according to Regulation (EC) No. 1907/2006



REPLASTeasy PLASTICS ADHESIVE TRANSPARENT - 50 ML (comp. B)

Version Revision Date: SDS Number: Date of last issue: 07.10.2014 3.0 16.03.2017 1428683-00001 Date of first issue: 11.06.2010

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

1.1 Product identifier

Trade name : REPLASTeasy PLASTICS ADHESIVE TRANSPARENT - 50

ML (comp. B)

Product code : 08935008

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

Use of the Sub- : Adhesives, Sealant

stance/Mixture

1.3 Details of the supplier of the safety data sheet

Company : Adolf Wuerth GmbH & Co. KG

Reinhold-Würth-Str. 12-17

74653 Künzelsau

Telephone : +49 794015 0

Telefax : +49 794015 10 00

E-mail address of person

responsible for the SDS

prodsafe@wuerth.com

1.4 Emergency telephone number

Giftnotrufzentrale Berlin +49 30 30686 790. Gesellschaft (07:00 - 18:00 Uhr) +49 794015

2552

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Acute toxicity, Category 4 H332: Harmful if inhaled.

Skin irritation, Category 2 H315: Causes skin irritation.

Eye irritation, Category 2 H319: Causes serious eye irritation.

Respiratory sensitisation, Category 1 H334: May cause allergy or asthma symptoms or

breathing difficulties if inhaled.

Skin sensitisation, Category 1 H317: May cause an allergic skin reaction.

Carcinogenicity, Category 2 H351: Suspected of causing cancer.

Specific target organ toxicity - single ex- H335: May cause respiratory irritation.

according to Regulation (EC) No. 1907/2006



REPLASTeasy PLASTICS ADHESIVE TRANSPARENT - 50 ML (comp. B)

Version Revision Date: SDS Number: Date of last issue: 07.10.2014 3.0 16.03.2017 1428683-00001 Date of first issue: 11.06.2010

posure, Category 3

Specific target organ toxicity - repeated H373: May cause damage to organs through pro-

exposure, Category 2 longed or repeated exposure.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms



Signal word : Danger

Hazard statements : 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.

Precautionary statements : Prevention:

P201 Obtain special instructions before use.

P260 Do not breathe mist or vapours.

P280 Wear protective gloves/ protective clothing/ eye protec-

tion/ face protection.

P284 Wear respiratory protection.

Response:

P304 + P340 + P312 IF INHALED: Remove person to fresh

air and keep comfortable for breathing. Call a POISON

CENTER/doctor if you feel unwell.

P308 + P313 IF exposed or concerned: Get medical advice/

attention.

Hazardous components which must be listed on the label:

4,4'-Methylenediphenyl diisocyanate, oligomers

Methylenediphenyl diisocyanate, oligomeric reaction products with butanediol, tripropylene glycol and propanediol

4,4'-Diphenylmethane diisocyanate

Additional Labelling

EUH204 Contains isocyanates. May produce an allergic reaction.

2.3 Other hazards

None known.

according to Regulation (EC) No. 1907/2006



REPLASTeasy PLASTICS ADHESIVE TRANSPARENT - 50 ML (comp. B)

Version Revision Date: SDS Number: Date of last issue: 07.10.2014 3.0 16.03.2017 1428683-00001 Date of first issue: 11.06.2010

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Hazardous components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
4,4'-Methylenediphenyl diisocyanate, oligomers	25686-28-6 500-040-3 01-2119457013-49	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	>= 70 - < 90
Methylenediphenyl diisocyanate, oligomeric reaction products with butanediol, tripropylene glycol and propanediol	123714-19-2 500-312-1 01-2119457025-44	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	>= 70 - < 90
4,4'-Diphenylmethane diisocyanate	101-68-8 202-966-0 615-005-00-9	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	>= 0,1 - < 1

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice : In the case of accident or if you feel unwell, seek medical ad-

vice immediately.

When symptoms persist or in all cases of doubt seek medical

advice.

Protection of first-aiders : First Aid responders should pay attention to self-protection,

and use the recommended personal protective equipment

when the potential for exposure exists.

If inhaled : If inhaled, remove to fresh air.

If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

according to Regulation (EC) No. 1907/2006



REPLASTeasy PLASTICS ADHESIVE TRANSPARENT - 50 ML (comp. B)

Version Revision Date: SDS Number: Date of last issue: 07.10.2014 3.0 16.03.2017 1428683-00001 Date of first issue: 11.06.2010

Get medical attention.

In case of skin contact : In case of contact, immediately flush skin with plenty of water

for at least 15 minutes while removing contaminated clothing

and shoes.

Get medical attention. Wash clothing before reuse.

Thoroughly clean shoes before reuse.

In case of eye contact : In case of contact, immediately flush eyes with plenty of water

for at least 15 minutes.

If easy to do, remove contact lens, if worn.

Get medical attention.

If swallowed : If swallowed, DO NOT induce vomiting.

Get medical attention.

Rinse mouth thoroughly with water.

4.2 Most important symptoms and effects, both acute and delayed

Risks : Causes skin irritation.

May cause an allergic skin reaction.

Causes serious eye irritation.

Harmful if inhaled.

May cause allergy or asthma symptoms or breathing difficul-

ties if inhaled.

May cause respiratory irritation. Suspected of causing cancer.

May cause damage to organs through prolonged or repeated

exposure.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : Treat symptomatically and supportively.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Water spray

Alcohol-resistant foam Carbon dioxide (CO2)

Dry chemical

Unsuitable extinguishing

media

: None known.

5.2 Special hazards arising from the substance or mixture

Specific hazards during fire-

fighting

: Exposure to combustion products may be a hazard to health.

Hazardous combustion prod: Carbon oxides

according to Regulation (EC) No. 1907/2006



REPLASTeasy PLASTICS ADHESIVE TRANSPARENT - 50 ML (comp. B)

Version Revision Date: SDS Number: Date of last issue: 07.10.2014 3.0 16.03.2017 1428683-00001 Date of first issue: 11.06.2010

ucts Nitrogen oxides (NOx)

5.3 Advice for firefighters

Special protective equipment :

for firefighters

In the event of fire, wear self-contained breathing apparatus.

Use personal protective equipment.

Specific extinguishing meth-

ods

Use extinguishing measures that are appropriate to local cir-

cumstances and the surrounding environment. Use water spray to cool unopened containers.

Remove undamaged containers from fire area if it is safe to do

SO.

Evacuate area.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Use personal protective equipment.

Follow safe handling advice and personal protective equip-

ment recommendations.

6.2 Environmental precautions

Environmental precautions : Discharge into the environment must be avoided.

Prevent further leakage or spillage if safe to do so.

Prevent spreading over a wide area (e.g. by containment or oil

barriers).

Retain and dispose of contaminated wash water.

Local authorities should be advised if significant spillages

cannot be contained.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Soak up with inert absorbent material.

For large spills, provide dyking or other appropriate containment to keep material from spreading. If dyked material can be pumped, store recovered material in appropriate container. Clean up remaining materials from spill with suitable absor-

bent.

Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to deter-

mine which regulations are applicable.

Sections 13 and 15 of this SDS provide information regarding

certain local or national requirements.

6.4 Reference to other sections

See sections: 7, 8, 11, 12 and 13.

according to Regulation (EC) No. 1907/2006



REPLASTeasy PLASTICS ADHESIVE TRANSPARENT - 50 ML (comp. B)

Version Revision Date: SDS Number: Date of last issue: 07.10.2014 3.0 16.03.2017 1428683-00001 Date of first issue: 11.06.2010

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Technical measures : See Engineering measures under EXPOSURE

CONTROLS/PERSONAL PROTECTION section.

Local/Total ventilation : Use with local exhaust ventilation.

Advice on safe handling : Do not get on skin or clothing.

Do not breathe vapours or spray mist.

Do not swallow. Do not get in eyes.

Handle in accordance with good industrial hygiene and safety

practice.

Keep container tightly closed. Keep away from water. Protect from moisture.

Take care to prevent spills, waste and minimize release to the

environment.

Hygiene measures : Ensure that eye flushing systems and safety showers are

located close to the working place. When using do not eat, drink or smoke. Wash contaminated clothing before re-use.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers

: Keep in properly labelled containers. Store locked up. Keep tightly closed. Keep in a cool, well-ventilated place. Store in

accordance with the particular national regulations.

Advice on common storage : Do not store with the following product types:

Strong oxidizing agents

Storage class (TRGS 510) : 10, Combustible liquids

7.3 Specific end use(s)

Specific use(s) : No data available

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
4,4'- Diphenylmethane diisocyanate	101-68-8	AGW (Vapour and aerosols)	0,05 mg/m3	TRGS 430
Peak-limit: excur-	1;=2=(I)			

according to Regulation (EC) No. 1907/2006



REPLASTeasy PLASTICS ADHESIVE TRANSPARENT - 50 ML (comp. B)

 Version
 Revision Date:
 SDS Number:
 Date of last issue: 07.10.2014

 3.0
 16.03.2017
 1428683-00001
 Date of first issue: 11.06.2010

sion factor (catego- ry)				
Further information	Sum of vapour and aerosols, The exposure limit is established for monomers. For regulatory details on oligomers and polymers see TRGS 430 'Isocyanate'., airway sensitizing substance			
		AGW (Vapour and aerosols, inhalable frac- tion)	0,05 mg/m3	DE TRGS 900
Peak-limit: excursion factor (category)	1;=2=(I)			
Further information	Senate commission for the review of compounds at the work place dangerous for the health (MAK-commission)., Sum of vapor and aerosols., The exposure limit is established for monomers. For regulatory details on oligomers and polymers see TRGS 430 'Isocyanate'., Skin absorption, When there is compliance with the OEL and biological tolerance values, there is no risk of harming the unborn child, Substance sensitizing through the skin and respiratory system			

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Substance name	End Use	Exposure routes	Potential health effects	Value
4,4'- Methylenediphenyl diisocyanate, oligo- mers	Workers	Inhalation	Long-term systemic effects	0,05 mg/m3
	Workers	Inhalation	Acute systemic effects	0,1 mg/m3
	Workers	Inhalation	Long-term local ef- fects	0,05 mg/m3
	Workers	Inhalation	Acute local effects	0,1 mg/m3
	Workers	Skin contact	Acute systemic effects	50 mg/kg bw/day
	Workers	Skin contact	Acute local effects	28,7 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	0,025 mg/m3
	Consumers	Inhalation	Acute systemic ef- fects	0,05 mg/m3
	Consumers	Inhalation	Long-term local ef- fects	0,025 mg/m3
	Consumers	Inhalation	Acute local effects	0,05 mg/m3
	Consumers	Skin contact	Acute systemic effects	25 mg/kg bw/day
	Consumers	Skin contact	Acute local effects	17,2 mg/kg bw/day
	Consumers	Ingestion	Acute systemic ef- fects	20 mg/kg bw/day
Methylenediphenyl diisocyanate, oligo-	Workers	Inhalation	Long-term systemic effects	0,05 mg/m3

according to Regulation (EC) No. 1907/2006



REPLASTeasy PLASTICS ADHESIVE TRANSPARENT - 50 ML (comp. B)

 Version
 Revision Date:
 SDS Number:
 Date of last issue: 07.10.2014

 3.0
 16.03.2017
 1428683-00001
 Date of first issue: 11.06.2010

ı	1	1	ı	ı
meric reaction prod-				
ucts with butanediol, tripropylene glycol				
and propanediol				
and propariculor	Workers	Inhalation	Acute systemic ef-	0,1 mg/m3
	Workers	midation	fects	0,11119/1113
	Workers	Inhalation	Long-term local ef- fects	0,05 mg/m3
	Workers	Inhalation	Acute local effects	0,1 mg/m3
	Workers	Skin contact	Acute systemic effects	50 mg/kg bw/day
	Workers	Skin contact	Acute local effects	28,7 mg/cm2
	Consumers	Inhalation	Long-term systemic effects	0,025 mg/m3
	Consumers	Inhalation	Acute systemic ef- fects	0,05 mg/m3
	Consumers	Inhalation	Long-term local ef- fects	0,025 mg/m3
	Consumers	Inhalation	Acute local effects	0,05 mg/m3
	Consumers	Skin contact	Acute systemic ef- fects	25 mg/kg bw/day
	Consumers	Skin contact	Acute local effects	17,2 mg/cm2
	Consumers	Ingestion	Acute systemic ef- fects	20 mg/kg bw/day
4,4'-Diphenylmethane diisocyanate	Workers	Inhalation	Long-term local ef- fects	0,05 mg/m3
•	Workers	Inhalation	Acute local effects	0,1 mg/m3
	Consumers	Inhalation	Long-term local ef- fects	0,025 mg/m3
	Consumers	Inhalation	Acute local effects	0,05 mg/m3

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Substance name	Environmental Compartment	Value
4,4'-Methylenediphenyl diisocyanate, oligomers	Fresh water	1 mg/l
	Marine water	0,1 mg/l
	Intermittent use/release	10 mg/l
	Sewage treatment plant	1 mg/l
	Soil	1 mg/kg
Methylenediphenyl diisocyanate, oligomeric reaction products with butanediol, tripropylene glycol and propanediol	Fresh water	1 mg/l
	Marine water	0,1 mg/l
	Intermittent use/release	10 mg/l
	Sewage treatment plant	1 mg/l
	Soil	1 mg/kg
4,4'-Diphenylmethane diisocyanate	Fresh water	1 mg/l
	Marine water	0,1 mg/l
	Intermittent use/release	10 mg/l
	Sewage treatment plant	1 mg/l

according to Regulation (EC) No. 1907/2006



REPLASTeasy PLASTICS ADHESIVE TRANSPARENT - 50 ML (comp. B)

Version Revision Date: SDS Number: Date of last issue: 07.10.2014 3.0 16.03.2017 1428683-00001 Date of first issue: 11.06.2010

Soil 1 mg/kg

8.2 Exposure controls

Engineering measures

Processing may form hazardous compounds (see section 10).

Minimize workplace exposure concentrations.

Use with local exhaust ventilation.

Personal protective equipment

Eye protection : Wear the following personal protective equipment:

Safety goggles

Hand protection

Material : PVC
Break through time : > 60 min
Glove thickness : 0,5 mm

Material : Nitrile rubber
Break through time : > 60 min
Glove thickness : 0,5 mm

Material : Neoprene
Break through time : > 60 min
Glove thickness : 0,5 mm

Remarks : Choose gloves to protect hands against chemicals depending

on the concentration and quantity of the hazardous substance and specific to place of work. For special applications, we recommend clarifying the resistance to chemicals of the aforementioned protective gloves with the glove manufacturer. Wash hands before breaks and at the end of workday.

Skin and body protection : Select appropriate protective clothing based on chemical

resistance data and an assessment of the local exposure

potential.

Skin contact must be avoided by using impervious protective

clothing (gloves, aprons, boots, etc).

Respiratory protection : Use respiratory protection unless adequate local exhaust

ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines.

Filter type : Combined particulates and organic vapour type (A-P)

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance : liquid

Colour : light yellow

according to Regulation (EC) No. 1907/2006



REPLASTeasy PLASTICS ADHESIVE TRANSPARENT - 50 ML (comp. B)

Version Revision Date: SDS Number: Date of last issue: 07.10.2014 3.0 16.03.2017 1428683-00001 Date of first issue: 11.06.2010

Odour : characteristic

Odour Threshold : No data available

pH : No data available

Melting point/freezing point : No data available

Initial boiling point and boiling

range

> 35 °C

Flash point : $100 - < 200 \,^{\circ}\text{C}$

Other information: Ignitable (see flash point)

Evaporation rate : No data available

Flammability (solid, gas) : Not applicable

Upper explosion limit / Upper

flammability limit

No data available

Lower explosion limit / Lower

flammability limit

No data available

Vapour pressure : No data available

Relative vapour density : No data available

Relative density : 1,15

Density : No data available

Solubility(ies)

Water solubility : Reacts with water.

Partition coefficient: n-

octanol/water

Not applicable

Auto-ignition temperature : No data available

Decomposition temperature : No data available

Viscosity

Viscosity, kinematic : No data available

Explosive properties : Not explosive

Oxidizing properties : The substance or mixture is not classified as oxidizing.

9.2 Other information

Particle size : Not applicable

according to Regulation (EC) No. 1907/2006



REPLASTeasy PLASTICS ADHESIVE TRANSPARENT - 50 ML (comp. B)

Version Revision Date: SDS Number: Date of last issue: 07.10.2014 3.0 16.03.2017 1428683-00001 Date of first issue: 11.06.2010

SECTION 10: Stability and reactivity

10.1 Reactivity

Not classified as a reactivity hazard.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

Hazardous reactions : Can react with strong oxidizing agents.

Hazardous decomposition products will be formed upon con-

tact with water or humid air.

10.4 Conditions to avoid

Conditions to avoid : Exposure to moisture

10.5 Incompatible materials

Materials to avoid : Oxidizing agents

Water

10.6 Hazardous decomposition products

No hazardous decomposition products are known.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Information on likely routes of:

exposure

Inhalation Skin contact

Ingestion Eye contact

Acute toxicity

Harmful if inhaled.

Product:

Acute inhalation toxicity : Acute toxicity estimate: 1,5 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist Method: Expert judgement

Components:

4,4'-Methylenediphenyl diisocyanate, oligomers:

Acute oral toxicity : LD50 (Rat): > 5.000 mg/kg

Method: OECD Test Guideline 425

Remarks: Based on data from similar materials

according to Regulation (EC) No. 1907/2006



REPLASTeasy PLASTICS ADHESIVE TRANSPARENT - 50 ML (comp. B)

Version Revision Date: SDS Number: Date of last issue: 07.10.2014 3.0 16.03.2017 1428683-00001 Date of first issue: 11.06.2010

Acute inhalation toxicity : Acute toxicity estimate: 1,5 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist Method: Expert judgement

Remarks: Based on data from similar materials

Acute dermal toxicity : LD50 (Rabbit): > 9.400 mg/kg

Remarks: Based on data from similar materials

Methylenediphenyl diisocyanate, oligomeric reaction products with butanediol, tripropylene glycol and propanediol:

Acute oral toxicity : LD50 (Rat): > 5.000 mg/kg

Method: OECD Test Guideline 425

Acute inhalation toxicity : LC50 (Rat): 0,49 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist

Remarks: Based on data from similar materials

Acute dermal toxicity : LD50 (Rabbit): > 5.000 mg/kg

Remarks: Based on data from similar materials

4,4'-Diphenylmethane diisocyanate:

Acute oral toxicity : LD50 (Rat): > 2.000 mg/kg

Assessment: The substance or mixture has no acute oral tox-

icity

Remarks: Based on data from similar materials

Acute inhalation toxicity : LC50 (Rat): > 2,24 mg/l

Exposure time: 1 h

Test atmosphere: dust/mist

Method: OECD Test Guideline 403

Acute dermal toxicity : LD50 (Rabbit): > 5.000 mg/kg

Remarks: Based on data from similar materials

Skin corrosion/irritation

Causes skin irritation.

Components:

4,4'-Methylenediphenyl diisocyanate, oligomers:

Species: Rabbit

Method: OECD Test Guideline 404

Result: Skin irritation

Remarks: Based on data from similar materials

Methylenediphenyl diisocyanate, oligomeric reaction products with butanediol, tripropylene glycol and propanediol :

according to Regulation (EC) No. 1907/2006



REPLASTeasy PLASTICS ADHESIVE TRANSPARENT - 50 ML (comp. B)

Version Revision Date: SDS Number: Date of last issue: 07.10.2014 3.0 16.03.2017 1428683-00001 Date of first issue: 11.06.2010

Result: Skin irritation

4,4'-Diphenylmethane diisocyanate:

Species: Rabbit

Method: OECD Test Guideline 404

Result: Skin irritation

Remarks: Based on data from similar materials

Serious eye damage/eye irritation

Causes serious eye irritation.

Components:

4,4'-Methylenediphenyl diisocyanate, oligomers:

Result: Irritation to eyes, reversing within 7 days Remarks: Based on data from similar materials

Methylenediphenyl diisocyanate, oligomeric reaction products with butanediol, tripropylene glycol and propanediol:

Result: Irritation to eyes, reversing within 7 days

4,4'-Diphenylmethane diisocyanate:

Result: Irritation to eyes, reversing within 7 days

Remarks: Based on harmonised classification in EU regulation 1272/2008, Annex VI

Respiratory or skin sensitisation

Skin sensitisation

May cause an allergic skin reaction.

Respiratory sensitisation

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

Components:

4,4'-Methylenediphenyl diisocyanate, oligomers:

Test Type: Maximisation Test Exposure routes: Skin contact

Species: Guinea pig

Method: OECD Test Guideline 406

Result: positive

Remarks: Based on data from similar materials

Assessment: Probability or evidence of skin sensitisation in humans

Exposure routes: Inhalation

Species: Rat Result: positive

Remarks: Based on data from similar materials

according to Regulation (EC) No. 1907/2006



REPLASTeasy PLASTICS ADHESIVE TRANSPARENT - 50 ML (comp. B)

Version Revision Date: SDS Number: Date of last issue: 07.10.2014 3.0 16.03.2017 1428683-00001 Date of first issue: 11.06.2010

Assessment: Probability of respiratory sensitisation in humans based on animal testing

Methylenediphenyl diisocyanate, oligomeric reaction products with butanediol, tripropylene glycol and propanediol:

Test Type: Local lymph node assay (LLNA)

Exposure routes: Skin contact

Species: Mouse Result: positive

Remarks: Based on data from similar materials

Assessment: Probability or evidence of skin sensitisation in humans

Assessment: May cause sensitisation by inhalation.

4,4'-Diphenylmethane diisocyanate:

Test Type: Buehler Test Exposure routes: Skin contact

Species: Guinea pig Result: positive

Assessment: Probability or evidence of skin sensitisation in humans

Exposure routes: Inhalation

Species: Rat Result: positive

Remarks: Based on data from similar materials

Assessment: Probability of respiratory sensitisation in humans based on animal testing

Germ cell mutagenicity

Not classified based on available information.

Components:

4,4'-Methylenediphenyl diisocyanate, oligomers:

Genotoxicity in vitro Test Type: Bacterial reverse mutation assay (AMES)

Method: OECD Test Guideline 471

Result: negative

Remarks: Based on data from similar materials

Genotoxicity in vivo Test Type: Mammalian erythrocyte micronucleus test (in vivo

cytogenetic assay)

Species: Rat

Application Route: inhalation (dust/mist/fume)

Method: OECD Test Guideline 474

Result: negative

Remarks: Based on data from similar materials

Methylenediphenyl diisocyanate, oligomeric reaction products with butanediol, tripropylene glycol and propanediol:

according to Regulation (EC) No. 1907/2006



REPLASTeasy PLASTICS ADHESIVE TRANSPARENT - 50 ML (comp. B)

Version Revision Date: SDS Number: Date of last issue: 07.10.2014 3.0 16.03.2017 1428683-00001 Date of first issue: 11.06.2010

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)

Method: OECD Test Guideline 471

Result: negative

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo

cytogenetic assay) Species: Mouse

Application Route: inhalation (dust/mist/fume)

Method: OECD Test Guideline 474

Result: negative

Remarks: Based on data from similar materials

4,4'-Diphenylmethane diisocyanate:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)

Result: negative

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo

cytogenetic assay) Species: Rat

Application Route: inhalation (dust/mist/fume)

Method: OECD Test Guideline 474

Result: negative

Carcinogenicity

Suspected of causing cancer.

Components:

4,4'-Methylenediphenyl diisocyanate, oligomers:

Species: Rat

Application Route: inhalation (dust/mist/fume)

Exposure time: 2 Years

Result: positive

Remarks: Based on data from similar materials

Carcinogenicity - Assess-

: Limited evidence of carcinogenicity in animal studies

ment

Methylenediphenyl diisocyanate, oligomeric reaction products with butanediol, tripropylene glycol and propanediol :

Carcinogenicity - Assess-

Limited evidence of carcinogenicity in animal studies

ment

4,4'-Diphenylmethane diisocyanate:

Species: Rat

Application Route: inhalation (dust/mist/fume)

Exposure time: 2 Years

Result: positive

Remarks: Based on data from similar materials

according to Regulation (EC) No. 1907/2006



REPLASTeasy PLASTICS ADHESIVE TRANSPARENT - 50 ML (comp. B)

Version Revision Date: SDS Number: Date of last issue: 07.10.2014 3.0 16.03.2017 1428683-00001 Date of first issue: 11.06.2010

Carcinogenicity - Assess-

ment

Limited evidence of carcinogenicity in animal studies

Reproductive toxicity

Not classified based on available information.

Components:

4,4'-Methylenediphenyl diisocyanate, oligomers:

Effects on foetal develop-

ment

Test Type: Embryo-foetal development

Species: Rat

Application Route: inhalation (dust/mist/fume)

Method: OECD Test Guideline 414

Result: negative

Remarks: Based on data from similar materials

Methylenediphenyl diisocyanate, oligomeric reaction products with butanediol, tripropylene glycol and propanediol:

Effects on foetal develop-

ment

Test Type: Embryo-foetal development

Species: Rat

Application Route: inhalation (dust/mist/fume)

Method: OECD Test Guideline 414

Result: negative

Remarks: Based on data from similar materials

4,4'-Diphenylmethane diisocyanate:

Effects on foetal develop-

ment

: Test Type: Embryo-foetal development

Species: Rat

Application Route: inhalation (dust/mist/fume)

Result: negative

Remarks: Based on data from similar materials

STOT - single exposure

May cause respiratory irritation.

Components:

4,4'-Methylenediphenyl diisocyanate, oligomers:

Assessment: May cause respiratory irritation. Remarks: Based on data from similar materials

Methylenediphenyl diisocyanate, oligomeric reaction products with butanediol, tripropylene glycol and propanediol :

Assessment: May cause respiratory irritation.

4,4'-Diphenylmethane diisocyanate:

Assessment: May cause respiratory irritation.

according to Regulation (EC) No. 1907/2006



REPLASTeasy PLASTICS ADHESIVE TRANSPARENT - 50 ML (comp. B)

Version Revision Date: SDS Number: Date of last issue: 07.10.2014 3.0 16.03.2017 1428683-00001 Date of first issue: 11.06.2010

STOT - repeated exposure

May cause damage to organs through prolonged or repeated exposure.

Components:

4,4'-Methylenediphenyl diisocyanate, oligomers:

Exposure routes: inhalation (dust/mist/fume)

Target Organs: Respiratory system

Assessment: Shown to produce significant health effects in animals at concentrations of >0.02 to

0.2 mg/l/6h/d.

Methylenediphenyl diisocyanate, oligomeric reaction products with butanediol, tripropylene glycol and propanediol:

Exposure routes: inhalation (dust/mist/fume)

Target Organs: Respiratory system

Assessment: Shown to produce significant health effects in animals at concentrations of >0.02 to

0.2 mg/l/6h/d.

4,4'-Diphenylmethane diisocyanate:

Exposure routes: inhalation (dust/mist/fume)

Target Organs: Respiratory system

Assessment: Shown to produce significant health effects in animals at concentrations of >0.02 to

0.2 mg/l/6h/d.

Repeated dose toxicity

Components:

4,4'-Methylenediphenyl diisocyanate, oligomers:

Species: Rat

NOAEL: 0,2 mg/m3 LOAEL: 1 mg/m3

Application Route: inhalation (dust/mist/fume)

Exposure time: 2 yr

Remarks: Based on data from similar materials

Methylenediphenyl diisocyanate, oligomeric reaction products with butanediol, tripropylene glycol and propanediol :

Species: Rat NOAEL: 1 mg/m3 LOAEL: 5 mg/m3

Application Route: inhalation (dust/mist/fume)

Exposure time: 13 Weeks

Remarks: Based on data from similar materials

4,4'-Diphenylmethane diisocyanate:

Species: Rat NOAEL: 0,2 mg/m3 LOAEL: 1 mg/m3

according to Regulation (EC) No. 1907/2006



REPLASTeasy PLASTICS ADHESIVE TRANSPARENT - 50 ML (comp. B)

Version Revision Date: SDS Number: Date of last issue: 07.10.2014 3.0 16.03.2017 1428683-00001 Date of first issue: 11.06.2010

Application Route: inhalation (dust/mist/fume)

Exposure time: 2 yr

Remarks: Based on data from similar materials

Aspiration toxicity

Not classified based on available information.

SECTION 12: Ecological information

12.1 Toxicity

Components:

4,4'-Methylenediphenyl diisocyanate, oligomers:

Toxicity to fish : LC50 (Danio rerio (zebra fish)): > 1.000 mg/l

Exposure time: 96 h

Method: OECD Test Guideline 203

Remarks: Based on data from similar materials

Toxicity to daphnia and other :

aquatic invertebrates

EC50 (Daphnia magna (Water flea)): > 1.000 mg/l

Exposure time: 24 h

Method: OECD Test Guideline 202

Remarks: Based on data from similar materials

Toxicity to algae : ErC50 (Desmodesmus subspicatus (green algae)): > 1.640

mg/l

Exposure time: 72 h

Method: OECD Test Guideline 201

Remarks: Based on data from similar materials

NOEC (Desmodesmus subspicatus (green algae)): 1.640 mg/l

Exposure time: 72 h

Method: OECD Test Guideline 201

Remarks: Based on data from similar materials

Toxicity to microorganisms : EC50 : > 100 mg/l

Exposure time: 3 h

Method: OECD Test Guideline 209

Remarks: Based on data from similar materials

Toxicity to daphnia and other : aquatic invertebrates (Chron-

ic toxicity)

NOEC: > 10 mg/l Exposure time: 21 d

Species: Daphnia magna (Water flea) Method: OECD Test Guideline 211

Remarks: Based on data from similar materials

Methylenediphenyl diisocyanate, oligomeric reaction products with butanediol, tripropylene glycol and propanediol :

Toxicity to fish : LL50 : > 100 mg/l

Exposure time: 96 h

Remarks: Based on data from similar materials

according to Regulation (EC) No. 1907/2006



REPLASTeasy PLASTICS ADHESIVE TRANSPARENT - 50 ML (comp. B)

Version Revision Date: SDS Number: Date of last issue: 07.10.2014 3.0 16.03.2017 1428683-00001 Date of first issue: 11.06.2010

Toxicity to daphnia and other :

aquatic invertebrates

EC50 (Daphnia magna (Water flea)): > 100 mg/l

Exposure time: 24 h

Remarks: Based on data from similar materials

Toxicity to algae : ErC50 (Desmodesmus subspicatus (green algae)): > 100 mg/l

Exposure time: 72 h

Method: OECD Test Guideline 201

Remarks: Based on data from similar materials

NOELR (Desmodesmus subspicatus (green algae)): > 100

ma/l

Exposure time: 72 h

Method: OECD Test Guideline 201

Remarks: Based on data from similar materials

Toxicity to microorganisms : EC50 : > 100 mg/l

Exposure time: 3 h

Remarks: Based on data from similar materials

Toxicity to daphnia and other :

aquatic invertebrates (Chron-

ic toxicity)

NOEC: 10 mg/l Exposure time: 21 d

Species: Daphnia magna (Water flea)

Method: OECD Test Guideline 211

Remarks: Based on data from similar materials

4,4'-Diphenylmethane diisocyanate:

Toxicity to fish : LC50 (Oryzias latipes (Orange-red killifish)): > 3.000 mg/l

Exposure time: 96 h

Remarks: Based on data from similar materials

Toxicity to daphnia and other :

aquatic invertebrates

EC50 (Daphnia magna (Water flea)): 129,7 mg/l

Exposure time: 24 h

Method: OECD Test Guideline 202

Toxicity to algae : EC50 (Desmodesmus subspicatus (green algae)): > 1.640

mg/l

Exposure time: 72 h

Method: OECD Test Guideline 201

Remarks: Based on data from similar materials

NOEC (Desmodesmus subspicatus (green algae)): 1.640 mg/l

Exposure time: 72 h

Method: OECD Test Guideline 201

Remarks: Based on data from similar materials

Toxicity to microorganisms : EC50 : > 100 mg/l

Exposure time: 3 h

Method: OECD Test Guideline 209

Remarks: Based on data from similar materials

Toxicity to daphnia and other : NOEC: 10 mg/l

according to Regulation (EC) No. 1907/2006



REPLASTeasy PLASTICS ADHESIVE TRANSPARENT - 50 ML (comp. B)

Version Revision Date: SDS Number: Date of last issue: 07.10.2014 3.0 16.03.2017 1428683-00001 Date of first issue: 11.06.2010

aquatic invertebrates (Chron-

Exposure time: 21 d

ic toxicity) Species: Daphnia magna (Water flea) Method: OECD Test Guideline 211

Remarks: Based on data from similar materials

12.2 Persistence and degradability

Components:

4,4'-Methylenediphenyl diisocyanate, oligomers:

Biodegradability Result: Not readily biodegradable.

> Biodegradation: 0 % Exposure time: 28 d

Method: OECD Test Guideline 302

Remarks: Based on data from similar materials

Methylenediphenyl diisocyanate, oligomeric reaction products with butanediol, tripropylene glycol and propanediol:

Biodegradability Result: Not readily biodegradable.

Remarks: Based on data from similar materials

4,4'-Diphenylmethane diisocyanate:

Biodegradability Result: Not readily biodegradable.

Biodegradation: 0 % Exposure time: 28 d

Method: OECD Test Guideline 302

Remarks: Based on data from similar materials

12.3 Bioaccumulative potential

Components:

4,4'-Methylenediphenyl diisocyanate, oligomers:

Bioaccumulation Species: Cyprinus carpio (Carp)

Bioconcentration factor (BCF): 200

Remarks: Based on data from similar materials

Methylenediphenyl diisocyanate, oligomeric reaction products with butanediol, tripropylene glycol and propanediol:

Partition coefficient: n-

octanol/water

log Pow: 4,34

4,4'-Diphenylmethane diisocyanate:

Bioaccumulation Species: Cyprinus carpio (Carp)

Bioconcentration factor (BCF): 200

Partition coefficient: n-

octanol/water

log Pow: 4,51

according to Regulation (EC) No. 1907/2006



REPLASTeasy PLASTICS ADHESIVE TRANSPARENT - 50 ML (comp. B)

Version Revision Date: SDS Number: Date of last issue: 07.10.2014 3.0 16.03.2017 1428683-00001 Date of first issue: 11.06.2010

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

Not relevant

12.6 Other adverse effects

No data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product : Dispose of in accordance with local regulations.

According to the European Waste Catalogue, Waste Codes

are not product specific, but application specific.

Waste codes should be assigned by the user, preferably in

discussion with the waste disposal authorities.

Contaminated packaging : Empty containers should be taken to an approved waste han-

dling site for recycling or disposal.

If not otherwise specified: Dispose of as unused product.

Waste Code : The following Waste Codes are only suggestions:

used product

080409, waste adhesives and sealants containing organic

solvents or other dangerous substances

unused product

080409, waste adhesives and sealants containing organic

solvents or other dangerous substances

uncleaned packagings

150110, packaging containing residues of or contaminated by

dangerous substances

SECTION 14: Transport information

14.1 UN number

ADN : Not regulated as a dangerous good
ADR : Not regulated as a dangerous good
RID : Not regulated as a dangerous good
IMDG : Not regulated as a dangerous good

IATA : UN 3334

14.2 UN proper shipping name

ADN : Not regulated as a dangerous good

according to Regulation (EC) No. 1907/2006



REPLASTeasy PLASTICS ADHESIVE TRANSPARENT - 50 ML (comp. B)

Version Revision Date: SDS Number: Date of last issue: 07.10.2014 3.0 16.03.2017 1428683-00001 Date of first issue: 11.06.2010

ADR : Not regulated as a dangerous good
RID : Not regulated as a dangerous good
IMDG : Not regulated as a dangerous good

IATA : Aviation regulated liquid, n.o.s.

(4,4'-Methylenediphenyl diisocyanate, oligomers, Methylenediphenyl diisocyanate, oligomeric reaction products with bu-

tanediol, tripropylene glycol and propanediol)

14.3 Transport hazard class(es)

ADN : Not regulated as a dangerous good
ADR : Not regulated as a dangerous good
RID : Not regulated as a dangerous good
IMDG : Not regulated as a dangerous good

IATA : 9

14.4 Packing group

ADN : Not regulated as a dangerous good
ADR : Not regulated as a dangerous good
RID : Not regulated as a dangerous good
IMDG : Not regulated as a dangerous good

IATA (Cargo)

Packing instruction (cargo : 964

aircraft)

Packing instruction (LQ) : Y964
Packing group : III

Labels : Miscellaneous

IATA (Passenger)

Packing instruction (passen: 964

ger aircraft)

Packing instruction (LQ) : Y964
Packing group : III

Labels : Miscellaneous

14.5 Environmental hazards

ADN : Not regulated as a dangerous good
ADR : Not regulated as a dangerous good
RID : Not regulated as a dangerous good
IMDG : Not regulated as a dangerous good

14.6 Special precautions for user

Not applicable

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

Remarks : Not applicable for product as supplied.

according to Regulation (EC) No. 1907/2006



: 4,4'-Diphenylmethane diisocyanate

(56)

Not applicable

Not applicable

REPLASTeasy PLASTICS ADHESIVE TRANSPARENT - 50 ML (comp. B)

Version Revision Date: SDS Number: Date of last issue: 07.10.2014 3.0 16.03.2017 1428683-00001 Date of first issue: 11.06.2010

SECTION 15: Regulatory information

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

REACH - Restrictions on the manufacture, placing on

the market and use of certain dangerous substances,

preparations and articles (Annex XVII)

REACH - Candidate List of Substances of Very High Not applicable

Concern for Authorisation (Article 59).

Regulation (EC) No 1005/2009 on substances that de-

plete the ozone layer

Not applicable

Regulation (EC) No 850/2004 on persistent organic pol-

lutants

Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import

of dangerous chemicals

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of

major-accident hazards involving dangerous substances.

Not applicable

Water contaminating class

(Germany)

WGK 1 slightly water endangering

Classification according VwVwS, Annex 4.

Directive 2010/75/EU of 24 November 2010 on industrial Volatile organic compounds

emissions (integrated pollution prevention and control)

Volatile organic compounds (VOC) content: 0 %

Other regulations:

Take note of Directive 92/85/EEC regarding maternity protection or stricter national regulations, where applicable.

Take note of Directive 94/33/EC on the protection of young people at work or stricter national regulations, where applicable.

TRGS 430 (German regulatory requirements)

15.2 Chemical safety assessment

A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

Full text of H-Statements

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

according to Regulation (EC) No. 1907/2006



REPLASTeasy PLASTICS ADHESIVE TRANSPARENT - 50 ML (comp. B)

Version 3.0	Revision Date: 16.03.2017	SDS Number: 1428683-00001	Date of last issue: 07.10.2014 Date of first issue: 11.06.2010	
H319 H332		: Causes serious : Harmful if inhal		
H334		 May cause aller ties if inhaled. 	May cause allergy or asthma symptoms or breathing difficulties if inhaled.	
H335		: May cause resp	: May cause respiratory irritation.	
H351		: Suspected of ca	Suspected of causing cancer.	
H373		•	: May cause damage to organs through prolonged or repeated exposure if inhaled.	

Full text of other abbreviations

Acute Tox. : Acute toxicity
Carc. : Carcinogenicity
Eye Irrit. : Eye irritation

Resp. Sens. : Respiratory sensitisation

Skin Irrit. : Skin irritation
Skin Sens. : Skin sensitisation

STOT RE : Specific target organ toxicity - repeated exposure STOT SE : Specific target organ toxicity - single exposure

DE TRGS 900 : Germany. TRGS 900 - Occupational exposure limit values.

TRGS 430 : Germany. TRGS 430 - Isocyanates

DE TRGS 900 / AGW : Time Weighted Average TRGS 430 / AGW : Occupational Exposure Limit

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways: ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road: AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx -Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx -Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified: NO(A)EC - No Observed (Adverse) Effect Concentration: NO(A)EL - No Observed (Adverse) Effect Level: NOELR - No Observable Effect Loading Rate: NZIoC - New Zealand Inventory of Chemicals: OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TRGS - Technical Rule

according to Regulation (EC) No. 1907/2006



REPLASTeasy PLASTICS ADHESIVE TRANSPARENT - 50 ML (comp. B)

Version **Revision Date:** SDS Number: Date of last issue: 07.10.2014 3.0 16.03.2017 1428683-00001 Date of first issue: 11.06.2010

for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Further information

compile the Safety Data Sheet

Sources of key data used to : Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agen-

Calculation method

cy, http://echa.europa.eu/

Classification of the	mixture:	Classification procedure:
Acute Tox. 4	H332	Expert judgement and weight of evidence determination.
Skin Irrit. 2	H315	Calculation method
Eye Irrit. 2	H319	Calculation method
Resp. Sens. 1	H334	Calculation method
Skin Sens. 1	H317	Calculation method
Carc. 2	H351	Calculation method
STOT SE 3	H335	Calculation method

Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

H373

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user's end product, if applicable.

DE / EN

STOT RE 2