VOLKSWAGEN

According to REACH Regulation (EC) No 1907/2006, as amended by UK REACH Regulations SI 2019/758

GROUP

1-component window adhesive

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

1.1 Product identifier

Trade name : 1-component window adhesive

Product code : D 169300M2

Unique Formula Identifier

(UFI)

: JRJ1-9539-J3FY-8D78, XEJE-QYEJ-E0G5-KE2M

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

Use of the Sub- : Adhesives and/or sealants

stance/Mixture

1.3 Details of the supplier of the safety data sheet

Company : Volkswagen Group UK

YEOMANS DRIVE, BLAKELANDS

United Kingdom, MK14 5AN MILTON KEYNES

Telephone : +49 (0) 5361/9-49179

E-mail address of person

responsible for the SDS

: MSDS@volkswagen.de

1.4 Emergency telephone number

24H SERVICE: +49/5361/9-23222

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008) as amended by GB-CLP Regulation, UK SI 2019/720, and UK SI 2020/1567)

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.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008) as amended by GB-CLP Regulation, UK SI 2019/720, and UK SI 2020/1567)

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Hazard pictograms :

Signal word : Danger

Hazard statements : H317 May cause an allergic skin reaction.

H334 May cause allergy or asthma symptoms or breathing

difficulties if inhaled.

Precautionary statements : Prevention:

P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.

P280 Wear protective gloves.P284 Wear respiratory protection.

Response:

P304 + P340 IF INHALED: Remove person to fresh air and

keep comfortable for breathing.

P333 + P313 If skin irritation or rash occurs: Get medical

advice/ attention.

P342 + P311 If experiencing respiratory symptoms: Call a

POISON CENTER/ doctor.

Hazardous components which must be listed on the label:

Hexamethylene diisocyanate, oligomers 4,4'-Diphenylmethane diisocyanate

Additional Labelling

"As from 24 August 2023 adequate training is required before industrial or professional use."

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher

Excessive exposure may aggravate preexisting asthma and other respiratory disorders (e.g. emphysema, bronchitis, reactive airways dysfunction syndrome).

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Components

Chemical name	CAS-No.	Classification	Concentration
	EC-No.		(% w/w)
	Index-No.		
	Registration number		
Hexamethylene diisocyanate, oligo-	28182-81-2	Acute Tox. 4; H332	>= 1 - < 10
mers		Skin Sens. 1; H317	

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	01-2119485796-17	STOT SE 3; H335	
4,4'-Diphenylmethane diisocyanate	101-68-8 202-966-0 615-005-00-9 01-2119457014-47	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 (Respiratory Tract)	>= 0.1 - < 1
Substances with a workplace exposur	e limit :		
Carbon black	1333-86-4 215-609-9		>= 10 - < 20
Di-isononyl phthalate	28553-12-0 249-079-5		>= 1 - < 10
Calcium carbonate	471-34-1 207-439-9		>= 1 - < 10

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 (see section 8).

If inhaled : If inhaled, remove to fresh air.

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

If breathing is difficult, give oxyger Get medical attention.

In case of skin contact : In case of contact, immediately flush skin with soap and plenty

of water.

Remove contaminated clothing and shoes.

Get medical attention. Wash clothing before reuse.

Thoroughly clean shoes before reuse.

In case of eye contact : Flush eyes with water as a precaution.

Get medical attention if irritation develops and persists.

If swallowed, DO NOT induce vomiting.

Get medical attention.

Rinse mouth thoroughly with water.

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4.2 Most important symptoms and effects, both acute and delayed

Risks : May cause an allergic skin reaction.

May cause allergy or asthma symptoms or breathing difficul-

ties if inhaled.

Respiratory symptoms, including pulmonary edema, may be

delayed.

Excessive exposure may aggravate preexisting asthma and other respiratory disorders (e.g. emphysema, bronchitis, reac-

tive airways dysfunction syndrome).

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 : Alcohol-resistant foam

Carbon dioxide (CO2)

Dry chemical

Water spray in large fire situations

Unsuitable extinguishing

media

High volume water jet

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.

If the temperature rises there is danger of the vessels bursting

due to the high vapor pressure.

Hazardous combustion prod: :

ucts

Carbon oxides

Nitrogen oxides (NOx)

Metal oxides

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.

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SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Use personal protective equipment.

Follow safe handling advice (see section 7) and personal pro-

tective equipment recommendations (see section 8).

6.2 Environmental precautions

Environmental precautions : Avoid release to the environment.

Prevent further leakage or spillage if safe to do so. 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.

After approximately one hour, transfer to waste container and

do not seal, due to evolution of carbon dioxide.

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.

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 only with adequate ventilation.

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

Avoid breathing dust, fume, gas, mist, vapours or spray.

Do not swallow.

Avoid contact with eyes.

Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure as-

sessment

Keep container tightly closed.

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Keep away from water. Protect from moisture.

Already sensitised individuals should consult their physician regarding working with respiratory irritants or sensitisers. Take care to prevent spills, waste and minimize release to the

environment.

Hygiene measures : If exposure to chemical is likely during typical use, provide eye

flushing systems and safety showers close to the working place. When using do not eat, drink or smoke. Contaminated work clothing should not be allowed out of the workplace.

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. Protect from moisture. Store in accordance with the particular national regulations.

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

Strong oxidizing agents

Recommended storage tem- :

perature

5 - 25 °C

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
Carbon black	1333-86-4	TWA	3.5 mg/m3	GB EH40
		STEL	7 mg/m3	GB EH40
Calcium carbonate	471-34-1	TWA (inhalable dust)	10 mg/m3	GB EH40
		TWA (Respirable dust)	4 mg/m3	GB EH40
Di-isononyl phthalate	28553-12-0	TWA	5 mg/m3	GB EH40
Hexamethylene diisocyanate, oligomers	28182-81-2	TWA	0.02 mg/m3 (NCO)	GB EH40
	Further information: Capable of causing occupational asthma.			
		STEL	0.07 mg/m3 (NCO)	GB EH40
	Further information: Capable of causing occupational asthma.			
4,4'-	101-68-8	TWA	0.02 mg/m3	GB EH40

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Diphenylmethane diisocyanate			(NCO)	
	Further information: Capable of causing occupational asthma.			
		STEL	0.07 mg/m3 (NCO)	GB EH40
	Further information: Capable of causing occupational asthma.			

These substance(s) are inextricably bound in the product and therefore do not contribute to a dust inhalation hazard.

Calcium carbonate

Biological occupational exposure limits

Substance name	CAS-No.	Control parameters	Sampling time	Basis
Hexamethylene diisocya- nate, oligomers	28182-81-2	isocyanate-derived diamine (Isocya- nates): 1 µmol/mol creatinine (Urine)	At the end of the period of exposure	GB EH40 BAT
4,4'-Diphenylmethane diisocyanate	101-68-8	isocyanate-derived diamine (Isocya- nates): 1 µmol/mol creatinine (Urine)	At the end of the period of exposure	GB EH40 BAT

Derived No Effect Level (DNEL):

Substance name	End Use	Exposure routes	Potential health effects	Value
Di-isononyl phthalate	Workers	Inhalation	Long-term systemic effects	51.72 mg/m3
	Workers	Skin contact	Long-term systemic effects	366 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	15.3 mg/m3
	Consumers	Skin contact	Long-term systemic effects	220 mg/kg bw/day
	Consumers	Ingestion	Long-term systemic effects	4.4 mg/kg bw/day
Di(2-ethylhexyl) adipate	Workers	Inhalation	Long-term systemic effects	17.8 mg/m3
	Workers	Skin contact	Long-term systemic effects	25.5 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	4.4 mg/m3
	Consumers	Skin contact	Long-term systemic effects	13 mg/kg bw/day
	Consumers	Ingestion	Long-term systemic effects	1.3 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

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	Consumers	Inhalation	Acute local effects	0.05 mg/m3
Carbon black	Workers	Inhalation	Long-term local ef- fects	0.5 mg/m3
Calcium carbonate	Workers	Inhalation	Long-term systemic effects	6.36 mg/m3
	Consumers	Ingestion	Acute systemic effects	6.1 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	1.06 mg/m3
	Consumers	Ingestion	Long-term systemic effects	6.1 mg/kg bw/day
Hexamethylene diiso- cyanate, oligomers	Workers	Inhalation	Long-term local ef- fects	0.5 mg/m3
	Workers	Inhalation	Acute local effects	1 mg/m3

Predicted No Effect Concentration (PNEC):

Substance name	Environmental Compartment	Value
Di-isononyl phthalate	Soil	30 mg/kg
Di(2-ethylhexyl) adipate	Fresh water	0.0032 mg/l
	Marine water	0.0032 mg/l
	Intermittent use/release	0.0032 mg/l
	Sewage treatment plant	35 mg/l
	Fresh water sediment	15.6 mg/kg
	Marine sediment	17 mg/kg
	Soil	0.865 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
	Soil	1 mg/kg
Carbon black	Fresh water	1 mg/l
	Freshwater - intermittent	10 mg/l
	Marine water	0.1 mg/l
	Marine water - intermittent	1 mg/l
Calcium carbonate	Sewage treatment plant	100 mg/l
Hexamethylene diisocyanate, oligomers	Fresh water	0.127 mg/l
	Marine water	0.0127 mg/l
	Intermittent use/release	1.27 mg/l
	Sewage treatment plant	38.3 mg/l
	Fresh water sediment	266700 mg/kg
	Marine sediment	26670 mg/kg
	Soil	53182 mg/kg

8.2 Exposure controls

Engineering measures

Processing may form hazardous compounds (see section 10). Ensure adequate ventilation, especially in confined areas. Minimize workplace exposure concentrations.

Personal protective equipment

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Eye protection : Wear the following personal protective equipment:

Safety glasses

Equipment should conform to BS EN 166

Hand protection

Material : Nitrile rubber
Break through time : > 480 min
Glove thickness : >= 0.4 mm

Directive : Equipment should conform to BS EN 374

Protective index : Class 6

Material : Nitrile rubber
Break through time : > 30 min
Glove thickness : >= 0.4 mm

Directive : Equipment should conform to BS EN 374

Protective index : Class 2

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 re-

sistance data and an assessment of the local exposure poten-

tial.

Skin contact must be avoided by using impervious protective

clothing (gloves, aprons, boots, etc).

Respiratory protection : If adequate local exhaust ventilation is not available or expo-

sure assessment demonstrates exposures outside the rec-

ommended guidelines, use respiratory protection. Equipment should conform to BS EN 14387

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 : paste

Colour : black

Odour : characteristic

Odour Threshold : No data available

pH : 7.6

Concentration: 100 %

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No data available

Melting point/freezing point : No data available

Initial boiling point and boiling

range

No data available

Flash point : Not applicable

Evaporation rate : Not applicable

Flammability (solid, gas) : Not classified as a flammability hazard

Upper explosion limit / Upper

flammability limit

No data available

Lower explosion limit / Lower

flammability limit

No data available

Vapour pressure : Not applicable

Relative vapour density : Not applicable

Relative density : No data available

Density : 1.3 g/cm³ (20 °C)

Solubility(ies)

Water solubility : No data available

Partition coefficient: n-

octanol/water

Not applicable

Auto-ignition temperature : No data available

Decomposition temperature : No data available

Viscosity

Viscosity, kinematic : Not applicable

Explosive properties : Not explosive

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

9.2 Other information

Particle size : No data available

SECTION 10: Stability and reactivity

10.1 Reactivity

Not classified as a reactivity hazard.

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10.2 Chemical stability

Stable if used as directed. Follow precautionary advice and avoid incompatible materials and conditions.

Polymerises at high temperatures with evolution of carbon dioxide.

10.3 Possibility of hazardous reactions

Hazardous reactions : Isocyanates react with many materials and the rate of reaction

increases with temperature as well as increased contact; these reactions can become violent. Contact is increased by stirring or if the other material mixes with the isocyanate. Exothermic reaction with acids, amines and alcohols Reacts with water to form carbon dioxide and heat

Isocyanates are not soluble in water and sink to the bottom, but react slowly at the interface. The reaction forms carbon

dioxide gas and a layer of solid polyurea.

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

Acids
Bases
Water
Alcohols
Amines
Ammonia
Aluminium
Zinc
Brass
Tin

Copper Galvanised metals

Humid air

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 : Skin contact exposure Ingestion

Eye contact

Acute toxicity

Not classified based on available information.

Product:

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Acute inhalation toxicity : Acute toxicity estimate: > 5 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist Method: Calculation method

Components:

Hexamethylene diisocyanate, oligomers:

Acute oral toxicity : LD50 (Rat, female): > 2,500 mg/kg

Method: OECD Test Guideline 423

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

icity

Acute inhalation toxicity : Acute toxicity estimate: 1.5 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist Method: Expert judgement

Acute dermal toxicity : LD50 (Rat): > 2,000 mg/kg

Method: OECD Test Guideline 402

Assessment: The substance or mixture has no acute dermal

toxicity

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

Carbon black:

Acute oral toxicity : LD50 (Rat): > 10,000 mg/kg

Di-isononyl phthalate:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 4.4 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist

Assessment: The substance or mixture has no acute inhala-

tion toxicity

Acute dermal toxicity : LD50 (Rabbit): > 3,160 mg/kg

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Assessment: The substance or mixture has no acute dermal

toxicity

Remarks: Based on data from similar materials

Calcium carbonate:

Acute oral toxicity : LD50 (Rat): > 2,000 mg/kg

Method: OECD Test Guideline 420

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

icity

Acute inhalation toxicity : LC50 (Rat): > 3 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist Method: OECD Test Guideline 403

Assessment: The substance or mixture has no acute inhala-

tion toxicity

Acute dermal toxicity : LD50 (Rat): > 2,000 mg/kg

Method: OECD Test Guideline 402

Assessment: The substance or mixture has no acute dermal

toxicity

Skin corrosion/irritation

Not classified based on available information.

Components:

Hexamethylene diisocyanate, oligomers:

Species : Rabbit

Method : OECD Test Guideline 404

Result : No skin irritation

4,4'-Diphenylmethane diisocyanate:

Species : Rabbit

Method : OECD Test Guideline 404

Result : Skin irritation

Remarks : Based on data from similar materials

Carbon black:

Species : Rabbit

Result : No skin irritation

Di-isononyl phthalate:

Species : Rabbit
Method : Draize Test
Result : No skin irritation

Calcium carbonate:

Species : Rabbit

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Method : OECD Test Guideline 404

Result : No skin irritation

Serious eye damage/eye irritation

Not classified based on available information.

Components:

Hexamethylene diisocyanate, oligomers:

Species : Rabbit

Method : OECD Test Guideline 405

Result : No eye irritation

4,4'-Diphenylmethane diisocyanate:

Result : Irritation to eyes, reversing within 7 days

Remarks : Based on harmonised classification in EU regulation

1272/2008, Annex VI

Carbon black:

Species : Rabbit

Method : OECD Test Guideline 405

Result : No eye irritation

Di-isononyl phthalate:

Species : Rabbit
Method : Draize Test
Result : No eye irritation

Calcium carbonate:

Species : Rabbit

Method : OECD Test Guideline 405

Result : No eye irritation

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:

Hexamethylene diisocyanate, oligomers:

Test Type : Local lymph node assay (LLNA)

Exposure routes : Skin contact Species : Mouse

Method : OECD Test Guideline 429

Result : positive

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Assessment : Probability or evidence of skin sensitisation in humans

Exposure routes : Inhalation
Species : Guinea pig
Result : negative

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

Carbon black:

Test Type : Buehler Test Exposure routes : Skin contact Species : Guinea pig

Method : OECD Test Guideline 406

Result : negative

Di-isononyl phthalate:

Test Type : Buehler Test Exposure routes : Skin contact Species : Guinea pig

Method : Directive 67/548/EEC, Annex V, B.6.

Result : negative

Remarks : Based on data from similar materials

Calcium carbonate:

Test Type : Local lymph node assay (LLNA)

Exposure routes : Skin contact Species : Mouse

Method : OECD Test Guideline 429

Result : negative

Germ cell mutagenicity

Not classified based on available information.

Components:

Hexamethylene diisocyanate, oligomers:

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Genotoxicity in vitro : Test Type: In vitro mammalian cell gene mutation test

Method: OECD Test Guideline 476

Result: negative

Test Type: Bacterial reverse mutation assay (AMES)

Method: OECD Test Guideline 471

Result: negative

Test Type: Chromosome aberration test in vitro

Method: OECD Test Guideline 473

Result: negative

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

cytogenetic assay) Species: Mouse

Application Route: Ingestion

Result: negative

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

Species. Kai

Application Route: inhalation (dust/mist/fume)

Method: OECD Test Guideline 474

Result: negative

Carbon black:

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

Method: OECD Test Guideline 471

Result: negative

Test Type: In vitro mammalian cell gene mutation test

Method: OECD Test Guideline 476

Result: negative

Test Type: In vitro sister chromatid exchange assay in mam-

malian cells

Method: OECD Test Guideline 479

Result: negative

Test Type: in vitro micronucleus test Method: OECD Test Guideline 487

Result: negative

Genotoxicity in vivo : Test Type: Sex-linked recessive lethal test in Drosophila mel-

anogaster (in vivo)

Species: Drosophila melanogaster (vinegar fly)

Application Route: Ingestion Method: OECD Test Guideline 477

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Result: negative

Di-isononyl phthalate:

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

Method: OECD Test Guideline 471

Result: negative

Test Type: In vitro mammalian cell gene mutation test

Result: negative

Test Type: Chromosome aberration test in vitro

Result: negative

Genotoxicity in vivo : Test Type: Mutagenicity (in vivo mammalian bone-marrow

cytogenetic test, chromosomal analysis)

Species: Rat

Application Route: Ingestion

Result: negative

Calcium carbonate:

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

Method: OECD Test Guideline 471

Result: negative

Test Type: Chromosome aberration test in vitro

Method: OECD Test Guideline 473

Result: negative

Test Type: In vitro mammalian cell gene mutation test

Method: OECD Test Guideline 476

Result: negative

Carcinogenicity

Not classified based on available information.

Components:

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

Carcinogenicity - Assess-

ment

Limited evidence of carcinogenicity in animal studies

Carbon black:

Species : Rat Application Route : Inhalation

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Exposure time : 24 Months Result : positive

Species : Rat
Application Route : Ingestion
Exposure time : 2 Years
Result : negative

Carcinogenicity - Assess-

ment

Weight of evidence does not support classification as a car-

cinogen

Di-isononyl phthalate:

Species : Rat
Application Route : Ingestion
Exposure time : 104 weeks
Result : negative

Reproductive toxicity

Not classified based on available information.

Components:

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

Carbon black:

Effects on foetal develop-

ment

Test Type: Embryo-foetal development

Species: Rat

Application Route: Ingestion Method: OECD Test Guideline 414

Result: negative

Test Type: Embryo-foetal development

Species: Mouse

Application Route: inhalation (dust/mist/fume)

Result: negative

Di-isononyl phthalate:

Effects on fertility : Test Type: Two-generation reproduction toxicity study

Species: Rat

Application Route: Ingestion

Result: negative

Effects on foetal develop-

ment

Test Type: Embryo-foetal development

Species: Rat

Application Route: Ingestion

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Method: OECD Test Guideline 414

Result: negative

Calcium carbonate:

Effects on fertility : Test Type: Combined repeated dose toxicity study with the

reproduction/developmental toxicity screening test

Species: Rat

Application Route: Ingestion Method: OECD Test Guideline 422

Result: negative

Effects on foetal develop-

ment

Test Type: Embryo-foetal development

Species: Rat

Application Route: Ingestion Method: OECD Test Guideline 414

Result: negative

STOT - single exposure

Not classified based on available information.

Components:

Hexamethylene diisocyanate, oligomers:

Assessment : May cause respiratory irritation.

4,4'-Diphenylmethane diisocyanate:

Assessment : May cause respiratory irritation.

STOT - repeated exposure

Not classified based on available information.

Components:

4,4'-Diphenylmethane diisocyanate:

Exposure routes : inhalation (dust/mist/fume)

Target Organs : Respiratory Tract

Assessment : Shown to produce significant health effects in animals at con-

centrations of >0.02 to 0.2 mg/l/6h/d.

Repeated dose toxicity

Components:

4,4'-Diphenylmethane diisocyanate:

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

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Di-isononyl phthalate:

Species : Rat, male
NOAEL : 88.3 mg/kg
Application Route : Ingestion
Exposure time : 104 Weeks

Calcium carbonate:

Species : Rat

NOAEL : > 1,000 mg/kg
Application Route : Ingestion
Exposure time : 28 Days

Method : OECD Test Guideline 422

Aspiration toxicity

Not classified based on available information.

SECTION 12: Ecological information

12.1 Toxicity

Components:

Hexamethylene diisocyanate, oligomers:

Toxicity to fish : LC50 (Danio rerio (zebra fish)): > 100 mg/l

Exposure time: 96 h

Method: Directive 67/548/EEC, Annex V, C.1.

Toxicity to daphnia and other :

aquatic invertebrates

EL50 (Daphnia magna (Water flea)): 127 mg/l

Exposure time: 48 h

Method: Directive 67/548/EEC, Annex V, C.2.

Toxicity to algae/aquatic

plants

EC10 (Desmodesmus subspicatus (green algae)): 370 mg/l

Exposure time: 72 h

ErC50 (Desmodesmus subspicatus (green algae)): > 1,000

mg/l

Exposure time: 72 h

Toxicity to microorganisms : EC10 : 880 mg/l

Exposure time: 3 h

Method: OECD Test Guideline 209

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

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Toxicity to algae/aquatic

plants

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 :

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

12.2 Persistence and degradability

Components:

Hexamethylene diisocyanate, oligomers:

Biodegradability : Result: Not readily biodegradable.

Biodegradation: 1 % Exposure time: 28 d

Method: Regulation (EC) No. 440/2008, Annex, C.4-E

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:

Hexamethylene diisocyanate, oligomers:

Partition coefficient: n- : log Pow: > 4

octanol/water Remarks: Calculation

4,4'-Diphenylmethane diisocyanate:

Bioaccumulation : Species: Cyprinus carpio (Carp)

Bioconcentration factor (BCF): 200

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Partition coefficient: n-

octanol/water

log Pow: 4.51

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

Product:

Assessment : This substance/mixture contains no components considered

to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of

0.1% or higher.

12.6 Endocrine disrupting properties

Product:

Assessment : The substance/mixture does not contain components consid-

ered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at

levels of 0.1% or higher.

12.7 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

08 04 09, waste adhesives and sealants containing organic

solvents or other hazardous substances

unused product

08 04 09, waste adhesives and sealants containing organic

solvents or other hazardous substances

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uncleaned packagings

15 01 10, packaging containing residues of or contaminated

by hazardous 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 3335

14.2 UN proper shipping name

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 : Aviation regulated solid, n.o.s.

(Hexamethylene diisocyanate, oligomers)

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

956

IATA (Cargo)

Packing instruction (cargo

aircraft)

Packing instruction (LQ) : Y956 Packing group : III

Labels : Miscellaneous

IATA (Passenger)

Packing instruction (passen- : 956

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GROUP

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ger aircraft)

Packing instruction (LQ) Y956 Packing group Ш

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

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

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

Remarks : Not applicable for product as supplied.

SECTION 15: Regulatory information

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

Relevant EU provisions transposed through retained EU law

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances. preparations and articles (Annex XVII)

Conditions of restriction for the following entries should be considered: Di-isononyl phthalate (Number on list 52)

4,4'-Diphenylmethane diisocyanate

(Number on list 74, 56)

REACH - Candidate List of Substances of Very High

Concern for Authorisation (Article 59).

Not applicable

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

plete the ozone layer

Not applicable

Regulation (EU) 2019/1021 on persistent organic pollu-

tants (recast)

Not applicable

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

of dangerous chemicals

Not applicable

UK REACH List of substances subject to authorisation

(Annex XIV)

Not applicable

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.

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Not applicable

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

emissions (integrated pollution prevention and control) Volatile organic compounds (VOC) content: 0 %

15.2 Chemical safety assessment

A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

Other information : Items where changes have been made to the previous version

are highlighted in the body of this document by two vertical

lines.

Full text of H-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 difficul-

ties if inhaled.

H335 : May cause respiratory irritation. H351 : 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 GB EH40 : UK. EH40 WEL - Workplace Exposure Limits GB EH40 BAT : UK. Biological monitoring guidance values

GB EH40 / TWA : Long-term exposure limit (8-hour TWA reference period)
GB EH40 / STEL : Short-term exposure limit (15-minute reference period)

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; AIIC - Australian Inventory of Industrial Chemicals; 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 - Interna-

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tional 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; SVHC - Substance of very high concern; TCSI - Taiwan Chemical Substance Inventory; TECI -Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods: vPvB - Very Persistent and Very Bioaccumulative

Further information

Sheet

Sources of key data used to compile the Safety Data

Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agen-

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

Classification of the mixture:

Classification procedure:

Resp. Sens. 1 H334 Calculation method Skin Sens. 1 H317 Calculation method

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.

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