

Safety data sheet **according to 1907/2006/EC, Article 31**

Printing date 13.12.2017

Revision: 13.12.2017

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

- **1.1 Product identifier** For professional use only
- **Trade name:** **L F P Line Marking Paint Part B**
- **1.2 Relevant identified uses of the substance or mixture and uses advised against** Surface Coating
- **Application of the substance / the mixture** Surface Coating
- **1.3 Details of the supplier of the safety data sheet**
- **Supplier:**
Tensid uk ltd
Unit 1 Craven Court, Canada Road
Byfleet. KT14 7JL
UNITED KINGDOM
TEL: +44 (0)1932 564133
EMAIL: info@tensid.com
- **Further information obtainable from:** info@tensid.com
- **1.4 Emergency telephone number:** +44 (0)1932 564133 (Business hours)

SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**
Acute Tox. 4 H332 Harmful if inhaled.
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**
The product is classified and labelled according to the CLP regulation.
- **Hazard pictograms**



GHS07

- **Signal word** Warning
- **Hazard-determining components of labelling:**
Hexamethylene-1,6-diisocyanate Homopolymer
hexamethylene-1,6 diisocyanate
- **Hazard statements**
H332 Harmful if inhaled.
H317 May cause an allergic skin reaction.
H335 May cause respiratory irritation.
- **Precautionary statements**
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P280 Wear protective gloves.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P321 Specific treatment (see on this label).
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

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- **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:** Mixture of substances listed below with nonhazardous additions.

· **Dangerous components:**

CAS: 28182-81-2 NLP: 500-060-2	Hexamethylene-1,6-diisocyanate Homopolymer Acute Tox. 4, H332; Skin Sens. 1, H317; STOT SE 3, H335	50-100%
CAS: 1119-40-0 EINECS: 214-277-2	dimethyl glutarate substance with a Community workplace exposure limit	2.5-10%
CAS: 106-65-0 EINECS: 203-419-9	Methyl succinate substance with a Community workplace exposure limit	≤2.5%
CAS: 627-93-0 EINECS: 211-020-6	dimethyl adipate substance with a Community workplace exposure limit	≤2.5%
CAS: 822-06-0 EINECS: 212-485-8	hexamethylene-1,6 diisocyanate Acute Tox. 2, H330; Resp. Sens. 1, H334; Acute Tox. 4, H302; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335	≤2.5%

- **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.
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 call for a doctor.
In case of unconsciousness place patient stably in side position for transportation.
Supply fresh air; consult doctor in case of complaints.
- **After skin contact:**
Immediately wash with water and soap and rinse thoroughly. Remove contaminated clothing.
Immediately rinse with water.
- **After eye contact:** Rinse opened eye for several minutes under running water.
- **After swallowing:**
Do not induce vomiting; call for medical help immediately and show safety datasheet or label.
- **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed** Treat symptomatically.

SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.
- **5.2 Special hazards arising from the substance or mixture** No further relevant information available.
- **5.3 Advice for firefighters**
- **Protective equipment:** Mount respiratory protective device.

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SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures** Not required.
- **6.2 Environmental precautions:** 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**
Ensure good ventilation/extraction 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:**
Keep receptacle tightly sealed and in a well-ventilated place.
Keep away from heat.
- **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.

· **8.1 Control parameters**

- **Ingredients with limit values that require monitoring at the workplace:**

28182-81-2 Hexamethylene-1,6-diisocyanate Homopolymer

EH40 WEL	Short-term value: 0.07 mg/m ³
	Long-term value: 0.02 mg/m ³

1119-40-0 dimethyl glutarate

TWA	Short-term value: 20 mg/m ³ , 3 ppm
	Long-term value: 33 mg/m ³ , 3 ppm

106-65-0 Methyl succinate

TWA	Short-term value: 1 mg/m ³ , 0.16 ppm
	Long-term value: 36 mg/m ³ , 0.16 ppm

627-93-0 dimethyl adipate

TWA	Short-term value: 1 mg/m ³ , 0.14 ppm
	Long-term value: 36 mg/m ³ , 0.14 ppm

822-06-0 hexamethylene-1,6 diisocyanate

WEL	Short-term value: 0.07 mg/m ³
	Long-term value: 0.02 mg/m ³
	Sen; as -NCO

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· DNELs		
28182-81-2 Hexamethylene-1,6-diisocyanate Homopolymer		
Inhalative	DNEL	0.5 mg/m ³ (Ind)
1119-40-0 dimethyl glutarate		
Inhalative	DNEL	8.3 mg/m ³ (Human)
106-65-0 Methyl succinate		
Inhalative	DNEL	5 mg/m ³ (Con)
		8.3 mg/m ³ (Ind)
627-93-0 dimethyl adipate		
Inhalative	DNEL	5 mg/m ³ (Con)
		8.3 mg/m ³ (Ind)
822-06-0 hexamethylene-1,6 diisocyanate		
Inhalative	DNEL	0.035 mg/m ³ (Ind)

· **PNECs**

CAS No. 28182-81-2 Hexamethylene-1,6-diisocyanate Homopolymer

Freshwater: 0.127 mg/l

Marine water: 0.0127 mg/l

Water: Intermittent release: 1.27 mg/l

Fresh water sediment: 266700 mg/kg dry weight

Marine sediment: 26670 mg/kg dry weight

STP (sewage-treatment plant): 38.3 mg/l

Soil: 53182 mg/kg dry weight

Air: No hazard identified

Secondary poisoning: Does not bioaccumulate.

· **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.

· **Respiratory protection:** When spraying the product, use a respiratory protective device.· **Protection of hands:**

Protective gloves

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:** Goggles recommended during refilling

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

Form:	Liquid
Colour:	Clear
Odour:	Characteristic
Odour threshold:	Not determined.

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

Melting point/freezing point:	Undetermined.
Initial boiling point and boiling range:	196°C

· **Flash point:** 103°C· **Flammability (solid, gas):** Not applicable.· **Ignition temperature:**· **Decomposition temperature:** Not determined.· **Auto-ignition temperature:** Product is not selfigniting.· **Explosive properties:** Product does not present an explosion hazard.· **Explosion limits:**

Lower:	Not determined.
Upper:	Not determined.

· **Vapour pressure:** Not determined.· **Density at 20°C:** 1.14 g/cm³· **Relative density** Not determined.· **Vapour density** Not determined.· **Evaporation rate** Not determined.· **Solubility in / Miscibility with water:** NOT MISCIBLE· **Partition coefficient: n-octanol/water:** Not determined.· **Viscosity:**

Dynamic at 20°C:	325 mPas
Kinematic:	Not determined.

· **Solvent content:**· **Organic solvents:** 7.1 %· **Solids content:** 92.9 %· **9.2 Other information** No further relevant information available.**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** 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 when stored and handled correctly

SECTION 11: Toxicological information· **11.1 Information on toxicological effects**· **Acute toxicity**

Harmful if inhaled.

· **LD/LC50 values relevant for classification:****28182-81-2 Hexamethylene-1,6-diisocyanate Homopolymer**

Oral	LD50	>2,500 mg/kg (rat) (OECD Test Guideline 423)
Dermal	LD50	>2,000 mg/kg (rat) (OECD Test Guideline 402)
Inhalative	LC50/4 h	0.39 mg/l (rat) (Method: OECD Test Guideline 403)

822-06-0 hexamethylene-1,6 diisocyanate

Dermal	LD50	>7,000 mg/kg (Rat)
Inhalative	LC50/4 h	0.124 mg/l (Rat)

· **Primary irritant effect:**· **Skin corrosion/irritation** Based on available data, the classification criteria are not met.· **Serious eye damage/irritation** Based on available data, the classification criteria are not met.· **Respiratory or skin sensitisation**

May cause an allergic skin reaction.

· **CMR effects (carcinogenicity, 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**

May cause respiratory irritation.

· **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:**

Acute Fish toxicity

Hexamethylene-1,6-diisocyanate Homopolymer

LC50 > 100 mg/l

Test type: Acute Fish toxicity

Species: *Danio rerio* (zebra fish)

Exposure duration: 96 h

Method: Directive 67/548/EEC, Annex V, C.1.

Acute toxicity for daphnia

Hexamethylene-1,6-diisocyanate Homopolymer

EC50 > 100 mg/l

Species: *Daphnia magna* (Water flea)

Exposure duration: 48 h

Method: Directive 67/548/EEC, Annex V, C.2.

Acute toxicity for algae

Hexamethylene-1,6-diisocyanate Homopolymer

ErC50 > 1,000 mg/l

Test type: Growth inhibition

Species: *scenedesmus subspicatus*

Exposure duration: 72 h

Method: DIN 38412

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- Acute bacterial toxicity
 Hexamethylene-1,6-diisocyanate Homopolymer
 EC50 3,828 mg/l
 Test type: Respiration inhibition
 Species: activated sludge
 Exposure duration: 3 h
 Method: OECD Test Guideline 209
 Ecotoxicology Assessment
 Hexamethylene-1,6-diisocyanate Homopolymer
 Acute aquatic toxicity: Based on available data, the classification criteria are not met.
 Chronic aquatic toxicity: There is no evidence of a chronic aquatic toxicity.
 Impact on Sewage Treatment: Because of the low bacterial toxicity, there is no risk of an adverse effect on the performance of biological waste water treatment plants.
- **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.

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: | Not applicable. |
| · 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. |

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· UN "Model Regulation":

Void

SECTION 15: Regulatory information

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

· Directive 2012/18/EU

· Named dangerous substances - ANNEX I None of the ingredients is listed.

· REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3

· National regulations:

· Technical instructions (air):

Class	Share in %
I	0.2
NK	7.1

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

· 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.

· Department issuing SDS: Product safety department: LABORATORY

· 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)

DNEL: Derived No-Effect Level (REACH)

PNEC: Predicted No-Effect Concentration (REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Acute Tox. 2: Acute toxicity – Category 2

Acute Tox. 4: Acute toxicity – Category 4

Skin Irrit. 2: Skin corrosion/irritation – Category 2

Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

Resp. Sens. 1: Respiratory sensitisation – Category 1

Skin Sens. 1: Skin sensitisation – Category 1

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