

Safety Data Sheet

according to Regulation (EC) No 1907/2006

MET-L-CHEK Penetrant FP 923 Spray

Revision date: 15.06.2023

Page 1 of 11

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

1.1. Product identifier

MET-L-CHEK Penetrant FP 923 Spray

Further trade names

Article no. (user):
122.102.621

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

Use of the substance/mixture

Fluorescent penetrant for surface crack detection

1.3. Details of the supplier of the safety data sheet

Company name:	Helling GmbH	
Street:	Spoekerdamm 2	
Place:	D-25436 Heidgraben	
Telephone:	+49-4122-922-0	Telefax: +49-4122-922-201
E-mail:	info@helling.de	
Internet:	www.helling.de	

1.4. Emergency telephone number:

Emergency CONTACT (24-Hour-Number): GBK GmbH +49 (0)6132-84463

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

Hazard categories:
Aerosols: Aerosol 1
Serious eye damage/eye irritation: Eye Dam. 1
Aspiration hazard: Asp. Tox. 1
Hazard Statements:
Extremely flammable aerosol.
Pressurised container: May burst if heated.
Causes serious eye damage.

2.2. Label elements

Regulation (EC) No 1272/2008

Hazard components for labelling

white mineral oil (petroleum)

Signal word: Danger

Pictograms:



Hazard statements

H222	Extremely flammable aerosol.
H229	Pressurised container: May burst if heated.
H318	Causes serious eye damage.

Precautionary statements

P102	Keep out of reach of children.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P211	Do not spray on an open flame or other ignition source.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

MET-L-CHEK Penetrant FP 923 Spray

Revision date: 15.06.2023

Page 2 of 11

P251	Do not pierce or burn, even after use.
P280	Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a doctor.
P410+P412	Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.
P501	Dispose of contents/container to industrial incineration plant.

Special labelling of certain mixtures

EUH066 Repeated exposure may cause skin dryness or cracking.

2.3. Other hazards

Results of PBT and vPvB assessment

PBT: not applicable

vPvB: not applicable

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (Regulation (EC) No 1272/2008)			
8042-47-5	white mineral oil (petroleum)			25 - 50 %
	232-455-8		01-2119487078-27	
	Asp. Tox. 1; H304			
115-10-6	dimethyl ether			25 - 50 %
	204-065-8	603-019-00-8		
	Flam. Gas 1; H220			
68131-40-8	secondary ethoxylate (4)			2,5 - 10 %
	Acute Tox. 4, Eye Dam. 1; H302 H318			

Full text of H and EUH statements: see section 16.

Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
		Specific Conc. Limits, M-factors and ATE	
8042-47-5	232-455-8	white mineral oil (petroleum)	25 - 50 %
		inhalation: LC50 = > 5 mg/l (vapours); dermal: LD50 = > 2000 mg/kg; oral: LD50 = > 5000 mg/kg	
68131-40-8		secondary ethoxylate (4)	2,5 - 10 %
		oral: ATE = 500 mg/kg	

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

When in doubt or if symptoms are observed, get medical advice.

After inhalation

Provide fresh air. In case of trouble call doctor.

After contact with skin

Wash with plenty of water. Change contaminated clothing.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

MET-L-CHEK Penetrant FP 923 Spray

Revision date: 15.06.2023

Page 3 of 11

After contact with eyes

In case of contact with eyes, rinse immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Subsequently consult an ophthalmologist.

After ingestion

Rinse mouth immediately and drink plenty of water. In case of trouble call doctor. Do NOT induce vomiting.

4.2. Most important symptoms and effects, both acute and delayed

No information available.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

Caution if victim vomits: Risk of aspiration!

SECTION 5: Firefighting measures**5.1. Extinguishing media****Suitable extinguishing media**

Co-ordinate fire-fighting measures to the fire surroundings.

Water fog. Foam. ABC powder.

Unsuitable extinguishing media

High power water jet.

5.2. Special hazards arising from the substance or mixture

Heating causes rise in pressure with risk of bursting.

In case of fire may be liberated: Carbon dioxide. Carbon monoxide

5.3. Advice for firefighters

In case of fire: Wear self-contained breathing apparatus.

Additional information

Use water spray jet to protect personnel and to cool endangered containers. Suppress gases/vapours/mists with water spray jet. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

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

Provide adequate ventilation. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes.

Wear personal protection equipment.

6.2. Environmental precautions

Do not allow to enter into surface water or drains.

In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

6.3. Methods and material for containment and cleaning up**Other information**

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.

6.4. Reference to other sections

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

SECTION 7: Handling and storage**7.1. Precautions for safe handling****Advice on safe handling**

If handled uncovered, arrangements with local exhaust ventilation have to be used.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

MET-L-CHEK Penetrant FP 923 Spray

Revision date: 15.06.2023

Page 4 of 11

Advice on protection against fire and explosion

Do not spray on naked flames or any incandescent material.
 Keep away from sources of ignition - No smoking.
 Take precautionary measures against static discharges. Use only antistatically equipped (spark-free) tools.
 Provide earthing of containers, equipment, pumps and ventilation facilities.

Advice on general occupational hygiene

Remove contaminated, saturated clothing immediately. After work, wash hands and face. When using do not eat or drink. Avoid contact with eyes. Protect skin by using skin protective cream.

Further information on handling

Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50 °C. Do not pierce or burn, even after use.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep container tightly closed in a cool, well-ventilated place.

Hints on joint storage

Keep away from food, drink and animal feedingstuffs.

Further information on storage conditions

Keep away from heat. Protect from direct sunlight.

7.3. Specific end use(s)

No information available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limits (EH40)

CAS No	Substance	ppm	mg/m ³	fibres/ml	Category	Origin
115-10-6	Dimethyl ether	400	766		TWA (8 h)	WEL
		500	958		STEL (15 min)	WEL

DNEL/DMEL values

CAS No	Substance	Exposure route	Effect	Value
8042-47-5	white mineral oil (petroleum)			
Worker DNEL, long-term		dermal	systemic	220 mg/kg bw/day
Worker DNEL, long-term		inhalation	systemic	160 mg/m ³

8.2. Exposure controls



Appropriate engineering controls

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray.

Individual protection measures, such as personal protective equipment

Eye/face protection

Tightly sealed safety glasses.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

MET-L-CHEK Penetrant FP 923 Spray

Revision date: 15.06.2023

Page 5 of 11

Hand protection

Suitable material: NR (Natural rubber (Caoutchouc), Natural latex). NBR (Nitrile rubber).

The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Skin protection

Wear suitable protective clothing.

Respiratory protection

In case of inadequate ventilation wear respiratory protection. In case of inadequate ventilation wear respiratory protection.

Filtering device (full mask or mouthpiece) with filter: A

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	Aerosol	
Colour:	yellow, fluorescent	
Odour:	characteristic	
		Test method
Melting point/freezing point:	not determined	
Boiling point or initial boiling point and boiling range:	-44 °C	
Flammability:	not applicable	
	not applicable	
Lower explosion limits:	1,0 vol. %	
Upper explosion limits:	18,6 vol. %	
Flash point:	-50 °C	ASTM D 93
Auto-ignition temperature:	235 °C	
Decomposition temperature:	not determined	
pH-Value:	not determined	
Viscosity / kinematic:	not determined	
Water solubility:	not determined	
Solubility in other solvents		
not determined		
Partition coefficient n-octanol/water:	not determined	
Vapour pressure:	5200 hPa	
(at 20 °C)		
Density (at 20 °C):	0,916 g/cm ³	ASTM D 1298
Relative vapour density:	not determined	

9.2. Other information

Information with regard to physical hazard classes

Explosive properties

not explosive.

Vapours can form explosive mixtures with air.

Self-ignition temperature

Solid:

not applicable

Gas:

not applicable

Oxidizing properties

Not oxidising.

Other safety characteristics

Evaporation rate:

not determined

Safety Data Sheet

according to Regulation (EC) No 1907/2006

MET-L-CHEK Penetrant FP 923 Spray

Revision date: 15.06.2023

Page 6 of 11

Solvent content: 78,5 %
 Viscosity / dynamic: not determined

Further Information

No information available.

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under normal conditions of use.

10.2. Chemical stability

Stable under normal conditions of use.

10.3. Possibility of hazardous reactions

No known hazardous reactions.

10.4. Conditions to avoid

No information available.

10.5. Incompatible materials

No information available.

10.6. Hazardous decomposition products

None known.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity

Based on available data, the classification criteria are not met.

ATEmix calculated

ATE (oral) > 2000 mg/kg; ATE (dermal) > 2000 mg/kg; ATE (inhalation vapour) 10,00 mg/l; ATE (inhalation dust/mist) > 5 mg/l

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
8042-47-5	white mineral oil (petroleum)				
	oral	LD50 > 5000 mg/kg	Rat		
	dermal	LD50 > 2000 mg/kg	Rabbit		
	inhalation (4 h) vapour	LC50 > 5 mg/l	Rat		
68131-40-8	secondary ethoxylate (4)				
	oral	ATE 500 mg/kg			

Irritation and corrosivity

Causes serious eye damage.

Skin corrosion/irritation: Based on available data, the classification criteria are not met.

Sensitising effects

Based on available data, the classification criteria are not met.

Carcinogenic/mutagenic/toxic effects for reproduction

Based on available data, the classification criteria are not met.

STOT-single exposure

Based on available data, the classification criteria are not met.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

MET-L-CHEK Penetrant FP 923 Spray

Revision date: 15.06.2023

Page 7 of 11

STOT-repeated exposure

Repeated exposure may cause skin dryness or cracking.

Aspiration hazard

Based on available data, the classification criteria are not met.

Caution if victim vomits: Risk of aspiration!

But not relevant for classification.

11.2. Information on other hazards

Endocrine disrupting properties

see section 12

SECTION 12: Ecological information

12.1. Toxicity

Based on available data, the classification criteria are not met.

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] [d]	Species	Source	Method
8042-47-5	white mineral oil (petroleum)					
	Acute fish toxicity	LC50 mg/l	> 1000	96 h	Leuciscus idus (golden orfe)	OECD 203
	Acute crustacea toxicity	EC50 mg/l	> 100	48 h	Daphnia magna	OECD 202
	Algae toxicity	NOEC mg/l	> 100	3 d	Pseudokirchneriella subcapitata	OECD 201

12.2. Persistence and degradability

CAS 68131-40-8:

This surfactant complies with the biodegradability criteria as laid down in Regulation (EC) No.648/2004 on detergents.

12.3. Bioaccumulative potential

The product has not been tested.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
115-10-6	dimethyl ether	0,1

12.4. Mobility in soil

No information available.

12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

12.6. Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

12.7. Other adverse effects

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil. Dispose of waste according to applicable legislation.

Must not be disposed together with household garbage.

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific

Safety Data Sheet

according to Regulation (EC) No 1907/2006

MET-L-CHEK Penetrant FP 923 Spray

Revision date: 15.06.2023

Page 8 of 11

to the industry and process.

List of Wastes Code - residues/unused products

070704 WASTES FROM ORGANIC CHEMICAL PROCESSES; wastes from the MFSU of fine chemicals and chemical products not otherwise specified; other organic solvents, washing liquids and mother liquors; hazardous waste

Contaminated packaging

Non-contaminated packages may be recycled. Handle contaminated packages in the same way as the substance itself.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number or ID number: UN 1950
14.2. UN proper shipping name: AEROSOLS
14.3. Transport hazard class(es): 2
14.4. Packing group: -
Hazard label: 2.1



Classification code: 5F
Special Provisions: 190 327 344 625
Limited quantity: 1 L
Excepted quantity: E0
Transport category: 2
Tunnel restriction code: D

Inland waterways transport (ADN)

14.1. UN number or ID number: UN 1950
14.2. UN proper shipping name: AEROSOLS
14.3. Transport hazard class(es): 2
14.4. Packing group: -
Hazard label: 2.1



Classification code: 5F
Special Provisions: 190 327 344 625
Limited quantity: 1 L
Excepted quantity: E0

Marine transport (IMDG)

14.1. UN number or ID number: UN 1950
14.2. UN proper shipping name: AEROSOLS
14.3. Transport hazard class(es): 2.1
14.4. Packing group: -
Hazard label: 2.1



Special Provisions: 63, 190, 277, 327, 344, 959
Limited quantity: 1000 mL
Excepted quantity: E0

Safety Data Sheet

according to Regulation (EC) No 1907/2006

MET-L-CHEK Penetrant FP 923 Spray

Revision date: 15.06.2023

Page 9 of 11

EmS: F-D, S-U

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number or ID number: UN 1950
14.2. UN proper shipping name: AEROSOLS
14.3. Transport hazard class(es): 2.1
14.4. Packing group: -
Hazard label: 2.1



Special Provisions: A145 A167 A802
Limited quantity Passenger: 30 kg G
Passenger LQ: Y203
Excepted quantity: E0
IATA-packing instructions - Passenger: 203
IATA-max. quantity - Passenger: 75 kg
IATA-packing instructions - Cargo: 203
IATA-max. quantity - Cargo: 150 kg

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

14.6. Special precautions for user

not applicable

14.7. Maritime transport in bulk according to IMO instruments

not applicable

SECTION 15: Regulatory information

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

EU regulatory information

Restrictions on use (REACH, annex XVII):

Entry 3, Entry 40

2004/42/EC (VOC): 50,0 %

National regulatory information

Employment restrictions: Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC).

Water hazard class (D): 1 - slightly hazardous to water

15.2. Chemical safety assessment

For the following substances of this mixture a chemical safety assessment has been carried out:
white mineral oil (petroleum)

SECTION 16: Other information

Changes

section 1, 9, 11, 12, 14, 16

Safety Data Sheet

according to Regulation (EC) No 1907/2006

MET-L-CHEK Penetrant FP 923 Spray

Revision date: 15.06.2023

Page 10 of 11

Abbreviations and acronyms

CLP: Classification, labelling and Packaging
REACH: Registration, Evaluation and Authorization of Chemicals
GHS: Globally Harmonised System of Classification, Labelling and Packaging of Chemicals
UN: United Nations
CAS: Chemical Abstracts Service
DNEL: Derived No Effect Level
DMEL: Derived Minimal Effect Level
PNEC: Predicted No Effect Concentration
ATE: Acute toxicity estimate
LC50: Lethal concentration, 50%
LD50: Lethal dose, 50%
LL50: Lethal loading, 50%
EL50: Effect loading, 50%
EC50: Effective Concentration 50%
ErC50: Effective Concentration 50%, growth rate
NOEC: No Observed Effect Concentration
BCF: Bio-concentration factor
PBT: persistent, bioaccumulative, toxic
vPvB: very persistent, very bioaccumulative
ADR: Accord européen sur le transport des marchandises dangereuses par Route
(European Agreement concerning the International Carriage of Dangerous Goods by Road)
RID: Regulations concerning the international carriage of dangerous goods by rail
ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
(Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures)
IMDG: International Maritime Code for Dangerous Goods
EmS: Emergency Schedules
MFAG: Medical First Aid Guide
IATA: International Air Transport Association
ICAO: International Civil Aviation Organization
MARPOL: International Convention for the Prevention of Marine Pollution from Ships
IBC: Intermediate Bulk Container
VOC: Volatile Organic Compounds
SVHC: Substance of Very High Concern
Flam. Gas: Flammable gases
Acute Tox: Acute toxicity
Asp. Tox: Aspiration hazard
Eye Dam: Eye damage

Key literature references and sources for data

General review and adaption to regulation (EC) 2020/878

Relevant H and EUH statements (number and full text)

H220	Extremely flammable gas.
H222	Extremely flammable aerosol.
H229	Pressurised container: May burst if heated.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H318	Causes serious eye damage.
EUH066	Repeated exposure may cause skin dryness or cracking.

Further Information

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

MET-L-CHEK Penetrant FP 923 Spray

Revision date: 15.06.2023

Page 11 of 11

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)