatic charges.
- **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 receptacle tightly sealed and in a well-ventilated place.  
Keep away from heat.
- **7.3 Specific end use(s)** No further relevant information available.

### **SECTION 8: Exposure controls/personal protection**

- **Additional information about design of technical facilities:** No further data; see item 7.

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· **8.1 Control parameters**· **Ingredients with limit values that require monitoring at the workplace:****9016-87-9 diphenylmethanediisocyanate, isomeres and homologues**

WEL	Short-term value: 0.07 mg/m <sup>3</sup> Long-term value: 0.02 mg/m <sup>3</sup> Sen; as -NCO
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**101-68-8 diphenylmethane-4,4'-di-isocyanate**

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

WEL	Short-term value: 0.07 mg/m <sup>3</sup> Long-term value: 0.02 mg/m <sup>3</sup> Sen; as -NCO
-----	---

**2536-05-2 diphenylmethane-2,2'-diisocyanate**

WEL	Short-term value: 0.07 mg/m <sup>3</sup> Long-term value: 0.02 mg/m <sup>3</sup> Sen; as -NCO
-----	---

· **DNELs****90989-38-1 Xylene (mixed isomers)**

Oral	DNEL	1.6 mg/day (Con)
Dermal	DNEL	108 mg/day (Con)
Inhalative	DNEL	14.8 mg/m <sup>3</sup> (Con) 77 mg/m <sup>3</sup> (Ind)

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

Inhalative	DNEL	0.025 mg/m <sup>3</sup> (Con) 0.05 mg/m <sup>3</sup> (Ind)
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**5873-54-1 diphenylmethane-2,4'-diisocyanate**

Inhalative	DNEL	0.025 mg/m <sup>3</sup> (Con) 0.05 mg/m <sup>3</sup> (Ind)
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**2536-05-2 diphenylmethane-2,2'-diisocyanate**

Inhalative	DNEL	0.025 mg/m <sup>3</sup> (Con) 0.05 mg/m <sup>3</sup> (Ind)
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· **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:** When spraying the product, use a respiratory protective device.· **Protection of hands:**

When skin exposure may occur, advice should be sought from the glove supplier on appropriate types and usage times for this product.



Protective gloves

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the

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resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:**



Tightly sealed goggles

### SECTION 9: Physical and chemical properties

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

· **General Information**

· **Appearance:**

· <b>Form:</b>	Liquid
· <b>Colour:</b>	According to product specification
· <b>Odour:</b>	Characteristic
· <b>Odour threshold:</b>	Not determined.

· **pH-value:** Not determined.

· **Change in condition**

· <b>Melting point/freezing point:</b>	Undetermined.
· <b>Initial boiling point and boiling range:</b>	136 °C

· **Flash point:** 24 °C

· **Flammability (solid, gas):** Not applicable.

· **Ignition temperature:** 400 °C

· **Decomposition temperature:** Not determined.

· **Auto-ignition temperature:** Product is not selfigniting.

· **Explosive properties:** Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

· **Explosion limits:**

· <b>Lower:</b>	1.0 Vol %
· <b>Upper:</b>	7.0 Vol %

· **Vapour pressure at 20 °C:** 6.7 hPa

· <b>Density at 20 °C:</b>	1.011 g/cm <sup>3</sup>
· <b>Relative density</b>	Not determined.
· <b>Vapour density</b>	Not determined.
· <b>Evaporation rate</b>	Not determined.

· **Solubility in / Miscibility with water:** NOT MISCIBLE

· **Partition coefficient: n-octanol/water:** Not determined.

· **Viscosity:**

· <b>Dynamic:</b>	Not determined.
· <b>Kinematic at 20 °C:</b>	22 s (DIN 53211/4)

· **Solvent content:**

· **Organic solvents:** 38.8 %

· **Solids content:** 61.2 %

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· **9.2 Other information** No further relevant information available.

### SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:**  
No dangerous decomposition products when stored and handled correctly

### SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity** Based on available data, the classification criteria are not met.

· **LD/LC50 values relevant for classification:**

**90989-38-1 Xylene (mixed isomers)**

Oral	LD50	3523 mg/kg (Rat)
Dermal	LD50	12126 mg/kg (Rab)
Inhalative	LC50/4 h	27000 mg/l (Rat)

**9016-87-9 diphenylmethanediisocyanate, isomeres and homologues**

Oral	LD50	>10000 mg/kg (Rat)
Dermal	LD50	>9400 mg/kg (Rab)
Inhalative	LC50/4 h	0.31 mg/l (Rat)

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

Oral	LD50	>2000 mg/kg (Rat)
Dermal	LD50	>9400 mg/kg (Rab)
Inhalative	LC50/4 h	0.368 mg/l (Rat)

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

Oral	LD50	>2000 mg/kg (Rat)
Dermal	LD50	>9400 mg/kg (Rab)
Inhalative	LC50/4 h	0.387 mg/l (Rat)

**2536-05-2 diphenylmethane-2,2'-diisocyanate**

Oral	LD50	>2000 mg/kg (Rat)
Dermal	LD50	>9400 mg/kg (Rab)
Inhalative	LC50/4 h	0.527 mg/l (Rat)

- **Primary irritant effect:**
- **Skin corrosion/irritation**  
Causes skin irritation.
- **Serious eye damage/irritation**  
Causes serious eye irritation.
- **Respiratory or skin sensitisation**  
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.

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- **STOT-single exposure**  
May cause respiratory irritation.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.


### SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **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 2 (German Regulation) (Self-assessment): hazardous for water  
Do not allow product to reach ground water, water course or sewage system.  
Danger to drinking water if even small quantities leak into the ground.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **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

- |  |   |
|--|---|
| · <b>14.1 UN-Number</b>                    |   |
| · <b>ADR, IMDG, IATA</b>                   | UN1263  |
| · <b>14.2 UN proper shipping name</b>      |   |
| · <b>ADR</b>                               | 1263 PAINT  |
| · <b>IMDG, IATA</b>                        | PAINT   |
| · <b>14.3 Transport hazard class(es)</b>   |   |
| · <b>ADR, IMDG, IATA</b>                   |   |
|  |  |
| · <b>Class</b>                             | 3 Flammable liquids.  |
| · <b>Label</b>                             | 3   |
| · <b>14.4 Packing group</b>                |   |
| · <b>ADR, IMDG, IATA</b>                   | III   |
| · <b>14.5 Environmental hazards:</b>       |   |
| · <b>Marine pollutant:</b>                 | No  |
| · <b>14.6 Special precautions for user</b> | Warning: Flammable liquids.   |
| · <b>Danger code (Kemler):</b>             | 30  |

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· <b>EMS Number:</b>	<i>F-E,S-D</i>
· <b>Stowage Category</b>	<i>A</i>
· <b>14.7 Transport in bulk according to Annex II of Marpol and the IBC Code</b>	<i>Not applicable.</i>
· <b>Transport/Additional information:</b>	
· <b>ADR</b>	
· <b>Limited quantities (LQ)</b>	<i>5L</i>
· <b>Excepted quantities (EQ)</b>	<i>Code: E1</i> <i>Maximum net quantity per inner packaging: 30 ml</i> <i>Maximum net quantity per outer packaging: 1000 ml</i>
· <b>Transport category</b>	<i>3</i>
· <b>Tunnel restriction code</b>	<i>D/E</i>
· <b>IMDG</b>	
· <b>Limited quantities (LQ)</b>	<i>5L</i>
· <b>Excepted quantities (EQ)</b>	<i>Code: E1</i> <i>Maximum net quantity per inner packaging: 30 ml</i> <i>Maximum net quantity per outer packaging: 1000 ml</i>
· <b>UN "Model Regulation":</b>	<i>UN 1263 PAINT, 3, III</i>

### SECTION 15: Regulatory information

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

- *Directive 2012/18/EU*
- *Named dangerous substances - ANNEX I None of the ingredients is listed.*
- *Seveso category P5c FLAMMABLE LIQUIDS*
- *Qualifying quantity (tonnes) for the application of lower-tier requirements 5,000 t*
- *Qualifying quantity (tonnes) for the application of upper-tier requirements 50,000 t*
- *REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3, 56a, 56b, 56c*

· **National regulations:**

· **Technical instructions (air):**

Class	Share in %
<i>I</i>	<i>32.0</i>
<i>NK</i>	<i>38.8</i>

- **Waterhazard class:** *Water hazard class 2 (Self-assessment): hazardous for water.*
- **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**

- H226 Flammable liquid and vapour.*
- H304 May be fatal if swallowed and enters airways.*
- H312 Harmful in contact with skin.*
- H315 Causes skin irritation.*
- 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.*

- **Department issuing SDS:** *Product safety department: LABORATORY*

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**· Contact: Health & Safety Officer****· Abbreviations and acronyms:**

*RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)*

*ICAO: International Civil Aviation Organisation*

*ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)*

*IMDG: International Maritime Code for Dangerous Goods*

*IATA: International Air Transport Association*

*GHS: Globally Harmonised System of Classification and Labelling of Chemicals*

*EINECS: European Inventory of Existing Commercial Chemical Substances*

*ELINCS: European List of Notified Chemical Substances*

*CAS: Chemical Abstracts Service (division of the American Chemical Society)*

*DNEL: Derived No-Effect Level (REACH)*

*LC50: Lethal concentration, 50 percent*

*LD50: Lethal dose, 50 percent*

*PBT: Persistent, Bioaccumulative and Toxic*

*vPvB: very Persistent and very Bioaccumulative*

*Flam. Liq. 3: Flammable liquids – Category 3*

*Acute Tox. 4: Acute toxicity – Category 4*

*Skin Irrit. 2: Skin corrosion/irritation – Category 2*

*Eye Irrit. 2: Serious eye damage/eye irritation – Category 2*

*Resp. Sens. 1: Respiratory sensitisation – Category 1*

*STOT SE 3: Specific target organ toxicity (single exposure) – Category 3*

*Asp. Tox. 1: Aspiration hazard – Category 1*

GB