

# Material Safety Data Sheet

NON HAZARDOUS – CHEMICAL IDENTIFICATION CODE NOT APPLICABLE

## 1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND OF THE COMPANY UNDERTAKING:

|              |   |                                                                   |
|--------------|---|-------------------------------------------------------------------|
| Product Name | : | HYDROTHANE HPE, part A                                            |
| HS Code      | : | 32149090                                                          |
| Application  | : | Two Component, Solvent Free Spray Applied Hybrid Polyurea Coating |
| Manufacturer | : | MATEX CONSTRUCTION CHEMICALS<br>MANUFACTURING CO. L.L.C.          |
| Address      | : | P.O. Box 29585                                                    |
| Telephone    | : | +971 4 3334140                                                    |
| Fax          | : | +971 4 3334115                                                    |
| Email        | : | <a href="mailto:info@matex.ae">info@matex.ae</a>                  |
| Website      | : | <a href="http://www.matex-global.com">www.matex-global.com</a>    |

## 2. HAZARDS IDENTIFICATION:

### Classification of the substance or mixture

#### According to (EC) No 1272/2008 (CLP)

|                |                                                                                      |
|----------------|--------------------------------------------------------------------------------------|
| Carc. 2:       | H351 Suspected of causing cancer                                                     |
| STOT RE2:      | H373 May cause damage to organs through prolonged or repeated Exposure if swallowed. |
| Resp. Sens. 1: | H334 May cause allergy or asthma symptoms or breathing difficulties if Inhaled       |
| Acute Tox. 4:  | H332 Harmful if inhaled                                                              |
| Eye Irrit. 2:  | H319 Causes serious eye irritation                                                   |
| Skin Sens. 1:  | H317 May cause an allergic skin reaction                                             |
| Skin Irrit. 2: | H315 Causes skin irritation                                                          |
| STOT SE 3:     | H335 May cause respiratory irritation                                                |

#### According to Regulation 67/548/EEC or 1999/45/EC

Xn, Harmful – R20: Harmful by inhalation  
Xi, Irritant – R36/37/38: irritating to eyes, respiratory system and skin  
Xn, carcinogen category 3 – R40: Limited evidence of a carcinogenic effect  
Sensitizing – R42/43: May cause sensitisation by inhalation and skin contact  
Xn, Harmful – R48/20: Harmful – danger of serious damage to health by prolonged exposure through inhalation

**Label Elements:** The product is classified and required to be labelled in accordance with EC-directives

# Material Safety Data Sheet

Labelling according to Regulation (EC) 1272/2008

Hazard Pictograms



Signal Word

**Danger**

Contains

Polyoxy (methyl-1,2-ethanediyl), alpha-hydro-omega-hydroxy-polymer  
With 1, 1-methylenebisocyanatobenzene

4,4 – Methylenediphenyl diisocyanate

Reaction mass of 4,4-methylenediphenyl diisocyanate and o-(p-Isocyanatobenzyl) phenyl isocyanate

4,4 – Methylenebisocyanatobenzene, oligomers

Hazard Statements

H351 Suspected of causing cancer  
H373 May cause damage to organs through prolonged or repeated exposure if swallowed  
H334 may cause allergy or asthma symptoms or breathing difficulties if inhaled  
H332 Harmful if inhaled  
H319 Causes serious eye irritation  
H317 May cause an allergic skin reaction  
H315 Causes skin irritation  
H335 may cause respiratory irritation

Precautionary Statements

P260 Do not breathe vapours/spray  
P280 Wear protective gloves/protective clothing/eye protection/face protection  
P284 In case of inadequate ventilation wear respiratory protection  
P302+P352 IF ON SKIN: Wash with plenty of water/soap  
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing  
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes Remove contact lenses, present and easy to do. Continue rinsing  
P311 Call a POISON CENTER/doctor

Special labelling

EUH204 Contains isocyanates. May produce an allergic reaction

# Material Safety Data Sheet

**Other Hazards** Further hazards were not determined with the current level of knowledge

## 3. COMPOSITION / INFORMATION ON INGREDIENTS:

The product is a mixture.

| Range (%) | Substance                                                                                                                                                                                                                                                                                                                                                                    |
|-----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 60 - 100  | Polyoxy (methyl-1,2-ethanediyl), alpha-hydro-omega-hydroxy-polymer with 1, 1-methylenebisisocyanatobenzene<br>CAS: 39420-98-9, EINECS/ELINCS: polymer<br>GHS/CLP: Acute Tox. 4: H332 – Skin Irrit. 2: H315 – Eye Irrit. 2: H319 – Resp. Sens. 1: H334 – Skin Sens. 1: H317 – Care. 2: H351 – STOT SE 3: H335 – STOT RE 2: H373<br>EEC: Xn, R20-36/37/38-40-42/43-48/20       |
| 13 - 30   | 4,4'-Methylenediphenyl diisocyanate<br>CAS: 101-68-8, EINECS/ELINCS: 202-966-0, EU-INDEX: 615-005-00-9, ECB-NR 01-2119457014-47-XXXX<br>GHS/CLP: Care. 2: H351 – Acute Tox. 4: H332 – STOT RE 2: H373 – Eye irrit. 2: H319 – STOT SE 3: H335 – Skin Irrit. 2: H315 – Resp. Sens. 1: H334 – Skin Sens. 1: H317<br>EEC: Xn, R 20-36/37/38-40-42/43-48/20                       |
| 3 - 7     | 4,4'-Methylenediphenyldiisocyanate, oligomers<br>CAS 25686-28-6, EINECS/ELINCS: 500-040-3, ECB-Nr.: 01-211945 7013-49-XXX<br>GHS/CLP: Scute Tox. 4: H332 – Skin Irrit. 2: H315 – Eye Irrit. 2: H319 – Resp. Sens. 1: H334 – Skin Sens. 1: H317 – Care 2: H351 – STOT RE 2: H373<br>EEC; Xn, R 40-20-42/43-48/20-36/37/38                                                     |
| 3 - 7     | Reaction mass of 4,4 methylenediphenyl diisocyanate and o(p-Isocyanatobenzyl)phenyl isocyanate<br>EINECS/ELINCS: 905-806-4, ECB-Nr.: 01-211945 7013-49-XXXX<br>GHS/CLP: Care. 2: H351 – Acute Tox. 4: H332 – STOT RE 2: H373 – Eye Irrit. 2: H319 – STOT SE 3: H335 – Skin Irrit. 2: H315 – Resp. Send. 1: H334 – Skin Sens. 1: H317<br>EEC: Xn, R20-36/37/38-40-42/43-48/20 |

Comment on component parts Substances of very high concern – SVHC: substances are not contained or are below 0.1%. For full test of H-statement and R-phrases: see SECTION 16

## 4. FIRST AID MEASURES:

**General Info**

: Take off contaminated clothing and wash before reuse

# Material Safety Data Sheet

|                   |   |                                                                                                                                                         |
|-------------------|---|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Eyes</b>       | : | Irrigate immediately with copious quantities of water for several minutes. Obtain medical attention urgently if symptoms persist.                       |
| <b>Skin</b>       | : | Wash immediately with copious quantities of water with soap. Remove contaminated clothing immediately. Obtain medical advice if skin disorders develop. |
| <b>Inhalation</b> | : | Remove from exposure, rest and keep warm and obtain medical attention urgently.                                                                         |
| <b>Ingestion</b>  | : | Wash out mouth with water. DO NOT induce vomiting. Obtain medical attention                                                                             |

## Most important symptoms and effects (both acute and delayed)

|   |                                                                                    |
|---|------------------------------------------------------------------------------------|
| : | Irritant effects, allergic reactions, redness, gastro-Intestinal complaints, cough |
|---|------------------------------------------------------------------------------------|

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

|   |                                                      |
|---|------------------------------------------------------|
| : | Treat symptomatically                                |
| : | Keep under medical supervision for at least 48 hours |

## 5. FIRE FIGHTING MEASURES:

|                                                    |   |                                                                                                            |
|----------------------------------------------------|---|------------------------------------------------------------------------------------------------------------|
| <b>Suitable Extinguishing Media</b>                | : | Foam, dry powder, water spray jet, carbon dioxide                                                          |
| <b>Extinguishing media that must not Be used</b>   | : | Full water jet                                                                                             |
| <b>Specific Hazards</b>                            | : | Oxides of carbon and nitrogen may be emitted.<br>Isocyanate, Hydrogen Cyanide                              |
| <b>Special Protective Precaution and Equipment</b> | : | Fire fighters to wear self-contained breathing apparatus and suitable protective clothing                  |
|                                                    | : | Do not inhale explosion and /or combustion gases                                                           |
|                                                    | : | Cool containers at risk with water spray jet                                                               |
|                                                    | : | Fire residues and contaminated firefighting water must be disposed of in accordance with local regulations |

## 6. ACCIDENTAL RELEASE MEASURES:

|                                  |   |                                                          |
|----------------------------------|---|----------------------------------------------------------|
| <b>Personal Precautions</b>      | : | Ensure adequate ventilation                              |
|                                  | : | Use breathing apparatus if exposed to vapour/aerosol     |
|                                  | : | Use personal protective equipment                        |
|                                  | : | Remove persons to safety                                 |
| <b>Environmental Precautions</b> | : | High risk of slipping due to leakage/spillage of product |
|                                  | : | Prevent entry into drains, sewers and water courses.     |

# Material Safety Data Sheet

- After spillage/leakage** :
- : Prevent spread over a wide area (e.g by containment or oil barriers)
  - : In case of product spills into drains/surface waters/ groundwater, immediately inform the authorities
  - : Pickup with absorbent material (e.g sand, universal absorbent, diatomaceous earth)
  - : Dispose of absorbed material in accordance with the regulations

In addition, please refer to the local regulations regarding disposal.

## 7. HANDLING AND STORAGE:

- Precautions for safe handling** :
- Use only in well-ventilated areas
  - Provide suitable vacuuming at the processing area
  - Avoid spilling or spraying in enclosed areas
- The product is combustible
- Do not eat, drink, smoke or take drugs at work
  - Take off contaminated clothing and wash before reuse
  - It is recommended to preview eye-wash bottle and showers
  - Wash hands before breaks and after work
  - Use barrier skin cream

**Conditions for safe storage, including any incompatibilities**

- : Prevent penetration into the ground
  - Keep only in original container
- Do not store with amines
  - Keep away from water
  - Do not store together with oxidizing agents
- Keep container tightly closed
  - Keep container in a well-ventilated place
  - Keep in a cool place. Store in a dry place
  - Protect from heat/overheating and from sun
- Storage class 10 (VCI)

# Material Safety Data Sheet

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION:

### Control Parameters

#### Ingredients with occupational exposure limits to be monitored (GB)

| Range (%) | Substance                                                                                                                                                                                                                                                                          |
|-----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 60 – 100  | Polyoxy(methyl-1,2-ethanediyl), alpha-hydro-omega-hydroxy-polymer<br>With 1, 1-methylenebisocyanatobenzene<br>CAS: 39420-98-9, EINECS/ELINCS: polymer<br>Long-term exposure: 0.02 mg/m <sup>3</sup> , as NCO, Sen<br>Short-term exposure (15-minute): 0.07 mg/m <sup>3</sup>       |
| 3 – 7     | Reaction mass of 4,4'-methylenediphenyl diisocyanate and o-(p-Isocyanatobenzyl)phenyl isocyanate<br>EINECS/ELINCS: 905-806-4, ECB-Nr: 01-2119457015-45-XXXX<br>Long-term exposure: 0.02 mg/m <sup>3</sup> , as NCO, Sen<br>Short-term exposure (15-minute): 0.07 mg/m <sup>3</sup> |
| 3 – 7     | 4,4'-methylenediphenyldiisocyanate, oligomers<br>CAS: 25686-28-6, EINECS/ELINCS: 500-040-3, ECB-Nr: 01-211945 7013-49<br>XXX<br>Long-term exposure: 0.02 mg/m <sup>3</sup> , as NCO, Sen<br>Short-term exposure (15-minute): 0.07 mg/m <sup>3</sup>                                |
| 13 – 30   | 4,4' Methylenediphenyl diisocyanate<br>CAS: 101-68-8, EINECS/ELINCS: 202-966-0, EU-INDEX: 615-005-00-9<br>ECB Nr: 01-2119457014-47-XXXX<br>Long-term exposure: 0.02 mg/m <sup>3</sup> , as NCO, Sen<br>Short-term exposure (15-minute): 0.07 mg/m <sup>3</sup>                     |

### DNEL

| Range (%) | Substance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 13 – 30   | 4,4'-methylenediphenyl diisocyanate, CAS: 101-68-8<br>Industrial, inhalative, long-term – local effects: 0.05 mg/m <sup>3</sup><br>Industrial, inhalative: long-term – systematic effects: 0.05 mg/m <sup>3</sup><br>Industrial, inhalative, Acute – local effects: 0.1 mg/m <sup>3</sup><br>Industrial, inhalative, Acute – local effects: 0.1 mg/m <sup>3</sup><br>Industrial, dermal, acute – local effects: 28.7 mg/cm <sup>3</sup><br>Industrial, dermal, acute – systematic effects: 50 mg/kg |

### PNEC

| Range (%) | Substance                                                                                                                                                    |
|-----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 13 – 30   | 4,4'-methylenediphenyl diisocyanate, CAS: 101-68-8<br>Sewage treatment plants (STP), >1 mg/l<br>Soil, >1 mg/kg<br>Seawater, >0.1 mg/l<br>Freshwater, >1 mg/l |

### Exposure controls

#### Additional advice on system design

Ensure adequate ventilation on work station  
Using suitable discharge or exhausts ventilation

# Material Safety Data Sheet

|                                                                |                                                                                                                                                                                                                                                                                                                                         |
|----------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Eye protection                                                 | Safety glasses                                                                                                                                                                                                                                                                                                                          |
| Hand protection                                                | The details concerned are recommendations. Please contact the glove supplier for further information<br>In full contact:<br>Butyl rubber, >480 min (EN 374)<br>Nitrile rubber, >480 min (EN 374)<br>Viton, >480 min (EN 374)<br>Polychlorophene, >480 min (EN 374)                                                                      |
| Skin Protection                                                | Impermeable protective and long-sleeved work clothing                                                                                                                                                                                                                                                                                   |
| Other                                                          | Avoid contact with eyes and skin<br>Do not breathe vapour/spray<br>Personal protective equipment should be selected specifically for the Working place, depending on concentration and quantity of the Hazardous substances handled. The resistance of this equipment/s To chemicals should be ascertained with the respective supplier |
| Respiratory protection                                         | Breathing apparatus In the event of high concentrations<br>Short term: filter apparatus, filter A                                                                                                                                                                                                                                       |
| Thermal hazards                                                | No information available                                                                                                                                                                                                                                                                                                                |
| Delimitation and monitoring<br>Of the environmental exposition | Protect the environment by applying appropriate control to prevent<br>Or limit emissions                                                                                                                                                                                                                                                |

## 9. PHYSICAL AND CHEMICAL PROPERTIES:

|                                    |   |                    |
|------------------------------------|---|--------------------|
| Form                               | : | Viscous liquid     |
| Colour                             | : | Yellowish          |
| Odour                              | : | characteristics    |
| Odour threshold                    | : | not determined     |
| pH value                           | : | not applicable     |
| pH value (1%)                      | : | not applicable     |
| Boiling point (°C)                 | : | not determined     |
| Flash point (°C)                   | : | not determined     |
| Flammability (°C)                  | : | not applicable     |
| Lower explosion limit              | : | not determined     |
| Upper explosion limit              | : | not determined     |
| Oxidizing properties               | : | no                 |
| Vapour pressure/gas pressure (kPa) | : | not determined     |
| Density (g/ml)                     | : | 1.09 – 1.13 (20°C) |
| Bulk Density (kg/m³)               | : | not applicable     |

# Material Safety Data Sheet

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|                                                  |   |                        |
|--------------------------------------------------|---|------------------------|
| <b>Solubility in water</b>                       | : | immiscible             |
| <b>Partition coefficient (n-octanol/water)</b>   | : | not determined         |
| <b>Viscosity</b>                                 | : | 600 – 1000 mPas (25°C) |
| <b>Relative vapour density determined in air</b> | : | not determined         |
| <b>Evaporation speed</b>                         | : | not determined         |
| <b>Melting point (°C)</b>                        | : | not determined         |
| <b>Autoignition temperature (°C)</b>             | : | not determined         |
| <b>Decomposition temperature (°C)</b>            | : | not determined         |

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## 10. STABILITY AND REACTIVITY:

|                                           |   |                                                                                                                                                                                 |
|-------------------------------------------|---|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Reactivity</b>                         | : | no dangerous reactions known if used as directed<br>In closed containers rise of pressure                                                                                       |
| <b>Chemical stability</b>                 | : | Stable under normal ambient conditions (ambient Temperature). Polymerization may occur at elevated temperature.                                                                 |
| <b>Possibility of hazardous reactions</b> | : | Reactions with water, with formation of carbon dioxide<br>Reactions with strong oxidizing agents<br>Exothermic reaction at:<br>Reactions with alcohols<br>Reactions with amines |
| <b>Conditions to avoid</b>                | : | Strong heating<br>Water                                                                                                                                                         |
| <b>Hazardous Decomposition Products</b>   | : | In the event of fire: see SECTION 5                                                                                                                                             |

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## 11. TOXICOLOGICAL INFORMATION:

### Information of toxicological effects

#### Acute toxicity

| Range (%) | Substance                                                                                                                                                                                                                                                                                                                    |
|-----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3 – 7     | 4,4'-Methylenediphenyldiisocyanate, oligomers, CAS: 25686-28-6<br>NOEC: < 4 mg/m <sup>3</sup> /90d (OECD 413)<br>NOEC: 0.2 mg/m <sup>3</sup> (OECD 453)<br>LD50, dermal, rabbit: >9400 mg/kg<br>LD50, oral, rat (female): > 5000 mg/kg<br>LC50, inhalative, Rat: 0.49 mg/l/4h<br>NOAEL, Rat: 12 mg/m <sup>3</sup> (OECD 414) |

13 – 30

4,4'-Methylenediphenyl diisocyanate, CAS: 101-68-8  
Inhalative, conversion value: 1.5 mg/l/4h (dust/mist)

# Material Safety Data Sheet

LD50, dermal, Rabbit: >9400 mg/kg (OECD 402)  
 LD50, oral, Rat: > 2000 mg/kg  
 LC50, inhalative, Rat: >2.24 mg/l/1h (OECD 403)  
 LC50, inhalative, Rat: 0.368 mg/l/4h (OECD 403)

|                                   |   |                                                                                                                                                                                                                    |
|-----------------------------------|---|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Serious eye damage/irritation     | : | irritant                                                                                                                                                                                                           |
| Skin corrosion/irritation         | : | irritant                                                                                                                                                                                                           |
| Respiratory or skin sensitisation | : | Sensitizing                                                                                                                                                                                                        |
| Specific target organ toxicity    |   |                                                                                                                                                                                                                    |
| Single exposure                   | : | STOT SE-3                                                                                                                                                                                                          |
| Specific target organ toxicity    |   |                                                                                                                                                                                                                    |
| Repeated exposure                 | : | STOT SE 2                                                                                                                                                                                                          |
| Mutagenicity                      | : | no classification                                                                                                                                                                                                  |
| Reproduction toxicity             | : | no classification                                                                                                                                                                                                  |
| Carcinogenity                     | : | limited evidence of a carcinogenic effect                                                                                                                                                                          |
| General remarks                   | : | The following applies to cyanogen compounds/nitriles in general: utmost caution!<br>Release of hydrocyanic acid is possible – blockade of cellular respiration. Cardiovascular disorders, dyspnea, unconsciousness |

Toxicological data of complete product are not available  
 The toxicity data listed pertaining to the ingredients are intended for those working in the medical professions, experts for occupational health and safety and toxicologists. The toxicity data pertaining to the ingredients were supplied by the manufacturers of raw materials.

## 12. ECOLOGICAL INFORMATION:

### Toxicity

|           |                                                                                                                                                                                                                                                                                                                |
|-----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Range (%) | Substance                                                                                                                                                                                                                                                                                                      |
| 3 – 7     | 4,4'-Methylenediphenyldiisocyanate, oligomers, CAS: 25686-28-6<br>LC50, (96h), fish: > 1000 mg/l (OECD 203)<br>EC50, (24h), Daphnia magna: > 1000 mg/l (OECD 202)<br>EC50, Bacteria: > 100 mg/l/3h (OECD 209)<br>EC50, (72h), Algae: >1640 mg/l (OECD 201)<br>NOEC, (21d), Daphnia magna: > 10 mg/l (OECD 211) |
| 13 – 30   | 4,4'-methylenediphenyl diisocyanate, CAS: 101-68-8<br>LC50, (96h), Danio rerio: > 1000 mg/l (OECD 203)<br>EC50, (3h), Bacteria: > 100 mg/l (OECD 209)<br>EC50, (24h), Daphnia magna: > 1000 mg/l (OECD 202)<br>NOEC, (21d), Daphnia magna: > 10 mg/l (OECD 202)                                                |

# Material Safety Data Sheet

ErCSO, (72h), Scenedesmus subspicatus: >1640 mg/l (OECD 201)

## Persistence and degradability

|                                       |   |                                                                                                                                                                                                           |
|---------------------------------------|---|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Behaviour in environment compartments | : | not determined                                                                                                                                                                                            |
| Behaviour in sewage plant             | : | not determined                                                                                                                                                                                            |
| Biological degradability              | : | the product is not readily biodegradable                                                                                                                                                                  |
| Bioaccumulative potential             | : | log Pow: 4,51 (CAS 101-68-8)<br>BCF: 200 (CAS 101-68-8)                                                                                                                                                   |
| Mobility in soil                      | : | No information available                                                                                                                                                                                  |
| Results of PBT and vPvB assessment    | : | Based on all available information not to be<br>Classified as PBT or vPvB                                                                                                                                 |
| Other Adverse effects                 | : | The product is insoluble in water<br>Ecological data of complete product are not<br>available<br>The toxicity data pertaining to the ingredients<br>were supplied by the manufacturer of raw<br>materials |

## 13. DISPOSAL CONSIDERATIONS:

**Disposal must be in accordance with local and national legislation.**

|                 |   |                                                                                                                                                                                                                                |
|-----------------|---|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Disposal</b> | : | Waste material must be disposed of in accordance with<br>the national and local regulations. Uncontaminated<br>packaging maybe taken for recycling<br>Packaging that cannot be cleaned should be disposed of<br>as for product |
|-----------------|---|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## 14. TRANSPORT INFORMATION:

### UN proper shipping name

|                                             |   |                                     |
|---------------------------------------------|---|-------------------------------------|
| Transport by land according to ADR/RID      | : | NO DANGEROUS GOODS                  |
| Inland navigation (AND)                     | : | NO DANGEROUS GOODS                  |
| Marine transport in accordance with<br>IMDG | : | NOT CLASSIFIED AS "DANGEROUS GOODS" |
| Air transport in accordance with IATA       | : | NOT CLASSIFIED AS "DANGEROUS GOODS" |

## 15. REGULATORY INFORMATION:

# Material Safety Data Sheet

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|                                  |   |                                                                                                                                         |
|----------------------------------|---|-----------------------------------------------------------------------------------------------------------------------------------------|
| <b>EEC – REGULATIONS</b>         | : | 1967/548 (1999/45); 1991/689 (2001/118); 1999/13; 2004/42; 648/2004; 1907/2006 (Reach); 1272/2008; 75/324/EEC (2008/47/EC); 453/2010/EC |
| <b>TRANSPORT REGULATIONS</b>     | : | DOT – classification, ADR (2013); IMDG-Code (2013, 36. Arndt); IATA-DGR (2013)                                                          |
| <b>NATIONAL REGULATIONS (GB)</b> | : | EH40/2005 Workplace exposure limits (second edition, Published December 2011 CHIP 3 / CHIP 4                                            |

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## 16. OTHER INFORMATION:

The data and advice given apply when the product is used for the stated application or applications. The product is not sold as suitable for any other applications. Use of the product for applications other than as stated in the sheet may give rise to risks not mentioned in this sheet. The product should not be used other than for the stated application or applications without seeking advice from MATEX.

If the product has been purchased for supply to a third party for use at work, it is the purchaser's duty to take all necessary steps to ensure that any person handling or using the product is provided with the information in this sheet.

It is the responsibility and duty of the employer to inform employees and others who may be affected of hazards described in this sheet and of any precautions which should be taken.

This sheet does not constitute or substitute for the users own assessment of workplace risk, as required by other health and safety legislation.

Further copies of this Safety Data Sheet may be obtained from MATEX.

# Material Safety Data Sheet

NON HAZARDOUS – CHEMICAL IDENTIFICATION CODE NOT APPLICABLE

## 1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND OF THE COMPANY UNDERTAKING:

|                     |   |                                                                   |
|---------------------|---|-------------------------------------------------------------------|
| <b>Product Name</b> | : | HYDROTHANE HPE, part B                                            |
| <b>HS Code</b>      | : | <b>32149090</b>                                                   |
| <b>Application</b>  | : | Two Component, Solvent Free Spray Applied Hybrid Polyurea Coating |
| <b>Manufacturer</b> | : | MATEX CONSTRUCTION CHEMICALS<br>MANUFACTURING CO. L.L.C.          |
| <b>Address</b>      | : | P.O. Box 29585                                                    |
| <b>Telephone</b>    | : | +971 4 3334140                                                    |
| <b>Fax</b>          | : | +971 4 3334115                                                    |
| <b>Email</b>        | : | <a href="mailto:info@matex.ae">info@matex.ae</a>                  |
| <b>Website</b>      | : | <a href="http://www.matex-global.com">www.matex-global.com</a>    |

## 2. HAZARDS IDENTIFICATION:

### Classification of the substance or mixture

#### According to (EC) No 1272/2008 (CLP)

STOT RE 2: H373 may cause damage to organs through prolonged or repeated exposure if swallowed

Eye Irrit. 2: H319 Causes serious eye irritation

Aquatic Chronic 1: H410 Very toxic to aquatic life with long lasting effects

Aquatic Acute 1: H400 Very toxic to aquatic life

#### According to Regulation 67/548/EEC or 1999/45/EC

Xn, Harmful – R21/22: Harmful in contact with skin and if swallowed

Xi, Irritant – R36: Irritating to eyes

Xn, Harmful – R48/22: Harmful – danger of serious damage to health by prolonged exposure if swallowed

N, Dangerous for the environment – R50/53: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

### Labelling according to Regulation (EC) 1272/2008

#### Hazard Pictograms



# Material Safety Data Sheet

|                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|---------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Signal Word</b>              | <b>Warning</b>                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Contains</b>                 | Diethylmethylbenzendiamine                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>R-phrases</b>                | R21/22 Harmful in contact with skin and if swallowed<br>R36 Irritating to eyes<br>R48/22 Harmful – danger of serious damage to health by prolonged exposure if swallowed<br>R50/53 Very toxic to aquatic organisms may cause long-term adverse effects in the aquatic environment.                                                                                                                                                          |
| <b>Hazard Statements</b>        | H373 May cause damage to organs through prolonged or repeated Exposure if swallowed<br>H319 Causes serious eye irritation<br>H410 Very toxic to aquatic life with long lasting effects                                                                                                                                                                                                                                                      |
| <b>Precautionary Statements</b> | P260 Do not breathe vapours/spray<br>P273 Avoid release to the environment<br>P280 Wear protective gloves/protective clothing/eye protection/face Protection<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>P337+P313 If eye irritation persists: Get medical advice/attention<br>P314 Get medical advice/attention if you feel unwell |
| <b>Other Hazards</b>            | Further hazards were not determined with the current level of knowledge                                                                                                                                                                                                                                                                                                                                                                     |

## 3. COMPOSITION / INFORMATION ON INGREDIENTS:

The product is a mixture.

|           |                                                                                                                                                                                                                                                                                                             |
|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Range (%) | Substance                                                                                                                                                                                                                                                                                                   |
| 60 – 80   | Polyoxypropylenediamine<br>CAS: 9046-10-0<br>GHS/CLP: Acute Tox. 4: H302 – Skin Corr. 1 B: H314 – Eye Dam. 1: H318<br>Aquatic Chronic 3: H412<br>ECC: C, R22 – 34 – 52/53                                                                                                                                   |
| 15 – 25   | Diethylmethylbenzenediamine<br>CAS: 68479-98-1, EINECS/ELINCS: 270-877-4, EU-INDEX: 612-130-00-0<br>ECB-Nr.: 01-2119486805-25-XXXX<br>GHS/CLP: Acute Tox. 4: H302 H312 – STOT RE 2: H373 – Eye Irrit. 2: H319 – Aquatic Acute 1: H400 – Aquatic Chronic 1: H410, M = 1<br>EEC: Xn-N, R 21/22-36-48/22-50/53 |

# Material Safety Data Sheet

Comment on component parts      Substances of very high concern – SVHC: substances are not contained or are below 0.1%. For full test of H-statement and R-phrases: see SECTION 16

## 4. FIRST AID MEASURES:

|                                                                                   |   |                                                                                                                                       |
|-----------------------------------------------------------------------------------|---|---------------------------------------------------------------------------------------------------------------------------------------|
| <b>General Info</b>                                                               | : | Take off contaminated clothing and wash before reuse                                                                                  |
| <b>Eyes</b>                                                                       | : | Irrigate immediately with copious quantities of water for several minutes. Obtain medical attention urgently if symptoms persist.     |
| <b>Skin</b>                                                                       | : | Wash off immediately with soap and water. Immediate medical treatment necessary as untreated burns can result in slow-healing wounds. |
| <b>Inhalation</b>                                                                 | : | Remove from exposure, rest and keep him calm. If Symptoms persist seek medical treatment                                              |
| <b>Ingestion</b>                                                                  | : | Wash out mouth with water. DO NOT induce vomiting. Obtain medical attention                                                           |
| <b>Most important symptoms and effects (both acute and delayed)</b>               |   |                                                                                                                                       |
|                                                                                   | : | No information available                                                                                                              |
| <b>Indication of any immediate medical attention and special treatment needed</b> |   |                                                                                                                                       |
|                                                                                   | : | Treat symptomatically                                                                                                                 |

## 5. FIRE FIGHTING MEASURES:

|                                                    |   |                                                                                                            |
|----------------------------------------------------|---|------------------------------------------------------------------------------------------------------------|
| <b>Suitable Extinguishing Media</b>                | : | Foam, dry powder, water spray jet, carbon dioxide                                                          |
| <b>Extinguishing media that must not Be used</b>   | : | Full water jet                                                                                             |
| <b>Specific Hazards</b>                            | : | Oxides of carbon and nitrogen may be emitted.<br>Unknown risk of formation of toxic pyrolysis products     |
| <b>Special Protective Precaution and Equipment</b> |   |                                                                                                            |
|                                                    | : | Fire fighters to wear self-contained breathing apparatus and suitable protective clothing                  |
|                                                    | : | Do not inhale explosion and /or combustion gases                                                           |
|                                                    | : | Fire residues and contaminated firefighting water must be disposed of in accordance with local regulations |

# Material Safety Data Sheet

## 6. ACCIDENTAL RELEASE MEASURES:

|                                                             |   |                                                                                                       |
|-------------------------------------------------------------|---|-------------------------------------------------------------------------------------------------------|
| <b>Personal Precautions</b>                                 | : | Ensure adequate ventilation                                                                           |
|                                                             | : | Use personal protective equipment                                                                     |
|                                                             | : | Remove persons to safety                                                                              |
| <b>Environmental Precautions<br/>After spillage/leakage</b> | : | Prevent entry into drains, sewers and water courses.                                                  |
|                                                             | : | Prevent spread over a wide area (e.g by containment or oil barriers                                   |
|                                                             | : | In case of product spills into drains/surface waters/ groundwater, immediately inform the authorities |
|                                                             | : | Pickup with absorbent material (e.g sand, universal absorbent, diatomaceous earth)                    |
|                                                             | : | Dispose of absorbed material in accordance with the regulations                                       |

## 7. HANDLING AND STORAGE:

|                                                                     |   |                                                      |
|---------------------------------------------------------------------|---|------------------------------------------------------|
| <b>Precautions for safe handling</b>                                | : | Ensure adequate ventilation                          |
|                                                                     | : | Use personal protective equipment                    |
|                                                                     | : | Remove persons to safety                             |
|                                                                     |   | Do not eat, drink, smoke or take drugs at work       |
|                                                                     |   | Take off contaminated clothing and wash before reuse |
|                                                                     |   | Wash hands before breaks and after work              |
|                                                                     |   | Use barrier skin cream                               |
| <b>Conditions for safe storage, including any incompatibilities</b> | : | Prevent penetration into the ground                  |
|                                                                     | : | Keep only in original container                      |
|                                                                     |   | Do not store together with oxidizing agents          |
|                                                                     |   | Keep container tightly closed                        |
|                                                                     |   | Keep container in a well-ventilated place            |
|                                                                     |   | Keep in a cool place. Store in a dry place           |
|                                                                     |   | Protect from heat/overheating and from sun           |
|                                                                     |   | Protect from light                                   |

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION:

**Control Parameters**

# Material Safety Data Sheet

**Ingredients with occupational exposure limits to be monitored (GB):** not applicable

## DNEL

Range (%)  
15 – 25

Substance  
Diethylmethylbenzenediamine, CAS: 68479-98-1  
Industrial, dermal, long-term – systemic effects: 1 mg/kg bw/day  
Industrial, inhalative, long-term systemic effects: 0.13 mg/m<sup>3</sup>  
General population, oral, long-term – systemic effects: 0.1 mg/kg bw/day  
General population, dermal, long-term – systemic effects: 1 mg/kg bw/day  
General population, inhalative, long-term-systemic effects: 0.1 mg/m<sup>3</sup>

## PNEC

Range (%)  
15 – 25

Substance  
Diethylmethylbenzenediamine, CAS: 68479-98-1  
Oral (food), 2 mg/kg  
Soil, 5,6 ug/kg  
Sediment (seawater), 0.0029 mg/kg  
Sediment (freshwater), 0.029 mg/kg  
Seawater, 0.00005 mg/l  
Freshwater, 0.0005 mg/l  
Sewage treatment plants (STP), 17 mg/l

## Exposure controls

Additional advice on system design

Ensure adequate ventilation on work station  
Using suitable discharge or exhausts ventilation

Eye protection

Tightly fitting goggles

Hand protection

The details concerned are recommendations. Please contact the glove supplier for further information  
In full contact:  
Butyl rubber, >480 min (EN 374)  
Nitrile rubber, >480 min (EN 374)

Skin Protection

Impermeable protective clothing

Other

Avoid contact with eyes and skin  
Do not breathe vapour/spray  
Personal protective equipment should be selected specifically for the Working place, depending on concentration and quantity of the Hazardous substances handled. The resistance of this equipment/s To chemicals should be ascertained with the respective supplier

Respiratory protection

If ventilation insufficient, ear respiratory protection  
Short term: filter apparatus, filter A

# Material Safety Data Sheet

Thermal hazards                      Not applicable

Delimitation and monitoring

Of the environmental exposition Protect the environment by applying appropriate control to prevent  
Or limit emissions

## 9. PHYSICAL AND CHEMICAL PROPERTIES:

|                                                      |   |                        |
|------------------------------------------------------|---|------------------------|
| <b>Form</b>                                          | : | Viscous liquid         |
| <b>Colour</b>                                        | : | Various                |
| <b>Odour</b>                                         | : | amine-like             |
| <b>Odour threshold</b>                               | : | not determined         |
| <b>pH value</b>                                      | : | not applicable         |
| <b>pH value (1%)</b>                                 | : | not applicable         |
| <b>Boiling point (°C)</b>                            | : | not determined         |
| <b>Flash point (°C)</b>                              | : | not determined         |
| <b>Flammability (°C)</b>                             | : | not applicable         |
| <b>Lower explosion limit</b>                         | : | not determined         |
| <b>Upper explosion limit</b>                         | : | not determined         |
| <b>Oxidizing properties</b>                          | : | no                     |
| <b>Vapour pressure/gas pressure (kPa)</b>            | : | not determined         |
| <b>Density (g/ml)</b>                                | : | 0.98 – 1.02 (20°C)     |
| <b>Bulk Density (kg/m³)</b>                          | : | not applicable         |
| <b>Solubility in water</b>                           | : | immiscible             |
| <b>Partition coefficient (n-octanol/water)</b>       | : | not determined         |
| <b>Viscosity</b>                                     | : | 800 – 1400 mPas (25°C) |
| <b>Relative vapour density<br/>determined in air</b> | : | not determined         |
| <b>Evaporation speed</b>                             | : | not determined         |
| <b>Melting point (°C)</b>                            | : | not determined         |
| <b>Autoignition temperature (°C)</b>                 | : | not determined         |
| <b>Decomposition temperature (°C)</b>                | : | not determined         |

## 10. STABILITY AND REACTIVITY:

|                                           |   |                                                               |
|-------------------------------------------|---|---------------------------------------------------------------|
| <b>Reactivity</b>                         | : | no dangerous reactions known if used as directed              |
| <b>Chemical stability</b>                 | : | Stable under normal ambient conditions (ambient Temperature). |
| <b>Possibility of hazardous reactions</b> | : | Reactions with strong oxidizing agents                        |

# Material Safety Data Sheet

|                                         |   |                                     |
|-----------------------------------------|---|-------------------------------------|
| <b>Conditions to avoid</b>              | : | Strong heating                      |
| <b>Hazardous Decomposition Products</b> | : | In the event of fire: see SECTION 5 |

## 11. TOXICOLOGICAL INFORMATION:

### Information of toxicological effects

#### Acute toxicity

##### Product

ATE-mix, dermal, >2000 mg/kg

ATE-mix, oral, > 300 - <2000 mg/kg

##### Range (%)

15 - 25

##### Substance

Diethylmethylbenzendiamine, CAS: 68479-98-1

LD50, dermal, Rat: >2000 mg/kg (OECD 402)

LD50, oral, Rat: 738 mg/kg (OECD 401)

NOAEL, oral, Rat: >=8 mg/kg/90d

NOAEL, dermal, Rabbit: >=10 mg/kg/21d

LOAEL, oral, Rat: >=21 mg/kg/90d

NOEL, oral, Rat: 50 ppm/28d

NOEL, dermal, Rabbit: 1.0 mg/kg/21d

|                                   |   |                                                                                                                                                                            |
|-----------------------------------|---|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Serious eye damage/irritation     | : | irritant                                                                                                                                                                   |
| Skin corrosion/irritation         | : | not determined                                                                                                                                                             |
| Respiratory or skin sensitisation | : | not determined                                                                                                                                                             |
| Specific target organ toxicity    |   |                                                                                                                                                                            |
| single exposure                   | : | no classification                                                                                                                                                          |
| Specific target organ toxicity    |   |                                                                                                                                                                            |
| repeated exposure                 | : | STOT RE 2                                                                                                                                                                  |
| Mutagenicity                      | : | OECD 471 (in vitro), Ames-test: positive<br>OECD 473, Negative chromosomal aberration test (in vitro)<br>OECD 474, Micronucleus test, negative (in vitro) (CAS 68479-98-1) |
| Reproduction toxicity             | : | not determined                                                                                                                                                             |
| Carcinogenicity                   | : | not determined                                                                                                                                                             |
| General remarks                   | : | May cause irritation                                                                                                                                                       |

Toxicological data of complete product are not available  
The toxicity data listed pertaining to the ingredients are

# Material Safety Data Sheet

intended for those working in the medical professions, experts for occupational health and safety and toxicologists. The toxicity data pertaining to the ingredients were supplied by the manufacturers of raw materials. The product was classified on the basis of the calculation procedure of the preparation directive.

## 12. ECOLOGICAL INFORMATION:

### Toxicity

Range (%)  
15 – 25

### Substance

Diethylmethylbenzenediamine, CAS: 68479-98-1  
LC50, (96h), Pimephales promelas: > 106 mg/l (OECD 203)  
EC50, (24h), Pseudomonas putida: > 170 mg/l (DIN 38412-8)  
EC50, (48h), Daphnia magna: 5.8 mg/l (OECD 202)  
ErC50, (72h), Desmodemus subspicatus: ca. 104 mg/l (OECD 201)

### Persistence and degradability

|                                       |   |                                                                                                                                                                               |
|---------------------------------------|---|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Behaviour in environment compartments | : | not determined                                                                                                                                                                |
| Behaviour in sewage plant             | : | not determined                                                                                                                                                                |
| Biological degradability              | : | the product is not readily biodegradable                                                                                                                                      |
| Bioaccumulative potential             | : | BCF: 2.75 (CAS 68479-98-1)<br>logPow: 1.38 (CAS 68479-98-1, OECD 107)                                                                                                         |
| Mobility in soil                      | : | No information available                                                                                                                                                      |
| Results of PBT and vPvB assessment    | : | Based on all available information not to be classified as PBT or vPvB respectively                                                                                           |
| Other Adverse effects                 | : | The product is insoluble in water<br>Ecological data of complete product are not available<br>Do not discharge product unmonitored into the Environment or into the drainage. |

The toxicity data pertaining to the ingredients were supplied by the manufacturers of raw materials

The product was classified on the basis of the calculation procedure of the preparation directive.

## 13. DISPOSAL CONSIDERATIONS:

**Disposal must be in accordance with local and national legislation.**

|                 |   |                                                                                                          |
|-----------------|---|----------------------------------------------------------------------------------------------------------|
| <b>Disposal</b> | : | Waste material must be disposed of in accordance with the national and local regulations. Uncontaminated |
|-----------------|---|----------------------------------------------------------------------------------------------------------|

# Material Safety Data Sheet

packaging maybe taken for recycling  
Packaging that cannot be cleaned should be disposed of  
as for product

## 14. TRANSPORT INFORMATION:

### UN proper shipping name

Transport by land according to ADR/RID :

UN 3082 Environmentally hazardous substance, liquid,  
n.o.s (Diethylmethylbenzenediamine) 9 III  
M6

- Classification code
- Label



- ADR LQ
- ADR 1.1.3.6 (8.6)

5 I  
Transport category (funnel restriction code) 3 (E)

Inland navigation (ADN)

:

UN 3082 Environmentally hazardous substance, liquid  
n.o.s (Diethylmethylbenzenediamine) 9 III  
M6

- Classification code
- Label

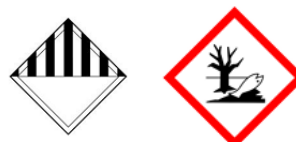


Marine transport in accordance with  
IMDG

:

UN 3082 Environmentally hazardous substance, liquid  
Diethylmethylbenzenediamine) 9 III  
F-A, S-F

- EMS
- Label



- IMDG LQ

5 I

Air transport in accordance with IATA :

UN 3082 Environmentally hazardous substance, liquid,  
n.o.s (Diethylmethylbenzenediamine) 9 III

- Label



# Material Safety Data Sheet

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## 15. REGULATORY INFORMATION:

|                                  |   |                                                                                                                                         |
|----------------------------------|---|-----------------------------------------------------------------------------------------------------------------------------------------|
| <b>EEC – REGULATIONS</b>         | : | 1967/548 (1999/45); 1991/689 (2001/118); 1999/13; 2004/42; 648/2004; 1907/2006 (Reach); 1272/2008; 75/324/EEC (2008/47/EC); 453/2010/EC |
| <b>TRANSPORT REGULATIONS</b>     | : | DOT – classification, ADR (2013); IMDG-Code (2013, 36. Arndt); IATA-DGR (2013)                                                          |
| <b>NATIONAL REGULATIONS (GB)</b> | : | EH40/2005 Workplace exposure limits (second edition, Published December 2011 CHIP 3 / CHIP 4                                            |

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## 16. OTHER INFORMATION:

The data and advice given apply when the product is used for the stated application or applications. The product is not sold as suitable for any other applications. Use of the product for applications other than as stated in the sheet may give rise to risks not mentioned in this sheet. The product should not be used other than for the stated application or applications without seeking advice from MATEX.

If the product has been purchased for supply to a third party for use at work, it is the purchaser's duty to take all necessary steps to ensure that any person handling or using the product is provided with the information in this sheet.

It is the responsibility and duty of the employer to inform employees and others who may be affected of hazards described in this sheet and of any precautions which should be taken.

This sheet does not constitute or substitute for the users own assessment of workplace risk, as required by other health and safety legislation.

Further copies of this Safety Data Sheet may be obtained from MATEX.