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

1.1. Product identifier

SL450

UFI: HRWA-XF03-N2FX-M9MX

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

Use of the substance/mixture

Farben und Lacke

1.3. Details of the supplier of the safety data sheet

Company name:	Hottinger Brüel & Kjaer
Street:	Im Tiefen See 45
Place:	D-64293 Darmstadt
Telephone:	+49 (0)6151 803-0
Internet:	www.hbm.com
Responsible Department:	+44 20 3807 3798 support@hbm.com

1.4. Emergency telephone number:

+44 2038073798

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GB CLP Regulation

Flam. Liq. 2; H225
Acute Tox. 4; H332
Skin Irrit. 2; H315
STOT RE 2; H373
Aquatic Chronic 3; H412

Full text of hazard statements: see SECTION 16.

2.2. Label elements

GB CLP Regulation

Hazard components for labelling

Xylol
Ethylbenzol

Signal word: Danger

Pictograms:

Hazard statements

H225	Highly flammable liquid and vapour.
H315	Causes skin irritation.
H332	Harmful if inhaled.
H373	May cause damage to organs through prolonged or repeated exposure.
H412	Harmful to aquatic life with long lasting effects.

Precautionary statements

P233	Keep container tightly closed.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.

Special labelling of certain mixtures

EUH208 Contains Zinkbis(diethyldithiocarbamat). May produce an allergic reaction.
Restricted to professional users.

Labelling of packages where the contents do not exceed 125 ml

Signal word: Danger

Pictograms:

Hazard statements

H412

2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	GHS Classification			
1330-20-7	xylene			50 - < 55 %
	215-535-7	601-022-00-9		
	Flam. Liq. 3, Acute Tox. 4, Acute Tox. 4, Skin Irrit. 2; H226 H332 H312 H315			
100-41-4	ethylbenzene			10 - < 15 %
	202-849-4	601-023-00-4		
	Flam. Liq. 2, Acute Tox. 4, STOT RE 2, Asp. Tox. 1; H225 H332 H373 H304			
14324-55-1	zinc bis(diethyldithiocarbamate)			< 1 %
	238-270-9	006-082-00-4		
	Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, Skin Sens. 1, STOT SE 3, Aquatic Acute 1, Aquatic Chronic 1; H302 H315 H319 H317 H335 H400 H410			
108-88-3	toluene			< 1 %
	203-625-9	601-021-00-3		
	Flam. Liq. 2, Repr. 2, Skin Irrit. 2, STOT SE 3, STOT RE 2, Asp. Tox. 1; H225 H361d H315 H336 H373 H304			

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		
1330-20-7	215-535-7	xylene	50 - < 55 %
	inhalation: ATE = 11 mg/l (vapours); inhalation: ATE = 1,5 mg/l (dusts or mists); dermal: ATE = 1100 mg/kg		
100-41-4	202-849-4	ethylbenzene	10 - < 15 %
	inhalation: LC50 = 17,2 mg/l (vapours); inhalation: ATE = 1,5 mg/l (dusts or mists); dermal: LD50 = 15400 mg/kg; oral: LD50 = 3500 mg/kg		
14324-55-1	238-270-9	zinc bis(diethyldithiocarbamate)	< 1 %
	oral: ATE = 500 mg/kg		
108-88-3	203-625-9	toluene	< 1 %
	inhalation: LC50 = 49 mg/l (vapours); dermal: LD50 = 12200 mg/kg		

Further Information

No information available.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

Remove affected person from the danger area and lay down. If unconscious but breathing normally, place in recovery position and seek medical advice. First aider: Pay attention to self-protection!

After inhalation

When in doubt or if symptoms are observed, get medical advice.
Provide fresh air.
In case of respiratory tract irritation, consult a physician.

After contact with skin

After contact with skin, wash immediately with plenty of water and soap.
Remove contaminated, saturated clothing immediately.
In case of skin irritation, consult a physician.

After contact with eyes

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

After ingestion

Rinse mouth immediately and drink plenty of water.
Never give anything by mouth to an unconscious person or a person with cramps.
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

No information available.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Water spray jet, Dry extinguishing powder, Foam

Unsuitable extinguishing media

Full water jet

5.2. Special hazards arising from the substance or mixture

Highly flammable.
Vapours can form explosive mixtures with air.
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

5.3. Advice for firefighters

Wear a self-contained breathing apparatus and chemical protective clothing.
Co-ordinate fire-fighting measures to the fire surroundings.

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

First aider: Pay attention to self-protection!
Remove all sources of ignition.
Provide adequate ventilation.
Vapours are heavier than air, spread along floors and form explosive mixtures with air.
Use personal protection equipment.

For non-emergency personnel

Remove persons to safety.

For emergency responders

First aider: Pay attention to self-protection!

6.2. Environmental precautions

Do not allow to enter into surface water or drains.
Do not allow uncontrolled discharge of product into the environment.

6.3. Methods and material for containment and cleaning up

For cleaning up

Take up mechanically, placing in appropriate containers for disposal.

Other information

Take up mechanically, placing in appropriate containers for disposal. Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents).

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 local exhaust ventilation is not possible or not sufficient, the entire working area should be ventilated by technical means.
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Advice on protection against fire and explosion

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. In case of insufficient ventilation and/or through use, explosive/highly flammable mixtures may develop.

Further information on handling

Wear personal protection equipment (refer to section 8). Do not empty into drains. When using do not eat, drink, smoke, sniff.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep container tightly closed and in a well-ventilated place.
Do not allow to enter into surface water or drains.
Do not allow uncontrolled discharge of product into the environment.

Hints on joint storage

Do not store together with: Oxidising agent, strong , Combustible substances of acute toxicity, category 1 and 2 / very toxic substances Non-combustible substances of acute toxicity, category 1 and 2 / very toxic substances

Further information on storage conditions

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

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limits (EH40)

CAS No	Substance	ppm	mg/m³	fibres/ml	Category	Origin
100-41-4	Ethylbenzene	100	441		TWA (8 h)	WEL
		125	552		STEL (15 min)	WEL
108-88-3	Toluene	50	191		TWA (8 h)	WEL
		100	384		STEL (15 min)	WEL
1330-20-7	Xylene: mixed isomers	50	220		TWA (8 h)	WEL
		100	441		STEL (15 min)	WEL

Biological Monitoring Guidance Values (EH40)

CAS No	Substance	Parameter	Value	Test material	Sampling time
1330-20-7	Xylene, o-, m-, p- or mixed isomers	methyl hippuric acid (creatinine)	650 mmol/mol	urine	Post shift

Additional advice on limit values

No information available.

8.2. Exposure controls





Appropriate engineering controls

If handled uncovered, arrangements with local exhaust ventilation should be used if possible.
In use, may form flammable/explosive vapour-air mixture.
Use explosion-proof electrical equipment.
Use non-sparking tools.

Protective and hygiene measures

When using do not eat or drink.
Do not breathe gas/fumes/vapour/spray.
After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water and soap.
Wear suitable protective clothing, gloves and eye/face protection.
Draw up and observe skin protection programme.

Eye/face protection

Wear eye/face protection.

Hand protection

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. EN ISO 374
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.
Thickness of the glove material: >= 0,7mm
Suitable gloves type NBR (Nitrile rubber)
Breakthrough time::>480 min
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

Used working clothes should not be worn outside the work area.

Separate storage of work clothes.
Wear anti-static footwear and clothing

Respiratory protection

If technical exhaust or ventilation measures are not possible or insufficient, respiratory protection must be worn. Filtering device (full mask or mouthpiece) with filter: a
The filter class must be suitable for the maximum contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product. If the concentration is exceeded, self-contained breathing apparatus must be used.

Environmental exposure controls

Do not allow to enter into surface water or drains.
The vapour of the product is heavier than air and may accumulate below ground level, in pits, channels and basements in higher concentration.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	Liquid
Colour:	colourless
Odour:	Solvents
pH-Value:	not determined
Changes in the physical state	
Melting point/freezing point:	not determined
Boiling point or initial boiling point and boiling range:	136 °C
Sublimation point:	not determined
Softening point:	not determined
Pour point:	not determined
nicht bestimmt:	
Flash point:	15 °C
Sustaining combustion:	No data available
Flammability	
Solid/liquid:	not determined
Explosive properties	
nicht explosionsgefährlich gemäß EU A.14	
Lower explosion limits:	0,7 vol. %
Upper explosion limits:	8,1 vol. %
Auto-ignition temperature:	430 °C
Self-ignition temperature	
Solid:	not determined
Gas:	not determined
Decomposition temperature:	not determined
Oxidizing properties	
Es liegen keine Informationen vor.	
Vapour pressure: (at 20 °C)	10 hPa
Vapour pressure: (at 50 °C)	47 hPa
Density (at 20 °C):	1,01 g/cm³
Bulk density:	not determined

Water solubility:	not determined

Solubility in other solvents

nicht bestimmt

Partition coefficient n-octanol/water:	not determined
Viscosity / dynamic:	not determined
Viscosity / kinematic:	not determined
Flow time:	not determined
Relative vapour density:	not determined
Evaporation rate:	not determined
Solvent separation test:	not determined
Solvent content:	70,25 %

9.2. Other information

Solid content:	0,99 %

Es liegen keine Informationen vor.

SECTION 10: Stability and reactivity

10.1. Reactivity

No information available.

10.2. Chemical stability

The substance is chemically stable under recommended conditions of storage, use and temperature.

10.3. Possibility of hazardous reactions

No hazardous reaction when handled and stored according to provisions.

10.4. Conditions to avoid

No information available.

10.5. Incompatible materials

No information available.

10.6. Hazardous decomposition products

No information available.

Further information

No information available.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in GB CLP Regulation

Acute toxicity

Harmful if inhaled.

ATEmix calculated

ATE (oral) > 2000 mg/kg; ATE (dermal) 2821 mg/kg; ATE (inhalation vapour) 23,57 mg/l; ATE (inhalation dust/mist) 2,941 mg/l

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
1330-20-7	xylene				
	dermal	ATE 1100 mg/kg			
	inhalation vapour	ATE 11 mg/l			
	inhalation dust/mist	ATE 1,5 mg/l			
100-41-4	ethylbenzene				
	oral	LD50 3500 mg/kg	Ratte	GESTIS	
	dermal	LD50 15400 mg/kg	Kaninchen	GESTIS	
	inhalation (4 h) vapour	LC50 17,2 mg/l	Ratte		
	inhalation dust/mist	ATE 1,5 mg/l			
14324-55-1	zinc bis(diethyldithiocarbamate)				
	oral	ATE 500 mg/kg			
108-88-3	toluene				
	dermal	LD50 12200 mg/kg	Kaninchen	GESTIS	
	inhalation (4 h) vapour	LC50 49 mg/l	Ratte	GESTIS	

Irritation and corrosivity

Causes skin irritation.

Serious eye damage/eye irritation: Based on available data, the classification criteria are not met.

Sensitising effects

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

Contains Zinkbis(diethyldithiocarbamat). May produce an allergic reaction.

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.

STOT-repeated exposure

May cause damage to organs through prolonged or repeated exposure. (ethylbenzene)

Aspiration hazard

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

Specific effects in experiment on an animal

No information available.

Additional information on tests

No information available.

Practical experience

No information available.

11.2. Information on other hazards

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.

Other information

No information available.

Further information

No information available.

SECTION 12: Ecological information

12.1. Toxicity

CAS No	Chemical name						
	Aquatic toxicity	Dose		[h] | [d]	Species	Source	Method
100-41-4	ethylbenzene						
	Acute fish toxicity	LC50	4,2 mg/l	96 h	Oncorhynchus mykiss	ECHA	
	Acute algae toxicity	ErC50	3,6 mg/l	96 h	Pseudokirchneriella subcapitata	GESTIS	
108-88-3	toluene						
	Acute fish toxicity	LC50	13 mg/l	96 h	Carassius auratus	IUCLID	
	Acute algae toxicity	ErC50 mg/l	12,5	72 h	Selenastrum capricornutum	GESTIS	

12.2. Persistence and degradability

No information available.

12.3. Bioaccumulative potential

No information available.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
100-41-4	ethylbenzene	3,15
108-88-3	toluene	2,73

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 UK REACH.
No information available.

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

No information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations

Dispose of waste according to applicable legislation.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number: UN 1993

14.2. UN proper shipping name: FLAMMABLE LIQUID, N.O.S. (Ethylbenzol, Xylol)

14.3. Transport hazard class(es): 3

14.4. Packing group: III

Hazard label:	3

Classification code:	F1
Special Provisions:	274 601
Limited quantity:	5 L
Excepted quantity:	E1
Transport category:	3
Hazard No:	30
Tunnel restriction code:	D/E

Inland waterways transport (ADN)

14.1. UN number:	UN 1993
14.2. UN proper shipping name:	FLAMMABLE LIQUID, N.O.S. (Ethylbenzol, Xylol)
14.3. Transport hazard class(es):	3
14.4. Packing group:	III
Hazard label:	3

Classification code:	F1
Special Provisions:	274 601
Limited quantity:	5 L
Excepted quantity:	E1

Marine transport (IMDG)

14.1. UN number:	UN 1993
14.2. UN proper shipping name:	FLAMMABLE LIQUID, N.O.S. (Ethylbenzene, Xylene)
14.3. Transport hazard class(es):	3
14.4. Packing group:	III
Hazard label:	3

Special Provisions:	223 274 955
Limited quantity:	5 L
Excepted quantity:	E1
EmS:	F-E, S-E

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number:	UN 1993
14.2. UN proper shipping name:	FLAMMABLE LIQUID, N.O.S. (Ethylbenzene, Xylene)
14.3. Transport hazard class(es):	3
14.4. Packing group:	III
Hazard label:	3

Special Provisions:	A3
Limited quantity Passenger:	10 L
Passenger LQ:	Y344
Excepted quantity:	E1
IATA-packing instructions - Passenger:	355
IATA-max. quantity - Passenger:	60 L
IATA-packing instructions - Cargo:	366
IATA-max. quantity - Cargo:	220 L

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

14.7. Maritime transport in bulk according to IMO instruments

No transport as bulk according to IBC Code.

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, Entry 48, Entry 75

Directive 2010/75/EU on industrial emissions:	70,19 % (708,919 g/l)
Directive 2004/42/EC on VOC in paints and varnishes:	70,19 % (708,919 g/l)
Information according to Directive 2012/18/EU (SEVESO III):	P5c FLAMMABLE LIQUIDS

National regulatory information

Employment restrictions:	Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.
Water hazard class (D):	2 - obviously hazardous to water

15.2. Chemical safety assessment

For this substance a chemical safety assessment has not been carried out.

SECTION 16: Other information

Changes

This data sheet contains changes from the previous version in section(s): 6,8,9,11,14.

Classification for mixtures and used evaluation method according to GB CLP Regulation

Classification	Classification procedure
Flam. Liq. 2; H225	On basis of test data
Acute Tox. 4; H332	Calculation method
Skin Irrit. 2; H315	Calculation method
STOT RE 2; H373	Calculation method
Aquatic Chronic 3; H412	Calculation method

Relevant H and EUH statements (number and full text)

H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H361d	Suspected of damaging the unborn child.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
EUH208	Contains Zinkbis(diethyldithiocarbamat). May produce an allergic reaction.

Further Information

The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights.
The receiver of our product is singularly responsible for adhering to existing laws and regulations.

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