



## Safety Data Sheet according to (EC) No 1907/2006 as amended

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Tangit M 3000

SDS No. : 367805

V003.1

Revision: 03.05.2022

printing date: 03.01.2023

Replaces version from: 13.01.2022

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

#### 1.1. Product identifier

Tangit M 3000 Part A

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

Intended use:

Foam, 2-component without propellant gas

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

Henkel Ltd

Adhesives

Wood Lane End

HP2 4RQ Hemel Hempstead

Great Britain

Phone: +44 (1442) 278000

ua-productsafety.uk@henkel.com

For Safety Data Sheet updates please visit our website <https://mysds.henkel.com/index.html#/appSelection> or [www.henkel-adhesives.com](http://www.henkel-adhesives.com).

#### 1.4. Emergency telephone number

24 Hours Emergency Tel: +44 0 8701 906777 - For further general health & safety, technical and practical advice on this product, please call +44 (0) 1606 593933 or write to: Technical Services; Henkel Limited; Road 5; Winsford Industrial Estate; Winsford; Cheshire; CW7 3QY- Email: [technical.services@henkel.co.uk](mailto:technical.services@henkel.co.uk)

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

#### Classification (CLP):

|                                                                                 |            |
|---------------------------------------------------------------------------------|------------|
| Acute toxicity                                                                  | Category 4 |
| H332 Harmful if inhaled.                                                        |            |
| Route of Exposure: Inhalation                                                   |            |
| Skin irritation                                                                 | Category 2 |
| H315 Causes skin irritation.                                                    |            |
| Serious eye irritation                                                          | Category 2 |
| H319 Causes serious eye irritation.                                             |            |
| Respiratory sensitization                                                       | Category 1 |
| H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled. |            |
| Skin sensitizer                                                                 | Category 1 |
| H317 May cause an allergic skin reaction.                                       |            |
| Carcinogenicity                                                                 | Category 2 |
| H351 Suspected of causing cancer.                                               |            |
| Specific target organ toxicity - single exposure                                | Category 3 |
| H335 May cause respiratory irritation.                                          |            |
| Target organ: respiratory tract irritation                                      |            |
| Specific target organ toxicity - repeated exposure                              | Category 2 |
| H373 May cause damage to organs through prolonged or repeated exposure.         |            |

### 2.2. Label elements

#### Label elements (CLP):

##### Hazard pictogram:



##### Contains

Diphenylmethane diisocyanate, isomers and homologues

##### Signal word:

Danger

##### Hazard statement:

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

##### Supplemental information

As from 24 August 2023 adequate training is required before industrial or professional use.  
Further information: <https://www.feica.eu/PUinfo>

##### Precautionary statement:

P102 Keep out of reach of children.  
P101 If medical advice is needed, have product container or label at hand.

##### Precautionary statement: Prevention

P260 Do not breathe vapours.  
P271 Use only outdoors or in a well-ventilated area.  
P280 Wear protective gloves/eye protection.

##### Precautionary statement: Disposal

P501 Dispose of contents/container in accordance with national regulation.

### 2.3. Other hazards

Persons already sensitised to diisocyanates may develop allergic reactions when using this product. Persons suffering from asthma, eczema or skin problems should avoid contact, including dermal contact, with this product. This product should not be used under conditions of poor ventilation unless a protective mask with an appropriate gas filter (i.e. type A1 according to standard EN 14387) is used.

Information according to XVII. 56 REACH

Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.

**Following substances are present in a concentration  $\geq 0,1\%$  and fulfill the criteria for PBT/vPvB, or were identified as endocrine disruptor (ED):**

This mixture does not contain any substances in concentration  $\geq$  the concentration limit that are assessed to be a PBT, vPvB or ED.

## SECTION 3: Composition/information on ingredients

### 3.2. Mixtures

**Declaration of the ingredients according to CLP (EC) No 1272/2008:**

| Hazardous components<br>CAS-No.<br>EC Number<br>REACH-Reg No.                         | Concentration | Classification                                                                                                                                                                  | Specific Conc. Limits, M-factors and ATEs                                                                                                     | Add. Information |
|---------------------------------------------------------------------------------------|---------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|------------------|
| 4,4'-methylenediphenyl diisocyanate<br>101-68-8<br>202-966-0<br>01-2119457014-47      | 40- 60 %      | Carc. 2, H351<br>Acute Tox. 4, Inhalation, H332<br>STOT RE 2, H373<br>Eye Irrit. 2, H319<br>STOT SE 3, H335<br>Skin Irrit. 2, H315<br>Resp. Sens. 1, H334<br>Skin Sens. 1, H317 | Eye Irrit. 2; H319; C $\geq 5\%$<br>Skin Irrit. 2; H315; C $\geq 5\%$<br>Resp. Sens. 1; H334; C $\geq 0,1\%$<br>STOT SE 3; H335; C $\geq 5\%$ |                  |
| Diphenylmethane diisocyanate, isomers and homologues<br>9016-87-9                     | 40- 60 %      | Carc. 2, H351<br>Acute Tox. 4, Inhalation, H332<br>STOT RE 2, H373<br>Eye Irrit. 2, H319<br>STOT SE 3, H335<br>Skin Irrit. 2, H315<br>Resp. Sens. 1, H334<br>Skin Sens. 1, H317 | Eye Irrit. 2; H319; C $\geq 5\%$<br>Skin Irrit. 2; H315; C $\geq 5\%$<br>Resp. Sens. 1; H334; C $\geq 0,1\%$<br>STOT SE 3; H335; C $\geq 5\%$ |                  |
| o-(p-Isocyanatobenzyl)phenyl isocyanate<br>5873-54-1<br>227-534-9<br>01-2119480143-45 | 1- < 5 %      | STOT RE 2, H373<br>Carc. 2, H351<br>Acute Tox. 4, Inhalation, H332<br>Eye Irrit. 2, H319<br>STOT SE 3, H335<br>Skin Irrit. 2, H315<br>Skin Sens. 1, H317<br>Resp. Sens. 1, H334 | Eye Irrit. 2; H319; C $\geq 5\%$<br>Skin Irrit. 2; H315; C $\geq 5\%$<br>Resp. Sens. 1; H334; C $\geq 0,1\%$<br>STOT SE 3; H335; C $\geq 5\%$ |                  |
| 2,2'-Methylenediphenyl diisocyanate<br>2536-05-2<br>219-799-4<br>01-2119927323-43     | 0,01- < 0,1 % | STOT RE 2, H373<br>Carc. 2, H351<br>Acute Tox. 4, Inhalation, H332<br>Eye Irrit. 2, H319<br>STOT SE 3, H335<br>Skin Irrit. 2, H315<br>Resp. Sens. 1, H334<br>Skin Sens. 1, H317 | Eye Irrit. 2; H319; C $\geq 5\%$<br>Skin Irrit. 2; H315; C $\geq 5\%$<br>Resp. Sens. 1; H334; C $\geq 0,1\%$<br>STOT SE 3; H335; C $\geq 5\%$ |                  |

**For full text of the H - statements and other abbreviations see section 16 "Other information".  
Substances without classification may have community workplace exposure limits available.**

**SECTION 4: First aid measures****4.1. Description of first aid measures**

General information:

In case of adverse health effects seek medical advice.

Inhalation:

Move to fresh air, consult doctor if complaint persists.

Skin contact:

Rinse with running water and soap. Skin care. Remove contaminated clothes immediately.

Eye contact:

Immediately flush eyes with soft jet of water or eye rinse solution for at least 5 minutes. If pains remain (intensive smarting, sensitivity to light, visual disturbance) continue flushing and contact/seek doctor or hospital.

Ingestion:

Rinse mouth and throat. Drink 1-2 glasses of water. Seek medical advice.

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

May cause an allergic skin reaction.

RESPIRATORY: Irritation, coughing, shortness of breath, chest tightness.

SKIN: Redness, inflammation.

Causes serious eye irritation.

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

See section: Description of first aid measures

**SECTION 5: Firefighting measures****5.1. Extinguishing media**

**Suitable extinguishing media:**

carbon dioxide, foam, powder, water spray jet, fine water spray

**Extinguishing media which must not be used for safety reasons:**

High pressure waterjet

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

In the event of fire, isocyanate vapors may be formed.

In the event of a fire, carbon monoxide (CO), carbon dioxide (CO<sub>2</sub>) and nitrogen oxides (NO<sub>x</sub>) can be released.

**5.3. Advice for firefighters**

Wear self-contained breathing apparatus.

Wear protective equipment.

**SECTION 6: Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures**

Wear protective equipment.

Ensure adequate ventilation.

Danger of slipping on spilled product.

Avoid contact with skin and eyes.

**6.2. Environmental precautions**

Do not empty into drains / surface water / ground water.

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

Remove with liquid-absorbing material (sand, peat, sawdust).  
Dispose of contaminated material as waste according to Section 13.

**6.4. Reference to other sections**

See advice in section 8

**SECTION 7: Handling and storage****7.1. Precautions for safe handling**

Ensure that workrooms are adequately ventilated.  
Avoid skin and eye contact.

Hygiene measures:

Do not eat, drink or smoke while working.  
Wash hands before work breaks and after finishing work.  
Remove any dirt that gets onto the skin with vegetable oil; skin care.

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

Store in sealed original container.  
Frost-sensitive  
Store in a cool, dry place.  
Avoid strictly temperatures below + 2°C and above + 30 °C.  
Do not store together with oxidants.  
Do not store together with food or other consumables (coffee, tea, tobacco, etc.).  
Do not store together with flammable solutions.

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

Foam, 2-component without propellant gas

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### Occupational Exposure Limits

Valid for  
Great Britain

| Ingredient [Regulated substance]                                                                | ppm | mg/m <sup>3</sup> | Value type                        | Short term exposure limit category / Remarks | Regulatory list |
|-------------------------------------------------------------------------------------------------|-----|-------------------|-----------------------------------|----------------------------------------------|-----------------|
| Diphenylmethane diisocyanate, isomers and homologs<br>9016-87-9<br>[ISOCYANATES, ALL (AS -NCO)] |     | 0,02              | Time Weighted Average (TWA):      |                                              | EH40 WEL        |
| Diphenylmethane diisocyanate, isomers and homologs<br>9016-87-9<br>[ISOCYANATES, ALL (AS -NCO)] |     | 0,07              | Short Term Exposure Limit (STEL): | 15 minutes                                   | EH40 WEL        |
| 4,4'-Methylenediphenyl diisocyanate<br>101-68-8<br>[ISOCYANATES, ALL (AS -NCO)]                 |     | 0,02              | Time Weighted Average (TWA):      |                                              | EH40 WEL        |
| 4,4'-Methylenediphenyl diisocyanate<br>101-68-8<br>[ISOCYANATES, ALL (AS -NCO)]                 |     | 0,07              | Short Term Exposure Limit (STEL): | 15 minutes                                   | EH40 WEL        |
| o-(p-Isocyanatobenzyl)phenyl isocyanate<br>5873-54-1<br>[ISOCYANATES, ALL (AS -NCO)]            |     | 0,02              | Time Weighted Average (TWA):      |                                              | EH40 WEL        |
| o-(p-Isocyanatobenzyl)phenyl isocyanate<br>5873-54-1<br>[ISOCYANATES, ALL (AS -NCO)]            |     | 0,07              | Short Term Exposure Limit (STEL): | 15 minutes                                   | EH40 WEL        |
| 2,2'-Methylenediphenyl diisocyanate<br>2536-05-2<br>[ISOCYANATES, ALL (AS -NCO)]                |     | 0,02              | Time Weighted Average (TWA):      |                                              | EH40 WEL        |
| 2,2'-Methylenediphenyl diisocyanate<br>2536-05-2<br>[ISOCYANATES, ALL (AS -NCO)]                |     | 0,07              | Short Term Exposure Limit (STEL): | 15 minutes                                   | EH40 WEL        |

#### Occupational Exposure Limits

Valid for  
Ireland

| Ingredient [Regulated substance]                                                                                                                                                                    | ppm   | mg/m <sup>3</sup> | Value type                        | Short term exposure limit category / Remarks | Regulatory list |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-------------------|-----------------------------------|----------------------------------------------|-----------------|
| Diphenylmethane diisocyanate, isomers and homologs<br>9016-87-9<br>[ISOCYANATES, ALL, EXCEPT METHYL ISOCYANATE (CAS NO. 624-83-9) AND TOLUENE (2,4 OR 2,6 DIISOCYANATE (CAS NO. 584-84-9, 91-08-7)] |       | 0,07              | Short Term Exposure Limit (STEL): | 15 minutes                                   | IR_OEL          |
| Diphenylmethane diisocyanate, isomers and homologs<br>9016-87-9<br>[ISOCYANATES, ALL, EXCEPT METHYL ISOCYANATE (CAS NO. 624-83-9) AND TOLUENE (2,4 OR 2,6 DIISOCYANATE (CAS NO. 584-84-9, 91-08-7)] |       | 0,02              | Time Weighted Average (TWA):      |                                              | IR_OEL          |
| 4,4'-Methylenediphenyl diisocyanate<br>101-68-8<br>[4,4'-METHYLENE-DIPHENYL DIISOCYANATE (AS -NCO)]                                                                                                 | 0,005 |                   | Time Weighted Average (TWA):      |                                              | IR_OEL          |
| 4,4'-Methylenediphenyl diisocyanate<br>101-68-8<br>[ISOCYANATES, ALL, EXCEPT METHYL ISOCYANATE (CAS NO. 624-83-9) AND TOLUENE (2,4 OR 2,6 DIISOCYANATE (CAS NO. 584-84-9, 91-08-7)]                 |       | 0,02              | Time Weighted Average (TWA):      |                                              | IR_OEL          |
| 4,4'-Methylenediphenyl diisocyanate                                                                                                                                                                 |       | 0,07              | Short Term Exposure               | 15 minutes                                   | IR_OEL          |

|                                                                                                                                                                                          |  |      |                                   |            |        |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|------|-----------------------------------|------------|--------|
| 101-68-8<br>[ISOCYANATES, ALL, EXCEPT METHYL ISOCYANATE (CAS NO. 624-83-9) AND TOLUENE (2,4 OR 2,6 DIISOCYANATE (CAS NO. 584-84-9, 91-08-7)]                                             |  |      | Limit (STEL):                     |            |        |
| o-(p-Isocyanatobenzyl)phenyl isocyanate<br>5873-54-1<br>[ISOCYANATES, ALL, EXCEPT METHYL ISOCYANATE (CAS NO. 624-83-9) AND TOLUENE (2,4 OR 2,6 DIISOCYANATE (CAS NO. 584-84-9, 91-08-7)] |  | 0,07 | Short Term Exposure Limit (STEL): | 15 minutes | IR_OEL |
| o-(p-Isocyanatobenzyl)phenyl isocyanate<br>5873-54-1<br>[ISOCYANATES, ALL, EXCEPT METHYL ISOCYANATE (CAS NO. 624-83-9) AND TOLUENE (2,4 OR 2,6 DIISOCYANATE (CAS NO. 584-84-9, 91-08-7)] |  | 0,02 | Time Weighted Average (TWA):      |            | IR_OEL |
| 2,2'-Methylenediphenyl diisocyanate<br>2536-05-2<br>[ISOCYANATES, ALL, EXCEPT METHYL ISOCYANATE (CAS NO. 624-83-9) AND TOLUENE (2,4 OR 2,6 DIISOCYANATE (CAS NO. 584-84-9, 91-08-7)]     |  | 0,07 | Short Term Exposure Limit (STEL): | 15 minutes | IR_OEL |
| 2,2'-Methylenediphenyl diisocyanate<br>2536-05-2<br>[ISOCYANATES, ALL, EXCEPT METHYL ISOCYANATE (CAS NO. 624-83-9) AND TOLUENE (2,4 OR 2,6 DIISOCYANATE (CAS NO. 584-84-9, 91-08-7)]     |  | 0,02 | Time Weighted Average (TWA):      |            | IR_OEL |

**Predicted No-Effect Concentration (PNEC):**

| Name on list                                         | Environmental<br>Compartment       | Exposure<br>period | Value    |     |         |        | Remarks                             |
|------------------------------------------------------|------------------------------------|--------------------|----------|-----|---------|--------|-------------------------------------|
|                                                      |                                    |                    | mg/l     | ppm | mg/kg   | others |                                     |
| 4,4'- methylenediphenyl diisocyanate<br>101-68-8     | aqua<br>(freshwater)               |                    | 1 mg/l   |     |         |        |                                     |
| 4,4'- methylenediphenyl diisocyanate<br>101-68-8     | aqua (marine<br>water)             |                    | 0,1 mg/l |     |         |        |                                     |
| 4,4'- methylenediphenyl diisocyanate<br>101-68-8     | Soil                               |                    |          |     | 1 mg/kg |        |                                     |
| 4,4'- methylenediphenyl diisocyanate<br>101-68-8     | sewage<br>treatment plant<br>(STP) |                    | 1 mg/l   |     |         |        |                                     |
| 4,4'- methylenediphenyl diisocyanate<br>101-68-8     | Air                                |                    |          |     |         |        | no hazard identified                |
| 4,4'- methylenediphenyl diisocyanate<br>101-68-8     | Predator                           |                    |          |     |         |        | no potential for<br>bioaccumulation |
| 4,4'- methylenediphenyl diisocyanate<br>101-68-8     | aqua<br>(intermittent<br>releases) |                    | 10 mg/l  |     |         |        |                                     |
| o-(p-Isocyanatobenzyl)phenyl isocyanate<br>5873-54-1 | aqua (marine<br>water)             |                    | 0,1 mg/l |     |         |        |                                     |
| o-(p-Isocyanatobenzyl)phenyl isocyanate<br>5873-54-1 | sewage<br>treatment plant<br>(STP) |                    | 1 mg/l   |     |         |        |                                     |
| o-(p-Isocyanatobenzyl)phenyl isocyanate<br>5873-54-1 | aqua<br>(intermittent<br>releases) |                    | 10 mg/l  |     |         |        |                                     |
| o-(p-Isocyanatobenzyl)phenyl isocyanate<br>5873-54-1 | aqua<br>(freshwater)               |                    | 1 mg/l   |     |         |        |                                     |
| o-(p-Isocyanatobenzyl)phenyl isocyanate<br>5873-54-1 | Soil                               |                    |          |     | 1 mg/kg |        |                                     |
| 2,2'-Methylenediphenyl diisocyanate<br>2536-05-2     | aqua<br>(freshwater)               |                    | 1 mg/l   |     |         |        |                                     |
| 2,2'-Methylenediphenyl diisocyanate<br>2536-05-2     | aqua (marine<br>water)             |                    | 0,1 mg/l |     |         |        |                                     |
| 2,2'-Methylenediphenyl diisocyanate<br>2536-05-2     | Soil                               |                    |          |     | 1 mg/kg |        |                                     |
| 2,2'-Methylenediphenyl diisocyanate<br>2536-05-2     | sewage<br>treatment plant<br>(STP) |                    | 1 mg/l   |     |         |        |                                     |
| 2,2'-Methylenediphenyl diisocyanate<br>2536-05-2     | aqua<br>(intermittent<br>releases) |                    | 10 mg/l  |     |         |        |                                     |

**Derived No-Effect Level (DNEL):**

| Name on list                                      | Application Area   | Route of Exposure | Health Effect                             | Exposure Time | Value                   | Remarks              |
|---------------------------------------------------|--------------------|-------------------|-------------------------------------------|---------------|-------------------------|----------------------|
| 4,4'-methylenediphenyl diisocyanate 101-68-8      | Workers            | inhalation        | Long term exposure - local effects        |               | 0,05 mg/m <sup>3</sup>  | no hazard identified |
| 4,4'-methylenediphenyl diisocyanate 101-68-8      | Workers            | inhalation        | Acute/short term exposure - local effects |               | 0,1 mg/m <sup>3</sup>   | no hazard identified |
| 4,4'-methylenediphenyl diisocyanate 101-68-8      | General population | inhalation        | Long term exposure - local effects        |               | 0,025 mg/m <sup>3</sup> | no hazard identified |
| 4,4'-methylenediphenyl diisocyanate 101-68-8      | General population | inhalation        | Acute/short term exposure - local effects |               | 0,05 mg/m <sup>3</sup>  | no hazard identified |
| o-(p-Isocyanatobenzyl)phenyl isocyanate 5873-54-1 | Workers            | inhalation        | Acute/short term exposure - local effects |               | 0,1 mg/m <sup>3</sup>   |                      |
| o-(p-Isocyanatobenzyl)phenyl isocyanate 5873-54-1 | Workers            | inhalation        | Long term exposure - local effects        |               | 0,05 mg/m <sup>3</sup>  |                      |
| o-(p-Isocyanatobenzyl)phenyl isocyanate 5873-54-1 | General population | inhalation        | Acute/short term exposure - local effects |               | 0,05 mg/m <sup>3</sup>  |                      |
| o-(p-Isocyanatobenzyl)phenyl isocyanate 5873-54-1 | General population | inhalation        | Long term exposure - local effects        |               | 0,025 mg/m <sup>3</sup> |                      |
| 2,2'-Methylenediphenyl diisocyanate 2536-05-2     | Workers            | inhalation        | Acute/short term exposure - local effects |               | 0,1 mg/m <sup>3</sup>   |                      |
| 2,2'-Methylenediphenyl diisocyanate 2536-05-2     | Workers            | inhalation        | Long term exposure - local effects        |               | 0,05 mg/m <sup>3</sup>  |                      |
| 2,2'-Methylenediphenyl diisocyanate 2536-05-2     | General population | inhalation        | Acute/short term exposure - local effects |               | 0,05 mg/m <sup>3</sup>  |                      |
| 2,2'-Methylenediphenyl diisocyanate 2536-05-2     | General population | inhalation        | Long term exposure - local effects        |               | 0,025 mg/m <sup>3</sup> |                      |

**Biological Exposure Indices:**

| Ingredient [Regulated substance]                                                                               | Parameters                 | Biological specimen | Sampling time                                        | Conc. | Basis of biol. exposure index | Remark | Additional Information |
|----------------------------------------------------------------------------------------------------------------|----------------------------|---------------------|------------------------------------------------------|-------|-------------------------------|--------|------------------------|
| Diphenylmethane diisocyanate, isomers and homologs 9016-87-9 [ISOCYANATES (APPLIES TO HDI, IPDI, TDI AND MDI)] | Isocyanate-derived diamine | Creatinine in urine | Sampling time: At the end of the period of exposure. |       | UKEH40BMG V                   |        |                        |
| 4,4'-Methylenediphenyl diisocyanate 101-68-8 [ISOCYANATES (APPLIES TO HDI, IPDI, TDI AND MDI)]                 | Isocyanate-derived diamine | Creatinine in urine | Sampling time: At the end of the period of exposure. |       | UKEH40BMG V                   |        |                        |
| o-(p-Isocyanatobenzyl)phenyl isocyanate 5873-54-1 [ISOCYANATES (APPLIES TO HDI, IPDI, TDI AND MDI)]            | Isocyanate-derived diamine | Creatinine in urine | Sampling time: At the end of the period of exposure. |       | UKEH40BMG V                   |        |                        |
| 2,2'-Methylenediphenyl diisocyanate 2536-05-2 [ISOCYANATES (APPLIES TO HDI, IPDI, TDI AND MDI)]                | Isocyanate-derived diamine | Creatinine in urine | Sampling time: At the end of the period of exposure. |       | UKEH40BMG V                   |        |                        |

**8.2. Exposure controls:**

**Respiratory protection:**

Suitable breathing mask when there is inadequate ventilation.

Combination filter: ABEKP (EN 14387)

This recommendation should be matched to local conditions.

**Hand protection:**

Recommended are gloves made from Nitril rubber (Material thickness >0,1 mm, Perforation time < 30s). Gloves should be replaced after each short time contact or contamination. Available at laboratory specialized trade or at pharmacies / chemist's shops.

In the case of longer contact protective gloves made from nitrile rubber are recommended according to EN 374.

material thickness > 0.4 mm

Perforation time > 30 minutes

In the case of longer and repeated contact please note that in practice the penetration times may be considerably shorter than those determined according to EN 374. The protective gloves must always be checked for their suitability for use at the specific workplace (e.g. mechanical and thermal stress, product compatibility, antistatic effects, etc.). The gloves must be replaced immediately at the first signs of wear and tear. The information provided by the manufacturers and given in the relevant trade association regulations for industrial safety must always be observed. We recommend that a hand care plan is drawn up in cooperation with a glove manufacturer and the trade association in accordance with the local operating conditions.

**Eye protection:**

Goggles which can be tightly sealed.

Protective eye equipment should conform to EN166.

**Skin protection:**

Suitable protective clothing

Protective clothing should conform to EN 14605 for liquid splashes or to EN 13982 for dusts.

**Advices to personal protection equipment:**

The information provided on personal protective equipment is for guidance purposes only. A full risk assessment should be conducted prior to using this product to determine the appropriate personal protective equipment to suit local conditions.

Personal protective equipment should conform to the relevant EN standard.

## SECTION 9: Physical and chemical properties

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

|                                                             |                                                          |
|-------------------------------------------------------------|----------------------------------------------------------|
| Physical state                                              | liquid                                                   |
| Delivery form                                               | liquid                                                   |
| Colour                                                      | brownish                                                 |
| Odor                                                        | neutral                                                  |
| Flash point                                                 | 199 °C (390.2 °F)                                        |
| pH                                                          | Not applicable, Product reacts with water.               |
| Viscosity, dynamic<br>(Brookfield; 20 °C (68 °F))           | 7.000 - 9.000 mPa.s no method                            |
| Solubility (qualitative)<br>(20 °C (68 °F); Solvent: Water) | Reacts slowly with water to liberate carbon dioxide gas. |
| Density<br>(20 °C (68 °F))                                  | 1,18 - 1,22 g/cm <sup>3</sup> no method                  |

### 9.2. Other information

Other information not applicable for this product

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Reaction with water, alcohols, amines.

Reaction with water, formation of CO<sub>2</sub>

Pressure build-up in closed containers.

### 10.2. Chemical stability

Stable under recommended storage conditions.

**10.3. Possibility of hazardous reactions**

See section reactivity

**10.4. Conditions to avoid**

Humidity

**10.5. Incompatible materials**

See section reactivity.

**10.6. Hazardous decomposition products**

At higher temperatures isocyanate may be released.

Carbon dioxide is generated under contact with moisture, leading to pressure in the cans. Danger of cans bursting!

**SECTION 11: Toxicological information****General toxicological information:**

Cross-reactions with other isocyanate compounds are possible.

**1.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008****Acute oral toxicity:**

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

| Hazardous substances<br>CAS-No.                                         | Value<br>type | Value          | Species | Method                                   |
|-------------------------------------------------------------------------|---------------|----------------|---------|------------------------------------------|
| 4,4'-methylenediphenyl<br>diisocyanate<br>101-68-8                      | LD50          | > 2.000 mg/kg  | rat     | other guideline:                         |
| Diphenylmethane<br>diisocyanate, isomers and<br>homologues<br>9016-87-9 | LD50          | > 10.000 mg/kg | rat     | OECD Guideline 401 (Acute Oral Toxicity) |
| o-(p-<br>Isocyanatobenzyl)phenyl<br>isocyanate<br>5873-54-1             | LD50          | > 2.000 mg/kg  | rat     | other guideline:                         |
| 2,2'-Methylenediphenyl<br>diisocyanate<br>2536-05-2                     | LD50          | > 2.000 mg/kg  | rat     | EU Method B.1 (Acute Toxicity (Oral))    |

**Acute dermal toxicity:**

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

| Hazardous substances<br>CAS-No.                                         | Value<br>type | Value         | Species | Method                                     |
|-------------------------------------------------------------------------|---------------|---------------|---------|--------------------------------------------|
| 4,4'-methylenediphenyl<br>diisocyanate<br>101-68-8                      | LD50          | > 9.400 mg/kg | rabbit  | OECD Guideline 402 (Acute Dermal Toxicity) |
| Diphenylmethane<br>diisocyanate, isomers and<br>homologues<br>9016-87-9 | LD50          | > 9.400 mg/kg | rat     | OECD Guideline 402 (Acute Dermal Toxicity) |
| o-(p-<br>Isocyanatobenzyl)phenyl<br>isocyanate<br>5873-54-1             | LD50          | > 9.400 mg/kg | rabbit  | OECD Guideline 402 (Acute Dermal Toxicity) |
| 2,2'-Methylenediphenyl<br>diisocyanate<br>2536-05-2                     | LD50          | > 9.400 mg/kg | rabbit  | OECD Guideline 402 (Acute Dermal Toxicity) |

**Acute inhalative toxicity:**

No substance data available.

The toxicity of the product is due to its narcotic effect after inhalation.

In the event of protracted or repeated exposure, damage to health cannot be excluded.

No substance data available.

**Skin corrosion/irritation:**

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

| Hazardous substances<br>CAS-No.                                         | Result     | Exposure<br>time | Species | Method                                                   |
|-------------------------------------------------------------------------|------------|------------------|---------|----------------------------------------------------------|
| 4,4'- methylenediphenyl<br>diisocyanate<br>101-68-8                     | irritating | 4 h              | rabbit  | OECD Guideline 404 (Acute Dermal Irritation / Corrosion) |
| Diphenylmethane<br>diisocyanate, isomers and<br>homologues<br>9016-87-9 | irritating |                  | rabbit  | OECD Guideline 404 (Acute Dermal Irritation / Corrosion) |
| o-(p-<br>Isocyanatobenzyl)phenyl<br>isocyanate<br>5873-54-1             | irritating |                  | rabbit  | OECD Guideline 404 (Acute Dermal Irritation / Corrosion) |

**Serious eye damage/irritation:**

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

| Hazardous substances<br>CAS-No.                                         | Result     | Exposure<br>time | Species | Method                                                |
|-------------------------------------------------------------------------|------------|------------------|---------|-------------------------------------------------------|
| Diphenylmethane<br>diisocyanate, isomers and<br>homologues<br>9016-87-9 | irritating |                  | rabbit  | OECD Guideline 405 (Acute Eye Irritation / Corrosion) |

**Respiratory or skin sensitization:**

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

| Hazardous substances<br>CAS-No.                                         | Result          | Test type                             | Species    | Method                                                             |
|-------------------------------------------------------------------------|-----------------|---------------------------------------|------------|--------------------------------------------------------------------|
| 4,4'- methylenediphenyl<br>diisocyanate<br>101-68-8                     | sensitising     | Buehler test                          | guinea pig | OECD Guideline 406 (Skin Sensitisation)                            |
| Diphenylmethane<br>diisocyanate, isomers and<br>homologues<br>9016-87-9 | sensitising     | Skin sensitisation                    | guinea pig | OECD Guideline 406 (Skin Sensitisation)                            |
| o-(p-<br>Isocyanatobenzyl)phenyl<br>isocyanate<br>5873-54-1             | sensitising     | Respiratory sensitisation             | guinea pig | not specified                                                      |
| o-(p-<br>Isocyanatobenzyl)phenyl<br>isocyanate<br>5873-54-1             | not sensitising | Buehler test                          | guinea pig | OECD Guideline 406 (Skin Sensitisation)                            |
| o-(p-<br>Isocyanatobenzyl)phenyl<br>isocyanate<br>5873-54-1             | sensitising     | Mouse local lymphnode<br>assay (LLNA) | mouse      | OECD Guideline 429 (Skin Sensitisation:<br>Local Lymph Node Assay) |
| 2,2'-Methylenediphenyl<br>diisocyanate<br>2536-05-2                     | sensitising     | Mouse local lymphnode<br>assay (LLNA) | mouse      | OECD Guideline 429 (Skin Sensitisation:<br>Local Lymph Node Assay) |
| 2,2'-Methylenediphenyl<br>diisocyanate<br>2536-05-2                     | sensitising     | Respiratory sensitisation             | guinea pig | not specified                                                      |

**Germ cell mutagenicity:**

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

| Hazardous substances<br>CAS-No.                                         | Result   | Type of study /<br>Route of<br>administration          | Metabolic<br>activation /<br>Exposure time | Species | Method                                                             |
|-------------------------------------------------------------------------|----------|--------------------------------------------------------|--------------------------------------------|---------|--------------------------------------------------------------------|
| 4,4'- methylenediphenyl<br>diisocyanate<br>101-68-8                     | negative | bacterial reverse<br>mutation assay (e.g<br>Ames test) | with and without                           |         | EU Method B.13/14<br>(Mutagenicity)                                |
| Diphenylmethane<br>diisocyanate, isomers and<br>homologues<br>9016-87-9 | negative | bacterial reverse<br>mutation assay (e.g<br>Ames test) | with and without                           |         | EU Method B.13/14<br>(Mutagenicity)                                |
| o-(p-<br>Isocyanatobenzyl)phenyl<br>isocyanate<br>5873-54-1             | negative | bacterial reverse<br>mutation assay (e.g<br>Ames test) | with and without                           |         | OECD Guideline 471<br>(Bacterial Reverse Mutation<br>Assay)        |
| 2,2'-Methylenediphenyl<br>diisocyanate<br>2536-05-2                     | negative | bacterial reverse<br>mutation assay (e.g<br>Ames test) | with and without                           |         | OECD Guideline 471<br>(Bacterial Reverse Mutation<br>Assay)        |
| 4,4'- methylenediphenyl<br>diisocyanate<br>101-68-8                     | negative | inhalation                                             |                                            | rat     | OECD Guideline 474<br>(Mammalian Erythrocyte<br>Micronucleus Test) |
| o-(p-<br>Isocyanatobenzyl)phenyl<br>isocyanate<br>5873-54-1             | negative | inhalation                                             |                                            | rat     | OECD Guideline 474<br>(Mammalian Erythrocyte<br>Micronucleus Test) |
| 2,2'-Methylenediphenyl<br>diisocyanate<br>2536-05-2                     | negative | inhalation                                             |                                            | rat     | OECD Guideline 474<br>(Mammalian Erythrocyte<br>Micronucleus Test) |

**Carcinogenicity**

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

| Hazardous components<br>CAS-No.                             | Result       | Route of<br>application | Exposure<br>time /<br>Frequency<br>of treatment | Species | Sex         | Method                                                                               |
|-------------------------------------------------------------|--------------|-------------------------|-------------------------------------------------|---------|-------------|--------------------------------------------------------------------------------------|
| 4,4'- methylenediphenyl<br>diisocyanate<br>101-68-8         | carcinogenic | inhalation:<br>aerosol  | 2 y<br>6 h/d                                    | rat     | male/female | OECD Guideline 453<br>(Combined Chronic<br>Toxicity /<br>Carcinogenicity<br>Studies) |
| o-(p-<br>Isocyanatobenzyl)phenyl<br>isocyanate<br>5873-54-1 | carcinogenic | inhalation:<br>aerosol  | 2 y<br>6 h/d, 5 d/w                             | rat     | male/female | OECD Guideline 453<br>(Combined Chronic<br>Toxicity /<br>Carcinogenicity<br>Studies) |
| 2,2'-Methylenediphenyl<br>diisocyanate<br>2536-05-2         | carcinogenic | inhalation:<br>aerosol  | 2 y<br>6 h/d, 5 d/w                             | rat     | male/female | OECD Guideline 453<br>(Combined Chronic<br>Toxicity /<br>Carcinogenicity<br>Studies) |

**Reproductive toxicity:**

No data available.

**STOT-single exposure:**

No data available.

**STOT-repeated exposure::**

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

| Hazardous substances<br>CAS-No.                                         | Result / Value              | Route of<br>application | Exposure time /<br>Frequency of<br>treatment | Species | Method                                                                            |
|-------------------------------------------------------------------------|-----------------------------|-------------------------|----------------------------------------------|---------|-----------------------------------------------------------------------------------|
| 4,4'- methylenediphenyl<br>diisocyanate<br>101-68-8                     | NOAEL 0,0002 mg/l           | inhalation:<br>aerosol  | main: 2 y; satellite:1<br>y<br>6 h/d; 5 d/w  | rat     | OECD Guideline 453<br>(Combined Chronic<br>Toxicity / Carcinogenicity<br>Studies) |
| Diphenylmethane<br>diisocyanate, isomers and<br>homologues<br>9016-87-9 | NOAEL 0,0002 mg/l           | inhalation:<br>aerosol  | 2 y<br>6 h per d, 5 d per<br>week            | rat     | OECD Guideline 453<br>(Combined Chronic<br>Toxicity / Carcinogenicity<br>Studies) |
| o-(p-<br>Isocyanatobenzyl)phenyl<br>isocyanate<br>5873-54-1             | NOAEL 0,2 mg/m <sup>3</sup> | inhalation:<br>aerosol  | 2 y<br>6 h/d, 5 d/w                          | rat     | OECD Guideline 453<br>(Combined Chronic<br>Toxicity / Carcinogenicity<br>Studies) |
| 2,2'-Methylenediphenyl<br>diisocyanate<br>2536-05-2                     | NOAEL 0,2 mg/m <sup>3</sup> | inhalation:<br>aerosol  | 2 y<br>6 h/d, 5 d/w                          | rat     | OECD Guideline 453<br>(Combined Chronic<br>Toxicity / Carcinogenicity<br>Studies) |

**Aspiration hazard:**

No data available.

**11.2 Information on other hazards**

not applicable

## SECTION 12: Ecological information

### General ecological information:

Do not empty into drains, soil or bodies of water.

### 12.1. Toxicity

#### Toxicity (Fish):

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

| Hazardous substances<br>CAS-No.                                   | Value<br>type | Value                       | Exposure time | Species                                   | Method                                         |
|-------------------------------------------------------------------|---------------|-----------------------------|---------------|-------------------------------------------|------------------------------------------------|
| 4,4'-methylenediphenyl diisocyanate<br>101-68-8                   | LC50          | > 1.000 mg/l                | 96 h          | Danio rerio                               | OECD Guideline 203 (Fish, Acute Toxicity Test) |
| Diphenylmethane diisocyanate, isomers and homologues<br>9016-87-9 | LC50          | > 1.000 mg/l                | 96 h          | Brachydanio rerio (new name: Danio rerio) | OECD Guideline 203 (Fish, Acute Toxicity Test) |
| o-(p-Isocyanatobenzyl)phenyl isocyanate<br>5873-54-1              | LC50          | Toxicity > Water Solubility | 96 h          | Danio rerio                               | OECD Guideline 203 (Fish, Acute Toxicity Test) |
| 2,2'-Methylenediphenyl diisocyanate<br>2536-05-2                  | LC50          | Tox>Water Solubility        | 96 h          | Danio rerio                               | OECD Guideline 203 (Fish, Acute Toxicity Test) |

#### Toxicity (Daphnia):

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

| Hazardous substances<br>CAS-No.                                   | Value<br>type | Value                       | Exposure time | Species       | Method                                                     |
|-------------------------------------------------------------------|---------------|-----------------------------|---------------|---------------|------------------------------------------------------------|
| 4,4'-methylenediphenyl diisocyanate<br>101-68-8                   | EC50          | 129,7 mg/l                  | 24 h          | Daphnia magna | OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test) |
| Diphenylmethane diisocyanate, isomers and homologues<br>9016-87-9 | EC50          | > 1.000 mg/l                | 24 h          | Daphnia magna | OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test) |
| o-(p-Isocyanatobenzyl)phenyl isocyanate<br>5873-54-1              | EC50          | Toxicity > Water Solubility | 24 h          | Daphnia magna | OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test) |
| 2,2'-Methylenediphenyl diisocyanate<br>2536-05-2                  | EC50          | Tox>Water Solubility        | 24 h          | Daphnia magna | OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test) |

#### Chronic toxicity to aquatic invertebrates

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

| Hazardous substances<br>CAS-No.                                   | Value<br>type | Value                       | Exposure time | Species       | Method                                      |
|-------------------------------------------------------------------|---------------|-----------------------------|---------------|---------------|---------------------------------------------|
| 4,4'-methylenediphenyl diisocyanate<br>101-68-8                   | NOEC          | 10 mg/l                     | 21 d          | Daphnia magna | OECD 211 (Daphnia magna, Reproduction Test) |
| Diphenylmethane diisocyanate, isomers and homologues<br>9016-87-9 | NOEC          | 10 mg/l                     | 21 d          | Daphnia magna | OECD 211 (Daphnia magna, Reproduction Test) |
| o-(p-Isocyanatobenzyl)phenyl isocyanate<br>5873-54-1              | NOEC          | Toxicity > Water solubility | 21 day        | Daphnia magna | OECD 211 (Daphnia magna, Reproduction Test) |
| 2,2'-Methylenediphenyl diisocyanate<br>2536-05-2                  | NOEC          | Toxicity > Water solubility | 21 day        | Daphnia magna | OECD 211 (Daphnia magna, Reproduction Test) |

#### Toxicity (Algae):

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

| Hazardous substances<br>CAS-No.                                   | Value<br>type | Value                       | Exposure time | Species                                                       | Method                                            |
|-------------------------------------------------------------------|---------------|-----------------------------|---------------|---------------------------------------------------------------|---------------------------------------------------|
| 4,4'-methylenediphenyl diisocyanate<br>101-68-8                   | EC50          | > 1.640 mg/l                | 72 h          | Scenedesmus subspicatus (new name: Desmodesmus subspicatus)   | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| 4,4'-methylenediphenyl diisocyanate<br>101-68-8                   | NOELR         | 1.640 mg/l                  | 72 h          | Scenedesmus subspicatus (new name: Desmodesmus subspicatus)   | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| Diphenylmethane diisocyanate, isomers and homologues<br>9016-87-9 | EC50          | > 1.640 mg/l                | 72 h          | Desmodesmus subspicatus                                       | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| o-(p-Isocyanatobenzyl)phenyl isocyanate<br>5873-54-1              | EC50          | Toxicity > Water Solubility | 72 h          | Desmodesmus subspicatus (reported as Scenedesmus subspicatus) | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| o-(p-Isocyanatobenzyl)phenyl isocyanate<br>5873-54-1              | NOELR         | Toxicity > Water Solubility | 72 h          | Desmodesmus subspicatus (reported as Scenedesmus subspicatus) | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| 2,2'-Methylenediphenyl diisocyanate<br>2536-05-2                  | EC50          | Tox>Water Solubility        | 72 h          | Desmodesmus subspicatus (reported as Scenedesmus subspicatus) | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| 2,2'-Methylenediphenyl diisocyanate<br>2536-05-2                  | NOELR         | Tox>Water Solubility        | 72 h          | Desmodesmus subspicatus (reported as Scenedesmus subspicatus) | OECD Guideline 201 (Alga, Growth Inhibition Test) |

#### Toxicity to microorganisms

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

| Hazardous substances<br>CAS-No.                                   | Value<br>type | Value      | Exposure time | Species          | Method                                                             |
|-------------------------------------------------------------------|---------------|------------|---------------|------------------|--------------------------------------------------------------------|
| 4,4'-methylenediphenyl diisocyanate<br>101-68-8                   | EC50          | > 100 mg/l | 3 h           | activated sludge | OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test) |
| Diphenylmethane diisocyanate, isomers and homologues<br>9016-87-9 | EC50          | > 100 mg/l | 3 h           | activated sludge | OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test) |

#### 12.2. Persistence and degradability

| Hazardous substances<br>CAS-No.                                   | Result                       | Test type     | Degradability | Exposure time | Method                                                                      |
|-------------------------------------------------------------------|------------------------------|---------------|---------------|---------------|-----------------------------------------------------------------------------|
| 4,4'-methylenediphenyl diisocyanate<br>101-68-8                   | not readily biodegradable.   | aerobic       | 0 %           | 28 d          | OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test) |
| Diphenylmethane diisocyanate, isomers and homologues<br>9016-87-9 | not inherently biodegradable | aerobic       | 0 %           | 28 d          | OECD Guideline 302 C (Inherent Biodegradability: Modified MITI Test (II))   |
| Diphenylmethane diisocyanate, isomers and homologues<br>9016-87-9 | not readily biodegradable.   | not specified | 0 %           | 28 d          | OECD 301 A - F                                                              |
| o-(p-Isocyanatobenzyl)phenyl isocyanate<br>5873-54-1              | not readily biodegradable.   | aerobic       | 0 %           | 28 day        | OECD Guideline 302 C (Inherent Biodegradability: Modified MITI Test (II))   |
| 2,2'-Methylenediphenyl diisocyanate<br>2536-05-2                  | not readily biodegradable.   | aerobic       | 0 %           | 28 day        | OECD Guideline 302 C (Inherent Biodegradability: Modified MITI Test (II))   |

#### 12.3. Bioaccumulative potential

| Hazardous substances<br>CAS-No.                                   | Bioconcentration factor (BCF) | Exposure time | Temperature | Species         | Method                                                            |
|-------------------------------------------------------------------|-------------------------------|---------------|-------------|-----------------|-------------------------------------------------------------------|
| 4,4'-methylenediphenyl diisocyanate<br>101-68-8                   | 92 - 200                      | 28 d          |             | Cyprinus carpio | OECD Guideline 305 E<br>(Bioaccumulation: Flow-through Fish Test) |
| Diphenylmethane diisocyanate, isomers and homologues<br>9016-87-9 | 200                           |               |             | Cyprinus carpio | OECD Guideline 305<br>(Bioconcentration: Flow-through Fish Test)  |
| o-(p-Isocyanatobenzyl)phenyl isocyanate<br>5873-54-1              | 200                           | 28 day        |             | Cyprinus carpio | OECD Guideline 305 E<br>(Bioaccumulation: Flow-through Fish Test) |
| 2,2'-Methylenediphenyl diisocyanate<br>2536-05-2                  | 200                           | 28 day        |             | Cyprinus carpio | OECD Guideline 305 E<br>(Bioaccumulation: Flow-through Fish Test) |

#### 12.4. Mobility in soil

| Hazardous substances<br>CAS-No.                      | LogPow | Temperature | Method                                                                      |
|------------------------------------------------------|--------|-------------|-----------------------------------------------------------------------------|
| 4,4'-methylenediphenyl diisocyanate<br>101-68-8      | 4,51   | 22 °C       | OECD Guideline 117 (Partition Coefficient (n-octanol / water), HPLC Method) |
| o-(p-Isocyanatobenzyl)phenyl isocyanate<br>5873-54-1 | 5,22   |             | QSAR (Quantitative Structure Activity Relationship)                         |
| 2,2'-Methylenediphenyl diisocyanate<br>2536-05-2     | 5,22   |             | QSAR (Quantitative Structure Activity Relationship)                         |

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

| Hazardous substances<br>CAS-No.                      | PBT / vPvB                                                                                                            |
|------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|
| 4,4'-methylenediphenyl diisocyanate<br>101-68-8      | Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria. |
| o-(p-Isocyanatobenzyl)phenyl isocyanate<br>5873-54-1 | Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria. |
| 2,2'-Methylenediphenyl diisocyanate<br>2536-05-2     | Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria. |

#### 12.6. Endocrine disrupting properties

not applicable

#### 12.7. Other adverse effects

No data available.

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

Product disposal:

Dispose of waste and residues in accordance with local authority requirements.

Disposal of uncleaned packages:

Use packages for recycling only when totally empty.

Waste code

160504 gases in pressure containers (including halons) containing dangerous substances  
08 05 01

**SECTION 14: Transport information****14.1. UN number**

Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.

**14.2. UN proper shipping name**

Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.

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

Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.

**14.4. Packing group**

Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.

**14.5. Environmental hazards**

Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.

**14.6. Special precautions for user**

Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.

**14.7. Maritime transport in bulk according to IMO instruments**

not applicable

**SECTION 15: Regulatory information**

No information available:

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

|                                                                 |                |
|-----------------------------------------------------------------|----------------|
| Ozone Depleting Substance (ODS) (Regulation (EC) No 1005/2009): | Not applicable |
| Prior Informed Consent (PIC) (Regulation (EU) No 649/2012):     | Not applicable |
| Persistent organic pollutants (Regulation (EU) 2019/1021):      | Not applicable |

**15.2. Chemical safety assessment**

A chemical safety assessment has not been carried out.

**SECTION 16: Other information**

The labelling of the product is indicated in Section 2. The full text of all abbreviations indicated by codes in this safety data sheet are as follows:

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

|             |                                                                                                                   |
|-------------|-------------------------------------------------------------------------------------------------------------------|
| ED:         | Substance identified as having endocrine disrupting properties                                                    |
| EU OEL:     | Substance with a Union workplace exposure limit                                                                   |
| EU EXPLD 1: | Substance listed in Annex I, Reg (EC) No. 2019/1148                                                               |
| EU EXPLD 2  | Substance listed in Annex II, Reg (EC) No. 2019/1148                                                              |
| SVHC:       | Substance of very high concern (REACH Candidate List)                                                             |
| PBT:        | Substance fulfilling persistent, bioaccumulative and toxic criteria                                               |
| PBT/vPvB:   | Substance fulfilling persistent, bioaccumulative and toxic plus very persistent and very bioaccumulative criteria |
| vPvB:       | Substance fulfilling very persistent and very bioaccumulative criteria                                            |

**Further information:**

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**Relevant changes in this safety data sheet are indicated by vertical lines at the left margin in the body of this document. Corresponding text is displayed in a different color on shadowed fields.**



## Safety Data Sheet according to (EC) No 1907/2006 as amendedPage 1 of 10

Tangit M 3000

SDS No. : 367807

V003.1

Revision: 03.05.2022

printing date: 03.01.2023

Replaces version from: 12.01.2022

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

#### 1.1. Product identifier

Tangit M 3000 Part B

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

Intended use:

Foam, 2-component without propellant gas

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

Henkel Ltd

Adhesives

Wood Lane End

HP2 4RQ Hemel Hempstead

Great Britain

Phone: +44 (1442) 278000

ua-productsafety.uk@henkel.com

For Safety Data Sheet updates please visit our website <https://mysds.henkel.com/index.html#/appSelection> or [www.henkel-adhesives.com](http://www.henkel-adhesives.com).

#### 1.4. Emergency telephone number

24 Hours Emergency Tel: +44 0 8701 906777 - For further general health & safety, technical and practical advice on this product, please call +44 (0) 1606 593933 or write to: Technical Services; Henkel Limited; Road 5; Winsford Industrial Estate; Winsford; Cheshire; CW7 3QY- Email: [technical.services@henkel.co.uk](mailto:technical.services@henkel.co.uk)

### SECTION 2: Hazards identification

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

##### Classification (CLP):

Skin irritation

Category 2

H315 Causes skin irritation.

Serious eye irritation

Category 2

H319 Causes serious eye irritation.

#### 2.2. Label elements

##### Label elements (CLP):

Hazard pictogram:



|                                                |                                                                                                                   |
|------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|
| <b>Signal word:</b>                            | Warning                                                                                                           |
| <b>Hazard statement:</b>                       | H315 Causes skin irritation.<br>H319 Causes serious eye irritation.                                               |
| <b>Precautionary statement:</b>                | P102 Keep out of reach of children.<br>P101 If medical advice is needed, have product container or label at hand. |
| <b>Precautionary statement:<br/>Prevention</b> | P280 Wear protective gloves/eye protection.                                                                       |

### 2.3. Other hazards

None if used properly.  
Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.

**Following substances are present in a concentration  $\geq 0,1\%$  and fulfill the criteria for PBT/vPvB, or were identified as endocrine disruptor (ED):**

This mixture does not contain any substances in concentration  $\geq$  the concentration limit that are assessed to be a PBT, vPvB or ED.

## SECTION 3: Composition/information on ingredients

### 3.2. Mixtures

**Declaration of the ingredients according to CLP (EC) No 1272/2008:**

| Hazardous components<br>CAS-No.<br>EC Number<br>REACH-Reg No.  | Concentration | Classification                                                                | Specific Conc. Limits, M-factors and ATEs | Add. Information |
|----------------------------------------------------------------|---------------|-------------------------------------------------------------------------------|-------------------------------------------|------------------|
| 1-methylimidazole<br>616-47-7<br>210-484-7<br>01-2119979544-23 | 1- < 3 %      | Acute Tox. 4, Oral, H302<br>Acute Tox. 3, Dermal, H311<br>Skin Corr. 1B, H314 | dermal:ATE = 400 mg/kg                    |                  |

**For full text of the H - statements and other abbreviations see section 16 "Other information".  
Substances without classification may have community workplace exposure limits available.**

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

General information:  
In case of adverse health effects seek medical advice.

Inhalation:  
Move to fresh air, consult doctor if complaint persists.

Skin contact:  
Rinse with running water and soap. Skin care. Remove contaminated clothes immediately.

Eye contact:  
Immediately flush eyes with soft jet of water or eye rinse solution for at least 5 minutes. If pains remain (intensive smarting, sensitivity to light, visual disturbance) continue flushing and contact/seek doctor or hospital.

Ingestion:  
Rinse mouth and throat. Drink 1-2 glasses of water. Seek medical advice.

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

Causes serious eye irritation.

SKIN: Redness, inflammation.

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

See section: Description of first aid measures

**SECTION 5: Firefighting measures****5.1. Extinguishing media****Suitable extinguishing media:**

carbon dioxide, foam, powder, water spray jet, fine water spray

**Extinguishing media which must not be used for safety reasons:**

High pressure waterjet

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

In the event of a fire, carbon monoxide (CO) and carbon dioxide (CO<sub>2</sub>) can be released.

**5.3. Advice for firefighters**

Wear self-contained breathing apparatus.

Wear protective equipment.

**SECTION 6: Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures**

Wear protective equipment.

Avoid contact with skin and eyes.

Danger of slipping on spilled product.

**6.2. Environmental precautions**

Do not empty into drains / surface water / ground water.

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

Remove with liquid-absorbing material (sand, peat, sawdust).

Dispose of contaminated material as waste according to Section 13.

**6.4. Reference to other sections**

See advice in section 8

**SECTION 7: Handling and storage****7.1. Precautions for safe handling**

Avoid skin and eye contact.

**Hygiene measures:**

Wash hands before work breaks and after finishing work.

Do not eat, drink or smoke while working.

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

Store in a cool place in closed original container.

Store in a dry place.

Avoid strictly temperatures below + 2°C and above + 30 °C.

Do not store together with food or other consumables (coffee, tea, tobacco, etc.).

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

Foam, 2-component without propellant gas

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### Occupational Exposure Limits

Valid for  
Great Britain

None

#### Occupational Exposure Limits

Valid for  
Ireland

None

#### Predicted No-Effect Concentration (PNEC):

| Name on list                  | Environmental<br>Compartment       | Exposure<br>period | Value     |     |                |        | Remarks |
|-------------------------------|------------------------------------|--------------------|-----------|-----|----------------|--------|---------|
|                               |                                    |                    | mg/l      | ppm | mg/kg          | others |         |
| 1-Methylimidazole<br>616-47-7 | aqua<br>(freshwater)               |                    | 0,1 mg/l  |     |                |        |         |
| 1-Methylimidazole<br>616-47-7 | aqua (marine<br>water)             |                    | 0,01 mg/l |     |                |        |         |
| 1-Methylimidazole<br>616-47-7 | aqua<br>(intermittent<br>releases) |                    | 1 mg/l    |     |                |        |         |
| 1-Methylimidazole<br>616-47-7 | sediment<br>(freshwater)           |                    |           |     | 6,95 mg/kg     |        |         |
| 1-Methylimidazole<br>616-47-7 | sediment<br>(marine water)         |                    |           |     | 0,695<br>mg/kg |        |         |
| 1-Methylimidazole<br>616-47-7 | Soil                               |                    |           |     | 1,26 mg/kg     |        |         |
| 1-Methylimidazole<br>616-47-7 | Sewage<br>treatment plant          |                    | 590 mg/l  |     |                |        |         |

#### Derived No-Effect Level (DNEL):

| Name on list                  | Application<br>Area | Route of<br>Exposure | Health Effect                               | Exposure<br>Time | Value      | Remarks |
|-------------------------------|---------------------|----------------------|---------------------------------------------|------------------|------------|---------|
| 1-Methylimidazole<br>616-47-7 | worker              | inhalation           | Long term<br>exposure -<br>systemic effects |                  | 7,9 mg/m3  |         |
| 1-Methylimidazole<br>616-47-7 | worker              | dermal               | Long term<br>exposure -<br>systemic effects |                  | 2,25 mg/kg |         |

#### Biological Exposure Indices:

None

### 8.2. Exposure controls:

Respiratory protection:  
Suitable breathing mask when there is inadequate ventilation.  
Combination filter: ABEKP (EN 14387)  
This recommendation should be matched to local conditions.

**Hand protection:**

Recommended are gloves made from Nitril rubber ( Material thickness >0,1 mm, Perforation time < 30s).Gloves should be replaced after each short time contact or contamination. Available at laboratory specialized trade or at pharmacies / chemist's shops.

In the case of longer contact protective gloves made from nitrile rubber are recommended according to EN 374.

material thickness > 0.4 mm

Perforation time > 30 minutes

In the case of longer and repeated contact please note that in practice the penetration times may be considerably shorter than those determined according to EN 374. The protective gloves must always be checked for their suitability for use at the specific workplace (e.g. mechanical and thermal stress, product compatibility, antistatic effects, etc.). The gloves must be replaced immediately at the first signs of wear and tear. The information provided by the manufacturers and given in the relevant trade association regulations for industrial safety must always be observed. We recommend that a hand care plan is drawn up in cooperation with a glove manufacturer and the trade association in accordance with the local operating conditions.

**Eye protection:**

Goggles which can be tightly sealed.

Protective eye equipment should conform to EN166.

**Skin protection:**

Suitable protective clothing

Protective clothing should conform to EN 14605 for liquid splashes or to EN 13982 for dusts.

**Advices to personal protection equipment:**

The information provided on personal protective equipment is for guidance purposes only. A full risk assessment should be conducted prior to using this product to determine the appropriate personal protective equipment to suit local conditions. Personal protective equipment should conform to the relevant EN standard.

**SECTION 9: Physical and chemical properties****9.1. Information on basic physical and chemical properties**

|                                                               |                                            |
|---------------------------------------------------------------|--------------------------------------------|
| Physical state                                                | liquid                                     |
| Delivery form                                                 | liquid                                     |
| Colour                                                        | light grey                                 |
| Odor                                                          | slightly, musty                            |
| Flash point                                                   | > 93 °C (> 199.4 °F)                       |
| pH                                                            | Not applicable, Product reacts with water. |
| Viscosity, dynamic<br>(Brookfield; 20 °C (68 °F))             | 3.000 - 4.400 mPa.s no method              |
| Solubility (qualitative)<br>(23 °C (73.4 °F); Solvent: Water) | Not miscible or difficult to mix           |
| Density<br>(20 °C (68 °F))                                    | 1,06 - 1,07 g/cm3 no method                |

**9.2. Other information**

Other information not applicable for this product

**SECTION 10: Stability and reactivity****10.1. Reactivity**

None if used for intended purpose.

**10.2. Chemical stability**

Stable under recommended storage conditions.

**10.3. Possibility of hazardous reactions**

See section reactivity

**10.4. Conditions to avoid**

None if used for intended purpose.

**10.5. Incompatible materials**

None if used properly.

**10.6. Hazardous decomposition products**

None known.

**SECTION 11: Toxicological information****1.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008****Acute oral toxicity:**

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

| Hazardous substances<br>CAS-No. | Value<br>type | Value       | Species | Method                                   |
|---------------------------------|---------------|-------------|---------|------------------------------------------|
| 1-methylimidazole<br>616-47-7   | LD50          | 1.144 mg/kg | rat     | OECD Guideline 401 (Acute Oral Toxicity) |

**Acute dermal toxicity:**

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

| Hazardous substances<br>CAS-No. | Value<br>type                          | Value              | Species | Method                                     |
|---------------------------------|----------------------------------------|--------------------|---------|--------------------------------------------|
| 1-methylimidazole<br>616-47-7   | LD50                                   | 400 - 640<br>mg/kg | rabbit  | OECD Guideline 402 (Acute Dermal Toxicity) |
| 1-methylimidazole<br>616-47-7   | Acute<br>toxicity<br>estimate<br>(ATE) | 400 mg/kg          |         | Expert judgement                           |

**Acute inhalative toxicity:**

No data available.

**Skin corrosion/irritation:**

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

| Hazardous substances<br>CAS-No. | Result    | Exposure<br>time | Species | Method    |
|---------------------------------|-----------|------------------|---------|-----------|
| 1-methylimidazole<br>616-47-7   | corrosive |                  | rabbit  | BASF Test |

**Serious eye damage/irritation:**

No data available.

**Respiratory or skin sensitization:**

No data available.

**Germ cell mutagenicity:**

No data available.

**Carcinogenicity**

No data available.

**Reproductive toxicity:**

No data available.

**STOT-single exposure:**

No data available.

**STOT-repeated exposure::**

No data available.

**Aspiration hazard:**

No data available.

**11.2 Information on other hazards**

not applicable

**SECTION 12: Ecological information****General ecological information:**

Do not empty into drains, soil or bodies of water.

**12.1. Toxicity****Toxicity (Fish):**

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

| Hazardous substances<br>CAS-No. | Value<br>type | Value            | Exposure time | Species        | Method                                            |
|---------------------------------|---------------|------------------|---------------|----------------|---------------------------------------------------|
| 1-methylimidazole<br>616-47-7   | LC50          | > 100 - 220 mg/l | 96 h          | Leuciscus idus | OECD Guideline 203 (Fish,<br>Acute Toxicity Test) |

**Toxicity (Daphnia):**

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

| Hazardous substances<br>CAS-No. | Value<br>type | Value    | Exposure time | Species     | Method                                                           |
|---------------------------------|---------------|----------|---------------|-------------|------------------------------------------------------------------|
| 1-methylimidazole<br>616-47-7   | EC50          | 268 mg/l | 48 h          | Daphnia sp. | OECD Guideline 202<br>(Daphnia sp. Acute<br>Immobilisation Test) |

**Chronic toxicity to aquatic invertebrates**

No data available.

**Toxicity (Algae):**

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

| Hazardous substances<br>CAS-No. | Value<br>type | Value    | Exposure time | Species | Method                                               |
|---------------------------------|---------------|----------|---------------|---------|------------------------------------------------------|
| 1-methylimidazole<br>616-47-7   | EC50          | 180 mg/l | 72 h          |         | OECD Guideline 201 (Alga,<br>Growth Inhibition Test) |

#### Toxicity to microorganisms

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

| Hazardous substances<br>CAS-No. | Value<br>type | Value      | Exposure time | Species | Method        |
|---------------------------------|---------------|------------|---------------|---------|---------------|
| 1-methylimidazole<br>616-47-7   | EC 50         | 1.100 mg/l | 17 h          |         | not specified |

#### 12.2. Persistence and degradability

| Hazardous substances<br>CAS-No. | Result | Test type | Degradability | Exposure<br>time | Method                                                                          |
|---------------------------------|--------|-----------|---------------|------------------|---------------------------------------------------------------------------------|
| 1-methylimidazole<br>616-47-7   |        |           | < 30 %        |                  | OECD Guideline 302 B (Inherent<br>biodegradability: Zahn-<br>Wellens/EMPA Test) |

#### 12.3. Bioaccumulative potential

No data available.

#### 12.4. Mobility in soil

No data available.

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

| Hazardous substances<br>CAS-No. | PBT / vPvB                                                                                                            |
|---------------------------------|-----------------------------------------------------------------------------------------------------------------------|
| 1-methylimidazole<br>616-47-7   | Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria. |

#### 12.6. Endocrine disrupting properties

not applicable

#### 12.7. Other adverse effects

No data available.

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

Product disposal:

Dispose of waste and residues in accordance with local authority requirements.

Disposal of uncleaned packages:

Use packages for recycling only when totally empty.

Waste code

080409

**SECTION 14: Transport information****14.1. UN number**

Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.

**14.2. UN proper shipping name**

Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.

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

Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.

**14.4. Packing group**

Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.

**14.5. Environmental hazards**

Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.

**14.6. Special precautions for user**

Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.

**14.7. Maritime transport in bulk according to IMO instruments**

not applicable

**SECTION 15: Regulatory information**

No information available:

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

|                                                                 |                |
|-----------------------------------------------------------------|----------------|
| Ozone Depleting Substance (ODS) (Regulation (EC) No 1005/2009): | Not applicable |
| Prior Informed Consent (PIC) (Regulation (EU) No 649/2012):     | Not applicable |
| Persistent organic pollutants (Regulation (EU) 2019/1021):      | Not applicable |

**15.2. Chemical safety assessment**

A chemical safety assessment has not been carried out.

**SECTION 16: Other information**

The labelling of the product is indicated in Section 2. The full text of all abbreviations indicated by codes in this safety data sheet are as follows:

H302 Harmful if swallowed.

H311 Toxic in contact with skin.

H314 Causes severe skin burns and eye damage.

|             |                                                                                                                   |
|-------------|-------------------------------------------------------------------------------------------------------------------|
| ED:         | Substance identified as having endocrine disrupting properties                                                    |
| EU OEL:     | Substance with a Union workplace exposure limit                                                                   |
| EU EXPLD 1: | Substance listed in Annex I, Reg (EC) No. 2019/1148                                                               |
| EU EXPLD 2  | Substance listed in Annex II, Reg (EC) No. 2019/1148                                                              |
| SVHC:       | Substance of very high concern (REACH Candidate List)                                                             |
| PBT:        | Substance fulfilling persistent, bioaccumulative and toxic criteria                                               |
| PBT/vPvB:   | Substance fulfilling persistent, bioaccumulative and toxic plus very persistent and very bioaccumulative criteria |
| vPvB:       | Substance fulfilling very persistent and very bioaccumulative criteria                                            |

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