

COMMERCIAL PRODUCT NAME: TECHMOFLEX 11PS

1. IDENTIFICATION OF PREPARATION AND COMPANY

| | |
|-------------------------------|--|
| Trade name: | TECHMOFLEX 11PS |
| Manufacturer/Supplier: | TÉCNICAS DE HORMIGÓN Y MORTEROS S.L. |
| Address: | C/ Las Mimosas, Fase 1, Nave 35A-35B Polígono Industrial de Arinaga. 35118 Agüimes - Gran Canaria |
| Phone: | 928 18 93 55/56 |
| Fax | 928 18 80 41 |
| Emergency Phone: | 91 562 04 20 (National Institute of Toxicology) |

SECTION 2: HAZARDS IDENTIFICATION







- **2.1 Classification of the substance or mixture**
 - Classification according to Regulation (EC) No 1272/2008
 - The product is not classified according to the CLP regulation.
- **2.2 Label elements**
 - Labelling according to Regulation (EC) No 1272/2008 Void
 - Hazard pictograms Void
 - Signal word Void
 - Hazard statements Void
 - Additional information :
Contains isocyanates. May produce an allergic reaction.
Safety data sheet available on request.
 - Classification system Non-irritating to rabbit's eye (method : OECD guideline 405)
- **2.3 Other hazards**
 - Results of PBT and vPvB assessment
 - PBT: Not applicable.
 - vPvB: Not applicable.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

- **3.2 Chemical characterisation: Mixtures**
 - Description: Adhesive containing a polyurethane prepolymer based on diphenylmethanediisocyanate

| • Dangerous components: | | |
|---|---|--------|
| CAS: 9002-86-2 | polyvinyl chloride substance with a Community workplace exposure limit | 20-50% |
| CAS: 1330-20-7 EINECS: 215-535-7 Reg.nr.: 01-2119488216-32 | xylene, mixture of isomers ⚠ Flam. Liq. 3, H226; ⚠ Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315 | 4-7% |
| CAS: 13463-67-7 EINECS: 236-675-5 Reg.nr.: 01-2119489379-17 | titanium dioxide substance with a Community workplace exposure limit | < 5% |
| CAS: 1305-78-8 EINECS: 215-138-9 Reg.nr.: 01-2119475325-36 | calcium oxide ⚠ Eye Dam. 1, H318; ⚠ Skin Irrit. 2, H315 | < 2.5% |

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|--|---|--------|
| 926-141-6 Reg.nr.: 01-2119456620-43 | hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, < 2% aromatics  Asp. Tox. 1, H304 | < 2.5% |
| CAS: 100-41-4 EINECS: 202-849-4 Reg.nr.: 01-2119489370-35 | ethylbenzene  Flam. Liq. 2, H225;  STOT RE 2, H373; Asp. Tox. 1, H304;  Acute Tox. 4, H332 | < 2% |
| CAS: 1309-37-1 EINECS: 215-168-2 Reg.nr.: 01-2119457614-35 | diiron trioxide substance with a Community workplace exposure limit | < 2% |
| CAS: 1305-62-0 EINECS: 215-137-3 Reg.nr.: 01-2119475151-45 | calcium dihydroxide  Eye Dam. 1, H318;  Skin Irrit. 2, H315 | < 0.5% |
| CAS: 1333-86-4 EINECS: 215-609-9 Reg.nr.: 01-2119384822-32 | carbon black substance with a Community workplace exposure limit | < 0.5% |

• **Additional information** : For the wording of the listed hazard phrases refer to section 16.

SECTION 4: FIRST AID MEASURES

• **4.1 Description of first aid measures**

- General information Immediately remove any clothing soiled by the product.
- After inhalation
Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.
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.

• **4.2 Most important symptoms and effects, both acute and delayed**

Drowsiness
Headache
Disziness
Nausea

• **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
Carbon dioxide
Foam
Fire-extinguishing powder
- For safety reasons unsuitable extinguishing agents Water with full jet.

• **5.2 Special hazards arising from the substance or mixture**

In case of fire, the following can be released:
Carbon monoxide (CO)
Nitrogen oxides (NOx)
In certain fire conditions, traces of other toxic gases cannot be excluded, e.g.:
Hydrogen cyanide (HCN)
Isocyanates

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- **5.3 Advice for firefighters**
- Protective equipment: Wear self-contained respiratory protective device.

SECTION 6: ACCIDENTAL RELEASE MEASURES

- **6.1 Personal precautions, protective equipment and emergency procedures**
Ensure adequate ventilation.
Keep away from ignition sources.
- **6.2 Environmental precautions: Do not allow product to reach sewage system or any water course.**
- **6.3 Methods and material for containment and cleaning up:**
Pick up mechanically.
Send for recovery or disposal in suitable receptacles.
Do not close them (reaction with water forming carbon dioxide).
- **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 Open and handle receptacle with care**
- Information about protection against explosions and fires:
Keep ignition sources away - Do not smoke.
- **7.2 Conditions for safe storage, including any incompatibilities**
- Storage
- Requirements to be met by storerooms and receptacles: Store in a cool location.
- Information about storage in one common storage facility: Not required.
- Further information about storage conditions: Protect from humidity and water.
- **7.3 Specific end use(s) No further relevant information available.**

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

- Additional information about design of technical systems: No further data; see item 7.
- **8.1 Control parameters**

| • Components with limit values that require monitoring at the workplace: | |
|--|--|
| 9002-86-2 polyvinyl chloride | |
| WEL | Long-term value: 10* 4** mg/m3 *inhalable dust **respirable dust |
| 1330-20-7 xylene, mixture of isomers | |
| WEL | Short-term value: 441 mg/m3, 100 ppm Long-term value: 220 mg/m3, 50 ppm Sk; BMGV |
| 13463-67-7 titanium dioxide | |
| WEL | Long-term value: 10* 4** mg/m3 *total inhalable **respirable |
| 1305-78-8 calcium oxide | |
| WEL | Long-term value: 2 mg/m3 |

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|---|--|
| 1308-38-9 dichromium trioxide | |
| WEL | Long-term value: 0.5 mg/m ³ as Cr |
| hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, < 2% aromatics | |
| RCP-TWA VME | Long-term value: 1200 mg/m ³ Long-term value: 1200 mg/m ³ |
| 100-41-4 ethylbenzene | |
| WEL | Short-term value: 552 mg/m ³ , 125 ppm Long-term value: 441 mg/m ³ , 100 ppm Sk |
| 1309-37-1 diiron trioxide | |
| WEL | Short-term value: 10* mg/m ³ Long-term value: 5* 10** 4*** mg/m ³ *fume (as Fe), **total respirable, ***respirable |
| 1305-62-0 calcium dihydroxide | |
| WEL | Long-term value: 5 mg/m ³ |
| 1333-86-4 carbon black | |
| WEL | Short-term value: 7 mg/m ³ Long-term value: 3.5 mg/m ³ |
| • Ingredients with biological limit values: | |
| 1330-20-7 xylene, mixture of isomers | |
| BMGV | 650 mmol/mol creatinine Medium: urine Sampling time: post shift Parameter: methyl hippuric acid |

• **Additional information:** The lists that were valid during the creation were used as basis.

• 8.2 Exposure controls

- Personal protective equipment
- General protective and hygienic measures
Wash hands before breaks and at the end of work.
Avoid close or long term contact with the skin.

• Breathing equipment:
Use suitable respiratory protective device in case of insufficient ventilation:
Short term filter device:
Filter AB

• Protection of hands:
PVA gloves of superior quality.

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.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

• 9.1 Information on basic physical and chemical properties

• General Information

• Appearance:

Form: Solid
Colour: Various colours
• Odour: Light

• Change in condition

Melting point/Melting range: undetermined

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- Boiling point/Boiling range: 137 °C
- Flash point: > 40 °C
ISO 1523
- Flammability (solid) The product is not subject to classification because its speed of combustion is lower than the limit of the regulation.
- Self-ignition temperature: > 200 °C
- Danger of explosion: Product is not explosive. However, formation of explosive air/vapour mixtures are possible
- Explosion limits:
Lower: 0.6 Vol %
Upper: 8 Vol %
- Density at 20 °C: 1.16
- Solubility in / Miscibility with Water: Insoluble
- **9.2 Other information** No further relevant information available.
- Volatile organic compounds (VOC) having at 293,15 K a vapour pressure of 0,01 kPa or more (directive 1999/13/EC) : < 7%

SECTION 10: STABILITY AND REACTIVITY

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
· Thermal decomposition / conditions to be avoided:
No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions**
Reacts with alcohols, amines, aqueous acids and alkalis.
Reacts with water forming carbon dioxide. Danger of receptacles bursting because of vapour overpressure.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** No dangerous decomposition products known.

SECTION 11: TOXICOLOGICAL INFORMATION

- **11.1 Information on toxicological effects**
· Acute toxicity Based on available data, the classification criteria are not met.

| · LD/LC50 values that are relevant for classification: | | |
|--|----------|------------------|
| 1330-20-7 xylene, mixture of isomers | | |
| Oral | LD50 | 8700 mg/kg (rat) |
| Dermal | LD50 | 2000 mg/kg (rbt) |
| Inhalative | LC50/4 h | 6350 mg/l (rat) |

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|------------------------------|------|-------------------|
| 100-41-4 ethylbenzene | | |
| Oral | LD50 | 3500 mg/kg (rat) |
| Dermal | LD50 | 17800 mg/kg (rbt) |

- Primary irritant effect:
- Skin corrosion/irritation May be slightly irritant.
- Serious eye damage/irritation May be slightly irritant.
- Respiratory or skin sensitisation Based on available data, the classification criteria are not met.
- Additional toxicological information: Non-irritating to rabbit's eye (method : OECD guideline 405)
- CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)
- Germ cell mutagenicity Based on available data, the classification criteria are not met.
- Carcinogenicity Based on available data, the classification criteria are not met.
- Reproductive toxicity Based on available data, the classification criteria are not met.
- STOT-single exposure Based on available data, the classification criteria are not met.
- STOT-repeated exposure Based on available data, the classification criteria are not met.
- Aspiration hazard Based on available data, the classification criteria are not met.

SECTION 12: ECOLOGICAL INFORMATION

- **12.1 Toxicity**
- Aquatic toxicity: No further relevant information available.
- 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 2 (German Regulation) (Self-assessment): hazardous for water. Do not allow product 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 be disposed of in an incinerator for hazardous waste according to official regulations.
- Note : contains chlorine (chemically bound)
- Waste disposal key: 08 04 09*
- Uncleaned packaging :
- Recommendation: Disposal must be made according to official regulations.

SECTION 14: TRANSPORT INFORMATION

- **14.1 UN-Number**
- ADR, ADN, IMDG, IATA Void
- **14.2 UN proper shipping name**
- ADR, ADN, IMDG Void
- IATA Not regulated
- **14.3 Transport hazard class(es)**
- ADR, ADN, IMDG, IATA
- Class Void

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- **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 Marpol and the IBC Code** Not applicable.
- **Transport/Additional information:** Not classified as hazardous for transport as specified in paragraphs 2.2.41.1.5 of the ADR code, 2.4.2.2.2.1 of the IMDG code and 3.4.1.1.2.1 of the IATA code as the product is a solid and as its combustion speed is lower than 2.2 mm/s
- **UN "Model Regulation":** Void

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 GHS label elements
 - Directive 2012/18/EU
 - Named dangerous substances - ANNEX I None of the ingredients is listed.
 - National regulations
 - French VOC regulation (decree n° 2011-321) : Class A+
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has 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.

This data sheet is particularly in accordance with the european regulations 1907/2006/EC, 1272/2008/ EC and their amendments ; it is written according to annex II of the european regulation 830/2015/EC.

- Relevant phrases
 - H225 Highly flammable liquid and vapour.
 - H226 Flammable liquid and vapour.
 - H304 May be fatal if swallowed and enters airways.
 - H312 Harmful in contact with skin.
 - H315 Causes skin irritation.
 - H318 Causes serious eye damage.
 - H332 Harmful if inhaled.
 - H373 May cause damage to the hearing organs through prolonged or repeated exposure.

- 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

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)

LC50: Lethal concentration, 50 percent

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LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative

Flam. Liq. 3: Flammable liquids, Hazard Category 3
Acute Tox. 4: Acute toxicity, Hazard Category 4
Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1
STOT RE 2: Specific target organ toxicity - Repeated exposure, Hazard Category 2
Asp. Tox. 1: Aspiration hazard, Hazard Category 1

ANNEX: EXPOSURE SCENARIO

· Name xylene, mixture of isomers

· Short title of the exposure scenario

Industrial use for rigid foam, coatings and adhesives and sealants
Professional end use in rigid foam, coatings, adhesives and sealants and other composite material
Consumer end use in rigid foam, coatings and adhesives and sealants

· Sector of Use

SU3 Industrial uses: uses of substances as such or in preparations at industrial sites
SU21 Consumer uses: Private households / general public / consumers
SU22 Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
SU3 Industrial uses: uses of substances as such or in preparations at industrial sites
SU22 Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
SU21 Consumer uses: Private households / general public / consumers

· Product category

PC1 Adhesives, sealants
PC32 Polymer preparations and compounds

· Process category

PROC4 Use in batch and other process (synthesis) where opportunity for exposure arises
PROC5 Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact)
PROC7 Industrial spraying
PROC8a Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities
PROC8b Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities
PROC9 Transfer of substance or preparation into small containers (dedicated filling line, including weighing)
PROC15 Use as laboratory reagent

· Environmental release category

ERC2 Formulation of preparations
ERC5 Industrial use resulting in inclusion into or onto a matrix
ERC8c Wide dispersive indoor use resulting in inclusion into or onto a matrix
ERC8f Wide dispersive outdoor use resulting in inclusion into or onto a matrix

· Description of the activities / processes covered in the Exposure Scenario
See section 1 of the annex to the Safety Data Sheet.

· Conditions of use

Customary application according to section 1.
According to directions for use.

· Duration and frequency

SU3 and SU22 :
Up to 8 h per day, 300 days per year
SU21, PC1 (adhesives, sealants) :
Up to 1 times per day, 365 days per year
Concentrations up to 25 %

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Exposed skin surface (hands) up to 35.73 cm²
Amounts used/applied per event : 75 g
Room volume : > 20 m³
Exposition up to 1 hour(s) per event

- Physical parameters
- Physical state Fluid
- Concentration of the substance in the mixture Raw material.
- Other operational conditions
- Other operational conditions affecting environmental exposure
Local fresh water dilution factor: 10
Local marine water dilution factor : 100
- Other operational conditions affecting worker exposure
Indoor application.
Outdoor application.
Do not breathe gas/vapour/aerosol.
Avoid contact with the skin, eyes and clothing.
Avoid contact with the skin.
- Other operational conditions affecting consumer exposure Keep out of the reach of children.
- Other operational conditions affecting consumer exposure during the use of the product
Application temperature : room temperature
- Risk management measures
- Worker protection

SU3 :

Avoid direct contact with skin. Identify potential areas for indirect contact with the skin. Wear gloves (EN 374) if there is a risk of contact of the substance with the skin. Remove impurities / quantities immediately after spilling. Wash skin immediately after handling. Complete basic training of personnel, so that exposure is minimized and eventually the skin problems are reported. Other measures of skin protection are required, such as waterproof clothing and a protective mask during activities with high spread, leading to the likely significant release of aerosols (e.g. spraying).

Mixing operations (closed systems) : provide adequate general ventilation (not less than 3 to 5 air changes per hour).

Preparation of material for application / blending operations (open systems) : provide adequate controlled ventilation (10 to 15 air changes per hour).

Spray (automatic / robotic) : carry out in ventilated booth with laminar air flow.

Spray : ensure an adequate controlled ventilation (10 to 15 air changes per hour). Wear a respiratory protection (standard EN 140 with Type A filter or better).

Roller coating, spraying and flow coating : provide additional ventilation where emissions occur.

Storage with occasional controlled exposure : store substance in a closed system.

Cleaning : ensure an adequate controlled ventilation (10 to 15 air changes per hour)

SU 22 :

Avoid direct contact with skin. Identify potential areas for indirect contact with the skin. Wear gloves (EN 374) if there is a risk of contact of the substance with the skin. Remove impurities / quantities immediately after spilling. Wash skin immediately after handling. Complete basic training of personnel, so that exposure is minimized and eventually the skin problems are reported. Other measures of skin protection are required, such as waterproof clothing and a protective mask during activities with high spread, leading to the likely significant release of aerosols (e.g. spraying).

Preparation of material for indoor application : provide adequate controlled ventilation (10 to 15 air changes per hour); avoid activities with more than 1 hour exposure.

Preparation of material for outdoor application : ensure that exploitation takes place outdoors ; avoid activities with more than 1 hour exposure.

Indoor roller coating, spraying and flow coating : ensure adequate controlled ventilation (10 to 15 air changes per hour) ; wear respiratory protection (standard EN 140 with Type A filter or better).

Outdoor roller coating, spray and flow coating : ensure that the operation takes place outdoors, wear respiratory protection (standard EN 140 with Type A filter or better).

Indoor spraying : carry out in ventilated booth with laminar air flow.

Outdoor spraying : ensure that the operation takes place outdoors ; avoid activities with more than 4 hours exposure ; wear a full face respirator according to standard EN136 with Type A filter or better.

Cleaning and maintenance of equipment : extinguish systems before opening and maintenance of equipment ; avoid activities with more than 4 hours exposure.

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Storage with occasional controlled exposure : store substance in a closed system ; ensure an adequate controlled ventilation (10 to 15 air changes per hour).

Do not eat, drink, smoke while working.

· Organisational protective measures

SU3 and SU 22 :

Do not apply industrial sludge to natural soils.

Sewage sludge has to be incinerated, stored or treated.

Ensure that activities are executed by specialists or authorised personnel only.

· Technical protective measures

Ensure good ventilation/exhaustion at the workplace.

Ensure that suitable extractors are available on processing machines

Take note of emission threshold.

· Personal protective measures

Avoid contact with the eyes and skin.

Wear approved protective gloves (EN 374) ; if contamination of hands is likely, wash skin contamination immediately.

Do not inhale gases / fumes / aerosols.

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.

Wear a respiratory protection (standard EN 140 with Type A filter or better).

Avoid contact with the skin.

Protective work clothing.

· Measures for consumer protection

Ensure adequate labelling.

Protective gloves

Tightly sealed goggles.

Keep out of reach of children.

Keep locked up and out of the reach of children.

· Environmental protection measures

· Air No special measures required.

· Water

Do not allow to reach sewage system.

On-site wastewater treatment (before release into the water) to achieve the required level of cleaning :

93.6 %

Do not allow to reach ground water, water bodies or sewage system.

· Soil Prevent contamination of soil.

· Disposal measures

Do not apply industrial sludge to natural soils.

Ensure that waste is collected and contained.

· Disposal procedures

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

· Guidance for downstream users

For the risk assessment, the tools recommended by ECHA can be used.