

# SAFETY DATA SHEET

## AQUAHESIVE 5836 B

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

#### 1.1. Product identifier

Product name AQUAHESIVE 5836 B

CAS number 9016-87-9

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

Identified uses non-volatile prepolymeric isocyanate

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

Supplier Aquasign  
4, Points Commercial Centre  
Craigshaw Road Tullos  
Aberdeen  
AB12 3AP  
00 44 1224 897 060

#### 1.4. Emergency telephone number

Emergency telephone 00 44 1224 897 060

### SECTION 2: Hazards identification

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

##### Classification (EC 1272/2008)

Physical hazards Not Classified

Health hazards Acute Tox. 4 - H332 Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 Resp. Sens. 1 - H334 Skin Sens. 1 - H317 Carc. 2 - H351 STOT SE 3 - H335 STOT RE 2 - H373

Environmental hazards Not Classified

**Human health** Contains non-volatile isocyanate. Suspected of causing cancer. Harmful if inhaled. The liquid may be irritating to eyes, respiratory system and skin.

**Environmental** The product will harden into a solid mass in contact with water and moisture. The resultant material is not biodegradable.

**Physicochemical** Closed containers can burst violently when heated, due to excess pressure build-up.

#### 2.2. Label elements

##### Hazard pictograms



Signal word Danger

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<b>Hazard statements</b>	<p>H315 Causes skin irritation.</p> <p>H317 May cause an allergic skin reaction.</p> <p>H319 Causes serious eye irritation.</p> <p>H332 Harmful if inhaled.</p> <p>H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.</p> <p>H335 May cause respiratory irritation.</p> <p>H351 Suspected of causing cancer.</p> <p>H373 May cause damage to organs through prolonged or repeated exposure.</p>
<b>Precautionary statements</b>	<p>P202 Do not handle until all safety precautions have been read and understood.</p> <p>P260 Do not breathe vapour/ spray.</p> <p>P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.</p> <p>P284 [In case of inadequate ventilation] wear respiratory protection.</p> <p>P314 Get medical advice/ attention if you feel unwell.</p> <p>P403+P233 Store in a well-ventilated place. Keep container tightly closed.</p>
<b>Contains</b>	Diphenylmethane - diisocyanate, isomers and homologues
<b>Supplementary precautionary statements</b>	<p>P201 Obtain special instructions before use.</p> <p>P261 Avoid breathing vapour/ spray.</p> <p>P264 Wash contaminated skin thoroughly after handling.</p> <p>P271 Use only outdoors or in a well-ventilated area.</p> <p>P272 Contaminated work clothing should not be allowed out of the workplace.</p> <p>P302+P352 IF ON SKIN: Wash with plenty of water.</p> <p>P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.</p> <p>P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</p> <p>P308+P313 IF exposed or concerned: Get medical advice/ attention.</p> <p>P312 Call a POISON CENTRE/doctor if you feel unwell.</p> <p>P321 Specific treatment (see medical advice on this label).</p> <p>P332+P313 If skin irritation occurs: Get medical advice/ attention.</p> <p>P333+P313 If skin irritation or rash occurs: Get medical advice/ attention.</p> <p>P337+P313 If eye irritation persists: Get medical advice/ attention.</p> <p>P342+P311 If experiencing respiratory symptoms: Call a POISON CENTER/ doctor.</p> <p>P362+P364 Take off contaminated clothing and wash it before reuse.</p> <p>P405 Store locked up.</p> <p>P501 Dispose of contents/ container in accordance with national regulations.</p>

### 2.3. Other hazards

This product does not contain any substances classified as PBT or vPvB.

## SECTION 3: Composition/information on ingredients

### 3.2. Mixtures

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<b>Diphenylmethane - diisocyanate, isomers and homologues</b>	<b>80-100%</b>
CAS number: 9016-87-9	
<b>Classification</b>	
Acute Tox. 4 - H332	
Skin Irrit. 2 - H315	
Eye Irrit. 2 - H319	
Resp. Sens. 1 - H334	
Skin Sens. 1 - H317	
Carc. 2 - H351	
STOT SE 3 - H335	
STOT RE 2 - H373	

The full text for all hazard statements is displayed in Section 16.

**Composition comments**            Contains non-volatile isocyanate. The product contains a sensitising substance.

### Chemical Nature

chemical nature

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

<b>General information</b>	Get medical attention if any discomfort continues.
<b>Inhalation</b>	Move affected person to fresh air at once. Get medical attention. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen.
<b>Ingestion</b>	Do not induce vomiting. Never give anything by mouth to an unconscious person. Do not induce vomiting. Remove affected person from source of contamination. Get medical attention immediately. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing.
<b>Skin contact</b>	Remove affected person from source of contamination. Remove contaminated clothing. Wash skin thoroughly with soap and water. Get medical attention promptly if symptoms occur after washing.
<b>Eye contact</b>	Remove affected person from source of contamination. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes and get medical attention.
<b>Protection of first aiders</b>	First aid personnel should wear appropriate protective equipment during any rescue. It may be dangerous for first aid personnel to carry out mouth-to-mouth resuscitation.

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

<b>General information</b>	The severity of the symptoms described will vary dependent on the concentration and the length of exposure. The product contains a sensitising substance. Persons already sensitised to diisocyanates may develop allergic reactions when using this product.
<b>Inhalation</b>	Vapours may cause headache, fatigue, dizziness and nausea. The product contains a sensitising substance. The product contains organic solvents. Frequent inhalation of vapours may cause respiratory allergy.
<b>Ingestion</b>	May cause stomach pain or vomiting.
<b>Skin contact</b>	May cause skin irritation/eczema. May cause sensitisation or allergic reactions in sensitive individuals.
<b>Eye contact</b>	May cause severe eye irritation.

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

<b>Notes for the doctor</b>	The product irritates the respiratory tract and may trigger sensitisation of the skin or respiratory tract. Treatment of acute irritation or bronchial constriction is primarily symptomatic. Extended medical treatment may be required depending on the degree of exposure and the severity of the symptoms.
<b>Specific treatments</b>	Treat symptomatically.

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

<b>Suitable extinguishing media</b>	Use fire-extinguishing media suitable for the surrounding fire.
<b>Unsuitable extinguishing media</b>	Water.

#### 5.2. Special hazards arising from the substance or mixture

<b>Specific hazards</b>	Thermal decomposition or combustion products may include the following substances: Asphyxiating gases. Carbon monoxide (CO). Carbon dioxide (CO <sub>2</sub> ). Hydrogen cyanide (HCN). Isocyanates.
<b>Hazardous combustion products</b>	Heating may generate the following products: Carbon monoxide (CO). Oxides of nitrogen. Isocyanates.

#### 5.3. Advice for firefighters

<b>Protective actions during firefighting</b>	Avoid breathing fire gases or vapours. Thermal decomposition or combustion products may include the following substances: Toxic and corrosive gases or vapours. Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Control run-off water by containing and keeping it out of sewers and watercourses.
<b>Special protective equipment for firefighters</b>	Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

### SECTION 6: Accidental release measures

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

<b>Personal precautions</b>	Wear protective clothing as described in Section 8 of this safety data sheet. Avoid inhalation of dust and vapours. If ventilation is inadequate, suitable respiratory protection must be worn.
<b>For non-emergency personnel</b>	Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.
<b>For emergency responders</b>	Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

#### 6.2. Environmental precautions

<b>Environmental precautions</b>	Do not discharge into drains or watercourses or onto the ground.
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#### 6.3. Methods and material for containment and cleaning up

<b>Methods for cleaning up</b>	Wear suitable protective equipment, including gloves, goggles/face shield, respirator, boots, clothing or apron, as appropriate. Absorb in vermiculite, dry sand or earth and place into containers. Avoid the spillage or runoff entering drains, sewers or watercourses.
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#### 6.4. Reference to other sections

<b>Reference to other sections</b>	Wear protective clothing as described in Section 8 of this safety data sheet. See Section 11 for additional information on health hazards.
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### SECTION 7: Handling and storage

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### 7.1. Precautions for safe handling

**Usage precautions** Avoid spilling. Provide adequate ventilation. Avoid inhalation of vapours. Use approved respirator if air contamination is above an acceptable level. Wear appropriate clothing to prevent skin contamination.

**Advice on general occupational hygiene** Wash hands and any other contaminated areas of the body with soap and water before leaving the work site. When using do not eat, drink or smoke.

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

**Storage precautions** Store in tightly-closed, original container in a dry, cool and well-ventilated place. Keep only in the original container.

**Storage class** Water-reactive storage.

### 7.3. Specific end use(s)

**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

#### Occupational exposure limits

#### **Diphenylmethane - diisocyanate, isomers and homologues**

Long-term exposure limit (8-hour TWA): WEL 0.02 mg/m<sup>3</sup>

Short-term exposure limit (15-minute): WEL 0.07 mg/m<sup>3</sup>

WEL = Workplace Exposure Limit

### 8.2. Exposure controls

#### **Protective equipment**



#### **Appropriate engineering controls**

Provide adequate general and local exhaust ventilation. As this product contains ingredients with exposure limits, process enclosures, local exhaust ventilation or other engineering controls should be used to keep worker exposure below any statutory or recommended limits, if use generates dust, fumes, gas, vapour or mist.

#### **Eye/face protection**

The following protection should be worn: Chemical splash goggles. Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. Personal protective equipment for eye and face protection should comply with European Standard EN166.

#### **Hand protection**

To protect hands from chemicals, gloves should comply with European Standard EN374. The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material. When used with mixtures, the protection time of gloves cannot be accurately estimated. Wear protective gloves made of the following material: Nitrile rubber.

#### **Other skin and body protection**

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

#### **Hygiene measures**

Do not smoke in work area. Wash at the end of each work shift and before eating, smoking and using the toilet. Promptly remove any clothing that becomes contaminated. Wash promptly with soap and water if skin becomes contaminated. When using do not eat, drink or smoke.

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<b>Respiratory protection</b>	Respiratory protection must be used if the airborne contamination exceeds the recommended occupational exposure limit. Wear a respirator fitted with the following cartridge: Gas filter, type A2. Respiratory protection complying with an approved standard should be worn if a risk assessment indicates inhalation of contaminants is possible. Ensure all respiratory protective equipment is suitable for its intended use and is 'CE'-marked.
<b>Thermal hazards</b>	Contact with hot product can cause serious thermal burns.
<b>Environmental exposure controls</b>	Keep container tightly sealed when not in use.

### SECTION 9: Physical and chemical properties

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

<b>Appearance</b>	Dark-coloured liquid.
<b>Colour</b>	Brown.
<b>Odour</b>	Earthy, musty
<b>Initial boiling point and range</b>	initial >300°C @
<b>Flash point</b>	>250°C N/A.
<b>Vapour pressure</b>	12 mbar @ °C
<b>Relative density</b>	1.24 @ 20°C
<b>Solubility(ies)</b>	Insoluble in water. Reacts with water
<b>Auto-ignition temperature</b>	> 500°C
<b>Viscosity</b>	ca. 300 cP @ 20°C

#### 9.2. Other information

<b>Refractive index</b>	No information available.
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### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

<b>Reactivity</b>	Reactions with the following materials may generate heat: Water. The product will harden into a solid mass in contact with water and moisture.
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#### 10.2. Chemical stability

<b>Stability</b>	Stable at normal ambient temperatures.
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#### 10.3. Possibility of hazardous reactions

<b>Possibility of hazardous reactions</b>	The following materials may react strongly with the product: Alcohols. Amines. Water, moisture. The product will harden into a solid mass in contact with water and moisture.
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#### 10.4. Conditions to avoid

<b>Conditions to avoid</b>	Reactions with the following materials may generate heat: Alkalis. Amines. When exposed to air, this product will absorb moisture. The product will harden into a solid mass in contact with water and moisture.
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#### 10.5. Incompatible materials

<b>Materials to avoid</b>	Water, steam, water mixtures. Amines. Alcohols, glycols.
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#### 10.6. Hazardous decomposition products

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**Hazardous decomposition products** Heating may generate the following products: Carbon monoxide (CO). Oxides of nitrogen. Isocyanates.

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

**Toxicological effects** Suspected of causing cancer.

#### Acute toxicity - inhalation

**ATE inhalation (dusts/mists mg/l)** 1.5

#### Carcinogenicity

**Carcinogenicity** Suspected of causing cancer.

#### **General information**

May cause respiratory allergy. May cause respiratory system irritation. Contains isocyanates. May produce an allergic reaction. Persons already sensitised to diisocyanates may develop allergic reactions when using this product. Suspected of causing cancer. May cause damage to organs .

#### **Inhalation**

Harmful by inhalation. May cause sensitisation by inhalation. Irritating to respiratory system. Harmful: danger of serious damage to health by prolonged exposure through inhalation. May cause allergy or asthma symptoms or breathing difficulties if inhaled.

#### **Ingestion**

Harmful if swallowed.

#### **Skin contact**

Irritating to skin. May cause sensitisation by skin contact. May cause an allergic skin reaction.

#### **Eye contact**

Irritating to eyes. May cause severe eye irritation.

#### **Acute and chronic health hazards**

Contains a substance/a group of substances which may cause cancer. May cause damage to organs through prolonged or repeated exposure.

#### **Route of exposure**

Inhalation Skin absorption

#### **Target organs**

Skin Eyes Respiratory system, lungs

#### Toxicological information on ingredients.

##### Diphenylmethane - diisocyanate, isomers and homologues

#### Acute toxicity - oral

**Acute toxicity oral (LD<sub>50</sub> mg/kg)** 10,000.0

**Species** Rat

#### Acute toxicity - dermal

**Acute toxicity dermal (LD<sub>50</sub> mg/kg)** 9,400.0

**Species** Rabbit

**ATE dermal (mg/kg)** 9,400.0

#### Acute toxicity - inhalation

**Acute toxicity inhalation (LC<sub>50</sub> dust/mist mg/l)** 0.31

**Species** Rat

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ATE inhalation 1.5  
(dusts/mists mg/l)

### SECTION 12: Ecological information

**Ecotoxicity** The product components are not classified as environmentally hazardous. However, large or frequent spills may have hazardous effects on the environment.

#### 12.1. Toxicity

##### Acute aquatic toxicity

**Acute toxicity - aquatic invertebrates** Reacts with water.

##### Ecological information on ingredients.

#### Diphenylmethane - diisocyanate, isomers and homologues

##### Acute aquatic toxicity

**Acute toxicity - fish** LC<sub>50</sub>, 96 hours: > 1,000 mg/l, Brachydanio rerio (Zebra Fish)

**Acute toxicity - aquatic invertebrates** EC<sub>50</sub>, 48 hours: > 1,000 mg/l, Daphnia magna  
NOEC, 192 hours: > 10 mg/l, Daphnia magna

**Acute toxicity - aquatic plants** EC<sub>0</sub>, 72 hours: 1,640 mg/l, Scenedesmus subspicatus

**Acute toxicity - microorganisms** EC<sub>50</sub>, 3 hours: > 100 mg/l, Activated sludge

**Acute toxicity - terrestrial** LC<sub>50</sub>, 14 days: > 1,000 mg/kg, Eisenia Fetida (Earthworm)

#### 12.2. Persistence and degradability

**Persistence and degradability** The degradability of the product is not known.

##### Ecological information on ingredients.

#### Diphenylmethane - diisocyanate, isomers and homologues

**Persistence and degradability** The product is not readily biodegradable.

**Biodegradation** Water - Degradation (%) 0: < 28 days  
No degradation observed

#### 12.3. Bioaccumulative potential

**Bioaccumulative potential** No data available on bioaccumulation.

##### Ecological information on ingredients.

#### Diphenylmethane - diisocyanate, isomers and homologues

**Bioaccumulative potential** BCF: < 14, Cyprinus carpio (Common carp) High

#### 12.4. Mobility in soil

**Mobility** Reactions with the following materials may generate heat: Water.

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

**Results of PBT and vPvB assessment** This product does not contain any substances classified as PBT or vPvB.



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### 12.6. Other adverse effects

**Other adverse effects**                      None known.

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

**General information**                      Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

**Disposal methods**                          Dispose of waste product or used containers in accordance with local regulations

### SECTION 14: Transport information

**General**    The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, ADR/RID).

#### 14.1. UN number

Not applicable.

#### 14.2. UN proper shipping name

Not applicable.

#### 14.3. Transport hazard class(es)

No transport warning sign required.

#### 14.4. Packing group

Not applicable.

#### 14.5. Environmental hazards

**Environmentally hazardous substance/marine pollutant**

No.

#### 14.6. Special precautions for user

Not applicable.

#### 14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

**Transport in bulk according to**    Not applicable.

**Annex II of MARPOL 73/78**

**and the IBC Code**

### SECTION 15: Regulatory information

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

**National regulations**                      The Control of Substances Hazardous to Health Regulations 2002 (SI 2002 No. 2677) (as amended).  
The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (SI 2009 No. 716).  
EH40/2005 Workplace exposure limits.

**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 (as amended).  
Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended).

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**Guidance** Isocyanates: Health hazards and precautionary measures EH16.  
Approved Classification and Labelling Guide (Sixth edition) L131.

**Authorisations (Annex XIV Regulation 1907/2006)** No specific authorisations are known for this product.

**Restrictions (Annex XVII Regulation 1907/2006)** No specific restrictions on use are known for this product.

### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

## SECTION 16: Other information

**Abbreviations and acronyms used in the safety data sheet**

ATE: Acute Toxicity Estimate.  
 ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.  
 CAS: Chemical Abstracts Service.  
 DNEL: Derived No Effect Level.  
 GHS: Globally Harmonized System.  
 IATA: International Air Transport Association.  
 ICAO: Technical Instructions for the Safe Transport of Dangerous Goods by Air.  
 IMDG: International Maritime Dangerous Goods.  
 Kow: Octanol-water partition coefficient.  
 LC<sub>50</sub>: Lethal Concentration to 50 % of a test population.  
 LD<sub>50</sub>: Lethal Dose to 50% of a test population (Median Lethal Dose).  
 PBT: Persistent, Bioaccumulative and Toxic substance.  
 PNEC: Predicted No Effect Concentration.  
 REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006.  
 RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail.  
 vPvB: Very Persistent and Very Bioaccumulative.  
 IARC: International Agency for Research on Cancer.  
 MARPOL 73/78: International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978.  
 cATpE: Converted Acute Toxicity Point Estimate.  
 BCF: Bioconcentration Factor.  
 BOD: Biochemical Oxygen Demand.  
 EC<sub>50</sub>: 50% of maximal Effective Concentration.  
 LOAEC: Lowest Observed Adverse Effect Concentration.  
 LOAEL: Lowest Observed Adverse Effect Level.  
 NOAEC: No Observed Adverse Effect Concentration.  
 NOAEL: No Observed Adverse Effect Level.  
 NOEC: No Observed Effect Concentration.  
 LOEC: Lowest Observed Effect Concentration.  
 UN: United Nations.

**Key literature references and sources for data** Dangerous Properties of Industrial Materials Report, N.Sax et.al.

**Revision comments** NOTE: Lines within the margin indicate significant changes from the previous revision.

**Revision date** 19/03/2019

**Revision** 10

**Supersedes date** 30/11/2017

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### Hazard statements in full

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.  
H351 Suspected of causing cancer.  
H373 May cause damage to organs through prolonged or repeated exposure.

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.