

SAFETY DATA SHEET
according to 1907/2006/EC, Article 31

Revision date: 02.10.2023

**1- IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/
UNDERTAKING**

Product details

Trade name: Polyurethane adhesive for windscreens

Article number: 37731

Recommended use of the chemical and restrictions on use

Recommended Use: Bonding and sealing

Advised Against: At this moment in time we do not have information on use restrictions. They will be included in this document when available

Intended use: Car refinishing product/Adhesives, sealants

Manufacturer/Supplier:

Chamäleon GmbH

Rudolf-Diesel-Straße, 8a, 69115 Heidelberg

Germany

Further information obtainable from: Product Safety Department

Information in case of emergency: + 49 70024112112 (CH)

2 – HAZARDS IDENTIFICATION

CLP classification according to Regulation EC No. 1272/2008

Skin Corrosion/Irritation Category 2

Sensitization Skin Category 1

Eye Damage/Irritation Category 2

Acute Toxicity Inhalation Category 4

Sensitization Respiratory Category 1

Specific Target Organ Toxicity (Single Exposure) Category 3 (Respiratory irritation)

Carcinogenicity Category 2

Specific Target Organ Toxicity (Repeated exposure) Category 2

Label elements

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:

P201: Obtain special instructions before use.

P202: Do not handle until all safety precautions have been read and understood.

P260: Do not breathe gas/mist/vapor.

P264: Wash face and hands thoroughly after handling.

P271: Use only outdoors or in a well-ventilated area.

P272 Contaminated work clothing should not be allowed out of the workplace.

P280: Wear protective gloves/protective clothing/eye protection/face protection.

P284: [In case of inadequate ventilation] wear respiratory protection.

P312: Call a POISON CENTRE/ doctor/... if you feel unwell.

P314 Get medical advice/ attention if you feel unwell.

P321: Specific treatment (see related instructions on this label).

P302+P352: IF ON SKIN: Wash with plenty of water.

P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.

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

P333+P313: If skin irritation or rash occurs: Get medical advice/attention.

P337+P313: If eye irritation persists: Get medical advice/attention.

P342+P311: If experiencing respiratory symptoms: Call a POISON CENTER/doctor.

P362+P364: Take off contaminated clothing and wash it before reuse.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P405 Store locked up.

P403+P233 Store in a well ventilated place. Keep container tightly closed.

P501 Dispose of contents/container in accordance with local/regional/national/ international regulations.
As from 24 August 2023, industrial or professional use shall be permitted only after having received appropriate training.**Other Hazards:**One the basis of available data, the product does not contain any PBT or vPvB in percentage \geq than 0.1%The product does not contain substances with endocrine disrupting properties in concentration \geq 0.1%

3- COMPONENT

Component	Cas No.	EC No.	Index No.	Hazard classification according to CLP	Concentration (weight percent, %)
Diphenylmethane-4,4'-diisocyanate	101-68-8	202-966-0	615-005-00-9	Skin Corrosion/Irritation, Category 2, H315, Eye Damage/Irritation, Category 2, H319, Sensitization Skin, Category 1, H317, Acute Toxicity Inhalation, Category 4, H332, Specific Target Organ Toxicity (Single exposure), Category 3, (Respiratory irritation), H335, Sensitization Respiratory, Category 1, H334, Carcinogenicity, Category 2, H351, Specific Target Organ Toxicity, (Repeated exposure), Category 2, H373	0.05~0.1
Carbon black	1333-86-4	215-609-9	-	Not Classified	0~10
1,2 Cyclohexanedicarboxylic acid, 1,2-diisononyl ester	166412-78-8	605-439-7	-	Not Classified	10~20
Calcium carbonate	471-34 1	207-439-9	-	Not Classified	10~20
1,2-Propanediol, polymer with 1,1'-methylenebis [isocyanatobenzene], 2-methyloxirane and oxirane	103837-45-2	692-816-4	-	Skin Corrosion/Irritation, Category 2, H315, Sensitization Skin Category 1, H317, Eye Damage/Irritation, Category 2, H319, Acute Toxicity Inhalation, Category 4, H332, Specific Target Organ Toxicity (Single Exposure), Category 3, (Respiratory irritation),	40~60

				H335, Specific Target Organ Toxicity (Repeated Exposure), Category 2, H373	
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4- FIRST AID MEASURES

Description of first aid measures

General advice:

Immediate medical attention is required. Show this safety data sheet (SDS) to the doctor in attendance.

Eye contact: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician if feel uncomfortable.

Skin contact: Take off contaminated clothing and shoes immediately. Wash off with plenty of soap and water for at least 15 minutes and consult a physician if feel uncomfortable.

Ingestion: Do not induce vomiting. Never give anything by mouth to an unconscious person. Call a physician or Poison Control Center immediately.

Inhalation: Move victim into fresh air. If breathing is difficult, give oxygen. Do not use mouth to mouth resuscitation if victim ingested or inhaled the substance. If not breathing, give artificial re spiration and consult a physician immediately.

Protecting of first aiders: Ensure that medical personnel are aware of the substance involved. Take precautions to protect themselves and prevent spread of contamination.

Most important symptoms and effects, both acute and delayed

Substance accumulation, in the human body, may occur and may cause some concern following repeated or long term occupational exposure.

Indication of any immediate medical attention and special treatment needed.

Treat symptomatically. Symptoms may be delayed.

5- FIRE - FIGHTING MEASURE

Extinguishing media

Suitable extinguishing media: Use extinguishing media suitable for surrounding area.

Unsuitable extinguishing media: There is no restriction on the type of extinguisher which may be used.
Specific hazards arising from the substance or mixture: Development of hazardous combustion gases or vapor possible in the event of fire. May expansion or decompose explosively when heated or involved in fire.

Advice for firefighters:

As in any fire, wear self-contained breathing apparatus (MSHA/NIOSH approved or equivalent) and full protective gear. Fight fire from a safe distance, with adequate cover. Prevent fire extinguishing water

from contaminating surface water or the ground water system.

6- ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:

Use personal protective equipment, do not breathe gas/mist/ vapor /spray.

Ensure adequate ventilation. Remove all sources of ignition. Take precautionary measures against static discharges.

Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

Environmental precautions:

Prevent further leakage or spillage if safe to do so.

Discharge into the environment must be avoided.

Methods and materials for containment and cleaning up:

Cut off the source of the leak as much as possible.

Keep leaks in a ventilated place.

Absorb spilled material in dry sand or inert absorbent. In case of large amount of spillage, contain a spill by bunding.

Remove all sources of ignition. Use spark-proof tools and explosion proof equipment.

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container.

7- HANDLING AND STORAGE

Protective measures

Handling is performed in a well ventilated place.

Wear suitable protective equipment.

Avoid contact with skin and eyes.

Measures to prevent fire

Keep away from heat/sparks/open flames/ hot surfaces.

Measures to prevent aerosol and dust generation

Not applicable.

Advice on general occupational hygiene

Wash hands and face after using of the substances.

Replace the contaminated clothing immediately.

Conditions for safe storage, including any incompatibilities

Keep containers tightly closed.

Keep containers in a dry, cool and well-ventilated place.

Keep away from heat/sparks/open flames/hot surfaces.

Store away from incompatible materials and foodstuff containers.

Specific end uses

In addition to use mentioned in the Section 1.2, unforeseen other specific end uses.

8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters

Occupational Exposure limit values

Component	Country/Region	Limit value- Eight hours		Limit value Short term	
		ppm	mg/m ³	ppm	mg/m ³
Diphenylmethane-4,4'-diisocyanate 101-68-8	USA - OSHA	-	-	0.02	0.2
	South Korea	0.005	0.055	-	-
	Ireland	-	0.02	-	0.07
	Germany(AGS)	-	0.05	-	0.05
	Denmark	0.005	0.05	0.01	0.1
	Australia	-	-	-	-
	USA- ACGIH	0.005	-	-	-
Carbon black 1333-86- 4	USA - OSHA	-	3.5	-	-
	South Korea	-	3.5	-	-
	Ireland	-	3.5	-	7
	France	-	3.5	-	-
	Denmark	-	3.5	-	7
	Australia	-	3	-	-
	USA- ACGIH	-	3	-	-
Calcium carbonate 471-34-1	USA -OSHA	-	15	-	-
	Latvia	-	6	-	-
	Ireland	-	10	-	-
	France	-	10	-	-
	Canada-Québec	-	10	-	-
	Australia	-	10	-	-

Biological limit values No relevant regulations

Monitoring methods

EN 14042 Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents.

GBZ/T 300 series standard Determination of toxic substances in workplace air.

Derived No effect level(DNEL)

Component	Route of exposure	DNEL for Workers			
		Acute effects (local)	Acute Effects (systemic)	Chronic effects(local)	Chronic effects (systemic)

Diphenylmethane-4,4'-diisocyanate 101-68-8	Inhalation	No data available	No data available	0.05 mg/m ³	No data available
	Oral	No data available	No data available	No data available	No data available
	Dermal	No data available	No data available	No data available	No data available
Carbon black 1333-86-4	Inhalation	No data available	No data available	3.5; 2 mg/m ³	1~2 mg/m ³
	Oral	No data available	No data available	No data available	No data available
	Dermal	No data available	No data available	No data available	No data available
1,2-Cyclohexanedi carboxylicacid , 1,2 - diisononyl ester 166412-78-8	Inhalation	No data available	No data available	No data available	No data available
	Oral	No data available	No data available	No data available	No data available
	Dermal	No data available	No data available	No data available	No data available
Calcium carbonate 471-34-1	Inhalation	No data available	No data available	No data available	10 mg/m ³
	Oral	No data available	No data available	No data available	No data available
	Dermal	No data available	No data available	No data available	No data available
1,2-Propanediol, polymer with 1,1'-methylenebis [isocyanatobenzene], 2 - methyloxirane and oxirane 103837-45-2	Inhalation	No data available	No data available	No data available	No data available
	Oral	No data available	No data available	No data available	No data available
	Dermal	No data available	No data available	No data available	No data available

Predicted No Effect Concentration PNEC

No information available

Engineering controls

Ensure adequate ventilation, especially in confined areas.

Ensure that eyewash stations and safety showers are close to the workstation location.

Use explosion-proof electrical/ventilating/lighting/equipment.

Set up emergency exit and necessary risk-elimination area.

Personal protection equipment

General requirement

Eye protection Must wear appropriate safety goggles.

Hand protection Must wear appropriate chemical protective gloves.

Respiratory protection Must wear appropriate personal respiratory protective equipment.

Skin and body protection Must wear appropriate chemical protective clothing and chemical resistant shoes.

9 – PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Paste
Odor :	Slight odor
Odor threshold	No information available
pH:	Not applicable
Melting point/freezing point(°C):	No information available
Initial boiling point and boiling range (°C)	>35
Flash point(Closed cup, °C)	The flash point above 93 °C
Evaporation rate	No information available
Flammability	Not flammable
Upper/lower explosive limits[%(v/v)]	Upper limit: No information available.Lower limit: No information available
Vapor pressure	No information available
Vapor density(Air=1)	No information available
Relative density(Water=1)	1.25~1.45
Solubility(mg/L)	Insoluble in water
n octanol/water partition coefficient	No information available
Auto ignition temperature (°C)	No information available
Decomposition temperature(°C)	No information available
Kinematic viscosity(mm ² /s)	Not applicable
Explosive properties	Not explosive
Oxidizing properties	Not oxidizing
Particle characteristics	Not applicable

10– STABILITY AND REACTIVITY

Reactivity: Contact with incompatible substances can cause decomposition or other chemical reactions.

Chemical stability: Stable under proper operation and storage conditions.

Possibility of hazardous reactions: No information available.

Conditions to avoid: Incompatible materials, heat, flame and spark.

Incompatible materials: No information available.

Hazardous decomposition products: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11- TOXICOLOGICAL INFORMATION

Acute toxicity

Component	Cas No.	LD50(oral)	LD50(dermal)	LC50(inhalation,4h)
Carbon black	1333-86-4	> 15400mg/kg(Rat)	> 3000mg/kg(Rabbit)	No information available
Diphenylmethane-4,4'-diisocyanate	101-68-8	9200mg/kg(Rat)	No information available	No information available
Calcium carbonate	471-34-1	6450mg/kg(Rat)	No information available	No information available

Carcinogenicity

ID	Cas No.	Component	IARC	NTP
1	1333-86-4	Carbon black	Category 2B	Not Listed
2	101-68-8	Diphenylmethane-4,4'-diisocyanate	Category 3	Not Listed
3	471-34-1	Calcium carbonate	Not Listed	Not Listed
4	166412-78-8	1,2-Cyclohexanedicarboxylic acid, 1,2-diisononyl ester	Not Listed	Not Listed
5	103837-45-2	1,2-Propanediol, polymer with 1,1'-methylenebis[isocyanatobenzene], 2-methyloxirane and oxirane	Not Listed	Not Listed

Others

PU Sealant

Skin corrosion/irritation Causes skin irritation(Category 2)

Serious eye damage/irritation Causes serious eye irritation(Category 2)

Skin sensitization May cause an allergic skin reaction(Category 1)

Respiratory sensitization May cause allergy or asthma symptoms or breathing difficulties if inhaled(Category 1)

- Reproductive toxicity** Based on available data, the classification criteria are not met
STOT single exposure May cause respiratory irritation(Category 3(Respiratory irritation))
STOT repeated exposure May cause damage to organs through prolonged or repeated exposure(Category 2)
Aspiration hazard Based on available data, the classification criteria are not met
Germ cell mutagenicity Based on available data, the classification criteria are not met
Reproductive toxicity(additional) Based on available data, the classification criteria are not met

12 – ECOLOGICAL INFORMATION

Acute aquatic toxicity

Component	Cas No.	Fish	Crustaceans	Algae
Carbon black	1333-86-4	LC50 : > 1000mg/L (96h)(Fish)	No information available	No information available
1,2 - Cyclohexanedicarboxylicacid, 1,2 diisononyl ester	166412-78-8	LC50 : > 100mg/L (96h)(Fish)	EC50 : > 100mg/L (48h)(Crustaceans)	No information available
Diphenylmethane-4,4'-diisocyanate	101-68-8	LC50 : 1000mg/L (96h)(Fish)	No information available	No information available

Chronic aquatic toxicity No information available

Persistence and degradability

Component	Cas No.	Persistence (water/soil)	Persistence (air)
Diphenylmethane-4,4'-diisocyanate	101-68-8	Low(Half-life = 1 days)	Low(Half-life = 0.24 days)

Bioaccumulative potential

Component	Cas No.	Bioaccumulative potential	comments
Diphenylmethane-4,4'-diisocyanate	101-68-8	Low	BCF=15

Mobility in soil

Component	Cas No.	Mobility in soil	Soil Organic Carbon Water Partitioning Coefficient (Koc)
Diphenylmethane-4,4'-diisocyanate	101-68-8	Low	376200

Results of PBT and vPvB assessment

Component	Cas No.	To Results of PBT and vPvB assessment (according
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		to (EC) No 2015/830
Diphenylmethane-4,4'-diisocyanate	101-68-8	Not PBT/vPvB
Carbon black	1333-86-4	Not PBT/vPvB
1,2-Cyclohexanedicarboxylic acid, 1,2 diisononyl ester	166412-78-8	Not PBT/vPvB
Calcium carbonate	471-34-1	Not applicable
1,2-Propanediol, polymer with 1,1'-methylenebis [isocyanatobenzene], 2-methyloxirane and oxirane	103837-45-2	Insufficient information, temporarily unable to evaluate

13- DISPOSAL CONSIDERATION

Disposal considerations

Waste chemicals Before disposal should refer to the relevant national and local laws and regulation. Recommend the use of incineration disposal.

Contaminated packaging Containers may still present chemical hazard when empty. Keep away from hot and ignition source of fire. Return to supplier for recycling if possible.

Disposal recommendations Refer to section waste chemicals and contaminated packaging.

14- TRANSPORT INFORMATION

Label and Mark

Transporting Label Not applicable

IMDG-CODE Not regulated for transport of dangerous goods.

ICAO/IATA-DGR Not regulated for transport of dangerous goods.

UN-ADR Not regulated for transport of dangerous goods.

15 – REGULATORY INFORMATION

International chemical inventory

Component	EC inventory	TSCA	DSL	IECSC	NZIoC	PICCS	KECI	AIIC	ENCS
Diphenylmethane-4,4'-diisocyanate	√	√	√	√	√	√	√	√	√
Carbon black	√	√	√	√	√	√	√	√	×
1,2-Cyclohexanedicarboxylic acid, 1,2-diisononyl ester	×	×	×	√	√	√	√	√	√
Calcium carbonate	√	√	√	√	√	√	√	√	√
1,2-Propanediol, polymer with 1,1'-methylenebis[isocyanatobenzene], 2-methyloxirane and oxirane	×	√	×	×	×	×	×	√	×

【EC inventory】 European Inventory of Existing Commercial Chemical Substances

【TSCA】 United States Toxic Substances Control Act Inventory

【DSL】 Canadian Domestic Substances List

【IECSC】 China Inventory of Existing Chemical Substances

【NZIoC】 New Zealand Inventory of Chemicals

【PICCS】 Philippines Inventory of Chemicals and Chemical Substances

【KECI】 Korea Existing Chemicals Inventory

【AIIC】 Australia. Inventory of Industrial Chemicals (AIIC)

【ENCS】 Japan Inventory of Existing & New Chemical Substances

European chemical inventory

Component	A	B	C	D	E	F	G
Diphenylmethane-4,4'-diisocyanate	×	×	√	√	√	√	×
Carbon black	×	×	×	√	√	√	×
1,2-Cyclohexanedicarboxylic acid, 1,2-diisononyl ester	×	×	×	√	√	×	×
Calcium carbonate	×	×	×	√	√	×	×
1,2-Propanediol, polymer with 1,1'-methylenebis[isocyanatobenzene], 2-methyloxirane and oxirane	×	×	×	×	×	×	×

【A】 Candidate list of Substances of Very High Concern for authorization under EU REACH regulation

【B】 Substances requiring authorisation under EU REACH regulation

【C】 Substances restricted under EU REACH

【D】 Pre-registered substances under EU REACH

【E】 Registered substances under EU REACH

【F】 Substance Evaluation –CoRAP under EU REACH

【G】 List of priority substances under EU water policy (Directive 2455/2001/EC)

“√” Indicates that the substance included in the regulations

“×” That no data or included in the regulations

16-OTHERS

Reference

[1]IPCS:The International Chemical Safety Cards (ICSC),website:

<http://www.ilo.org/dyn/icsc/showcard.home>.

[2]IARC, website: <http://www.iarc.fr/>.

[3]OECD: The Global Portal to Information on Chemical Substances, website:

http://www.echemportal.org/echemportal/index?pageID=0&request_locale=en.

[4]CAMEO Chemicals, website: <http://cameochemicals.noaa.gov/search/simple>.

[5]NLM:ChemIDplus, website: <http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp>.

- [6]EPA: Integrated Risk Information System, website: <http://cfpub.epa.gov/iris/>.
- [7]U.S. Department of Transportation:ERG, website: <http://www.phmsa.dot.gov/hazmat/library/erg>.
- [8]Germany GESTIS-database on hazard substance, website: <http://gestis-en.itrust.de/>.

Abbreviations and acronyms

CAS –Chemical Abstracts Service
CMR - Carcinogens, mutagens or substances toxic to reproduction
PC-STEL- Short term exposure limit
PC-TWA - Time Weighted Average
DNEL - Derived No Effect Level
IARC - International Agency for Research on Cancer
RPE - Respiratory Protective Equipment
PNEC –Predicted No Effect Concentration
LC50 - Lethal Concentration 50%
LD50 - Lethal Dose 50%
NOEC -No Observed Effect Concentration
EC50 - Effective Concentration 50%
PBT - Persistent, Bioaccumulative, Toxic
POW - Partition coefficient Octanol:Water
BCF - Bioconcentration factor (BCF)
vPvB - very Persistent, very Bioaccumulative
IMDG-CODE - International Maritime Dangerous Goods CODE
ICAO/IATA - International Civil Aviation Organization/International Air Transportation Association
UN - The United Nations
ACGIH - American Conference of Governmental Industrial Hygienists
NFPA - National Fire Protection Association
OECD - Organization for Economic Cooperation and Development

The information contained in these sheets is based on the present state of knowledge and current national legislation. It provides guidance on health, safety and environmental aspects and should not be construed as any guarantee of technical performance or suitability for particular applications.