

Date of issue: 09/08/2026

Reviewed on 09/08/2026

1 Identification· **Product identifier**· **Trade name:****Herculan XF { C }**· **Other means of identification**· **Article number:**

HE_503300/5

· **Application of the substance / the mixture**

Component or ready-mix for in-situ creation of flooring / roofing / adhesives / resins - materials.
The final product is created only upon curing - Chemical properties of the starting materials in section 3.

· **Details of the supplier of the safety data sheet**· **Manufacturer/Supplier:****HERCULAN B.V.**

c/o EPUTAN Kunststoftechniek B.V.

Energieweg 6

4231 DJ Meerkkerk

The Netherlands

Phone +31 183 354700

Fax: +31 183 354740

e-mail: info@herculan.com

· **Information department:**

Environmental 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**

Flammable liquids 4

H227 Combustible liquid.

Acute toxicity - inhalation 4

H332 Harmful if inhaled.

Sensitization - skin 1

H317 May cause an allergic skin reaction.

Specific target organ toxicity (single exposure) 3

H335 May cause respiratory irritation.

Specific target organ toxicity (repeated exposure) 1

H372 Causes damage to organs through prolonged or repeated exposure.

· **Additional information:**

The full text of the classification and labeling elements mentioned is given in Section 16.

· **Label elements**· **GHS label elements**· **Hazard pictograms**

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



GHS07 GHS08

· **Signal word**

Danger

· **Hazard-determining components of labeling:**Hexamethylene diisocyanate, oligomer (biuret type)
triphenylphosphine· **Hazard statements**

H227 Combustible liquid.

H332 Harmful if inhaled.

H317 May cause an allergic skin reaction.

H335 May cause respiratory irritation.

H372 Causes damage to organs through prolonged or repeated exposure.

· **Precautionary statements**

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P260 Do not breathe dust/fume/gas/mist/vapors/spray.

P264 Wash thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

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

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

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

P304+P340 If inhaled: Remove person to fresh air and keep comfortable for breathing.

P314 Get medical advice/attention if you feel unwell.

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

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

P370+P378 In case of fire: Use CO₂, powder or water spray to extinguish.

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

(Contd. on page 2)

Date of issue: 09/08/2026

Reviewed on 09/08/2026

Trade name: **Herculan XF { C }**

(Contd. of page 1)

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Information pertaining to particular dangers for man and environment:**· **Classification system:**· **NFPA ratings (scale 0 - 4)**Health = 0
Fire = 2
Reactivity = 0· **HMS-ratings (scale 0 - 4)**Health = 1
Fire = 2
Reactivity = 0· **Other hazards**· **Results of PBT and vPvB assessment**· **PBT:**

This product contains no substances evaluated as PBT at concentrations of 0.1% or higher.

· **vPvB:**

This product contains no substances rated as vPvB at concentrations of 0.1% or higher.

· **Classification according to (d)(1)(ii) of § 1910.1200**

The SDS issuer does not object to the classifications provided by importers or manufacturers of precursor products.

· **Hazards not otherwise classified**

There are no adverse physical or health effects known that are not covered by the hazard classes of the Hazard Communications Standard.

* **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:**

28182-81-2	Hexamethylene diisocyanate, oligomer (biuret type)	45-70%
	⚠ Acute toxicity - inhalation 4, H332; Sensitization - skin 1, H317; Specific target organ toxicity (single exposure) 3, H335	
603-35-0	triphenylphosphine	1-5%
	⚠ Acute toxicity - oral 3, H301; ⚠ Specific target organ toxicity (repeated exposure) 1, H372; ⚠ Sensitization - skin 1, H317; Specific target organ toxicity (single exposure) 3, H335	

· **Additional information:**

Acute toxicity estimates

	Oral	Inhalative	Dermal
CAS 822-06-0	746 mg/kg	0,124 mg/l	mg/kg
CAS 28182-81-2	mg/kg	1,5 mg/l	mg/kg

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.

Take affected persons out into the fresh air.

Do not leave affected persons unattended.

Seek medical treatment.

Medical supervision for at least 48 hours.

Show this safety data sheet to the physician on duty.

Protection of first aiders : No action should be taken if there is a risk of personal accidents or in case of insufficient training. This can be dangerous for the person applying mouth-to-mouth resuscitation.

If the possibility of exposure exists, consult Section 8 for specific personal protective equipment.

First responders should remember to protect themselves and wear the recommended protective clothing.

No action should be taken if there is a risk of personal accidents or in case of insufficient training.

· **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.

Seek medical treatment.

Use a respiration bag or breathing device.

(Contd. on page 3)

Date of issue: 09/08/2026

Reviewed on 09/08/2026

Trade name: Herculan XF { C }

(Contd. of page 2)

- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
Immediately rinse with water.
Seek medical treatment.
- **After eye contact:** Protect unharmed eye.
As far as easy to do, remove any contact lenses.
- **After swallowing:** Do not induce vomiting; immediately call for medical help.
A person vomiting while lying on their back should be turned onto their side.
Clean carefully or rinse mouth with water.
Keep breathing passages clear.
Never allow an unconscious person to drink (or eat).
Take patient to a hospital immediately.
- **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:**  CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **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.
Carbon monoxide (CO)
- **Advice for firefighters**
- **Protective equipment:** Mount respiratory protective device.
Wear self-contained respiratory protective device.
Do not inhale explosion gases or combustion gases.
Wear fully protective suit.
PSA 52 / PSA 55 / PSA 56 / PSA 57
- **Additional information** Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.
Collect contaminated fire fighting water separately. It must not enter the sewage system.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Mount respiratory protective device.
Remove persons from danger area.
Wear protective equipment. Keep unprotected persons away.
Keep people at a distance and stay upwind.
Wear protective clothing.
- **For emergency responders** Ensure adequate neutralization/absorbents are present near the storage area.
Never return spills to original containers for reuse.
Handle ingested material as described in "Disposal" section (section 13)
Danger zones should be clearly delineated and indicated by relevant warning and danger signs.
- **Environmental precautions:** Inform respective authorities in case of seepage into water course or sewage system.
In case of seepage into the ground inform responsible authorities.
Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.
Prevent further leaks and spills if safe to do so. If significant leaks cannot be contained, notify local authorities.
If the product contaminates rivers, lakes or sewers notify the respective authorities.
- **Methods and material for containment and cleaning up:** Let reaction take place at least 30 minuten.
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to section 13.
Ensure adequate ventilation.
Scoop up into lidded drums and render harmless.
Store in suitable and closed containers for disposal.

(Contd. on page 4)

Date of issue: 09/08/2026

Reviewed on 09/08/2026

Trade name: **Herculan XF { C }**

(Contd. of page 3)

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

603-35-0	triphenylphosphine	0.37 ppm
822-06-0	hexamethylene-di-isocyanate	0.13 mg/m3

· **PAC-2:**

603-35-0	triphenylphosphine	8.3 ppm
822-06-0	hexamethylene-di-isocyanate	1.4 mg/m3

· **PAC-3:**

603-35-0	triphenylphosphine	50 ppm
822-06-0	hexamethylene-di-isocyanate	20 mg/m3

· **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**· **Precautions for safe handling**

Provide eyewash facilities and safety showers near the work area.
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.

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

No special measures required.

· **Handling:**

Use according to accepted rules and practices related to industrial hygiene and safety. After working with this product, wash face, hands and exposed skin thoroughly. Remove contaminated clothing and protective equipment before going to the canteen. Do not eat, drink or smoke during use. Do not allow contaminated work clothing to leave the workplace. Wash hands before each work break and immediately after using the product. Wash hands before each work break and at the end of the working day.

· **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:**

Store away from foodstuffs.

· **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· **Control parameters**· **Components with limit values that require monitoring at the workplace:**

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

· **Additional information:**

The lists that were valid during the creation were used as basis.

· **Exposure controls**· **Appropriate engineering controls**

Keep respiratory protective device available.

· **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.
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.

(Contd. on page 5)

Date of issue: 09/08/2026

Reviewed on 09/08/2026

Trade name: **Herculan XF { C }**

(Contd. of page 4)

· **Recommended filter device for short term use:**

Airborne concentrations would be kept below exposure guidelines. When airborne concentrations may exceed exposure guidelines, use an approved air-purifying respirator equipped with a filter for organic vapors and particulates. In circumstances where concentrations in the air may exceed the level for which an air-purifying respirator is effective, use a compressed air respirator (type: positive pressure) (air hose-fed or self-contained respirator). In emergencies or in conditions where the concentration in air is not known, use an approved compressed air breathing apparatus (type: positive pressure) or air hose-fed respirator (type: positive pressure). Use following EC approved respirator: Filter for organic vapors with a particulate pre-filter for highly toxic substances, type AP3 (must comply with Standard EN 14387).

· **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 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 16523-1:2015 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

· **Not suitable are gloves made of the following materials:**

Leather gloves
Strong gloves

· **Eye protection:**



Tightly sealed goggles

· **Body protection:**



(Protective) work clothing

- Protective work clothing (long trousers, long-sleeved shirt). Avoid exposed skin, even in hot weather.

- Depending on processing: use spray-tight trousers or spray-tight overalls Overall (preferably thick cotton) or Tyvek-Pro Tech 'C', TyvekPro Tech 'F' fully protective single-use clothing.

· **Limitation and supervision of exposure into the environment**

Storage of the substances in tightly closed packaging

Emissions from ventilation or processing equipment must be monitored to ensure that they meet the requirements of environmental protection legislation. In some cases, gas scrubbers, filters or technical modifications to process equipment are required to reduce emissions to acceptable levels.

Avoid spreading spilled material and waste material and prevent contact with soil, waterways, drains and sewers.

9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Physical state**

Liquid

· **Color:**

Clear

· **Odor:**

A little musty

· **Odor threshold:**

Not determined

· **Melting point/Melting range:**

No test data available

· **Boiling point/Boiling range:**

209 °C (408.2 °F)

· **Flammability:**

No test data available

(Contd. on page 6)

US

Date of issue: 09/08/2026

Reviewed on 09/08/2026

Trade name: **Herculan XF { C }**

(Contd. of page 5)

- **Explosion limits:**
- **Lower:** No test data available
- **Upper:** No test data available
- **Flash point:** 88 °C (190.4 °F)
- **Auto igniting:** 160 °C (320 °F)
- **Decomposition temperature:** No test data available
- **pH-value:** Mixture is non-polar/aprotic.
- **Viscosity:**
- **Kinematic:** No test data available
- **Dynamic:** No test data available
- **Solubility in / Miscibility with**
- **Water:** Fully miscible.
- **Partition coefficient (n-octanol/water):** No test data available
- **Vapor pressure at 20 °C (68 °F):** 0 hPa
- **Vapor pressure:**
- **Density at 20 °C (68 °F):** 1.07 g/cm³ (8.929 lbs/gal)
- **Relative density** >> density
- **Vapor density** No test data available
- **Particle characteristics** Not applicable

- **Other information**
- **Appearance:**
- **Form:** Fluid
- **Important information on protection of health and environment, and on safety.**
- **Ignition temperature:** Product is not selfigniting.
- **Danger of explosion:** Product does not present an explosion hazard.
No test data available
- **Solvent content:**
- **Water:** 0.0 %
- **Solids content:** 60.1 %
- **Change in condition**
- **Evaporation rate** No test data available

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability** Stable under recommended storage conditions. See Section 7, Storage.
- **Thermal decomposition / conditions to be avoided:** Extreme temperatures and direct sunlight.
Exposure to air or moisture for prolonged periods.
- **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:** ATE values > 2000 mg/kg will have no impact on classification.
- **LD/LC50 values that are relevant for classification:**

ATE (Acute Toxicity Estimate)

Oral	Acute orale toxiciteit	3,367 mg/kg
Inhalative	Acute inhalatief toxiciteit	16.6 mg/l

28182-81-2 Hexamethylene diisocyanate, oligomer (biuret type)

Oral	OECD 401 (LD50)	>5,000 mg / kg (Rat)
Dermal	OECD 402 (LD50)	>2,000 mg/kg (Rat)
		>2,000 mg/kg (rabbit)

(Contd. on page 7)

Date of issue: 09/08/2026

Reviewed on 09/08/2026

Trade name: **Herculan XF { C }**

(Contd. of page 6)

Inhalative	Acute inhalatief toxiciteit	11 mg/l (ATE)
	OECD 403 (LC50)	0.402 mg/l (Rat) (04 h)
Irritation of skin	OECD 404	(rabbit) (04 h)
	OECD 406	(marmot (Magnusson-Kligman test))
Irritation of eyes	OECD 405	(rabbit)
603-35-0 triphenylphosphine		
Oral	Acute orale toxiciteit	100 mg/kg (ATE)
	OECD 423 (LD50)	700 mg/kg (Rat)
Dermal	OECD 402 (LD50)	>5 mg/kg (rabbit)
Inhalative	OECD 403 (LC50)	12.5 mg/l (Rat) (04 h)

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

No irritant effect.

· **on the eye:**

No irritating effect.

· **Sensitization:**

Sensitization possible through skin contact.

28182-81-2 Hexamethylene diisocyanate, oligomer (biuret type)

Irritation of skin | OECD 429 | (mouse)

· **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:

Harmful

Irritant

· **Interactive effects**

No interactive effects between components are known.

· **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.

· **Alternative sources for toxicological information**

No non-standard sources for toxicological information where used.

· **Toxiciteit bij herhaalde toediening****28182-81-2 Hexamethylene diisocyanate, oligomer (biuret type)**

Inhalative	OECD 413	3.3 mg/m ³ (Rat) (90 d)
	OECD 473	(Chinese hamster ovary (CHO) cells)
	OECD 476	(Chinese hamster ovary (CHO) cells)

* **12 Ecological information**· **Toxicity**· **Aquatic toxicity:****28182-81-2 Hexamethylene diisocyanate, oligomer (biuret type)**

OECD 201 (ErC50/ErL50)	>100 mg/l (Desmodesmus subspicatus) (72 h)
	>100 mg/l (scenedesmus subspicatus) (72 h)
OECD 202 (EC50/EL50)	>100 mg/l (Daphnia Magna) (48 h)
OECD 203 (LC50/LL50)	>100 mg/l (Danio rerio) (96 h)
OECD 209 (EC50/EL50)	645.7 mg/l (Activated sludge) (03 h)
OECD 471	(Ames Test (Salmonella/microsome test))

603-35-0 triphenylphosphine

OECD 201 (ErC50/ErL50)	>10,000 mg/l (pseudomonas putida) (01 h)
OECD 202 (EC50/EL50)	5 mg/l (Daphnia Magna) (48 h)

· **Persistence and degradability****28182-81-2 Hexamethylene diisocyanate, oligomer (biuret type)**

OECD 301 D | 0 % (28 d)

(Contd. on page 8)

Date of issue: 09/08/2026

Reviewed on 09/08/2026

Trade name: **Herculan XF { C }**

(Contd. of page 7)

603-35-0 triphenylphosphine

OECD 301 F <20 %

· **Bioaccumulative potential**

28182-81-2 Hexamethylene diisocyanate, oligomer (biuret type)

BCF (BioConcentrationFactor) - Bioaccumulation 9.6

OECD 117 (log Pow) - Bioaccumulation

· **Mobility in soil**

No further relevant information available.

· **Results of PBT and vPvB assessment**

This substance/mixture does not contain any components that can be considered persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

· **PBT:**

-

· **vPvB:**

-

· **Other adverse effects**· **Additional ecological information:**· **General notes:**

Water hazard class 1 (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.

13 Disposal considerations· **Waste treatment methods**· **Recommendation:**

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

This product, when disposed of in its unused and uncontaminated state, must be treated as hazardous waste according to EC Directive 2008/98/EC. Disposal practices must comply with all national and provincial laws and any municipal or local bylaws regarding hazardous waste. Additional evaluations may be required for used, contaminated and residual material. Do not discharge into sewers, soil or surface water. Incineration in a licensed incinerator suitable for this hazardous waste is recommended for this material. Small amounts of waste can be neutralized with e.g. polyol in preference to landfilling. Empty drums should be cleaned first (see Section 6) and then either punctured and scrapped or given to an approved reprocessor.

· **Uncleaned packagings:**· **Recommendation:**

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

· **Recommended cleansing agent:**

Water, if necessary with cleansing agents.

14 Transport information· **UN-Number**· **DOT, ADR, IMDG, IATA**

Void

· **UN proper shipping name**· **DOT, ADR, IMDG, IATA**

Void

· **Transport hazard class(es)**· **DOT, ADR, ADN, IMDG, IATA**· **Class**

Void

· **Packing group**· **DOT, ADR, IMDG, IATA**

Void

· **Environmental hazards:**

Not applicable

· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**

Not applicable

· **Transport/Additional information:**· **DOT**· **Quantity limitations**

<----- aircraft ----->

· **Special precautions for user**

Not applicable

(Contd. on page 9)

Date of issue: 09/08/2026

Reviewed on 09/08/2026

Trade name: **Herculan XF { C }**

(Contd. of page 8)

· UN "Model Regulation":

Void

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):**

28182-81-2 Hexamethylene diisocyanate, oligomer (biuret type)

ACTIVE

603-35-0 triphenylphosphine

ACTIVE

· **Hazardous Air Pollutants**

822-06-0 hexamethylene-di-isocyanate

· **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)**

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.

· **National regulations:**· **Water hazard class:**

Water hazard class 1 (Self-assessment): slightly hazardous for water.

· **Other regulations, limitations and prohibitive regulations**

General international information on combating damage caused by fire and leakage.

www.ERICARDS.net· **VOC USA**

0.0 g/l / 0.00 lb/gal

· **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.

- **Classification according to Regulation (EC) No 1272/2008**

The classification of the mixture is based on the calculation method using substance data according to Regulation (EC) No 1272/2008.

The safety data sheet is prepared in accordance with Regulation (EC) No. 1907/2006 (REACH) § 31, taking into account Annex II, which was amended by Commission Regulation (EU) 2020/878.

· **Department issuing SDS:**

Environmental Department

· **Contact:**

Dr. Michael Kissel

(Contd. on page 10)

Date of issue: 09/08/2026

Reviewed on 09/08/2026

Trade name: **Herculan XF { C }**

(Contd. of page 9)

- **Date of previous version**
- **Version number of previous version:**
- **Date of preparation**
- **Abbreviations and acronyms:**

07/22/2025

4

09/08/2026

ADR: Accord relatif au transport international 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

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)

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

TSCA: Toxic Substances Control Act

Flammable liquids 4: Flammable liquids – Category 4

Acute toxicity - oral 3: Acute toxicity – Category 3

Acute toxicity - inhalation 4: Acute toxicity – Category 4

Sensitization - skin 1: Skin sensitisation – Category 1

Specific target organ toxicity (single exposure) 3: Specific target organ toxicity (single exposure) – Category 3

Specific target organ toxicity (repeated exposure) 1: Specific target organ toxicity (repeated exposure) – Category 1

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

—US—