

# SAFETY DATA SHEET

## 1 IDENTIFICATION OF THE PREPARATION AND COMPANY

**PRODUCT NAME AND/OR CODE:** HNAH1547  
**INTENDED USE:** Hardener for use with waterbased PU coatings on timber.

**NAME & FULL ADDRESS:** Arch Coatings UK Ltd  
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## 2 HAZARDS IDENTIFICATION

The product is classified as flammable and irritant according to the CHIP Regulations.  
Irritating to Skin and Eyes.  
Flammable.  
May cause sensitisation by skin contact.  
Harmful to aquatic organisms, may cause long term adverse effects in the aquatic environment.

## 3 COMPOSITION/INFORMATION OF INGREDIENTS

Substances presenting a health and environmental hazard within the meaning of the CHIP Regulations or assigned workplace exposure limits.

Substance	Conc Range %	Symbol Letter	R Phrases <sup>(5)</sup>	Workplace Exposure Limits (WEL's)				Notations <sup>(3)</sup>
				8 hr TWA <sup>(1)</sup>		15 min STEL <sup>(2)</sup>		
				ppm <sup>(4)</sup>	mg/m <sup>3(4)</sup>	ppm <sup>(4)</sup>	mg/m <sup>3(4)</sup>	
Hexamethylene diisocyanate oligomers (CAS: 28182-81-2)	50-100	Xi	43, 52, 53	(6)	(6)	(6)	(6)	
2-methoxy-1-methyl ethyl acetate (CAS: 108-65-6)	10-25	Xi	36	(6)	(6)	(6)	(6)	
Ethoxylated tridecyl alcohol (CAS:9046-01-9)	2.5-10	C	34, 36/38	(6)	(6)	(6)	(6)	
Dimethylaminocyclohexane (CAS: 98-94-2)	0.5-2.5	Xn, N	20/21/22, 34, 51, 53	(6)	(6)	(6)	(6)	
Hexamethalene Diisocyanate (CAS:822-06-0)	0.1-0.5	T	23, 36/37/38, 42/43	-	0.02	-	0.07	Sen

- Notes:**
- (1) Long term exposure limit – 8 hour time weighted average.
  - (2) Short term exposure limit – 15 minute reference period.
  - (3) 'Sk' indicates a risk of absorption through the skin. 'Sen' indicates a respiratory sensitiser.  
'WEL's' are taken from EH40, except those marked 'SUP', which are assigned by the supplier of the substance.  
'Bmgv' indicates that biological monitoring may be appropriate. Biological Monitoring Guidance Values are listed in EH40.

- (4) For full text see Section 15.  
(6) Values have not been assigned by the supplier.

## 4 FIRST AID MEASURES

### General:

In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person.

### Inhalation:

Remove to fresh air, keep the patient warm and at rest. If breathing has stopped, administer artificial respiration. Give nothing by mouth. If unconscious, place in the recover position and seek medical advice.

### Eye Contact:

Contact lenses should be removed. Irrigate copiously with clean, fresh water for at least 10 minutes, holding eyelids apart and seek medical advice.

### Skin Contact:

Remove contaminated clothing. Wash skin thoroughly with soap and water or use a proprietary skin cleaner.  
DO NOT USE SOLVENTS OR THINNERS.

### Ingestion:

If accidentally swallowed obtain immediate medical attention. Keep at rest. Do **NOT** induce vomiting.

## 5 FIRE FIGHTING MEASURES

### Extinguishing Media:

RECOMMENDED: Alcohol resistant foam, CO<sub>2</sub> powder, water spray/mist  
NOT TO BE USED: Water jet

### Recommendations:

Fire will produce dense black smoke containing hazardous products of combustion (see Section 10). Exposure to decomposition products may be a hazard to health. Appropriate self-contained breathing apparatus may be required. Cool closed containers exposed to fire with water spray. Do not allow run-off from fire fighting to enter drains or watercourses.

## 6 ACCIDENTAL RELEASE MEASURES

Exclude sources of ignition and ventilate the area. Exclude non-essential personnel. Avoid breathing vapours. Refer to protective measures listed in Sections 7 and 8. Contain and collect spillages with non-combustible absorbent materials, e.g. sand, earth, vermiculite, diatomaceous earth and place in a suitable container for disposal in accordance with the waste regulations (see Section 13). The contaminated area should be cleaned up immediately with a suitable decontaminant. One possible (flammable) decontaminant comprises: water (45 parts by volume)/ethanol or isopropanol (50 parts)/concentrated (d: 0.880) ammonia solution (5 parts). A non-flammable alternative is sodium carbonate (5 parts)/water (95 parts). Add the same decontaminant to any residues and allow to stand for several days in a non-sealed container until no further reaction occurs. Once this stage is reached, close the container and dispose of in accordance with the waste regulations (see Section 13).

Do not allow to enter drains or watercourses.

If the product enters drains or sewers the local Water Company should be contacted immediately; in case of contamination of streams, rivers or lakes, the relevant Environment Agency.

## 7 HANDLING AND STORAGE

### Handling:

PERSONS WITH A HISTORY OF ASTHMA, ALLERGIES OR CHRONIC OR RECURRENT RESPIRATORY DISEASE SHOULD ONLY BE EMPLOYED IN PROCESSES IN WHICH THIS PRODUCT IS USED UNDER APPROPRIATE MEDICAL SUPERVISION.

Vapours are heavier than air and may spread along floors. They may form explosive mixtures with air. Prevent the creation of flammable or explosive concentrations of vapour in air and avoid vapour concentrations higher than the workplace exposure limits.

Additionally, the product should only be used in areas which all naked lights and other sources of ignition have been excluded. Electrical equipment should be protected to the appropriate standard. Keep the container tightly closed. Exclude sources of heat, sparks and open flame. Non-sparking tools should be used.

Avoid skin and eye contact. Avoid inhalation of vapour and spray mist.

Smoking, eating and drinking should be prohibited in areas of storage and use.

For Occupational Exposure Controls, see Section 8.

Never use pressure to empty, the container is not a pressure vessel.

Always keep in containers made of the same material as the supply container.

Good housekeeping standards including the regular safe removal of waste materials and regular maintenance of spray booth filters will minimise risks of spontaneous combustion and other fire hazards.

Precautions should be taken to minimise exposure to atmospheric humidity or water as carbon dioxide may be formed which, in closed containers can result in pressurisation. Care should be taken when re-opening partly used containers.

The Manual Handling Operations Regulations may apply to the handling of containers of the product. Refer to the guide weight indicated on the container when carrying out assessments.

#### **Storage:**

The storage and use of this product is subject to the requirements of the Dangerous Substances and Explosive Atmosphere Regulations 2002 (DSEAR). The requirements are given in the HSE Approved Code of Practice and Guidance, Storage of Dangerous Substances.

Up to 250 litres of such highly flammable liquids may be kept in a workroom provided they are kept in a fireproof cupboard or bin.

Larger quantities must be kept in a separate storeroom conforming to the structural requirements of the regulations. Further guidance is contained in the HSE guidance note Storage of Flammable Liquids in Containers.

Observe the label precautions. Store between 5 and 25°C in a dry, well-ventilated place away from sources of heat, ignition and direct sunlight. No smoking. Prevent unauthorised access. Containers that are opened should be properly resealed and kept upright to prevent leakage. The principles contained in the HSE guidance note Chemical Warehousing: The Storage of packaged Dangerous Substances should be observed when storing this product. Store separately from oxidising agents, strongly alkaline and strongly acidic materials, amines, alcohols and water.

## **8**

## **EXPOSURE CONTROLS/PERSONAL PROTECTION**

PERSONS WITH A HISTORY OF ASTHMA, ALLERGIES OR CHRONIC OR RECURRENT RESPIRATORY DISEASE SHOULD ONLY BE EMPLOYED IN PROCESSES IN WHICH THIS PRODUCT IS USED UNDER APPROPRIATE MEDICAL SUPERVISION.

#### **Exposure Limits:**

(see Section 2)

#### **Exposure Controls:**

Provide adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and/or solvent vapours below the relevant workplace exposure limits, suitable respiratory protective equipment should be worn (see Personal Protection below).

#### **Personal Protection:**

**All personal protective equipment, including respiratory protective equipment, used to control exposure to hazardous substances must be selected to meet the requirements of the COSHH Regulations.**

#### **Respiratory Protection:**

Air-fed respiratory protective equipment should be worn when this product is sprayed. This should be in addition to other measures taken to reduce exposure (eg. In booth design and operation and process modifications). Non-essential and unprotected people should be excluded from the area if possible.

#### **Hand Protection:**

When skin exposure may occur, advice should be sought from glove suppliers on appropriate types and usage times for this product. The instructions and information provided by the glove supplier on use, storage, maintenance and replacement must be followed.

Barrier creams may help to protect exposed areas of the skin, but are not substitutes for full physical protection. They should not be applied once exposure has occurred.

**Eye Protection:**

Eye protection designed to protect against liquid splashes should be worn.

**Skin Protection:**

Cotton or cotton/synthetic overalls or coveralls are normally suitable. Grossly contaminated clothing should be removed and the skin washed with soap and water or a proprietary skin cleaner.

Regular skin inspection of users of this product is recommended.

**ALWAYS WASH YOUR HANDS BEFORE EATING, SMOKING OR USING THE TOILET.**

**9 PHYSICAL AND CHEMICAL PROPERTIES**

Physical state:	Liquid		
Flash Point:	40 °C	Method:	Closed cup
Specific Gravity:	1.12	Method:	weight of 100 ml at 20°C
Vapour Density (air=1):	4.6		
Lower Explosion Limit:	% VOL		
Boiling Point ( °C)	140		
Solubility in Water:	4.6 %		
VOC in g/l:	242		

**10 STABILITY AND REACTIVITY**

Stable under the recommended storage and handling conditions (see Section 7). In a fire, hazardous decomposition products such as smoke, carbon monoxide and carbon dioxide and oxides of nitrogen, hydrogen cyanide, amines and alcohols may be produced. Keep away from oxidising agents and strongly alkaline and strongly acidic materials to prevent the possibility of exothermic reaction. Keep dirty wipers in an enclosed container.

Uncontrolled exothermic reactions may occur with amines and alcohols. The product may react slowly with water, resulting in evolution of carbon dioxide. In closed containers, pressure build up could result in distortion, blowing and in extreme cases bursting of the container.

**11 TOXICOLOGICAL INFORMATION**

There is no data available on the product itself. The product has been assessed following the conventional method of CHIP and is classified for toxicological hazards accordingly. This takes into account, where known, delayed and immediate effects and also chronic effects of components from short-term and long-term exposure by oral, inhalation and dermal routes of exposure and eye contact. See Sections 3 and 15 for details of the resulting hazard classification.

Exposure to organic solvent vapours in excess of the stated occupational exposure limit may result in adverse health effects, such as irritation of the mucous membrane and the respiratory system and adverse effects on the kidney, liver and central nervous systems. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness. Repeated and prolonged exposure to solvents at levels significantly above WELs may lead to the development of long-lasting central nervous system disorders such as chronic toxic encephalopathy. Signs of toxicity include changes in behaviour and memory. Solvents may cause some of the above effects by absorption through the skin. Repeated or prolonged contact with the product may cause removal of natural fats from the skin, resulting in non-allergic contact dermatitis and absorption through the skin. Splashes in the eyes may cause irritation and reversible local damage. Ingestion may result in the following effects: sore throat, abdominal pain, drowsiness, nausea, vomiting and diarrhoea.

Based on the properties of the isocyanate content of this product, respiratory exposure may cause acute irritation and/or sensitisation of the respiratory system, resulting in asthmatic symptoms, wheezing and tightness of the chest. Sensitised persons may subsequently show asthmatic symptoms when exposed to airborne concentrations of isocyanates well below the occupational exposure limit. Repeated exposure may lead to permanent respiratory disability. COSHH requires that persons exposed to products containing isocyanates, which are respiratory sensitisers, are subject to appropriate health surveillance. Publications giving guidance on health surveillance are listed in Section 16.

## 12 ECOLOGICAL INFORMATION

There is no data available on the product itself.

The product has been assessed following the conventional method of CHIP and is classified for ecological hazards accordingly (see section 3 and 15 for details). Contains Hexamethylene diisocyanate oligomers which is harmful to aquatic organisms, Dimethylaminocyclohexane which is toxic to aquatic organisms and both substances may also cause long term adverse effects in the aquatic environment.

The product should not be allowed to enter drains or watercourses or be deposited where it can affect ground or surface waters. Air Pollution Control requirements of regulations made under the Environmental Protection Act and Pollution Prevention and Control Act may apply to the use of this product (see Section 9 for VOC level).

## 13 DISPOSAL CONSIDERATIONS

Do not allow into drains or watercourses or dispose of where ground or surface waters may be affected. Wastes, including emptied containers, are controlled wastes and should be disposed of in accordance with regulations made under the Control of Pollution Act and the Environmental Protection Act.

The classification of this product when mixed with other related materials supplied and disposed of as waste is: 0800111 (paint/thinners). For Further Information contact your local waste authority.

Using the information provided in this safety data sheet, advice should be obtained from the relevant Environment Agency, whether the special waste regulations apply.

Residues in emptied containers can be neutralised with decontaminant (see Section 6).

## 14 TRANSPORT INFORMATION

### Transport within the user's premises:

Always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of accident or spillage.

### Transport Details:

UN 1263: Paint related product.

CLASS 3 - PACKING GROUP III

Ensure drivers have adequate training.

## 15 REGULATORY INFORMATION

The product is classified and labelled for supply in accordance with the CHIP Regulations as follows:

<b>R No</b>	<b>Phrase</b>
R10	FLAMMABLE
R36/38	IRRITATING TO EYES AND SKIN
R43	MAY CAUSE SENSITISATION BY SKIN CONTACT
R52/53	HARMFUL TO AQUATIC ORGANISMS, MAY CAUSE LONG TERM EFFECTS IN THE AQUATIC ENVIRONMENT.
<b>S No</b>	<b>Phrase</b>
S23	DO NOT BREATHE VAPOUR/SPRAY
S26	IN CASE OF CONTACT WITH EYES, RINSE IMMEDIATELY WITH PLENTY OF WATER AND SEEK MEDICAL ADVICE
S43	IN CASE OF FIRE, USE POWDER EXTINGUISHER- NEVER USE WATER
S46	IF SWALLOWED SEEK MEDICAL ADVICE IMMEDIATELY AND SHOW THIS CONTAINER OR LABEL.
S51	USE ONLY IN WELL VENTILATED AREAS
S61	AVOID RELEASE INTO THE ENVIRONMENT

The information contained in this safety data sheet does not constitute the user's own assessment of workplace risks as required by other health and safety legislation. The provisions of the Health and Safety at Work etc Act and the Control of Substances Hazardous to Health Regulations apply to the use of this product at work.

<b>16</b>	<b>OTHER INFORMATION</b>
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Text of other R phrases listed in Section 2.

R Phrase No	Text
R52	HARMFUL TO AQUATIC ORGANISMS
R34	CAUSES BURNS
R20/21/22	HARMFUL BY INHALATION, IN CONTACT WITH SKIN AND IF SWALLOWED
R51	TOXIC TO AQUATIC ORGANISMS
R23	TOXIC BY INHALATION
R36/37/38	IRRITATING TO EYES, RESPIRATORY SYSTEM AND SKIN
R42/43	MAY CAUSE SENSITISATION BY INHALATION AND SKIN CONTACT

The information contained in this safety data sheet is provided in accordance with the requirements of CHIP Regulations.

The product should not be used for purposes other than those shown in Section 1 without first referring to the supplier and obtaining written handling instructions. As the specific conditions of use of the product are outside the supplier's control, the user is responsible for ensuring that the requirements of relevant legislation are complied with.

The information contained in this safety data sheet is based on the present state of knowledge and current national legislation. It provides guidance on health, safety and environmental aspects of the product and should not be construed as any guarantee of technical performance or suitability for particular applications.

Further information and relevant advice can be found in the following:

The Control of Substances Hazardous to Health Regulations 2002 (SI 2002: 2677)  
 COSHH Essentials: easy steps to control chemicals, HSG193. Details of Control Guidance Sheets, which may be relevant to the particular conditions of use, can also be found in this publication.  
 Chemical Warehousing: The storage of packaged dangerous Substances HSG71  
 Storage of Flammable Liquids in Containers HSG51  
 The Manual Handling Operations Regulations 1992 (SI 1992: 2793)  
 The Dangerous Substances and Explosive Atmosphere Regulations DSEAR 2002: Approved Code of Practice and Guidance, L138  
 Storage of Dangerous Substances DSEAR 2002: Approved Code of Practice and Guidance, L135  
 Control and Mitigation Measures, DSEAR 2002: Approved Code of Practice and Guidance, L136  
 Safe Maintenance, Repair and Cleaning Procedures, DSEAR 2002: Approved Code of Practice and Guidance, L137  
 Design of Plant, Equipment and Workplaces, DSEAR 2002: Approved Code of Practice and Guidance L134  
 The Environmental Protection (Duty of Care) Regulations 1992 (SI 1992: 2839)  
 Breathe Freely, IND(G)172  
 Respiratory Sensitisers and COSHH – a guide for employers. IND(G)95  
 Isocyanates: health hazards and precautionary measures. EH16  
 Surveillance of People Exposed to Health Risks at Work, (ISBN 0 11 885574 3) HMSO  
 EH40/## Occupational Exposure Limits, HSE Books  
 A Guide to Working with Solvents, INDG 272