

TYTEX CONSTRUCTION ADHESIVE

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING.

1.1 Product identifier

Product name: Tytex Construction Adhesive

Product code: TYX310CA

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

Identified uses: Adhesive.

Uses advised against: No specific uses advised against are identified.

1.3 Details of the supplier of the safety data sheet

Tytex

Unit F, Dales Manor Business Park, Grove Road, Sawston, Cambridge, CB22 3TJ

T: +44 (0) 1223 755752 E: tech@tytexadhesives.co.uk

1.4 Emergency telephone number

Emergency Telephone Number: +44 (0) 1223 755752 (NOT 24HRS)

Working Hours: Weekdays: 8.00 am - 16.30 pm (GMT)



SECTION 2. HAZARDS IDENTIFICATION.

2.1 Classification of the substance/mixture

Classification (EC 1272/2008)

Physical hazards	Not Classified
Health hazards	Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 Resp. Sens. 1 - H334 Skin Sens. 1 - H317 Carc. 2 -H351 STOT SE 3 - H335 STOT RE 2 - H373
Environmental hazards	Not Classified
Human health	Contains non-volatile isocyanate. Heating may generate vapours which irritate the respiratory system. May cause allergy or asthma symptoms or breathing difficulties if inhaled.

2.2 Hazards Identification

Hazard Pictograms:		
	GHS07	GHS08
Signal Words:	Danger	
Hazard Statements	H315	Causes skin irritation.
	H319	Causes serious eye irritation.
	H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
	H317	May cause an allergic skin reaction.
	H351	Suspected of causing cancer.
	H335	May cause respiratory irritation.
	H373	May cause damage to organs through prolonged or repeated exposure.
Precautionary Statements	EUH204	Contains isocyanates. May produce an allergic reaction.
	P260	Do not breathe vapour / spray.
	P280	Wear protective gloves / protective clothing / eye protection / face protection.
	P281	Use personal protective equipment as required.
	P284	[In case of inadequate ventilation] wear respiratory protection.
	P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	P313	Get medical advice / attention.
	P501	Dispose of contents / container in accordance with national regulations.
	RCH004a	Persons already sensitised to diisocyanates may develop allergic reactions when using this product.
	RCH004b	Persons suffering from asthma, eczema or skin problems should avoid contact, including dermal contact, with this product.
RCH004c	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.	
Contains	DIPHENYLMETHANE-4,4'-DIISOCYANATE	

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS.

3.2 Mixtures

DIPHENYLMETHANE-4,4'-DI-ISOCYANATE 30-60%

CAS No.	EC No.	REACH registration number	Classification
101-68-8	202-966-0	01-2119457014-47-0000	Acute Tox. 4 - H332 Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 Resp. Sens. 1 - H334 Skin Sens. 1 - H317 Carc. 2 - H351 STOT SE 3 - H335 STOT RE 2 - H373

2,2'DIMORPHOLINYLDIETHYL ETHER 1-5%

CAS No.	EC No.	REACH registration number	Classification
6425-39-4	229-194-7	01-2119969278-20-0000	Eye Irrit. 2 - H319

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

SECTION 4. FIRST AID MEASURES.

4.1 Description of first aid measures

General information	Remove affected person from source of contamination.
Inhalation	Move affected person to fresh air at once. Get medical attention if any discomfort continues.
Ingestion	DO NOT induce vomiting. Get medical attention immediately.
Skin contact	Remove contaminated clothing immediately and wash skin with soap and water. Get medical attention if any discomfort continues.
Eye contact	Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Get medical attention if irritation persists after washing. Show this Safety Data Sheet to the medical personnel.

4.2 Most important symptoms and effects, both acute and delayed

General information	The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
Inhalation	Irritation of nose, throat and airway. Coughing, chest tightness, feeling of chest pressure.
Ingestion	May cause discomfort if swallowed.
Skin contact	Prolonged skin contact may cause redness and irritation.
Eye contact	Severe irritation, burning and tearing.

4.3 Indication of any immediate medical attention and special treatment needed

Notes for the doctor	No specific recommendations. If in doubt, get medical attention promptly.
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SECTION 5. FIRE-FIGHTING MEASURES.

5.1 Extinguishing media

Suitable extinguishing media: Extinguish with foam, carbon dioxide, dry powder or water fog.

Unsuitable extinguishing media: Do not use water jet as an extinguisher, as this will spread the fire.

5.2 Special hazards arising from the substance or mixture

Specific hazards: Irritating gases or vapours.

Hazardous combustion products: Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours. Oxides of carbon. Oxides of nitrogen.

5.3 Advice for firefighters

Protective actions during firefighting: Containers close to fire should be removed or cooled with water. Do not allow water to contact any leaked material.

Special protective equipment for firefighters: Wear chemical protective suit. Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

SECTION 6. ACCIDENTAL RELEASE MEASURES.

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions: Wear protective clothing as described in Section 8 of this safety data sheet.

6.2 Environmental precautions

Do not discharge into drains or watercourses or onto the ground.

6.3 Methods and material for containment and cleaning up

Absorb spillage with non-combustible, absorbent material. Absorb spillage with non-combustible, absorbent material. Collect and place in suitable waste disposal containers and seal securely. Provide adequate ventilation. Contain spillage with sand, earth or other suitable non-combustible material. Avoid the spillage or runoff entering drains, sewers or watercourses.

6.4 Reference to other sections

Wear protective clothing as described in Section 8 of this safety data sheet.

SECTION 7. HANDLING AND STORAGE.

7.1 Precautions for safe handling

Usage precautions: Avoid inhalation of vapours and spray/mists. Avoid contact with skin and eyes. Do not use in confined spaces without adequate ventilation and/or respirator. Spraying is permitted only in closed systems, spray cabinets or spray boxes with adequate ventilation.

7.2 Conditions for safe storage, including any incompatibilities

Storage precautions: Store in closed original container at temperatures between 5°C and 25°C.

Storage class: Chemical storage.

7.3 Specific end use(s)

The identified uses for this product are detailed in Section 1.2.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION.

8.1 Control parameters

Occupational exposure limits

DIPHENYLMETHANE-4,4'-DI-ISOCYANATE

Long-term exposure limit (8-hour TWA): WEL 0.02 mg/m³(Sen)

Short-term exposure limit (15-minute): WEL 0.07 mg/m³(Sen)

WEL = Workplace Exposure Limit.

Ingredient comments WEL = Workplace Exposure Limits

DIPHENYLMETHANE-4,4'-DI-ISOCYANATE (CAS: 101-68-8)

DNEL	Workers - Inhalation; Short term systemic effects: 0.1 mg/m ³
	Workers - Dermal; Short term local effects: 28.7 mg/cm ²
	Workers - Inhalation; Short term local effects: 0.1 mg/m ³
	Workers - Inhalation; Long term systemic effects: 0.05 mg/m ³
	Workers - Inhalation; Long term local effects: 0.05 mg/m ³
	Consumer - Dermal; Short term systemic effects: 25 mg/kg bw/day
	Workers - Dermal; Short term systemic effects: 50 mg/kg bw/day
	Consumer - Oral; Short term systemic effects: 20 mg/kg bw/day
	Consumer - Dermal; Short term local effects: 17.2 mg/cm ²
	Consumer - Inhalation; Short term local effects: 0.05 mg/m ³
	Consumer - Inhalation; Long term systemic effects: 0.025 mg/m ³
	Consumer - Inhalation; Long term local effects: 0.025 mg/m ³
	Consumer - Inhalation; Short term systemic effects: 0.05 mg/m ³
PNEC	- marine water; 0.1 mg/l
	- STP; 1 mg/l
	- Fresh water; 1 mg/l
	- Soil; 1 mg/kg

2,2'DIMORPHOLINYLDIETHYL ETHER (CAS: 6425-39-4)

DNEL	Workers - Inhalation; Long term systemic effects: 7.28 mg/m ³
	Workers - Dermal; Long term systemic effects: 1 mg/kg bw/day
	Consumer - Inhalation; Long term systemic effects: 1.8 mg/m ³
	Consumer - Dermal; Long term systemic effects: 0.5 mg/kg bw/day
	Consumer - Oral; Long term systemic effects: 0.5 mg/kg bw/day
PNEC	- Fresh water; 0.1 mg/l
	- marine water; 0.01 mg/l
	- Intermittent release; 1 mg/l
	- Sediment (Freshwater); 8.2 mg/kg
	- Sediment (Marinewater); 0.82 mg/kg
	- STP; 100 mg/l
- Soil; 1.58 mg/kg	

8.2 Exposure controls

Protective equipment



Appropriate engineering controls:

Provide adequate ventilation. Avoid inhalation of vapours. Observe any occupational exposure limits for the product or ingredients. This product is not to be used under conditions of poor ventilation. This product must not be handled in a confined space without adequate ventilation. 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.

Eye/face protection:

Wear chemical splash goggles.

Hand protection:

It is recommended that gloves are made of the following material: Nitrile rubber. It should be noted that liquid may penetrate the gloves. Frequent changes are recommended. For exposure up to 8 hours, wear gloves made of the following material: Nitrile rubber.

Other skin and body protection:

Wear suitable protective clothing as protection against splashing or contamination. Wear apron or protective clothing in case of contact.

Hygiene measures:

Use engineering controls to reduce air contamination to permissible exposure level. Wash hands after handling. When using do not eat, drink or smoke.

Respiratory protection:

If ventilation is inadequate, suitable respiratory protection must be worn. If ventilation is inadequate, suitable respiratory protection must be worn. Wear a respirator fitted with the following cartridge: ABEK2-P3.

Environmental exposure controls:

Keep container tightly sealed when not in use.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES.

9.1. Information on basic physical and chemical properties

Appearance	Coloured gel
Colour	Cream
Odour	Musty (mouldy)
Odour threshold	Not available
pH	Not available
Melting point	<10°C
Initial boiling point and range	330°C @ mbar
Flash point	200°C Closed cup.
Evaporation rate	slow
Evaporation factor	Not available
Flammability (solid, gas)	Not available
Upper/lower flammability or explosive limits	Not applicable
Other flammability	Not available
Vapour pressure	0.01 Pa @ °C

Vapour density	8.5
Relative density	1.10 @ 20°C
Bulk density	Not available.
Solubility(ies)	Insoluble in water. Hardens in contact with water.
Partition coefficient	Not available
Auto-ignition temperature	>600°C
Decomposition temperature	Not available
Viscosity	Kinematic viscosity > 20.5 mm ² /s.
Explosive properties	Not available
Explosive under the influence of a flame	Not considered to be explosive.
Oxidising properties	Not available
Comments	Information given is applicable to the product as supplied

9.2. Other information

Other information	No information required
Refractive index	Not available
Particle size	Not available
Molecular weight	Not available
Volatility	Not available
Saturation concentration	Not available
Critical temperature	Not available

SECTION 10: STABILITY AND REACTIVITY.

10.1. Reactivity

The product will harden into a solid mass in contact with water and moisture.

10.2. Chemical stability

Stable at normal ambient temperatures and when used as recommended.

10.3. Possibility of hazardous reactions

Not applicable. May polymerise.

10.4. Conditions to avoid

Avoid contact with water.

10.5. Incompatible materials

10.6. Hazardous decomposition products

Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours. Oxides of carbon. Oxides of nitrogen.

SECTION 11: TOXICOLOGICAL INFORMATION.

11.1. Information on toxicological effects

Acute toxicity - oral

Acute toxicity oral (LD₅₀ 10,000.0 mg/kg)

Species	Rat
Acute toxicity - dermal Acute toxicity dermal (LD ₅₀ mg/kg)	10,000.0
Species	Rabbit
Acute toxicity - inhalation Species	Rat
ATE inhalation (vapours mg/l)	26.83
Skin corrosion/irritation	
Animal data	Irritating
Serious eye damage/irritation	Moderately irritating
Respiratory sensitisation	Sensitising
Carcinogenicity	Suspected carcinogen based on limited evidence
Target organ for carcinogenicity	No specific target organs known
Reproductive toxicity - development	This substance has no evidence of toxicity to reproduction
Specific target organ toxicity - repeated exposure	
STOT - repeated exposure	Morphological changes that are potentially reversible but provide clear evidence of marked organ dysfunction
Aspiration hazard	Not anticipated to present an aspiration hazard, based on chemical structure
Inhalation	Irritating to respiratory system. May cause sensitisation by inhalation
Ingestion	May cause stomach pain or vomiting
Skin contact	Irritating to skin. May cause sensitisation by skin contact
Eye contact	Irritation of eyes and mucous membranes
Acute and chronic health hazards	May cause sensitisation by skin contact. The product contains small quantities of isocyanate. May cause respiratory allergy. May cause respiratory system irritation. May cause respiratory system irritation. Frequent inhalation of vapours may cause respiratory allergy.
Route of exposure	Inhalation Skin and/or eye contact
Medical symptoms	Irritation of eyes and mucous membranes. Coughing, chest tightness, feeling of chest pressure
Medical considerations	Chronic respiratory and obstructive airway diseases

Toxicological information on ingredients.

DIPHENYLMETHANE-4,4'-DI-ISOCYANATE

Acute toxicity - oral

Acute toxicity oral (LD₅₀mg/kg) 10,000.0

Species Rat

ATE oral (mg/kg) 10,000.0

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ mg/kg) 9,400.0

Species Rabbit

ATE dermal (mg/kg) 9,400.0

Acute toxicity - inhalation

Acute toxicity inhalation (LC₅₀ vapours mg/l) 0.31

Species Rat

ATE inhalation (vapours mg/l) 11.0

Carcinogenicity

IARC carcinogenicity IARC Group 3 Not classifiable as to its carcinogenicity to humans.

2,2'DIMORPHOLINYLDIETHYL ETHER

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 2,025.0

Species Rat

Notes (oral LD₅₀) No information available

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ mg/kg) 3,038.0

Species Rabbit

Notes (dermal LD₅₀) No information available

Acute toxicity - inhalation

Notes (inhalation LC₅₀) No information available

Skin corrosion/irritation

Skin corrosion/irritation No information available

Serious eye damage/irritation

Serious eye damage/irritation No information available

Respiratory sensitisation

Respiratory sensitisation No information available

Skin sensitisation

Skin sensitisation No information available

Carcinogenicity

IARC carcinogenicity

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Inhalation

May be harmful if inhaled. Spray/mists may cause respiratory tract irritation.

Ingestion

May be harmful if swallowed.

Skin contact

May be absorbed through the skin. May be harmful in contact with skin. May cause skin irritation.

Eye contact

May cause eye irritation.

SECTION 12. ECOLOGICAL INFORMATION.

Ecotoxicity The product is not expected to be hazardous to the environment.

12.1. Toxicity

Acute aquatic toxicity Acute toxicity - fish

LC₅₀, 96 hours: > 1000 mg/l, Freshwater fish

Acute toxicity - aquatic invertebrates

EC₅₀, 48 hours: >500 mg/l, Daphnia magna

Acute toxicity - aquatic plants

EC₅₀, 72 hours: ~ 1640 mg/l, Scenedesmus subspicatus

Ecological information on ingredients.

DIPHENYLMETHANE-4,4'-DI-ISOCYANATE

Acute aquatic toxicity

Acute toxicity - fish

LC₅₀, 96 hours: >1000 mg/l, Marinewater fish

Acute toxicity - aquatic invertebrates

EC₅₀, 24 hours: >1000 mg/l, Daphnia magna

Chronic aquatic toxicity

Chronic toxicity - aquatic invertebrates

NOEC, 21 days: >10 mg/l, Daphnia magna

2,2'DIMORPHOLINYLDIETHYL ETHER

Acute aquatic toxicity

Acute toxicity - fish

LC₅₀, 96 hours: 2150 mg/l,

Acute toxicity - aquatic invertebrates

EC₅₀, 48 hours: >100 mg/l, Daphnia magna

Acute toxicity - microorganisms

EC₅₀, 3 hours: >1000 mg/l, Bacteria

12.2. Persistence and degradability

Persistence and degradability

The product is not readily biodegradable

Stability (hydrolysis)

Reacts with water

Biological oxygen demand

< 10 g O₂/g substance

12.3. Bioaccumulative potential

Bioaccumulative potential

The product does not contain any substances expected to be bioaccumulating.

Partition coefficient

Not available.

Ecological information on ingredients.

DIPHENYLMETHANE-4,4'-DI-ISOCYANATE

Partition coefficient log Pow: 4.51

12.4. Mobility in soil

Mobility The product is non-volatile.

12.5. Results of PBT and vPvB assessment

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

12.6. Other adverse effects

SECTION 13. DISPOSAL CONSIDERATIONS.

13.1. Waste treatment methods

General information

Waste should be treated as controlled waste. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

Disposal methods

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

SECTION 14. TRANSPORT INFORMATION.

General

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

14.1. UN number

Not applicable.

14.2. UN proper shipping name

Not applicable.

14.3. Transport hazard class(es)

Transport labels

No transport warning sign required.

14.4. Packing group

Not applicable.

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant

No.

14.6. Special precautions for user

Not applicable.

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

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

SECTION 15. REGULATORY INFORMATION.

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

National regulations

The Control of Substances Hazardous to Health Regulations 2002 (SI 2002 No. 2677) (as amended).
Control of Pollution Act 1974.

EU legislation

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

Guidance

Approved Classification and Labelling Guide (Sixth edition) L131.

Restrictions (Annex XVII Regulation 1907/2006) Entry number: 56 Methylenediphenyl diisocyanate (MDI)

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

SECTION 16. OTHER INFORMATION.

Issued by	Compliance
Revision date	15/06/2020
Revision	20
Supersedes date	21/03/2019
SDS status	Approved
Hazard statements in full	H315 Causes skin irritation. H317 May cause an allergic skin reaction. H319 Causes serious eye irritation. H332 Harmful if inhaled. H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled. H335 May cause respiratory irritation. H351 Suspected of causing cancer. H373 May cause damage to organs through prolonged or repeated exposure.
Store between	Store Between 5°C - 25°C
Contains SVHC	NO

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