

Safety Data Sheet TIG-W-US-SDS

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Issue date: 08/11/2015 Revision date: 11/30/2020 Supersedes: 06/27/2019 Version: 3.0

SECTION 1: Identification

1.1. Identification

Product form : Mixture

Trade name : TIGERSEAL ADHESIVE SEALANT - WHITE

UP Number UP0728

1.2. Recommended use and restrictions on use

Use of the substance/mixture : Adhesives, sealants Recommended use : Adhesives, sealants

1.3. Supplier

U-POL US Inc 108 Commerce Way

Easton, PA 18040 - United States T 1-800-340-7824 - F 1-800-787-5150 technicalsupport@u-pol.com - www.u-pol.com

1.4. Emergency telephone number

Emergency number : CHEMTREC - 1-800-424-9300

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS US classification

Respiratory sensitization, Category 1 Skin sensitization, Category 1 Carcinogenicity Category 2

Specific target organ toxicity (repeated exposure)

Category 2

May cause an allergy or asthma symptoms or breathing difficulties if inhaled

May cause an allergic skin reaction

Suspected of causing cancer

May cause damage to organs through prolonged or repeated exposure

2.2. GHS Label elements, including precautionary statements

GHS US labeling

Hazard pictograms (GHS US)



Signal word (GHS US) : Danger

Hazard statements (GHS US) : May cause an allergic skin reaction

May cause an allergy or asthma symptoms or breathing difficulties if inhaled

Suspected of causing cancer

May cause damage to organs through prolonged or repeated exposure

Precautionary statements (GHS US) : Keep out of reach of children.

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Do not breathe vapors, fume.

Contaminated work clothing must not be allowed out of the workplace.

Wear eye protection, protective clothing, protective gloves. [In case of inadequate ventilation] wear Respiratory Protection.

If on skin: Wash with plenty of water.

If inhaled: If breathing is difficult, remove person to fresh air and keep comfortable for

breathing.

If exposed or concerned: Get medical advice/attention.

If skin irritation or rash occurs: Get medical advice/attention.

If experiencing respiratory symptoms: Call a POISON CENTER.

Store locked up.

Dispose of contents/container to hazardous or special waste collection point, in accordance

with local, regional, national and/or international regulation.

2.3. Other hazards which do not result in classification

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2.4. Unknown acute toxicity (GHS US)

SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

| Name | Product identifier | % | GHS US classification |
|--|----------------------|------|--|
| Xylene | (CAS-No.) 1330-20-7 | < 23 | Flam. Liq. 3, H226 Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 STOT RE 2, H373 Asp. Tox. 1, H304 |
| Ethylbenzene | (CAS-No.) 100-41-4 | < 5 | Flam. Liq. 2, H225 Acute Tox. 4 (Inhalation), H332 Acute Tox. 4 (Inhalation:vapour), H332 Carc. 2, H351 STOT RE 2, H373 Asp. Tox. 1, H304 |
| 4,4'-methylenediphenyl diisocyanate, diphenylmethane-4,4'-diisocyanate | (CAS-No.) 101-68-8 | < 5 | Acute Tox. 4 (Inhalation), H332 Acute Tox. 4 (Inhalation:dust,mist), H332 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Resp. Sens. 1, H334 Skin Sens. 1, H317 Carc. 2, H351 STOT SE 3, H335 STOT RE 2, H373 |
| 4,4'-methylenediphenyl diisocyanate, oligomers | (CAS-No.) 25686-28-6 | < 5 | Acute Tox. 4 (Inhalation), 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 |

Full text of hazard classes and H-statements : see section 16

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures general : IF exposed or concerned: Get medical advice/attention. Call a poison center/doctor/physician if

you feel unwell.

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. If experiencing respiratory

symptoms: Call a poison center or a doctor.

First-aid measures after skin contact : Wash skin with plenty of water. Take off contaminated clothing. If skin irritation or rash occurs:

Get medical advice/attention.

First-aid measures after eye contact : Rinse eyes with water as a precaution.

First-aid measures after ingestion : Call a poison center/doctor/physician if you feel unwell.

4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects after inhalation : May cause an allergy or asthma symptoms or breathing difficulties if inhaled.

Symptoms/effects after skin contact : May cause an allergic skin reaction.

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam.

5.2. Specific hazards arising from the chemical

Reactivity : The product is non-reactive under normal conditions of use, storage and transport.

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5.3. Special protective equipment and precautions for fire-fighters

Protection during firefighting

: Self-contained breathing apparatus. Do not attempt to take action without suitable protective equipment. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Protective equipment :

: Safety glasses. Protective clothing. Gloves.

Emergency procedures : Ventilate spillage area. Do not breathe vapors, fume. Avoid contact with skin and eyes.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information

refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment : Collect spillage. Contain released product, pump into suitable containers.

Methods for cleaning up : Mechanically recover the product. Notify authorities if product enters sewers or public waters.

Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Obtain special instructions before use. Do not

handle until all safety precautions have been read and understood. Wear personal protective

equipment. Do not breathe vapors, fume. Avoid contact with skin and eyes.

Hygiene measures : Contaminated work clothing should not be allowed out of the workplace. Wash contaminated

clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands

after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store locked up. Store in a well-ventilated place. Keep cool.

Storage temperature : < 25 °C

Storage area : Keep out of direct sunlight. Store in a well-ventilated place. Protect against frost. Store in a dry

area.

Special rules on packaging : Store in a closed container. Keep only in original container. dry.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

| 4,4'-methylenediphenyl diisocyanate, diphenylmethane-4,4'-diisocyanate (101-68-8) | | | |
|---|--------------------------------|--------------------------------------|--|
| ACGIH | Local name | Methylene bisphenyl isocyanate (MDI) | |
| ACGIH | ACGIH OEL TWA [ppm] | 0.005 ppm | |
| ACGIH | Remark (ACGIH) | TLV® Basis: Resp sens | |
| ACGIH | Regulatory reference | ACGIH 2021 | |
| OSHA | OSHA PEL (Ceiling) | 0.2 mg/m ³ | |
| OSHA | OSHA PEL C [ppm] | 0.02 ppm | |
| OSHA | Regulatory reference (US-OSHA) | OSHA Annotated Table Z-1 | |

4,4'-methylenediphenyl diisocyanate, oligomers (25686-28-6)

Not applicable

| Ethylbenzene (100-41-4) | | |
|-------------------------|---------------------|--------------|
| ACGIH | Local name | Ethylbenzene |
| ACGIH | ACGIH OEL TWA [ppm] | 20 ppm |
| | | |

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| Ethylbenzene (100- | -41-4) | |
|--------------------|--------------------------------|---|
| ACGIH | Remark (ACGIH) | TLV® Basis: URT irr; kidney dam (nephropathy); cochlear impair. Notations: A3 (Confirmed Animal Carcinogen with Unknown Relevance to Humans); BEI |
| ACGIH | Regulatory reference | ACGIH 2021 |
| OSHA | OSHA PEL (TWA) [1] | 435 mg/m³ |
| OSHA | OSHA PEL (TWA) [2] | 100 ppm |
| OSHA | Regulatory reference (US-OSHA) | OSHA Annotated Table Z-1 |
| Xylene (1330-20-7) | | |
| ACGIH | Local name | Xylene, mixed isomers (Dimethylbenzene) |
| ACGIH | ACGIH OEL TWA [ppm] | 100 ppm |
| ACGIH | ACGIH OEL STEL [ppm] | 150 ppm |
| ACGIH | Remark (ACGIH) | TLV® Basis: URT & eye irr; CNS impair. Notations: A4 (Not classifiable as a Human Carcinogen); BEI |
| ACGIH | Regulatory reference | ACGIH 2021 |
| OSHA | OSHA PEL (TWA) [1] | 435 mg/m³ |
| OSHA | OSHA PEL (TWA) [2] | 100 ppm |
| OSHA | Regulatory reference (US-OSHA) | OSHA Annotated Table Z-1 |

8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.

Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Personal protective equipment:

Gloves. Protective clothing. Safety glasses.

Materials for protective clothing:

Impermeable clothing

Hand protection:

Protective gloves

Eye protection:

Safety glasses

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

Wear respiratory protection.

Personal protective equipment symbol(s):







SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Solid
Appearance : Paste.
Color : white

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Odor : aromatic

Odor threshold : No data available No data available Melting point : No data available Freezing point Not applicable No data available Boiling point Flash point : Not applicable Relative evaporation rate (butyl acetate=1) No data available Flammability (solid, gas) : Non flammable. : < 100 hPa @ 20°C Vapor pressure Relative vapor density at 20 °C : No data available Relative density : No data available

Density : 1.22 g/cm³

Solubility : insoluble in water. Reacts with water.

Partition coefficient n-octanol/water (Log Pow) : No data available
Auto-ignition temperature : Not applicable
Decomposition temperature : No data available
No data availableViscosity, kinematic : > 20.5 mm²/s
Viscosity, dynamic : No data available
Explosion limits : Not applicable

Lower explosive limit (LEL): 0.1 vol % Upper explosive limit (UEL): 7.8 vol %

Explosive properties : No data available
Oxidizing properties : No data available

9.2. Other information

As Packaged Regulatory VOC : 98.4 g/l (0.82 lb/gal)
As Packaged Actual VOC : 98.4 g/l (0.82 lb/gal)
As Applied Regulatory VOC : 98.4 g/l (0.82 lb/gal)
As Applied Actual VOC : 98.4 g/l (0.82 lb/gal)

Volatiles : 8 wt%

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Hydrogen chloride. Nitrogen oxides. Sulphur oxides.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified

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Acute toxicity (inhalation) : Not classified

| 4,4'-methylenediphenyl diisocyanate, diphe | enylmethane-4,4'-diisocyanate (101-68-8) | |
|--|--|--|
| LD50 oral rat | > 7616 mg/kg (Equivalent or similar to OECD 401, Rat, Female, Read-across, Oral) | |
| LD50 dermal rabbit | > 9400 mg/kg body weight (Equivalent or similar to OECD 402, 24 h, Rabbit, Male / female, Read-across, Dermal) | |
| ATE US (gases) | 4500 ppmV/4h | |
| ATE US (vapors) | 11 mg/l/4h | |
| ATE US (dust, mist) | 1.5 mg/l/4h | |
| 4,4'-methylenediphenyl diisocyanate, oligo | mers (25686-28-6) | |
| LD50 oral rat | > 5000 mg/kg (OECD Guideline 425 (Acute Oral Toxicity: Up-and-Down Procedure), rat, female) | |
| LD50 dermal rabbit | > 9400 mg/kg (OECD Guideline 402 (Acute Dermal Toxicity), rat, male/female) | |
| ATE US (gases) | 4500 ppmV/4h | |
| ATE US (vapors) | 11 mg/l/4h | |
| ATE US (dust, mist) | 1.5 mg/l/4h | |
| Ethylbenzene (100-41-4) | | |
| LD50 oral rat | 3500 mg/kg (Rat, Male / female, Experimental value, Oral, 14 day(s)) | |
| LD50 dermal rabbit | 15432 mg/kg body weight (24 h, Rabbit, Male, Experimental value, Dermal) | |
| LC50 Inhalation - Rat | 17.8 mg/l (4 h, Rat, Male, Experimental value, Inhalation (vapours)) | |
| ATE US (oral) | 3500 mg/kg body weight | |
| ATE US (dermal) | 15432 mg/kg body weight | |
| ATE US (gases) | 4500 ppmV/4h | |
| ATE US (vapors) | 17.8 mg/l/4h | |
| ATE US (dust, mist) | 1.5 mg/l/4h | |
| Xylene (1330-20-7) | | |
| LD50 oral rat | 3523 mg/kg body weight (Equivalent or similar to EU Method B.1: Acute Toxicity (Oral), Rat, Male, Experimental value, Oral, 14 day(s)) | |
| LD50 dermal rat | 12126 mg/kg (Non-GLP, read-across from supporting substance, single dermal dose under occlusion followed by observation for 14 days) | |
| LD50 dermal rabbit | 12126 mg/kg body weight Animal: rabbit, Animal sex: male | |
| LC50 Inhalation - Rat [ppm] | 6700 ppm/4h (EU Method B.2 (Acute Toxicity (Inhalation)), 4h, rat, male) | |
| ATE US (oral) | 3523 mg/kg body weight | |
| ATE US (dermal) | 1100 mg/kg body weight | |
| ATE US (gases) | 6700 ppmV/4h | |
| ATE US (vapors) | 11 mg/l/4h | |
| ATE US (dust, mist) | 1.5 mg/l/4h | |
| Skin corrosion/irritation | : Not classified | |
| Serious eye damage/irritation | : Not classified | |
| Respiratory or skin sensitization | : May cause an allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction. | |
| Germ cell mutagenicity | : Not classified | |
| Carcinogenicity | : Suspected of causing cancer. | |
| 4,4'-methylenediphenyl diisocyanate, diphe | | |
| IARC group | 3 - Not classifiable | |
| | - Tel sidesification | |
| Ethylbenzene (100-41-4) | | |
| IARC group | 2B - Possibly carcinogenic to humans | |
| Xylene (1330-20-7) | | |
| IARC group | 3 - Not classifiable | |
| Reproductive toxicity | : Not classified | |
| STOT-single exposure | : Not classified | |
| 4,4'-methylenediphenyl diisocyanate, diphe | envlmethane-4.4'-diisocvanate (101-68-8) | |
| STOT-single exposure | May cause respiratory irritation. | |
| | -, | |

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|---|--|--|
| 4,4'-methylenediphenyl diisocyanate, olig | | |
| STOT-single exposure | May cause respiratory irritation. | |
| Xylene (1330-20-7) | | |
| STOT-single exposure | May cause respiratory irritation. | |
| STOT-repeated exposure | : May cause damage to organs through prolonged or repeated exposure. | |
| 4,4'-methylenediphenyl diisocyanate, dipl | henylmethane-4,4'-diisocyanate (101-68-8) | |
| STOT-repeated exposure | May cause damage to organs through prolonged or repeated exposure. | |
| 4,4'-methylenediphenyl diisocyanate, olig | jomers (25686-28-6) | |
| STOT-repeated exposure | May cause damage to organs through prolonged or repeated exposure. | |
| Ethylbenzene (100-41-4) | | |
| NOAEL (oral,rat,90 days) | 75 mg/kg body weight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents) | |
| STOT-repeated exposure | May cause damage to organs through prolonged or repeated exposure. | |
| Xylene (1330-20-7) | | |
| LOAEL (oral,rat,90 days) | 150 mg/kg body weight Animal: rat, Animal sex: male, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents), Guideline: EPA OPP 82-1 (90-Day Oral Toxicity) | |
| STOT-repeated exposure | May cause damage to organs through prolonged or repeated exposure. | |
| spiration hazard | : Not classified | |
| iscosity, kinematic | : > 20.5 mm ² /s | |
| Symptoms/effects after inhalation | : May cause an allergy or asthma symptoms or breathing difficulties if inhaled. | |
| Symptoms/effects after skin contact | : May cause an allergic skin reaction. | |
| 2.1. Toxicity | | |
| Cology - general | : The product is not considered harmful to aquatic organisms or to cause long-term adverse | |
| cology - general | : The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment. | |
| 4,4'-methylenediphenyl diisocyanate, diph | effects in the environment. henylmethane-4,4'-diisocyanate (101-68-8) | |
| | effects in the environment. | |
| 4,4'-methylenediphenyl diisocyanate, diph | effects in the environment. henylmethane-4,4'-diisocyanate (101-68-8) > 1000 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Danio rerio, Static system, Fresh | |
| 4,4'-methylenediphenyl diisocyanate, diph LC50 - Fish [1] | effects in the environment. henylmethane-4,4'-diisocyanate (101-68-8) > 1000 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Danio rerio, Static system, Fresh water, Read-across, Nominal concentration) 129.7 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 24 h, Daphnia magna, Static | |
| 4,4'-methylenediphenyl diisocyanate, diph LC50 - Fish [1] EC50 - Crustacea [1] | effects in the environment. henylmethane-4,4'-diisocyanate (101-68-8) > 1000 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Danio rerio, Static system, Fresh water, Read-across, Nominal concentration) 129.7 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 24 h, Daphnia magna, Static system, Fresh water, Read-across, Locomotor effect) 5.1 mg/l Test organisms (species): Menidia menidia | |
| 4,4'-methylenediphenyl diisocyanate, diph LC50 - Fish [1] EC50 - Crustacea [1] Ethylbenzene (100-41-4) LC50 - Fish [1] EC50 - Crustacea [1] | effects in the environment. henylmethane-4,4'-diisocyanate (101-68-8) > 1000 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Danio rerio, Static system, Fresh water, Read-across, Nominal concentration) 129.7 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 24 h, Daphnia magna, Static system, Fresh water, Read-across, Locomotor effect) 5.1 mg/l Test organisms (species): Menidia menidia 1.8 – 2.4 mg/l (US EPA, 48 h, Daphnia magna, Static system, Fresh water, Experimental value) | |
| 4,4'-methylenediphenyl diisocyanate, diph LC50 - Fish [1] EC50 - Crustacea [1] Ethylbenzene (100-41-4) LC50 - Fish [1] EC50 - Crustacea [1] LOEC (chronic) | effects in the environment. henylmethane-4,4'-diisocyanate (101-68-8) > 1000 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Danio rerio, Static system, Fresh water, Read-across, Nominal concentration) 129.7 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 24 h, Daphnia magna, Static system, Fresh water, Read-across, Locomotor effect) 5.1 mg/l Test organisms (species): Menidia menidia 1.8 – 2.4 mg/l (US EPA, 48 h, Daphnia magna, Static system, Fresh water, Experimental value) 1.7 mg/l Test organisms (species): Ceriodaphnia dubia Duration: '7 d' | |
| 4,4'-methylenediphenyl diisocyanate, diph LC50 - Fish [1] EC50 - Crustacea [1] Ethylbenzene (100-41-4) LC50 - Fish [1] EC50 - Crustacea [1] LOEC (chronic) NOEC (chronic) | effects in the environment. henylmethane-4,4'-diisocyanate (101-68-8) > 1000 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Danio rerio, Static system, Fresh water, Read-across, Nominal concentration) 129.7 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 24 h, Daphnia magna, Static system, Fresh water, Read-across, Locomotor effect) 5.1 mg/l Test organisms (species): Menidia menidia 1.8 – 2.4 mg/l (US EPA, 48 h, Daphnia magna, Static system, Fresh water, Experimental value) | |
| 4,4'-methylenediphenyl diisocyanate, diph LC50 - Fish [1] EC50 - Crustacea [1] Ethylbenzene (100-41-4) LC50 - Fish [1] EC50 - Crustacea [1] LOEC (chronic) NOEC (chronic) Xylene (1330-20-7) | effects in the environment. henylmethane-4,4'-diisocyanate (101-68-8) > 1000 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Danio rerio, Static system, Fresh water, Read-across, Nominal concentration) 129.7 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 24 h, Daphnia magna, Static system, Fresh water, Read-across, Locomotor effect) 5.1 mg/l Test organisms (species): Menidia menidia 1.8 – 2.4 mg/l (US EPA, 48 h, Daphnia magna, Static system, Fresh water, Experimental value) 1.7 mg/l Test organisms (species): Ceriodaphnia dubia Duration: '7 d' 0.96 mg/l Test organisms (species): Ceriodaphnia dubia Duration: '7 d' | |
| 4,4'-methylenediphenyl diisocyanate, diph LC50 - Fish [1] EC50 - Crustacea [1] Ethylbenzene (100-41-4) LC50 - Fish [1] EC50 - Crustacea [1] LOEC (chronic) NOEC (chronic) Xylene (1330-20-7) LC50 - Fish [1] | effects in the environment. henylmethane-4,4'-diisocyanate (101-68-8) > 1000 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Danio rerio, Static system, Fresh water, Read-across, Nominal concentration) 129.7 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 24 h, Daphnia magna, Static system, Fresh water, Read-across, Locomotor effect) 5.1 mg/l Test organisms (species): Menidia menidia 1.8 – 2.4 mg/l (US EPA, 48 h, Daphnia magna, Static system, Fresh water, Experimental value) 1.7 mg/l Test organisms (species): Ceriodaphnia dubia Duration: '7 d' 0.96 mg/l Test organisms (species): Ceriodaphnia dubia Duration: '7 d' 2.6 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri) | |
| 4,4'-methylenediphenyl diisocyanate, diph LC50 - Fish [1] EC50 - Crustacea [1] Ethylbenzene (100-41-4) LC50 - Fish [1] EC50 - Crustacea [1] LOEC (chronic) NOEC (chronic) Xylene (1330-20-7) | effects in the environment. henylmethane-4,4'-diisocyanate (101-68-8) > 1000 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Danio rerio, Static system, Fresh water, Read-across, Nominal concentration) 129.7 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 24 h, Daphnia magna, Static system, Fresh water, Read-across, Locomotor effect) 5.1 mg/l Test organisms (species): Menidia menidia 1.8 – 2.4 mg/l (US EPA, 48 h, Daphnia magna, Static system, Fresh water, Experimental value) 1.7 mg/l Test organisms (species): Ceriodaphnia dubia Duration: '7 d' 0.96 mg/l Test organisms (species): Ceriodaphnia dubia Duration: '7 d' 2.6 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri) > 3.4 mg/l Test organisms (species): Ceriodaphnia dubia 4.36 mg/l (OECD 201: Alga, Growth Inhibition Test, 73 h, Pseudokirchneriella subcapitata, | |
| 4,4'-methylenediphenyl diisocyanate, diph LC50 - Fish [1] EC50 - Crustacea [1] Ethylbenzene (100-41-4) LC50 - Fish [1] EC50 - Crustacea [1] LOEC (chronic) NOEC (chronic) Xylene (1330-20-7) LC50 - Fish [1] EC50 - Crustacea [1] | effects in the environment. henylmethane-4,4'-diisocyanate (101-68-8) > 1000 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Danio rerio, Static system, Fresh water, Read-across, Nominal concentration) 129.7 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 24 h, Daphnia magna, Static system, Fresh water, Read-across, Locomotor effect) 5.1 mg/l Test organisms (species): Menidia menidia 1.8 – 2.4 mg/l (US EPA, 48 h, Daphnia magna, Static system, Fresh water, Experimental value) 1.7 mg/l Test organisms (species): Ceriodaphnia dubia Duration: '7 d' 0.96 mg/l Test organisms (species): Ceriodaphnia dubia Duration: '7 d' 2.6 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri) > 3.4 mg/l Test organisms (species): Ceriodaphnia dubia | |
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| Ethylbenzene (100-41-4) | | |
|-------------------------------|--|--|
| Chemical oxygen demand (COD) | 2.1 g O₂/g substance | |
| ThOD | 3.17 g O₂/g substance | |
| Xylene (1330-20-7) | | |
| Persistence and degradability | Biodegradable in the soil. Readily biodegradable in water. | |

12.3. Bioaccumulative potential

| 4,4'-methylenediphenyl diisocyanate, diphenylmethane-4,4'-diisocyanate (101-68-8) | | |
|---|--|--|
| BCF - Fish [1] | 92 – 200 (OECD 305: Bioconcentration: Flow-Through Fish Test, 4 week(s), Cyprinus carpio, Flow-through system, Fresh water, Experimental value, GLP) | |
| Partition coefficient n-octanol/water (Log Pow) | 4.51 (Experimental value, OECD 117: Partition Coefficient (n-octanol/water), HPLC method, 22 °C) | |
| Bioaccumulative potential | Low potential for bioaccumulation (BCF < 500). | |
| Ethylbenzene (100-41-4) | | |
| BCF - Fish [1] | 1 (6 week(s), Oncorhynchus kisutch, Flow-through system, Salt water, Experimental value) | |
| Partition coefficient n-octanol/water (Log Pow) | 3.6 (Experimental value, EU Method A.8: Partition Coefficient, 20 °C) | |
| Bioaccumulative potential | Low potential for bioaccumulation (BCF < 500). | |

| · | |
|---|--|
| Xylene (1330-20-7) | |
| BCF - Fish [1] | 7.2 – 25.9 (56 day(s), Oncorhynchus mykiss, Flow-through system, Fresh water, Read-across) |
| Partition coefficient n-octanol/water (Log Pow) | 3.2 (Read-across, 20 °C) |
| Bioaccumulative potential | Low potential for bioaccumulation (BCF < 500). |

12.4. Mobility in soil

| 4,4'-methylenediphenyl diisocyanate, diphenylmethane-4,4'-diisocyanate (101-68-8) | | |
|---|--|--|
| Surface tension | Data waiving | |
| Ecology - soil | No (test)data on mobility of the substance available. | |
| Ethylbenzene (100-41-4) | | |
| Surface tension | 71.2 mN/m (23 °C, 0.058 g/l, EU Method A.5: Surface tension) | |
| Organic Carbon Normalized Adsorption Coefficient (Log Koc) | 2.71 (log Koc, PCKOCWIN v1.66, QSAR) | |
| Ecology - soil | Low potential for adsorption in soil. Toxic to soil organisms. | |
| Xylene (1330-20-7) | | |

| Ecology - soil | Low potential for adsorption in soil. Toxic to soil organisms. |
|---|---|
| Xylene (1330-20-7) | |
| Surface tension | 28.01 – 29.76 mN/m (25 °C) |
| Organic Carbon Normalized Adsorption Coefficient (Log Koc) | 2.73 (log Koc, Equivalent or similar to OECD 121, Read-across) |
| Ecology - soil | Low potential for adsorption in soil. May be harmful to plant growth, blooming and fruit formation. |

12.5. Other adverse effects

SECTION 13: Disposal considerations

13.1. Disposal methods

Regional legislation (waste) : Disposal must be done according to official regulations.

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Not regulated

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Transportation of Dangerous Goods

Not regulated

Transport by sea

Not regulated

Air transport

Not regulated

SECTION 15: Regulatory information

15.1. US Federal regulations

Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.

| 4,4'-methylenediphenyl diisocyanate, diphenylmethane-4,4'-diisocyanate | CAS-No. 101-68-8 | < 5% |
|--|-------------------|-------|
| Ethylbenzene | CAS-No. 100-41-4 | < 5% |
| Xylene | CAS-No. 1330-20-7 | < 23% |

| 4,4'-methylenediphenyl diisocyanate, diphenyl | lmethane-4,4'-diisocyanate (101-68-8) | |
|--|---|--|
| sted on the United States TSCA (Toxic Substances Control Act) inventory sted on EPA Hazardous Air Pollutant (HAPS) | | |
| Listed on EPA Hazardous Air Pollutant (HAPS) | | |
| ERCLA RQ 5000 lb | | |
| 4'-methylenediphenyl diisocyanate, oligomers (25686-28-6) | | |
| Listed on the United States TSCA (Toxic Substan | ces Control Act) inventory | |
| EPA TSCA Regulatory Flag | XU - XU - indicates a substance exempt from reporting under the Chemical Data Reporting Rule, (40 CFR 711). | |

| Ethylbenzene (100-41-4) | | |
|--|---------|--|
| Listed on the United States TSCA (Toxic Substances Control Act) inventory Listed on EPA Hazardous Air Pollutant (HAPS) | | |
| Listed on EPA Hazardous Air Pollutant (HAPS) | | |
| CERCLA RQ | 1000 lb | |

| Xylene (1330-20-7) | |
|--|--|
| | Listed on the United States TSCA (Toxic Substances Control Act) inventory Listed on EPA Hazardous Air Pollutant (HAPS) |
| Listed on EPA Hazardous Air Pollutant (HAPS) | |

CERCLA RQ 100 lb

15.2. International regulations

CANADA

4,4'-methylenediphenyl diisocyanate, diphenylmethane-4,4'-diisocyanate (101-68-8)

Listed on the Canadian DSL (Domestic Substances List)

4,4'-methylenediphenyl diisocyanate, oligomers (25686-28-6)

Listed on the Canadian DSL (Domestic Substances List)

Ethylbenzene (100-41-4)

Listed on the Canadian DSL (Domestic Substances List)

Xylene (1330-20-7)

Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

No additional information available

National regulations

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Ethylbenzene (100-41-4)

Listed on IARC (International Agency for Research on Cancer)

15.3. US State regulations

MARNING:

This product can expose you to Ethylbenzene, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

| Component | Carcinogenicity | Developmental toxicity | Reproductive toxicity male | Reproductive toxicity female | No significant risk level (NSRL) | Maximum allowable dose level (MADL) |
|------------------------|-----------------|------------------------|----------------------------|------------------------------|--|--|
| Ethylbenzene(100-41-4) | X | | | | 54 μg/day (inhalation); 41 μg/day (oral) | |

| Component | State or local regulations |
|--|---|
| 4,4'-methylenediphenyl diisocyanate, diphenylmethane- 4,4'-diisocyanate(101-68-8) | U.S Delaware - Pollutant Discharge Requirements - Reportable Quantities; U.S Idaho - Non-Carcinogenic Toxic Air Pollutants - Acceptable Ambient Concentrations; U.S Massachusetts - Right To Know List; U.S New Jersey - Right to Know Hazardous Substance List; U.S New York City - Right to Know Hazardous Substances List; U.S Pennsylvania - RTK (Right to Know) List |
| Ethylbenzene(100-41-4) | U.S Delaware - Pollutant Discharge Requirements - Reportable Quantities; U.S Idaho - Non-Carcinogenic Toxic Air Pollutants - Acceptable Ambient Concentrations; U.S Massachusetts - Right To Know List; U.S New Jersey - Right to Know Hazardous Substance List; U.S New York City - Right to Know Hazardous Substances List; U.S Pennsylvania - RTK (Right to Know) List |
| Xylene(1330-20-7) | U.S Delaware - Pollutant Discharge Requirements - Reportable Quantities; U.S Idaho - Non-Carcinogenic Toxic Air Pollutants - Acceptable Ambient Concentrations; U.S Massachusetts - Right To Know List; U.S New Jersey - Right to Know Hazardous Substance List; U.S New York City - Right to Know Hazardous Substances List; U.S Pennsylvania - RTK (Right to Know) List |

SECTION 16: Other information

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Revision date : 11/30/2020

NFPA health hazard : 2 - Materials that, under emergency conditions, can cause

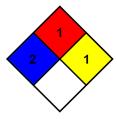
temporary incapacitation or residual injury.

NFPA fire hazard : 1 - Materials that must be preheated before ignition can

occur.

NFPA reactivity : 1 - Materials that in themselves are normally stable but can

become unstable at elevated temperatures and pressures.



SDS US GHS (GHS HazCom2012)

For professional use only.

The information contained within this Safety Data Sheet (SDS) is believed to be correct as of the date issued however it is subject to change from time to time. It does not purport to be all inclusive or exhaustive and shall only be used as a guide. U-POL makes no warranties, expressed or implied, including but not limited to, any implied warranty of fitness for a given purpose or usage. It is the Buyers responsibility to ensure the suitability of the products for their own use and to check the information is up to date. U-POL cannot be held responsible for the suitability of use for any of its products, considering the wide range of factors such as application, substrates and handling methods. Since these conditions of use are outside of our control, the company shall not be held liable for any damage resulting from handling or from contact with the product detailed. Moreover, addition of reducers, hardeners or other additives over and above U-POL's recommendations for use, may substantially alter the composition and hazards of the product. U-POL data sheets are available via the U-POL website at WWW.U-POL.COM.

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