

1 Identification

Product identifier

- Trade name: **HERCULAN FC 4000 { B }**
- Article number: 803750/18
- Application of the substance / the mixture: Coating compound/ Surface coating/ paint

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

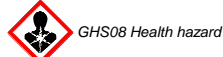
Information department:

—
 Enviromental department

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

2 Hazard(s) identification

Classification of the substance or mixture


GHS08 Health hazard

Repr. 2 H361 Suspected of damaging fertility or the unborn child.



GHS05 Corrosion

Skin Corr. 1B H314 Causes severe skin burns and eye damage.

Eye Dam. 1 H318 Causes serious eye damage.



GHS07

Acute Tox. 4 H332 Harmful if inhaled.

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

Label elements
GHS label elements
Hazard pictograms
Signal word

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

GHS05, GHS07, GHS08

Danger

Hazard-determining components of labeling:

m-phenylenebis(methylamine)
 4-tert-butylphenol
 trimethylhexane-1,6-diamine

Hazard statements

H332 Harmful if inhaled.
 H314 Causes severe skin burns and eye damage.
 H317 May cause an allergic skin reaction.
 H361 Suspected of damaging fertility or the unborn child.

Precautionary statements

P260 Do not breathe dusts or mists.
 P280 Wear protective gloves.
 P280 Wear eye protection / face protection.
 P264 Wash thoroughly after handling.
 P271 Use only outdoors or in a well-ventilated area.
 P272 Contaminated work clothing must not be allowed out of the workplace.
 P201 Obtain special instructions before use.
 P202 Do not handle until all safety precautions have been read and understood.
 P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

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 P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P310 Immediately call a POISON CENTER/doctor.
 P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 P321 Specific treatment (see on this label).
 P363 Wash contaminated clothing before reuse.
 P308+P313 IF exposed or concerned: Get medical advice/attention.
 P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
 P301+P330+P331 If swallowed: Rinse mouth. Do NOT induce vomiting.
 P405 Store locked up.
 P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Classification system:
NFPA ratings (scale 0 - 4)

Health = 3
 Fire = 1
 Reactivity = 0

HEALTH 3
 FIRE 1
 REACTIVITY 0

HMS-ratings (scale 0 - 4)
Other hazards
Results of PBT and vPvB assessment
PBT:

Not applicable.

vPvB:

Not applicable.

3 Composition/information on ingredients

Chemical characterization: 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:

1477-55-0	m-phenylenebis(methylamine)	10 - 25%
	⚠ Skin Corr. 1B, H314; Eye Dam. 1, H318; ⚠ Acute Tox. 4, H302; Acute Tox. 4, H332; Skin Sens. 1, H317	
98-54-4	4-tert-butylphenol	10 - 25%
	⚠ Repr. 2, H361; ⚠ Skin Corr. 1C, H314; Eye Dam. 1, H318; ⚠ Aquatic Chronic 2, H411; ⚠ STOT SE 3, H335; Aquatic Acute 2, H401	
25620-58-0	trimethylhexane-1,6-diamine	5 - 10%
	⚠ Skin Corr. 1B, H314; Eye Dam. 1, H318; ⚠ Acute Tox. 4, H302; Skin Sens. 1, H317	

Additional information:

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

4 First-aid measures

Description of first aid measures
General information:

Immediately remove any clothing soiled by the product.



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.
 Immediately rinse with water.

After eye contact:

Rinse opened eye for several minutes under running water. Then consult a doctor.
 Drink copious amounts of water and provide fresh air. Immediately call a doctor.

After swallowing:
Information for doctor:
Most important symptoms and effects, both acute and delayed

No further relevant information available.


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· **Indication of any immediate medical attention and special treatment needed** No further relevant information available.

5 Fire-fighting measures

· **Extinguishing media**
· **Suitable extinguishing agents:**  CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
Use fire fighting measures that suit the environment.

· **Special hazards arising from the substance or mixture** During heating or in case of fire poisonous gases are produced. Formation of toxic gases is possible during heating or in case of fire.

· **Advice for firefighters**
· **Protective equipment:** Mount respiratory protective device. Do not inhale explosion gases or combustion gases.

6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures** Mount respiratory protective device. Wear protective equipment. Keep unprotected persons away. Do not allow to enter sewers/ surface or ground water.

· **Environmental precautions:**
· **Methods and material for containment and cleaning up:** Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Use neutralizing agent. Dispose contaminated material as waste according to item 13. Ensure adequate ventilation.

· **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.

7 Handling and storage

· **Handling:**
· **Precautions for safe handling** No special measures required. Ensure good ventilation/exhaustion at the workplace. Open and handle receptacle with care. Prevent formation of aerosols.

· **Information about protection against explosions and fires:** Keep respiratory protective device available.

· **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 receptacle tightly sealed. Store in dry conditions. Store in a cool place.

· **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.


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· **Control parameters**
· **Components with limit values that require monitoring at the workplace:** The following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

1477-55-0 m-phenylenebis(methylamine)


REL	Ceiling limit value: 0.1 mg/m ³ Skin
TLV	Ceiling limit value: 0.1 mg/m ³ Skin

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

· **Breathing equipment:**  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.


· **Recommended filter device for short term use:** Combination filter A-P2

· **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 material** The exact break trough 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

9 Physical and chemical properties

· **Information on basic physical and chemical properties**
· **General Information**
· **Appearance:** Fluid
· **Form:** Fluid

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Color:	According to product specification
Odor:	Characteristic
Odor threshold:	Not determined.
pH-value at 20 °C (68 °F):	12
Change in condition	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	239 °C (462 °F)
Flash point:	111 °C (232 °F)
Flammability (solid, gaseous):	Not applicable.
Ignition temperature:	510 °C (950 °F)
Decomposition temperature:	Not determined.
Auto igniting:	Product is not selfigniting.
Danger of explosion:	Product does not present an explosion hazard.
Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
Vapor pressure:	Not determined.
Density at 20 °C (68 °F):	1.07144 g/cm ³ (8.941 lbs/gal)
Relative density	Not determined.
Vapor density	Not determined.
Evaporation rate	Not determined.
Solubility in / Miscibility with	
Water:	Not miscible or difficult to mix.
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:	75.2 %
Other information	No further relevant information available.

10 Stability and reactivity

- Reactivity** No further relevant information available.
- 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.

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11 Toxicological information

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

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

1477-55-0 m-phenylenebis(methylamine)		
Oral	LD50	940 mg/kg (rat)
Dermal	LD50	2000 mg/kg (rabbit)
Inhalative	LC50/4 h	2.4 mg/l (rat)

98-54-4 4-tert-butylphenol

Oral	LD50	4000 mg/kg (rat)
Dermal	LD50	2288 mg/kg (rabbit)
Inhalative	LC50/4 h	5.6 mg/l (rat)

- Primary irritant effect:**

- on the skin:** Caustic effect on skin and mucous membranes.
- on the eye:** Strong caustic effect.

- Sensitization:**

- Additional toxicological information:**

Strong irritant with the danger of severe eye injury.
Sensitization possible through skin contact.

The product shows the following dangers according to internally approved calculation methods for preparations:
Harmful
Corrosive
Irritant
Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

- Carcinogenic categories**

- IARC (International Agency for Research on Cancer)**

None of the ingredients is listed.

- 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:**

1477-55-0 m-phenylenebis(methylamine)

Acute LC50	75 mg/L (leuciscus idus) (96 h)
Acute EC50	15.2 mg/L (Daphnia Magna) (48 h)
	12 mg/L (scenedesmus subspicatus) (72 h)
LogPow	0.18 BCF (n-octanol/water)
OECD 301 B	49 % (28 d)
OECD 302 C	22 % (28 d)

- 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.

- 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.
Must not reach bodies of water or drainage ditch undiluted or unneutralized.
Danger to drinking water if even small quantities leak into the ground.
Rinse off of bigger amounts into drains or the aquatic environment may lead to increased pH-values. A high pH-value harms aquatic organisms. In the dilution of the use-level the pH-value is considerably reduced, so that after the use of the product the aqueous waste, emptied into

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· **Results of PBT and vPvB assessment** drains, is only low water-dangerous.

· **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:** Empty contaminated packagings thoroughly. They can be recycled after thorough and proper cleaning.

14 Transport information

· **UN-Number**

· **DOT, ADR, IMDG, IATA** UN2735

· **UN proper shipping name**

· **DOT** Amines, liquid, corrosive, n.o.s. (m-phenylenebis(methylamine), 4-tert-butylphenol)

· **ADR** 2735 Amines, liquid, corrosive, n.o.s. (m-phenylenebis(methylamine), 4-tert-butylphenol)

· **IMDG, IATA** AMINES, LIQUID, CORROSIVE, N.O.S. (m-phenylenebis(methylamine), 4-tert-butylphenol)

· **Transport hazard class(es)**

· **DOT**



· **Class** 8 Corrosive substances

· **Label** 8

· **ADR**



· **Class** 8 (C7) Corrosive substances

· **Label** 8

· **IMDG, IATA**



· **Class** 8 Corrosive substances

· **Label** 8

· **Packing group**

· **DOT, ADR, IMDG, IATA** III

· **Environmental hazards:**

· **Marine pollutant:** No

· **Special precautions for user** Warning: Corrosive substances

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· **Danger code (Kemler):** 80

· **EMS Number:** F-A, S-B

· **Segregation groups** Alkalis

· **Stowage Category** A

· **Segregation Code** SG35 Stow "separated from" acids.

· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.

· **Transport/Additional information:**

· **ADR**

· **Excepted quantities (EQ)** -

Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 1000 ml

· **IMDG**

· **Limited quantities (LQ)** 5L

· **Excepted quantities (EQ)** -

Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 1000 ml

· **UN "Model Regulation":** UN 2735 AMINES, LIQUID, CORROSIVE, N.O.S. (M-PHENYLENEBIS(METHYLAMINE), 4-TERT-BUTYLPHENOL), 8, III

15 Regulatory information

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

· **Sara**

· **Section 355 (extremely hazardous substances):**

None of the ingredient is listed.

· **Section 313 (Specific toxic chemical listings):**

None of the ingredients is listed.

· **TSCA (Toxic Substances Control Act):**

1477-55-0 m-phenylenebis(methylamine)

25620-58-0 trimethylhexane-1,6-diamine

68611-44-9 Silane, dichlorodimethyl-, reaction products with silica

· **Proposition 65**

· **Chemicals known to cause cancer:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

· **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.

· **Carcinogenicity categories**

· **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

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

None of the ingredients is listed.

· **MAK (German Maximum Workplace Concentration)**

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** GHS05, GHS07, GHS08

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Safety Data Sheet

acc. to OSHA HCS

Printing date 08/02/2016

Reviewed on 08/02/2016

Trade name: **HERCULAN FC 4000 { B }**

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- **Signal word** Danger
- **Hazard-determining components of labeling:** *m*-phenylenebis(methylamine)
4-tert-butylpheno
trimethylhexane-1,6-diamine
- **Hazard statements**
H332 Harmful if inhaled.
H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.
H361 Suspected of damaging fertility or the unborn child.
- **Precautionary statements**
P260 Do not breathe dusts or mists.
P280 Wear protective gloves.
P280 Wear eye protection / face protection.
P264 Wash thoroughly after handling.
P271 Use only outdoors or in a well-ventilated area.
P272 Contaminated work clothing must not be allowed out of the workplace.
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER/doctor.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P321 Specific treatment (see on this label).
P363 Wash contaminated clothing before reuse.
P308+P313 IF exposed or concerned: Get medical advice/attention.
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
P301+P330+P331 If swallowed: Rinse mouth. Do NOT induce vomiting.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
- **National regulations:**
- **Water hazard class:** Water hazard class 2 (Self-assessment): hazardous for water.
- **VOC**
- **VOC EU [%]** 0.00 %
- **VOC USA** 0.0 g/l / 0.00 lb/gl
- **VOC CH** 0.00 %
- **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:** Environmental Department
- **Contact:** Dr. Michael Kissel
- **Date of preparation / last revision** 08/02/2016 / 17
- **Abbreviations and acronyms:**
 - RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
 - ICAO: International Civil Aviation Organisation
 - 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
 - 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)
 - HMIS: Hazardous Materials Identification System (USA)
 - LCS50: 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

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acc. to OSHA HCS

Printing date 08/02/2016

Reviewed on 08/02/2016

Trade name: **HERCULAN FC 4000 { B }**

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

PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
Acute Tox. 4: Acute toxicity – Category 4
Skin Corr. 1B: Skin corrosion/irritation – Category 1B
Skin Corr. 1C: Skin corrosion/irritation – Category 1C
Eye Dam. 1: Serious eye damage/eye irritation – Category 1
Skin Sens. 1: Skin sensitisation – Category 1
Repr. 2: Reproductive toxicity – Category 2
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
Aquatic Acute 2: Hazardous to the aquatic environment - acute aquatic hazard – Category 2
Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2

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