

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

1.1 Product identifier

Trade name: **HERCULAN RB-N / SR 150 { B }**

Article number: 223343 1/4

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

Sector of Use

Product category

Process category

Environmental release category

Article category

Application of the substance / the mixture

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier:

HERCULAN B.V.
Energieweg 6
4231 DJ Meerkerk
The Netherlands
Phone +31 183 354700
Fax: +31 183 354740
e-mail: info@herculan.com

Further information obtainable from:

Environmental department

1.4 Emergency telephone number:

+49 (0) 6131 19240 [24 h - 365 d] - Giftinformationszentrale Mainz
or
+31 (0) 183 354 700 [Mo - Fr. 8 - 17 o'clock] - HERCULAN

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008



GHS08 health hazard

Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Carc. 2 H351 Suspected of causing cancer.

STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.



GHS07

Acute Tox. 4 H332 Harmful if inhaled.

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2 H319 Causes serious eye irritation.

Skin Sens. 1 H317 May cause an allergic skin reaction.

STOT SE 3 H335 May cause respiratory irritation.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008

Hazard pictograms

Signal word

The product is classified and labelled according to the CLP regulation.

GHS07, GHS08

Danger

Hazard-determining components of labelling:

Prepolymeer van MDI/TDI & Polyol
diphenylmethane-4,4'-di-isocyanate
diphenylmethane-2,4'-diisocyanate
m-tolylidene diisocyanate

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Hazard statements

H332 Harmful if inhaled.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317 May cause an allergic skin reaction.
H351 Suspected of causing cancer.
H335 May cause respiratory irritation.
H373 May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P284 [In case of inadequate ventilation] wear respiratory protection.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
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.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Additional information:

Contains isocyanates. May produce an allergic reaction.

2.3 Other hazards

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Results of PBT and vPvB assessment

PBT:

Not applicable.

vPvB:

Not applicable.

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SECTION 3: Composition/information on ingredients

3.2 Chemical characterisation: Mixtures

Description:

There are no additional ingredients present which are classified as hazardous to health or the environment and on this basis need to be mentioned in this section.

Dangerous components:

	Prepolymeer van MDI/TDI & Polyol ⚠ Resp. Sens. 1, H334; ⚠ Eye Irrit. 2, H319; Skin Sens. 1, H317	50 - 100%
CAS: 101-68-8 EINECS: 202-966-0	diphenylmethane-4,4'-di-isocyanate ⚠ Resp. Sens. 1, H334; Carc. 2, H351; STOT RE 2, H373; ⚠ Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335	10 - 25%
CAS: 5873-54-1 EINECS: 227-534-9	diphenylmethane-2,4'-diisocyanate ⚠ Resp. Sens. 1, H334; Carc. 2, H351; STOT RE 2, H373; ⚠ Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335	10 - 25%
CAS: 26471-62-5 EINECS: 247-722-4	m-tolylidene diisocyanate ⚠ Acute Tox. 2, H330; ⚠ Resp. Sens. 1, H334; Carc. 2, H351; ⚠ Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335; Aquatic Chronic 3, H412	≤ 2.5%
CAS: 128-37-0 EINECS: 204-881-4	2,6-di-tert-butyl-p-cresol ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410; ⚠ Acute Tox. 4, H302; Skin Irrit. 2, H315; Eye Irrit. 2, H319	≤ 0.15%

Additional information:

For the wording of the listed risk phrases refer to section 16.

SECTION 4: First aid measures

4.1 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. If symptoms persist, consult a doctor.

After swallowing:

If symptoms persist consult doctor.

4.2 Most important symptoms and effects, both acute and delayed

No further relevant information available.

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4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

SECTION 5: Firefighting measures**5.1 Extinguishing media**
Suitable extinguishing agents:CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

Use fire extinguishing methods suitable to surrounding conditions.

5.2 Special hazards arising from the substance or mixture

Formation of toxic gases is possible during heating or in case of fire.

5.3 Advice for firefighters**Protective equipment:**

Mount respiratory protective device.

Do not inhale explosion gases or combustion gases.

SECTION 6: Accidental release measures**6.1 Personal precautions, protective equipment and emergency procedures**

Not required.

6.2 Environmental precautions:

Dilute with plenty of water.

Do not allow to enter sewers/ surface or ground water.

6.3 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.**6.4 Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

SECTION 7: Handling and storage**7.1 Precautions for safe handling**No special measures required.
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.**Information about fire - and explosion protection:**

No special measures required.

7.2 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:Protect from frost.
Keep container tightly sealed.
Store in dry conditions.
Store in a cool place.**7.3 Specific end use(s)**

No further relevant information available.

SECTION 8: Exposure controls/personal protection**Additional information about design of technical facilities:**

No further data; see item 7.

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8.1 Control parameters**Ingredients with limit values that require monitoring at the workplace:****101-68-8 diphenylmethane-4,4'-di-isocyanate**WEL Short-term value: 0.07 mg/m³
Long-term value: 0.02 mg/m³
Sen; as -NCO**5873-54-1 diphenylmethane-2,4'-diisocyanate**WEL Short-term value: 0.07 mg/m³
Long-term value: 0.02 mg/m³
Sen; as -NCO**26471-62-5 m-tolylidene diisocyanate**WEL Short-term value: 0.07 mg/m³
Long-term value: 0.02 mg/m³
Sen; as -NCO**Additional information:**

The lists valid during the making were used as basis.

8.2 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.
Store protective clothing separately.
Avoid contact with the eyes and skin.
Do not eat, drink, smoke or sniff while working.**Respiratory protection:**

Only during spraying without adequate removal by suction.

Use suitable respiratory protective device in case of insufficient ventilation.
Use suitable respiratory protective device when high concentrations are present.**Protection of hands:**

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

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 materialThe exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
The determined penetration times according to EN 374 part III are not performed under practical conditions. Therefore a maximum wearing time, which corresponds to 50% of the penetration time, is recommended.**As protection from splashes gloves made of the following materials are suitable:**Nitrile rubber, NBR
Natural rubber, NR**Eye protection:**

Tightly sealed goggles

Body protection:

Protective work clothing

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SECTION 9: Physical and chemical properties· **9.1 Information on basic physical and chemical properties**· **General Information**· **Appearance:**

· Form:	Fluid
· Colour:	According to product specification
· Odour:	Characteristic
· Odour threshold:	Not determined.

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

· Melting point/Melting range:	Undetermined.
· Boiling point/Boiling range:	208 °C

· **Flash point:** > 200 °C· **Flammability (solid, gaseous):** Not applicable.· **Ignition temperature:** 520 °C· **Decomposition temperature:** Not determined.· **Self-igniting:** Product is not selfigniting.· **Danger of explosion:** Product does not present an explosion hazard.· **Explosion limits:**

· Lower:	0.4 Vol %
· Upper:	Not determined.

· **Vapour pressure:** Not determined.· **Density at 20 °C:** 1.12 g/cm³· **Relative density:** Not determined.· **Vapour density:** Not determined.· **Evaporation rate:** Not determined.· **Solubility in / Miscibility with water:**

Fully miscible.

· **Partition coefficient (n-octanol/water):** Not determined.· **Viscosity:**

· Dynamic:	Not determined.
· Kinematic:	Not determined.

· **Solvent content:**

· Organic solvents:	0,0 %
· Water:	0,0 %

· **Solids content:** 9,0 %· **9.2 Other information:** No further relevant information available.**SECTION 10: Stability and reactivity**· **10.1 Reactivity**· **10.2 Chemical stability**· **Thermal decomposition / conditions to be avoided:**

No decomposition if used according to specifications.

· **10.3 Possibility of hazardous reactions**

No dangerous reactions known.

· **10.4 Conditions to avoid**

No further relevant information available.

· **10.5 Incompatible materials:**

No further relevant information available.

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· **10.6 Hazardous decomposition products:** No dangerous decomposition products known.**SECTION 11: Toxicological information**· **11.1 Information on toxicological effects**· **Acute toxicity:**· **LD/LC50 values relevant for classification:****101-68-8 diphenylmethane-4,4'-di-isocyanate**

Inhalative	LC50/4 h OECD 453 without guidelines	0.31 mg/l (rat) positive (rat) (2 years - 5 days per week) Sensitising (Guinea pig)
Irritation of skin	OECD 406 OECD 474	Not sensitising (Guinea pig) - (Mammalian Erythrocyte Micronucelus Test)

5873-54-1 diphenylmethane-2,4'-diisocyanate

Inhalative	LC50/4 h OECD 453 without guidelines	0.31 mg/l (rat) positive (rat) (2 years - 5 days per week) Sensitising (Guinea pig)
Irritation of skin	OECD 406 OECD 474	not sensitising (Guinea pig) - (Mammalian Erythrocyte Micronucelus Test)

· **Primary irritant effect:**· **on the skin:**

Irritant to skin and mucous membranes.

· **on the eye:**

Irritating effect.

· **Sensitisation:**Sensitisation possible through inhalation.
Sensitisation possible through skin contact.· **Additional toxicological information:**The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
Harmful
Irritant· **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)****101-68-8 diphenylmethane-4,4'-di-isocyanate**OECD 414 | 12 mg/m³ (rat) (NOAEL)**5873-54-1 diphenylmethane-2,4'-diisocyanate**OECD 414 | 4 mg/m³ (rat)

Carc. 2

SECTION 12: Ecological information· **12.1 Toxicity**· **Aquatic toxicity:****101-68-8 diphenylmethane-4,4'-di-isocyanate**

LogPow	200 BCF (-)
OECD 202	> 1000 mg/l (daphnia)
OECD 203	> 1000 mg/l (fish)
OECD 209	> 100 mg/l (Bacterie)
OECD 211	> 10 mg/l (Daphnia Magna)
OECD 302 C	0 % (-) (Modified MITI Test (III))

5873-54-1 diphenylmethane-2,4'-diisocyanate

LogPow	200 BCF (-)
OECD 202	> 1000 mg/l (Daphnia Magna)
OECD 203	> 1000 mg/l (fish)
OECD 209	> 100 mg/l (Bacterie)
OECD 211	> 10 mg/l (Daphnia Magna)
OECD 302 C	0 % (-) (Modified MITI Test (III))
OECD 471	- (Bacterial Reserve Mutation Test)

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- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:** Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation** Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

SECTION 14: Transport information

- **14.1 UN-Number**
- **ADR, ADN, IMDG, IATA** Void
- **14.2 UN proper shipping name**
- **ADR, ADN, IMDG, IATA** Void
- **14.3 Transport hazard class(es)**
- **ADR, ADN, IMDG, IATA**
- **Class** Void
- **14.4 Packing group**
- **ADR, IMDG, IATA** Void
- **14.5 Environmental hazards:**
- **Marine pollutant:** No
- **14.6 Special precautions for user** Not applicable.
- **14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.
- **UN "Model Regulation":** -

SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Labelling according to Regulation (EC) No 1272/2008** The product is classified and labelled according to the CLP regulation.
- **Hazard pictograms** GHS07, GHS08
- **Signal word** Danger
- **Hazard-determining components of labelling:** Prepolymeer van MDI/TDI & Polyol
diphenylmethane-4,4'-di-isocyanate
diphenylmethane-2,4'-diisocyanate
m-tolylidene diisocyanate
- **Hazard statements** H332 Harmful if inhaled.
H315 Causes skin irritation.
H319 Causes serious eye irritation.

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- **Precautionary statements**
 - H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
 - H317 May cause an allergic skin reaction.
 - H351 Suspected of causing cancer.
 - H335 May cause respiratory irritation.
 - H373 May cause damage to organs through prolonged or repeated exposure.
 - P260 Do not breathe dust/fume/gas/mist/vapours/spray.
 - P284 [In case of inadequate ventilation] wear respiratory protection.
 - P280 Wear protective gloves/protective clothing/eye protection/face protection.
 - 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.
 - P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
- **National regulations:**
- **Technical instructions (air):**

Class	Share in %
I	20.9
- **Waterhazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water.
- **Other regulations, limitations and prohibitive regulations** No sales to private
- **VOC**
- **VOC EU [%]** 0.00 %
- **VOC CH** 0.00 %
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 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.

- **Relevant phrases**
 - H302 Harmful if swallowed.
 - H315 Causes skin irritation.
 - H317 May cause an allergic skin reaction.
 - H319 Causes serious eye irritation.
 - H330 Fatal if inhaled.
 - 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.
 - H400 Very toxic to aquatic life.
 - H410 Very toxic to aquatic life with long lasting effects.
 - H412 Harmful to aquatic life with long lasting effects.
- **Department issuing MSDS:** Environmental Department
- **Contact:** Dr. Michael Kissel
- **Abbreviations and acronyms:**
 - ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
 - IMDG: International Maritime Code for Dangerous Goods
 - IATA: International Air Transport Association
 - GHS: Globally Harmonised System of Classification and Labelling of Chemicals
 - 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)
 - LCS0: Lethal concentration, 50 percent
 - LD50: Lethal dose, 50 percent
 - Acute Tox. 2: Acute toxicity, Hazard Category 2
 - Acute Tox. 4: Acute toxicity, Hazard Category 4
 - Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
 - Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2
 - Resp. Sens. 1: Sensitisation - Respirat., Hazard Category 1
 - Skin Sens. 1: Sensitisation - Skin, Hazard Category 1
 - Carc. 2: Carcinogenicity, Hazard Category 2
 - STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3
 - STOT RE 2: Specific target organ toxicity - Repeated exposure, Hazard Category 2
 - Aquatic Acute 1: Hazardous to the aquatic environment - Acute/Hazard, Category 1
 - Aquatic Chronic 1: Hazardous to the aquatic environment - Chronic Hazard, Category 1
 - Aquatic Chronic 3: Hazardous to the aquatic environment - Chronic Hazard, Category 3

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*** Data compared to the previous version
altered.**

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