

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

#### 1.1. Product identifier

Product form : Mixture  
Product name : PRC1810-ISO- SL000221  
Product code : SL000221  
Product group : Trade product

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

##### 1.2.1. Relevant identified uses

Main use category : For professional use only  
Industrial/Professional use spec : Industrial  
Use of the substance/mixture : Polyurethane resin

##### 1.2.2. Uses advised against

No additional information available

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

SYNTHENE  
Ferme de l'Evêché CS20308  
60723 Pont Sainte Maxence Cedex - FRANCE  
T 33 344 31 72 00 - F 33 157 67 44 58  
[qual@synthene.com](mailto:qual@synthene.com) - [www.synthene.com](http://www.synthene.com)

#### 1.4. Emergency telephone number

| Country        | Organisation/Company                                                                          | Address                         | Emergency number | Comment |
|----------------|-----------------------------------------------------------------------------------------------|---------------------------------|------------------|---------|
| United Kingdom | Guy's & St Thomas' Poisons Unit<br>Medical Toxicology Unit, Guy's & St Thomas' Hospital Trust | Avonley Road<br>SE14 5ER London | 0870 243 2241    |         |

### SECTION 2: Hazards identification

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

##### Classification according to Regulation (EC) No. 1272/2008 [CLP]

Acute toxicity (inhalation:dust,mist) H330  
Category 2  
Skin corrosion/irritation, Category 2 H315  
Serious eye damage/eye irritation, Category 2 H319  
Respiratory sensitisation, Category 1 H334  
Skin sensitisation, Category 1 H317  
Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation H335

Full text of H statements : see section 16

##### Adverse physicochemical, human health and environmental effects

No additional information available

#### 2.2. Label elements

##### Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS06



GHS08

Signal word (CLP) : Danger  
Hazardous ingredients : 4,4'-methylenedi(cyclohexyl isocyanate), dicyclohexylmethane-4,4'-di-isocyanate; Homopolymer of 1,6-hexamethylene diisocyanate  
Hazard statements (CLP) : H315 - Causes skin irritation.  
H317 - May cause an allergic skin reaction.

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## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH)

|                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|--------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                | H319 - Causes serious eye irritation.<br>H330 - Fatal if inhaled.<br>H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled.<br>H335 - May cause respiratory irritation.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Precautionary statements (CLP) | : P271 - Use only outdoors or in a well-ventilated area.<br>P280 - Wear eye protection, face protection, protective clothing.<br>P284 - In case of inadequate ventilation wear respiratory protection.<br>P302+P352 - IF ON SKIN: Wash with plenty of water, soap.<br>P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.<br>P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.<br>P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.<br>P342+P311 - If experiencing respiratory symptoms: Call a doctor, a POISON CENTER.<br>P501 - Dispose of contents and container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation. |
| EUH-statements                 | : EUH210 - Safety data sheet available on request.<br>EUH204 - Contains isocyanates. May produce an allergic reaction.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

### 2.3. Other hazards

No additional information available

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Not applicable

### 3.2. Mixtures

| Name                                                                            | Product identifier                                                       | %       | Classification according to Regulation (EC) No. 1272/2008 [CLP]                                                                              |
|---------------------------------------------------------------------------------|--------------------------------------------------------------------------|---------|----------------------------------------------------------------------------------------------------------------------------------------------|
| 4,4'-methylenedi(cyclohexyl isocyanate), dicyclohexylmethane-4,4'-di-isocyanate | (CAS-No.) 5124-30-1<br>(EC-No.) 225-863-2<br>(EC Index-No.) 615-009-00-0 | 50 - 80 | Acute Tox. 2 (Inhalation), H330<br>Skin Irrit. 2, H315<br>Eye Irrit. 2, H319<br>Resp. Sens. 1, H334<br>Skin Sens. 1, H317<br>STOT SE 3, H335 |
| Homopolymer of 1,6-hexamethylene diisocyanate                                   | (CAS-No.) 28182-81-2<br>(REACH-no) 01-2119485796-17                      | 20 - 25 | Acute Tox. 4 (Inhalation), H332<br>Skin Sens. 1, H317<br>STOT SE 3, H335                                                                     |

#### Specific concentration limits:

| Name                                                                            | Product identifier                                                       | Specific concentration limits                                   |
|---------------------------------------------------------------------------------|--------------------------------------------------------------------------|-----------------------------------------------------------------|
| 4,4'-methylenedi(cyclohexyl isocyanate), dicyclohexylmethane-4,4'-di-isocyanate | (CAS-No.) 5124-30-1<br>(EC-No.) 225-863-2<br>(EC Index-No.) 615-009-00-0 | (C >= 0,5) Skin Sens. 1, H317<br>(C >= 0,5) Resp. Sens. 1, H334 |

Full text of H-statements: see section 16

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

|                                       |                                                                                                                                                                  |
|---------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| First-aid measures after inhalation   | : Move to fresh air in case of accidental inhalation of vapours or decomposition products.                                                                       |
| First-aid measures after skin contact | : Take off immediately all contaminated clothing. Gently wash with plenty of soap and water. Get medical advice/attention.                                       |
| First-aid measures after eye contact  | : In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.                                                                  |
| First-aid measures after ingestion    | : Take victim to fresh air, in a quiet place in an half laying position and urgently take medical advice. Do not give anything to drink. Do not induce vomiting. |

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

No additional information available

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

No additional information available

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

|                              |                                            |
|------------------------------|--------------------------------------------|
| Suitable extinguishing media | : Carbon dioxide. Dry powder. Water spray. |
|------------------------------|--------------------------------------------|

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

Fire hazard : In case of fire and/or explosion do not breathe fumes. Isocyanates. Nitrogen oxides. Risk of decomposition. Carbon oxides (CO, CO<sub>2</sub>).

### 5.3. Advice for firefighters

Firefighting instructions : Exercise caution when fighting any chemical fire. Prevent fire fighting water from entering the environment.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection. In case of fire and/or explosion do not breathe fumes.

## SECTION 6: Accidental release measures

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

General measures : Provide local exhaust or general room ventilation.

#### 6.1.1. For non-emergency personnel

Emergency procedures : Evacuate unnecessary personnel.

#### 6.1.2. For emergency responders

Protective equipment : Only qualified personnel equipped with suitable protective equipment may intervene. Equip cleanup crew with proper protection. Do not breathe gas, fumes, vapour or spray.

### 6.2. Environmental precautions

Prevent entry to sewers and public waters. Avoid release to the environment.

### 6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Shovel into suitable and closed container for disposal. Dispose of this material and its container to hazardous or special waste collection point.

### 6.4. Reference to other sections

No additional information available

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Precautions for safe handling : Provide good ventilation in process area to prevent formation of vapour. Do not get in eyes, on skin, or on clothing. Use personal protective equipment as required.

Hygiene measures : Do not eat, drink or smoke when using this product. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Regular cleaning of equipment, work area and clothing.

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

Technical measures : Keep only in the original container in a cool, well-ventilated place.

Storage conditions : Store at temperatures between 15 - 25°C.

Packaging materials : Keep away from food, drink and animal feedingstuffs.

### 7.3. Specific end use(s)

No additional information available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

No additional information available

### 8.2. Exposure controls

#### Personal protective equipment:

Gloves. Safety glasses. Insufficient ventilation: wear respiratory protection. Protective clothing.

#### Hand protection:

PVC or other plastic material gloves

#### Eye protection:

Chemical goggles or face shield

#### Skin and body protection:

Wear suitable protective clothing

#### Respiratory protection:

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In case of insufficient ventilation, wear suitable respiratory equipment

**Personal protective equipment symbol(s):**



**Other information:**

Do not eat, drink or smoke when using this product. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Regular cleaning of equipment, work area and clothing.

### SECTION 9: Physical and chemical properties

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

|                                            |                                 |
|--------------------------------------------|---------------------------------|
| Physical state                             | : Liquid                        |
| Appearance                                 | : Transparent.                  |
| Colour                                     | : Colourless.                   |
| Odour                                      | : Characteristics.              |
| Odour threshold                            | : No data available             |
| pH                                         | : No data available             |
| Relative evaporation rate (butylacetate=1) | : No data available             |
| Melting point                              | : No data available             |
| Freezing point                             | : No data available             |
| Boiling point                              | : No data available             |
| Flash point                                | : No data available             |
| Auto-ignition temperature                  | : No data available             |
| Decomposition temperature                  | : No data available             |
| Flammability (solid, gas)                  | : No data available             |
| Vapour pressure                            | : No data available             |
| Relative vapour density at 20 °C           | : No data available             |
| Relative density                           | : 1,08                          |
| Solubility                                 | : Reacts with water. Insoluble. |
| Log Pow                                    | : No data available             |
| Viscosity, kinematic                       | : No data available             |
| Viscosity, dynamic                         | : 450 mPa.s                     |
| Explosive properties                       | : No data available             |
| Oxidising properties                       | : No data available             |
| Explosive limits                           | : No data available             |

#### 9.2. Other information

|             |       |
|-------------|-------|
| VOC content | : 0 % |
|-------------|-------|

### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

No additional information available

#### 10.2. Chemical stability

The product is stable at normal handling and storage conditions. No decomposition if stored normally.

#### 10.3. Possibility of hazardous reactions

No additional information available

#### 10.4. Conditions to avoid

No additional information available

#### 10.5. Incompatible materials

Strong bases. Alcohol. Amines. Ammonia.

#### 10.6. Hazardous decomposition products

None under normal conditions.

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### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified  
Acute toxicity (dermal) : Not classified  
Acute toxicity (inhalation) : Inhalation:dust,mist: Fatal if inhaled.

|                     |               |
|---------------------|---------------|
| ATE CLP (dust,mist) | 0,429 mg/l/4h |
|---------------------|---------------|

#### 4,4'-methylenedi(cyclohexyl isocyanate), dicyclohexylmethane-4,4'-di-isocyanate (5124-30-1)

|                            |              |
|----------------------------|--------------|
| LD50 oral rat              | 18200 mg/kg  |
| LD50 dermal rat            | > 7000 mg/kg |
| LC50 inhalation rat (mg/l) | 0,33 mg/l/4h |

#### Homopolymer of 1,6-hexamethylene diisocyanate (28182-81-2)

|                                           |              |
|-------------------------------------------|--------------|
| LD50 oral rat                             | > 5000 mg/kg |
| LD50 dermal rat                           | > 2000 mg/kg |
| LD50 dermal rabbit                        | 2000 mg/kg   |
| LC50 inhalation rat (Dust/Mist - mg/l/4h) | 0,39 mg/l/4h |

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. May cause an allergic skin reaction.  
Germ cell mutagenicity : Not classified  
Carcinogenicity : Not classified  
Reproductive toxicity : Not classified  
  
STOT-single exposure : May cause respiratory irritation.  
STOT-repeated exposure : Not classified  
Aspiration hazard : Not classified

### SECTION 12: Ecological information

#### 12.1. Toxicity

Acute aquatic toxicity : Not classified  
Chronic aquatic toxicity : Not classified

#### 4,4'-methylenedi(cyclohexyl isocyanate), dicyclohexylmethane-4,4'-di-isocyanate (5124-30-1)

|                |             |
|----------------|-------------|
| LC50 fish 1    | >= 8,1 mg/l |
| EC50 Daphnia 1 | >= 8,3 mg/l |
| ErC50 (algae)  | >= 5 mg/l   |

#### Homopolymer of 1,6-hexamethylene diisocyanate (28182-81-2)

|                              |                   |
|------------------------------|-------------------|
| LC50 fish 1                  | > 100 mg/l        |
| EC50 Daphnia 1               | > 100 mg/l (48 h) |
| EC50 72h algae (1)           | 0 mg/l            |
| ErC50 (algae)                | > 199 mg/l        |
| ErC50 (other aquatic plants) | > mg/l            |

#### 12.2. Persistence and degradability

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|                               |                            |
|-------------------------------|----------------------------|
| Persistence and degradability | Not readily biodegradable. |
|-------------------------------|----------------------------|

#### 12.3. Bioaccumulative potential

##### Homopolymer of 1,6-hexamethylene diisocyanate (28182-81-2)

|                                     |        |
|-------------------------------------|--------|
| Bioconcentration factor (BCF REACH) | 706,2  |
| Log Pow                             | ≈ 8,38 |

#### 12.4. Mobility in soil

No additional information available

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

No additional information available

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### 12.6. Other adverse effects

No additional information available

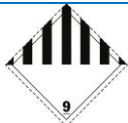
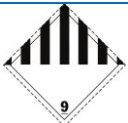
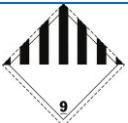
## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.  
Ecology - waste materials : Avoid release to the environment. Do not empty into drains, dispose of this material and its container at hazardous or special waste collection point.

## SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

| ADR                                                                                                                                                                                                                   | IMDG                                                                                                                                | IATA                                                                                                                                |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| <b>14.1. UN number</b>                                                                                                                                                                                                |                                                                                                                                     |                                                                                                                                     |
| 3334                                                                                                                                                                                                                  | 3334                                                                                                                                | 3334                                                                                                                                |
| <b>14.2. UN proper shipping name</b>                                                                                                                                                                                  |                                                                                                                                     |                                                                                                                                     |
| aviation regulated liquid, n.o.s. (4,4'-methylenedi(cyclohexyl isocyanate), dicyclohexylmethane-4,4'-di-isocyanate ; 4,4'-methylenedi(cyclohexyl isocyanate), dicyclohexylmethane-4,4'-di-isocyanate)                 | AVIATION REGULATED LIQUID, N.O.S. (4,4'-methylenedi(cyclohexyl isocyanate), dicyclohexylmethane-4,4'-di-isocyanate)                 | aviation regulated liquid, n.o.s. (4,4'-methylenedi(cyclohexyl isocyanate), dicyclohexylmethane-4,4'-di-isocyanate)                 |
| <b>Transport document description</b>                                                                                                                                                                                 |                                                                                                                                     |                                                                                                                                     |
| UN 3334 aviation regulated liquid, n.o.s. (4,4'-methylenedi(cyclohexyl isocyanate), dicyclohexylmethane-4,4'-di-isocyanate ; 4,4'-methylenedi(cyclohexyl isocyanate), dicyclohexylmethane-4,4'-di-isocyanate), 9, III | UN 3334 AVIATION REGULATED LIQUID, N.O.S. (4,4'-methylenedi(cyclohexyl isocyanate), dicyclohexylmethane-4,4'-di-isocyanate), 9, III | UN 3334 aviation regulated liquid, n.o.s. (4,4'-methylenedi(cyclohexyl isocyanate), dicyclohexylmethane-4,4'-di-isocyanate), 9, III |
| <b>14.3. Transport hazard class(es)</b>                                                                                                                                                                               |                                                                                                                                     |                                                                                                                                     |
| 9                                                                                                                                                                                                                     | 9                                                                                                                                   | 9                                                                                                                                   |
|                                                                                                                                     |                                                  |                                                |
| <b>14.4. Packing group</b>                                                                                                                                                                                            |                                                                                                                                     |                                                                                                                                     |
| III                                                                                                                                                                                                                   | III                                                                                                                                 | III                                                                                                                                 |
| <b>14.5. Environmental hazards</b>                                                                                                                                                                                    |                                                                                                                                     |                                                                                                                                     |
| Dangerous for the environment : No                                                                                                                                                                                    | Dangerous for the environment : No<br>Marine pollutant : No                                                                         | Dangerous for the environment : No                                                                                                  |
| No supplementary information available                                                                                                                                                                                |                                                                                                                                     |                                                                                                                                     |

### 14.6. Special precautions for user

#### - Overland transport

Transport regulations (ADR) : Not subject  
Classification code (ADR) : M11  
EAC code : 2Z

#### - Transport by sea

Transport regulations (IMDG) : Not subject  
Special provisions (IMDG) : 960  
Stowage category (IMDG) : None  
Properties and observations (IMDG) : Not subject to the provisions of this Code but may be subject to provisions governing the transport of dangerous goods by other modes.

#### - Air transport

PCA Excepted quantities (IATA) : E1  
PCA Limited quantities (IATA) : Y964  
PCA limited quantity max net quantity (IATA) : 30kgG  
PCA packing instructions (IATA) : 964  
PCA max net quantity (IATA) : 100L  
CAO packing instructions (IATA) : 964  
CAO max net quantity (IATA) : 220L  
Special provisions (IATA) : A27

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ERG code (IATA) : 9A

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

Not applicable

## SECTION 15: Regulatory information

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

#### 15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

VOC content : 0 %

#### 15.1.2. National regulations

##### Germany

Reference to AwSV : Water hazard class (WGK) 1, low hazard to waters (Classification according to AwSV, Annex 1)

12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

##### Netherlands

SZW-lijst van kankerverwekkende stoffen : None of the components are listed

SZW-lijst van mutagene stoffen : None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding : None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid : None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling : None of the components are listed

##### Denmark

Danish National Regulations : Young people below the age of 18 years are not allowed to use the product  
Pregnant/breastfeeding women working with the product must not be in direct contact with the product  
Persons suffering from asthma or eczema and persons who have chronic lung diseases, skin or respiratory allergies to isocyanates should not work with the material  
The requirements from the Danish Working Environment Authorities regarding work with epoxy resins and isocyanates must be observed during use and disposal

### 15.2. Chemical safety assessment

No additional information available

## SECTION 16: Other information

Full text of H- and EUH-statements:

|                           |                                                                                            |
|---------------------------|--------------------------------------------------------------------------------------------|
| Acute Tox. 2 (Inhalation) | Acute toxicity (inhal.), Category 2                                                        |
| Acute Tox. 4 (Inhalation) | Acute toxicity (inhal.), Category 4                                                        |
| Eye Irrit. 2              | Serious eye damage/eye irritation, Category 2                                              |
| Resp. Sens. 1             | Respiratory sensitisation, Category 1                                                      |
| Skin Irrit. 2             | Skin corrosion/irritation, Category 2                                                      |
| Skin Sens. 1              | Skin sensitisation, Category 1                                                             |
| STOT SE 3                 | Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation |
| H315                      | Causes skin irritation.                                                                    |
| H317                      | May cause an allergic skin reaction.                                                       |
| H319                      | Causes serious eye irritation.                                                             |
| H330                      | Fatal if inhaled.                                                                          |
| H332                      | Harmful if inhaled.                                                                        |
| H334                      | May cause allergy or asthma symptoms or breathing difficulties if inhaled.                 |
| H335                      | May cause respiratory irritation.                                                          |
| EUH204                    | Contains isocyanates. May produce an allergic reaction.                                    |
| EUH210                    | Safety data sheet available on request.                                                    |

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## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH)

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

|                                     |      |                    |
|-------------------------------------|------|--------------------|
| Acute Tox. 2 (Inhalation:dust,mist) | H330 | Calculation method |
| Skin Irrit. 2                       | H315 | Calculation method |
| Eye Irrit. 2                        | H319 | Calculation method |
| Resp. Sens. 1                       | H334 | Calculation method |
| Skin Sens. 1                        | H317 | Calculation method |
| STOT SE 3                           | H335 | Calculation method |

SDS EU (REACH Annex II)

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product*