



SAFETY DATA SHEET

SDS No. 1081AEU

according to Regulation (EC)

No. 1907/2006 as amended

Version 1 Revision Date 10/10/2022

Section 1 - Identification of the substance/mixture and of the company/undertaking

1.1 Product Identifier

Trade Name: **Clear Flex® 50 EU and 95 EU Part A**

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

General Use: Polyurethane Elastomer

Restrictions on Use: None known

1.3 Details of the supplier of the safety data sheet:

Company: Smooth-On, Inc.,
5600 Lower Macungie Rd., Macungie, PA 18062

Telephone: Phone (610) 252-5800

E-mail address of person: Visit our website at www.smooth-on.com or email
responsible for the SDS sds@smooth-on.com

1.4 **Emergency Contact:** Chem-Tel Domestic: 800-255-3924 International: 813-248-0585

Italy Istituto Superiore di Sanità (ISS) +390649906140

Section 2 – Hazard(s) Identification

2.1 Classification of the substance or mixture:

Classification (REGULATION (EC) No 1272/2008) as amended

H315 Skin corrosion/irritation – Category 2

H317 Skin sensitization – Category 1

H319 Eye irritation – Category 2A

H331 Acute toxicity, inhalation – Category 3

H334 Respiratory sensitization – Category 1

H335 Specific target organ toxicity – single exposure – Category 3 (respiratory system)

For the full text of the H-Statements mentioned in this Section, see Section 16

2.2 Label elements, including precautionary statements

Labelling (REGULATION (EC) No 1272/2008) as amended



Pictogram(s):

Signal word: Danger

Health Hazards:

H315 Causes skin irritation

H317 May cause an allergic skin reaction

- H319 Causes serious eye irritation
- H331 Toxic if inhaled
- H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled
- H335 May cause respiratory irritation

General Precautions:

- P101 If medical advice is needed, have product container or label at hand.
- P102 Keep out of reach of children.
- P103 Read label before use.

Prevention Precautions:

- P261 Avoid breathing dust/fume/gas/mist/vapors/spray.
- P264 Wash skin 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.
- P285 In case of inadequate ventilation wear respiratory protection.

Response Precautions:

- P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
- P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- P311 Call a POISON CENTER or doctor/physician.
- P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- 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/physician.
- P362 Take off contaminated clothing.

Storage Precautions:

- P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
- P405 Store locked up.

Disposal Precautions:

- P501 Dispose of contents/container according to local, state and federal laws.

UFI: DDS2-X0X8-G00P-4PYM

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.

Section 3 - Composition / Information on Ingredients

3.1 Substances/Mixtures

Hazardous ingredients according to Regulation (EC) No 1272/2008

Chemical name	Classification	Concentration
4,4' Methylenedicyclohexyl diisocyanate		
CAS-No. 5124-30-1 EC-No. 225-863-2 Index-No. 615-009-00-0	Skin Irrit. 3, Skin Sens. 1, Eye Irrit. 2, Acute Tox. 3, Resp. Sens. 1, STOT SE 3, H315, H317, H319, H331, H334, H335	35% – 85%

For the full text of the H-Statements mentioned in this Section, see Section 16.

Section 4 - First Aid Measures

4.1 Description of first aid measures

Inhalation

Remove source(s) of contamination and move victim to fresh air. If breathing has stopped, give artificial respiration, then oxygen if needed. Contact physician immediately.

Eye Contact

Flush eyes with plenty of water. If irritation persists, seek medical attention.

Skin Contact

In case of skin contact, wash thoroughly with soap and water.

Ingestion

Do not induce vomiting unless instructed by a physician. Never give anything by mouth to an unconscious person.

4.2 Most important symptoms and effects, both acute and delayed

None known.

4.3 Indication of any immediate medical attention and specific treatment needed

Section 5 - Fire-Fighting Measures

5.1 Extinguishing Media

Water Fog, Dry Chemical, and Carbon Dioxide Foam

5.2 Special hazards arising from the substance or mixture

None known.

5.3 Advice for firefighters

Use water spray to cool fire-exposed surfaces and to protect personnel. Shut off "fuel" to fire. If a leak or spill has not ignited, use water spray to disperse the vapors. Either allow fire to burn under controlled conditions or extinguish with foam or dry chemical. Try to cover liquid spills with foam. Because fire may produce toxic thermal decomposition products, wear a self-contained breathing apparatus (SCBA) with a full-face piece operated in pressure demand or positive-pressure mode.

Section 6 - Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Only properly protected personnel should remain in the spill area; dike and contain spill. Stop or reduce discharge if it can be done safely.

6.2 Environmental precautions

Stop spill/release if it can be done safely. Prevent spilled material from entering sewers, storm drains or unauthorized drainage systems and natural waterways by using sand, earth, or other appropriate barriers. No special environmental precautions required.

6.3 Methods and material for containment and cleaning up

Put on appropriate protective gear including approved self-contained breathing apparatus, rubber boots and heavy rubber gloves. Dike and contain spill; absorb or scrape up excess into suitable container for disposal; wash area with dilute ammonia solution. Stop or reduce discharge if it can be done safely.

6.4 Reference to other sections

See Section 3 for list of Hazardous Ingredients; Sections 8 for Exposure Controls; and Section 13 for Disposal.

Section 7 - Handling and Storage

7.1 Precautions for safe handling

Use good general housekeeping procedures. Wash hands after use. Do not get in eyes, on skin or on clothing. Do not breathe vapors or mists. Use good personal hygiene practices.

7.2 Conditions for safe storage, including any incompatibilities

Keep container(s) tightly closed and properly labeled. Store in cool, dry, well ventilated place away from heat, direct sunlight, strong oxidizers and any incompatibles. Store in approved containers and protect against physical damage. Keep containers securely sealed when not in use. Indoor storage should meet local standards and appropriate fire codes. Containers that have been opened must be carefully resealed to prevent leakage. Empty containers retain residue and may be dangerous. Avoid water contamination.

7.3 Specific end use(s)

These precautions are for room temperature handling. Other uses including elevated temperatures or aerosol/spray applications may require added precautions.

Section 8 - Exposure Controls / Personal Protection

8.1 Control parameters:

Components with workplace control parameters

Component	CAS-No.	ValueForm of exposure	Control parameters	Basis
Dicyclohexylmethane-4,4'-di-isocyanate	5124-30-1	TWA	0.02 mg/m ³	UK. EH40 WEL - Workplace Exposure Limits
		STEL	0.07 mg/m ³	UK. EH40 WEL - Workplace Exposure Limits
	Remarks	Substances that can cause occupational asthma (also known as asthmagens and respiratory sensitizers) can induce a state of specific airway hyper-responsiveness via an immunological, irritant or other mechanism. Once the airways have become hyper-responsive, further exposure to the substance, sometimes even to tiny quantities, may cause respiratory symptoms. These symptoms can range in severity from a runny nose to asthma. Not all workers who are exposed to a sensitizer will become hyper-responsive and it is impossible to identify in advance those who are likely to become hyper-responsive. 54 Substances that can cause occupational asthma should be distinguished from substances which may trigger the symptoms of asthma in people with pre-existing airway hyper-responsiveness, but which do not include the disease themselves. The latter substances are not classified asthmagens or respiratory sensitizers.		

		<p>Wherever it is reasonably practicable, exposure to substances that can cause occupational asthma should be prevented. Where this is not possible, the primary aim is to apply adequate standards of control to prevent workers from becoming hyper-responsive. For substances that can cause occupational asthma, COSHH requires that exposure be reduced as low as is reasonably practicable.</p> <p>Activities giving rise to short-term peak concentrations should receive particular attention when risk management is being considered. Health surveillance is appropriate for all employees exposed or liable to be exposed to a substance which may cause occupational asthma and there should be appropriate consultation with an occupational health professional over the degree of risk and level of surveillance.</p> <p>Capable of causing occupational asthma. The identified substances are those which: - are assigned the risk phrase 'R42: May cause sensitisation by inhalation'; or 'R42/43: May cause sensitisation by inhalation and skin contact' or - are listed in section C of HSE publication 'Asthmagen? Critical assessments of the evidence for agents implicated in occupational asthma' as updated from time to time, or any other substance which the risk assessment has shown to be a potential cause of occupational asthma.</p> <p>The 'Sen' notation in the list of WELs has been assigned only to those substances which may cause occupational asthma.</p>
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Biological occupational exposure limits

Component	CAS-No.	Parameters	Value	Biological specimen	Basis
Dicyclohexylmethane 4,4'-di-isocyanate	5124-30-1	urinary diamine	1µmol/mol creatinine	Urine	UK. Biological monitoring guidance values
	Remarks	Post task			

8.2 Exposure controls:

Engineering measures

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Hand protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Skin and body protection

Complete suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Protective measures

Ensure that eye flushing systems and safety showers are located close to the working place.

Section 9 - Physical and Chemical Properties

9.1 Information on basic physical and chemical properties:

Appearance:	Clear liquid	Vapor pressure:	0.0013 hPa at 25 °C
Odor:	Odorless	Vapor density (Air=1):	No data
Odor threshold:	No data	Relative density:	No data
pH:	No data	Solubility:	Insoluble in water
Melting / freezing point:	26°C	Partition coefficient (n-octanol/water):	No data
Low / high boiling point:	113°C	Auto-ignition temperature:	No data
Flash Point:	200°C	Decomposition temperature:	225 °C at 1,013 hPa
Evaporation rate:	No data	Viscosity:	No data
Flammability (solid, gas):	No data	Explosive properties:	No data
Upper/lower flammability or explosive limits:	No data	Relative Density:	1.066 g/cm ³ at 25 °C

Section 10 - Stability and Reactivity
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10.1 Reactivity

No hazardous reactions if stored and handled as prescribed/indicated., No corrosive effect on metal. Not fire propagating.

10.2 Chemical stability

These products are stable at room temperature in closed containers under normal storage and handling conditions.

10.3 Possibility of hazardous reactions

Hazardous polymerization cannot occur

10.4 Conditions to avoid

None known

10.5 Incompatible materials

Strong bases and acids

10.6 Hazardous decomposition products

Thermal oxidative decomposition can produce carbon oxides, gasses/vapors, and traces of incompletely burned carbon compounds.

Section 11- Toxicological Information

11.1 Information on toxicological effects:

Acute Toxicity

No data available

Skin Corrosion/Irritation

Skin – Rabbit Result: Irritating to skin. - 4 h (OECD Test Guideline 404)

Serious Eye Damage/Irritation

Eyes – Rabbit Result: Irritating to eyes. (OECD Test Guideline 405)

Respiratory/Skin Sensitization

Buehler Test – Guinea pig Result: May cause sensitisation by skin contact. - Mouse Result: May cause sensitisation by inhalation.

Germ Cell Mutagenicity

Hamster Lungs Result: negative

Carcinogenicity

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

Reproductive Toxicity

No data available

Specific Target Organ Toxicity – Single Exposure

No data available

Specific Target Organ Toxicity – Repeated Exposure

No data available

Aspiration Hazard

No data available

Potential Health Effects – Miscellaneous

Repeated dose toxicity RTECS: NQ9250000

Rat - male and female - Inhalation - NOAEL: 0.003 mg/l

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., Cough, Shortness of breath, Headache, Nausea, To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Section 12 - Ecological Information

12.1 Toxicity

Toxicity to fish

static test LC50 - Danio rerio (zebra fish) - 1.2 mg/l - 96 h
(OECD Test Guideline 203)

Toxicity to daphnia and
other aquatic
invertebrates

static test EC0 - Daphnia magna (Water flea) - \geq 8.3 mg/l - 48 h

Toxicity to algae	static test EC50 - Desmodesmus subspicatus (Scenedesmus subspicatus) - > 5 mg/l - 72 h
Toxicity to bacteria	EC50 - Sludge Treatment - 191 mg/l - 3 h (OECD Test Guideline 209)

12.2 Persistence and Degradability

Biodegradability aerobic - Exposure time 28 d
Result: 0 % - Not readily biodegradable.

12.3 Bioaccumulative Potential

No data available

12.4 Mobility in Soil

No data available

12.5 Results of PBT and vPvB 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 Other Adverse Effects

No data available

Section 13 - Disposal Considerations

13.1 Waste treatment methods**Product**

Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging

Dispose of as unused product.

Section 14 - Transport Information

Not hazardous according to ADR/RID, IMDG, and IATA

- 14.1 **UN number:** none
- 14.2 **UN proper shipping name:** none
- 14.3 **Transport hazard class(es):** not applicable
- 14.4 **Packing group:** not applicable
- 14.5 **Environmental hazards:** none known
- 14.6 **Special precautions for user:** none known
- 14.7 **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:** not applicable

Section 15 - Regulatory Information

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

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006 and EC No. 2020/878.

Regulation (EC) No 649/2012 of the European Parliament : Not applicable

and the Council concerning the export and import of dangerous chemicals

REACH - Candidate List of Substances of Very High Concern for Authorization (Article 59). : Not applicable

REACH Annex XIV: REACH Authorization List : Not applicable

REACH Annex XVII: REACH Restricted Substance List:
4,4´ Methylene-dicyclohexyl diisocyanate Listed under Annex XVII of REACH. Entry 74

Regulation (EC) No 2019/1021 on substances that deplete the ozone layer : Not applicable

Regulation (EC) No 850/2004 on persistent organic pollutants : Not applicable

Seveso III: Directive: Dangerous substance/hazard categories: H2

15.2 Chemical safety assessment

No chemical safety assessment has been carried out for this substance/mixture by the supplier.

16 - Other Information

Date Prepared: October 10, 2022

Revision:2

Full text of H-Statements referred to under Sections 2 and 3.

H315 Causes skin irritation
 H317 May cause an allergic skin reaction
 H319 Causes serious eye irritation
 H331 Toxic if inhaled
 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled
 H335 May cause respiratory irritation

Abbreviations and acronyms:

ATE - Acute Toxicity Estimate; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; REACH - Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006; EINECS - European Inventory of Existing Commercial Chemical Substances
 ELINCS - European List of Notified Chemical Substances; CAS# - Chemical Abstract Service number;
 PPE - Personal Protection Equipment; Kow - octanol-water partition coefficient; DNEL - Derived No Effect Level; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); NOEC - No Observed Effect Concentration; PNEC - Predicted No Effect Concentration; RMM - Risk Management Measure; OEL - Occupational Exposure Limit; PBT - Persistent, Bioaccumulative and Toxic; vPvB - Very Persistent and Very Bioaccumulative; STOT - Specific Target Organ Toxicity; CSA - Chemical Safety Assessment; EN - European Standard; UN - United Nations; ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; IATA - International Air Transport Association; IMDG - International Maritime Dangerous Goods; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; WGK - Water Hazard Class

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