



16E Tuas Avenue 1, #05-61, JTC Space@Tuas Singapore 639537. Tel: +65 6397 5001

MATERIAL SAFETY DATA SHEET

## Synthane A8L-1990G

ISSUED : 08/04/2024

PROVISIONAL: REV. 0

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

#### 1.1 Product Identifier

|              |                 |
|--------------|-----------------|
| Code         | A8L-1990G       |
| Product name | Synthane Series |

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

|              |   |
|--------------|---|
| Intended use | Thermoplastic polyurethane for industrial use |
|--------------|---|

### SECTION 2. Hazards identification.

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

The product is not classified as hazardous according to Regulation(EC) 1272/2008 as amended. Any additional information concerning the risks for health and/or the environment are given in sections 15 and 16 of this sheet.

Signal word : No signal word.  
Hazard statements : No known significant effects or critical hazards.

#### Precautionary statements

General : Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand.

Prevention : Not applicable.

Response : Not applicable.

Storage : Not applicable.

Disposal : Not applicable.

Hazardous ingredients : Not applicable.

Supplemental label elements : Not applicable.

Annex XVII - Restrictions on the : Not applicable.

manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

#### Special packaging requirements

Containers to be fitted with child-resistant fastenings : Not applicable.

Tactile warning of danger : Not applicable.



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### 2.3. Other hazards.

This mixture does not contain any substances that are assessed to be a PBT or a vPvB according to Regulation (EC) No. 1907/2006, ANNEX XIII.

Not applicable on other hazards which do not result in classification.

## SECTION 3. Composition/information on ingredients.

### 3.1. Substances.

Information not relevant.

### 3.2. Mixtures.

| Identification                                 | CAS NO     | Classification 1272/2008 (CLP) |
|--|------------|--------------------------------|
| MDI/ butylene glycol/<br>adipic acid copolymer | 26375-23-5 | Not classified.                |

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section. Occupational exposure limits, if available, are listed in Section 8.

## SECTION 4. First aid measures.

### 4.1. Description of first aid measures.

No episodes of harm to the staff authorised to use the product have been reported. The following general measures should be adopted as necessary:

|               |  |
|---------------|--|
| INHALATION    | : Remove to open air. If the subject stops breathing, administer artificial respiration. Get medical advice/attention.                   |
| INGESTION     | : Get medical advice/attention. Induce vomiting only if indicated by the doctor. Do not give anything by mouth to an unconscious person. |
| EYES and SKIN | : Wash with plenty of water. In the event of persistent irritation, get medical advice/attention.  |

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

No episodes of damage to health ascribable to the product have been reported.

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

No specific treatment.



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## SECTION 5. Firefighting measures.

### 5.1. Extinguishing media.

#### SUITABLE EXTINGUISHING EQUIPMENT

The extinguishing equipment should be of the conventional kind: carbon dioxide, foam, powder and water spray.

#### UNSUITABLE EXTINGUISHING EQUIPMENT

Do not use water jet.

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

#### HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE

Do not breathe in combustion products : carbon oxides (CO, CO<sub>2</sub>), phosphorus oxides.

### 5.3. Advice for firefighters.

#### GENERAL INFORMATION

Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health. Always wear full fire prevention gear. Collect extinguishing water to prevent it from draining into the sewer system. Dispose of contaminated water used for extinction and the remains of the fire according to applicable regulations.

#### SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS

Normal firefighting clothing i.e. fire kit (BS EN 469), gloves (BS EN 659) and boots (HO specification A29 and A30) in combination with self-contained open circuit positive pressure compressed air breathing apparatus (BS EN 137).

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## SECTION 6. Accidental release measures.

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

#### FOR LIQUID PRODUCTS

Block the leakage if there is no hazard.

#### FOR SOLID PRODUCTS

If there are no contraindications, spray powder with water to prevent the formation of dust. Avoid breathing vapours/mists/gases.

Wear suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing. These indications apply for both processing staff and those involved in emergency procedures.

### 6.2. Environmental precautions.

The product must not penetrate into the sewer system or come into contact with surface water or ground water.

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

#### FOR LIQUID PRODUCTS

Collect the leaked product into a suitable container. Evaluate the compatibility of the container to be used, by checking section 10. Absorb the remainder with inert absorbent material.



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#### FOR SOLID PRODUCTS

Use spark-proof mechanical equipment to collect the leaked product and place it in containers for recovery or disposal. If there are no contraindications, use jets of water to eliminate product residues.

Make sure the leakage site is well aired. Check incompatibility for container material in section 7. Contaminated material should be disposed of in compliance with the provisions set forth in point 13.

#### **6.4. Reference to other sections.**

Any information on personal protection and disposal is given in sections 8 and 13.

### **SECTION 7. Handling and storage.**

#### **7.1. Precautions for safe handling.**

Keep away from heat, sparks and naked flames; do not smoke or use matches or lighters. Vapours may catch fire and an explosion may occur; vapour accumulation is therefore to be avoided by leaving windows and doors open and ensuring good cross ventilation. Without adequate ventilation, vapours may accumulate at ground level and, if ignited, catch fire even at a distance, with the danger of backfire. Avoid bunching of electrostatic charges. When performing transfer operations involving large containers, connect to an earthing system and wear antistatic footwear. In order to avoid the risk of fires and explosions, never use compressed air when handling. Open containers with caution as they may be pressurised. Do not eat, drink or smoke during use. Avoid leakage of the product into the environment.

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

Store only in the original container. Store the containers sealed, in a well ventilated place, away from direct sunlight. Store in a well ventilated place, keep far away from sources of heat, naked flames and sparks, other sources of ignition, any incompatible materials and acids. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage.

#### **7.3. Specific end use(s).**

Information not available.

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

#### **8.1. Control parameters.**

##### OCCUPATIONAL EXPOSURE LIMITS

| Product/ingredient name | Exposure limit values |
|-------------------------|-----------------------|
| Synthane Series         | NA                    |

##### RECOMMEND MONITORING PROCEDURES

If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to European Standard EN 689 for methods for the assessment of exposure by inhalation to chemical agents and national guidance documents for methods for the determination of hazardous substances.





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## 8.2. Exposure controls.

As the use of adequate technical equipment must always take priority over personal protection equipment, make sure that the workplace is well aired through effective local aspiration. Personal protection equipment must comply with the rules in force indicated below.

### HAND PROTECTION

Protect hands with category I (ref. Directive 89/686/EEC and standard EN 374) work gloves, such as those in latex, PVC or equivalent. The following should be considered when choosing work glove material: degradation, breakage times and permeation. Work glove resistance to preparations should be checked before use, as it can be unpredictable. Gloves' limit depends on the duration of exposure.

### EYE PROTECTION

Wear hood visor or protective visor together with airtight goggles (ref. standard EN 166).

### SKIN PROTECTION

Wear category I professional long-sleeved overalls and safety footwear (ref. Directive 89/686/CEE and standard EN ISO 20344). Wash body with soap and water after removing overalls.

### RESPIRATORY PROTECTION

If the threshold value (if available) for one or more of the substances present in the preparation for daily exposure in the workplace or to a fraction established by the company's prevention and protection service is exceeded, wear an FFP3 (ref. standard EN 14387/EN 143) type half mask.

The use of respiratory tract protection equipment, such as masks like that indicated above, is necessary to reduce worker exposure in the absence of technical measures. The protection provided by masks is in any case limited.

If the substance in question is odourless or its olfactory threshold is higher than the relative exposure limit and in the event of an emergency, or when exposure levels are unknown or the concentration of oxygen in the workplace is less than 17% volume, wear self-contained, open-circuit compressed air breathing apparatus (ref. standard EN 137) or fresh air hose breathing apparatus for use with full face mask, half mask or mouthpiece (ref. standard EN 138).

An emergency eye washing and shower system must be provided.

### ENVIRONMENTAL EXPOSURE CONTROLS

The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with environmental standards.

## SECTION 9. Physical and chemical properties..

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

|                       |                  |
|-----------------------|------------------|
| Appearance            | : Solid pellet.  |
| Colour                | : Natural.       |
| Odour                 | : Very light.    |
| Odour threshold       | : Not available. |
| pH                    | : Not available. |
| Melting point         | : 170 -200 °C.   |
| Initial boiling point | : Not available. |
| Boiling range         | : Not available. |
| Flash point           | : Not available. |
| Evaporation Rate      | : Not available. |



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|  |                      |
|--|----------------------|
| Flammability of solids and gases       | : Non-flammable.     |
| Lower inflammability limit             | : Not available.     |
| Upper inflammability limit             | : Not available.     |
| Lower explosive limit                  | : Not available.     |
| Upper explosive limit                  | : Not available.     |
| Vapour pressure                        | : Not available.     |
| Vapour density                         | : Not available.     |
| Relative density                       | : 1.1 – 1.3 @ 20 °C. |
| Solubility                             | : Not available.     |
| Partition coefficient: n-octanol/water | : Not available.     |
| Auto-ignition temperature              | : Not available.     |
| Decomposition temperature              | : Not available.     |
| Viscosity                              | : Not available.     |
| Explosive properties                   | : Not available.     |
| Oxidising properties                   | : Not available.     |

## 9.2. Other information.

|                     |                  |
|---------------------|------------------|
| Burning time        | : Not available. |
| Solubility in water | : Not available. |

## SECTION 10. Stability and reactivity.

### 10.1. Reactivity.

There are no particular risks of reaction with other substances in normal conditions of use.

### 10.2. Chemical stability.

The product is stable in normal conditions of use and storage.

### 10.3. Possibility of hazardous reactions.

Under normal conditions of storage and use, hazardous reactions will not occur.

### 10.4. Conditions to avoid.

Avoid overheating. Avoid bunching of electrostatic charges. Avoid all sources of ignition.

### 10.5. Incompatible materials.

Avoid oxidising materials and acids.

### 10.6. Hazardous decomposition products.

In the event of thermal decomposition or fire, gases and vapours that are potentially dangerous to health may be released. Decomposition products may include the following materials: Phosphine.



**SECTION 11. Toxicological information.**

**11.1. Information on toxicological effects.**

ACUTE TOXICITY

NA

IRRITATION/CORROSION

NA

SENSITIZATION

NA

MUTAGENICITY

NA

Specific target organ toxicity (single exposure) : Not available.

Specific target organ toxicity (repeated exposure) : Not available.

Information on the likely routes of exposure : Not available.

POTENTIAL ACUTE HEALTH EFFECTS

Eye contact : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

SYMPTOMS RELATED TO THE PHYSICAL, CHEMICAL AND TOXICOLOGICAL CHARACTERISTICS

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : No specific data.

Ingestion : No specific data.

DELAYED AND IMMEDIATE EFFECTS AND ALSO CHRONIC EFFECTS FROM SHORT AND LONG TERM EXPOSURE

SHORT TERM EXPOSURE

Potential immediate effects : No known significant effects or critical hazards.

Potential delayed effects : No known significant effects or critical hazards.

Long term exposure

Potential immediate effects : No known significant effects or critical hazards.

Potential delayed effects : No known significant effects or critical hazards.

POTENTIAL CHRONIC HEALTH EFFECTS

Conclusion/Summary : Conclusive but not sufficient for classification.

General : No known significant effects or critical hazards.

Carcinogenicity : No known significant effects or critical hazards.



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|                       |   |   |
|-----------------------|---|---|
| Mutagenicity          | : | No known significant effects or critical hazards. |
| Teratogenicity        | : | No known significant effects or critical hazards. |
| Developmental effects | : | No known significant effects or critical hazards. |
| Fertility effects     | : | No known significant effects or critical hazards. |

#### TOXICOKINETICS

|                   |   |                |
|-------------------|---|----------------|
| Absorption        | : | Not applicable |
| Distribution      | : | Not applicable |
| Metabolism        | : | Not applicable |
| Elimination       | : | Not applicable |
| Other information | : | Not applicable |

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### SECTION 12. Ecological information.

Use this product according to good working practices. Avoid littering. Inform the competent authorities, should the product reach waterways or contaminate soil or vegetation.

#### 12.1. Toxicity.

Non-toxic to aquatic organisms.

#### 12.2. Persistence and degradability.

Not readily degradable.

#### 12.3. Bioaccumulative potential.

Information not available.

#### 12.4. Mobility in soil.

Information not available.

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

On the basis of available data, the product does not contain any PBT or vPvB.

#### 12.6. Other adverse effects.

Information not available.

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### SECTION 13. Disposal considerations.

#### 13.1. Waste treatment methods.

Reuse, when possible. Product residues should be considered special hazardous waste. The hazard level of waste containing this product should be evaluated according to applicable regulations. Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations.

#### CONTAMINATED PACKAGING

Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.





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**SECTION 14. Transport information.**

The product is not dangerous under current provisions of the Code of International Carriage of Dangerous Goods by Road (ADR) and by Rail (RID), of the International Maritime Dangerous Goods Code (IMDG), and of the International Air Transport Association (IATA) regulations.

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**SECTION 15. Regulatory information.**

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

**Seveso Category - Directive 2012/18/EC:**

None.

**Restrictions relating to the product or contained substances pursuant to Annex XVII to EC Regulation 1907/2006.**

None.

**Substances in Candidate List (Art. 59 REACH).**

None.

**Substances subject to authorisation (Annex XIV REACH).**

None.

**Substances subject to exportation reporting pursuant to (EC) Reg. 689/2008:**

None.

**Substances subject to the Rotterdam Convention:**

None.

**Substances subject to the Stockholm Convention:**

None.

**Substances subject to the Chemical Weapon Convention List Schedule I, II, III Chemicals:**

None.

**Substances subject to the UNECE Aarhus Protocol on POPs (Annex 1, 2, 3) and Heavy Metals:**

None.

**Healthcare controls.**

None.

**15.2. Chemical safety assessment.**

No chemical safety assessment has been processed for the mixture and the substances it contains.

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**SECTION 16. Other information.**

**ABBREVIATIONS AND ACRONYMS**

N/A  
PBT  
vPvB

= Not available  
= Persistent, Bioaccumulative and Toxic  
= Very Persistent and Very Bioaccumulative



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**Note for users:**

The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the suitability and thoroughness of provided information according to each specific use of the product.

This document must not be regarded as a guarantee on any specific product property.

The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses.

Provide appointed staff with adequate training on how to use chemical products.