





**Trade name: Resinwerks Kinetic 85 Part B**

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<b>· Dangerous components:</b>		
28182-81-2	Hexamethylene Diisocyanate Homopolymer	>50- 100%
628-63-7	pentyl acetate	>5- 25%
98-56-6	4-chloro-alpha,alpha,alpha-trifluorotoluene	>5- 25%
624-41-9	2-methylbutyl acetat	>0- 10%
5989-27-5	(R)-p-mentha-1,8-diene	>0- 10%
822-06-0	hexamethylene-di-isocyanate	>0-<10%

**4 First-aid measures**

- **Description of first aid measures**
- **General information:**  
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation:**  
Supply fresh air and to be sure call for a doctor.  
In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:** If symptoms persist consult doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed**  
No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

**5 Fire-fighting measures**

- **Extinguishing media**
- **Suitable extinguishing agents:** CO<sub>2</sub>, sand, extinguishing powder. Do not use water.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.

**6 Accidental release measures**

- **Personal precautions, protective equipment and emergency procedures**  
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:**  
Do not allow product to reach sewage system or any water course.  
Inform respective authorities in case of seepage into water course or sewage system.  
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Dispose contaminated material as waste according to item 13.  
Ensure adequate ventilation.  
Do not flush with water or aqueous cleansing agents
- **Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.

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See Section 13 for disposal information.

**Protective Action Criteria for Chemicals****PAC-1:**

28182-81-2	Hexamethylene Diisocyanate Homopolymer	7.8 mg/m <sup>3</sup>
628-63-7	pentyl acetate	100 ppm
5989-27-5	(R)-p-mentha-1,8-diene	15 ppm
60-00-4	edetic acid	4.1 mg/m <sup>3</sup>
822-06-0	hexamethylene-di-isocyanate	0.018 ppm

**PAC-2:**

28182-81-2	Hexamethylene Diisocyanate Homopolymer	86 mg/m <sup>3</sup>
628-63-7	pentyl acetate	670 ppm
5989-27-5	(R)-p-mentha-1,8-diene	67 ppm
60-00-4	edetic acid	45 mg/m <sup>3</sup>
822-06-0	hexamethylene-di-isocyanate	0.2 ppm

**PAC-3:**

28182-81-2	Hexamethylene Diisocyanate Homopolymer	510 mg/m <sup>3</sup>
628-63-7	pentyl acetate	4000* ppm
5989-27-5	(R)-p-mentha-1,8-diene	170 ppm
60-00-4	edetic acid	200 mg/m <sup>3</sup>
822-06-0	hexamethylene-di-isocyanate	3 ppm

**7 Handling and storage****Handling:****Precautions for safe handling**

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of aerosols.

**Information about protection against explosions and fires:**

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

**Conditions for safe storage, including any incompatibilities****Storage:****Requirements to be met by storerooms and receptacles:** No special requirements.**Information about storage in one common storage facility:** Not required.**Further information about storage conditions:** Keep receptacle tightly sealed.**Specific end use(s)** No further relevant information available.**8 Exposure controls/personal protection****Additional information about design of technical systems:** No further data; see item 7.**Control parameters****Components with limit values that require monitoring at the workplace:**

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit.

At this time, the other constituents have no known exposure limits.

**628-63-7 pentyl acetate**PEL Long-term value: 525 mg/m<sup>3</sup>, 100 ppm

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REL	Long-term value: 525 mg/m <sup>3</sup> , 100 ppm
TLV	Short-term value: 532 mg/m <sup>3</sup> , 100 ppm Long-term value: 266 mg/m <sup>3</sup> , 50 ppm
<b>624-41-9 2-methylbutyl acetat</b>	
TLV	Short-term value: 532 mg/m <sup>3</sup> , 100 ppm Long-term value: 266 mg/m <sup>3</sup> , 50 ppm
<b>822-06-0 hexamethylene-di-isocyanate</b>	
REL	Long-term value: 0.035 mg/m <sup>3</sup> , 0.005 ppm Ceiling limit value: 0.14* mg/m <sup>3</sup> , 0.02* ppm *10-min
TLV	Long-term value: 0.034 mg/m <sup>3</sup> , 0.005 ppm BEI

- **Additional information:** The lists that were valid during the creation were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**  
Keep away from foodstuffs, beverages and feed.  
Immediately remove all soiled and contaminated clothing.  
Wash hands before breaks and at the end of work.  
Avoid contact with the skin.  
Avoid contact with the eyes and skin.
- **Breathing equipment:**  
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.
- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**  
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
- **Penetration time of glove material**  
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:**



Tightly sealed goggles

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**9 Physical and chemical properties**· **Information on basic physical and chemical properties**· **General Information**· **Appearance:**

· <b>Form:</b>	Liquid
· <b>Color:</b>	Colorless
· <b>Odor:</b>	Characteristic
· <b>Odor threshold:</b>	Not determined.

· **pH-value:** Not determined.· **Change in condition**

· <b>Melting point/Melting range:</b>	Undetermined.
· <b>Boiling point/Boiling range:</b>	139 °C (282.2 °F)

· **Flash point:** 52 °C (125.6 °F) (Closed Cup)· **Flammability (solid, gaseous):** Not applicable.· **Ignition temperature:** 375 °C (707 °F)· **Decomposition temperature:** Not determined.· **Auto igniting:** Product is not selfigniting.· **Danger of explosion:** Product is not explosive. However, formation of explosive air/vapor mixtures are possible.· **Explosion limits:**

· <b>Lower:</b>	Not determined.
· <b>Upper:</b>	Not determined.

· **Vapor pressure at 20 °C (68 °F):** 6 hPa (4.5 mm Hg)· **Density at 20 °C (68 °F):** 1.1 g/cm<sup>3</sup> (9.1795 lbs/gal)· **Relative density** Not determined.· **Vapor density** Not determined.· **Evaporation rate** Not determined.· **Solubility in / Miscibility with**· **Water:** Miscible· **Partition coefficient (n-octanol/water):** Not determined.· **Viscosity:**

· <b>Dynamic:</b>	Not determined.
· <b>Kinematic:</b>	Not determined.

· **Solvent content:**

· <b>Organic solvents:</b>	9.5 %
· <b>VOC content:</b>	9.47 %
	104.2 g/l / 0.87 lb/gal

· **Solids content:** 79.5 %· **Other information:** No further relevant information available.**10 Stability and reactivity**· **Reactivity** No further relevant information available.

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- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:**  
No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

**11 Toxicological information**

- **Information on toxicological effects**
- **Acute toxicity:**

- **LD/LC50 values that are relevant for classification:**

<b>28182-81-2 Hexamethylene Diisocyanate Homopolymer</b>		
Oral	LD50	>5,000 mg/kg (rat)
Inhalative	LC50/4 h	0.554 mg/l (rat)
<b>5989-27-5 (R)-p-mentha-1,8-diene</b>		
Oral	LD50	4,400 mg/kg (rat)
<b>822-06-0 hexamethylene-di-isocyanate</b>		
Oral	LD50	738 mg/kg (rat)
Dermal	LD50	593 mg/kg (rat)

- **Primary irritant effect:**
- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** No irritating effect.
- **Sensitization:** Sensitization possible through skin contact.
- **Additional toxicological information:**  
The product shows the following dangers according to internally approved calculation methods for preparations:  
Harmful  
Irritant

- **Carcinogenic categories**

<b>IARC (International Agency for Research on Cancer)</b>		
5989-27-5	(R)-p-mentha-1,8-diene	3

- **NTP (National Toxicology Program)**

None of the ingredients is listed.

- **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

**12 Ecological information**

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:** Harmful to fish

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- **Additional ecological information:**
- **General notes:**  
Water hazard class 2 (Self-assessment): hazardous for water  
Do not allow product to reach ground water, water course or sewage system.  
Danger to drinking water if even small quantities leak into the ground.  
Harmful to aquatic organisms
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

**13 Disposal considerations**

- **Waste treatment methods**
- **Recommendation:**  
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

**14 Transport information**

- |   |  |
|---|--|
| · <b>UN-Number</b>  | UN2929   |
| · <b>DOT, IMDG, IATA</b>  |  |
| · <b>UN proper shipping name</b>  | Toxic liquids, flammable, organic, n.o.s. (hexamethylene-di-isocyanate, Amyl acetates) |
| · <b>DOT</b>  |  |
| · <b>IMDG, IATA</b>   | TOXIC LIQUID, FLAMMABLE, ORGANIC, N.O.S. (hexamethylene-di-isocyanate, AMYL ACETATES)  |
| · <b>Transport hazard class(es)</b>   |  |
| · <b>DOT</b>  |  |
|  |  |
|  |  |
| · <b>Class</b>  | 6.1 Toxic substances   |
| · <b>Label</b>  | 6.1, 3   |
| · <b>IMDG</b>   |  |
|  |  |
|  |  |
| · <b>Class</b>  | 6.1 Toxic substances   |
| · <b>Label</b>  | 6.1/3  |


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<p>· <b>IATA</b></p> 	
· <b>Class</b>	6.1 Toxic substances
· <b>Label</b>	6.1 (3)
· <b>Packing group</b>	II
· <b>DOT, IMDG, IATA</b>	II
· <b>Environmental hazards:</b>	Not applicable.
· <b>Special precautions for user</b>	Warning: Toxic substances
· <b>Danger code (Kemler):</b>	63
· <b>EMS Number:</b>	F-E,S-D
· <b>Stowage Category</b>	B
· <b>Stowage Code</b>	SW2 Clear of living quarters.
· <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>	Not applicable.
· <b>Transport/Additional information:</b>	
· <b>DOT</b>	
· <b>Quantity limitations</b>	On passenger aircraft/rail: 5 L On cargo aircraft only: 60 L
· <b>IMDG</b>	
· <b>Limited quantities (LQ)</b>	100 ml
· <b>Excepted quantities (EQ)</b>	Code: E4 Maximum net quantity per inner packaging: 1 ml Maximum net quantity per outer packaging: 500 ml
· <b>UN "Model Regulation":</b>	UN 2929 TOXIC LIQUID, FLAMMABLE, ORGANIC, N.O.S. (HEXAMETHYLENE-DI-ISOCYANATE, AMYL ACETATES), 6.1 (3), II

**15 Regulatory information**

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Sara**

· <b>Section 355 (extremely hazardous substances):</b>
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None of the ingredients is listed.
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· <b>Section 313 (Specific toxic chemical listings):</b>
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822-06-0   hexamethylene-di-isocyanate
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· <b>TSCA (Toxic Substances Control Act):</b>
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All ingredients are listed.
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· <b>Proposition 65</b>
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· <b>Chemicals known to cause cancer:</b>
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None of the ingredients is listed.
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· <b>Chemicals known to cause reproductive toxicity for females:</b>
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None of the ingredients is listed.
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· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

· **Carcinogenic categories**· **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

· **TLV (Threshold Limit Value established by ACGIH)**

None of the ingredients is listed.

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

· **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms**

GHS02 GHS07

· **Signal word** Warning· **Hazard-determining components of labeling:**Hexamethylene Diisocyanate Homopolymer  
(R)-p-mentha-1,8-diene  
hexamethylene-di-isocyanate· **Hazard statements**

Flammable liquid and vapor.

Harmful if inhaled.

Causes skin irritation.

May cause an allergic skin reaction.

May cause respiratory irritation.

· **Precautionary statements**

If medical advice is needed, have product container or label at hand.

Keep out of reach of children.

Read label before use.

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

Ground/bond container and receiving equipment.

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

Use only non-sparking tools.

Take precautionary measures against static discharge.

Avoid breathing dust/fume/gas/mist/vapors/spray

Wash thoroughly after handling.

Use only outdoors or in a well-ventilated area.

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

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

If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

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

Call a poison center/doctor if you feel unwell.

Specific treatment (see on this label).

Take off contaminated clothing and wash it before reuse.

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

Wash contaminated clothing before reuse.

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*In case of fire: Use for extinction: CO2, powder or water spray.  
Store in a well-ventilated place. Keep container tightly closed.  
Store in a well-ventilated place. Keep cool.  
Store locked up.  
Dispose of contents/container in accordance with local/regional/national/international regulations.*

- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

## 16 Other information

*This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.*

- **Department issuing SDS:** Environment protection department.
- **Contact:** Mr. Williams
- **Date of preparation / last revision** 01/20/2022 / -
- **Abbreviations and acronyms:**
  - IMDG: International Maritime Code for Dangerous Goods
  - DOT: US Department of Transportation
  - IATA: International Air Transport Association
  - ACGIH: American Conference of Governmental Industrial Hygienists
  - EINECS: European Inventory of Existing Commercial Chemical Substances
  - ELINCS: European List of Notified Chemical Substances
  - CAS: Chemical Abstracts Service (division of the American Chemical Society)
  - NFPA: National Fire Protection Association (USA)
  - HMS: Hazardous Materials Identification System (USA)
  - VOC: Volatile Organic Compounds (USA, EU)
  - LC50: Lethal concentration, 50 percent
  - LD50: Lethal dose, 50 percent
  - PBT: Persistent, Bioaccumulative and Toxic
  - vPvB: very Persistent and very Bioaccumulative
  - NIOSH: National Institute for Occupational Safety
  - OSHA: Occupational Safety & Health
  - TLV: Threshold Limit Value
  - PEL: Permissible Exposure Limit
  - REL: Recommended Exposure Limit
  - Flam. Liq. 3: Flammable liquids – Category 3
  - Acute Tox. 4: Acute toxicity – Category 4
  - Skin Irrit. 2: Skin corrosion/irritation – Category 2
  - Skin Sens. 1: Skin sensitisation – Category 1
  - STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

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