TEMASIL 90

Date 17.4.2008 Previous date: 13.9.2005

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/ UNDERTAKING

1.1 Identification of the article

1.1.1 Commercial Product Name

TEMASIL 90

1.1.2 Product code

008 7381

1.2 Use of the Substance/Preparation

1.2.1 Intended use

Painting work

Description: A two component, ethyl silicate, zinc rich paint.

1.3 Identification of the company

1.3.1 Supplier

Tikkurila Oy

1.3.2 Contact information:

P.O.Box	P.O.Box 53
Postcode and post office	FI-01301 VANTAA FINLAND
Telephone	+358 9 857 71
Telefax	+358 9 8577 6936

1.3.4 Responsible for the Safety Data Sheet:

Tikkurila Oy, Product Safety, e-mail: productsafety@tikkurila.com

1.4 Emergency telephone number

1.4.1 Telephone number, name and address

Tikkurila Oy, Environment and Safety: +358 9 857 71

2. HAZARDS IDENTIFICATION

Highly flammable, F
Dangerous for the environment, N
Contact with water liberates extremely flammable gases. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Information on hazard labelling in section 15.1.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Hazardous components

3.1.1 CAS number	EINECS	3.1.2 Chemical name of the substance	3.1.3 Concentration	3.1.4 Classification
107-98-2	203-539-1	1-Methoxy-2-propanol	5 - 10 %	-; R10
1330-20-7	215-535-7	Xylene	1 - 5 %	Xn; R10-20/21-38
67-63-0	200-661-7	Isopropanol	1 - 5 %	F, Xi; R11-36-67
7440-66-6	231-175-3	Zinc powder	70 - 90 %	N; R10-15-50/53
7646-85-7	231-592-0	Zinc chloride	< 0,5 %	C, N; R34-50/53
1314-13-2	215-222-5	Zinc oxide	1 - 5 %	N; R50/53
100-41-4	202-849-4	Ethylbenzene	1 - 5 %	F, Xn; R11-20

4. FIRST AID MEASURES

4.1 Additional advice

In all cases of doubt, or when symptoms persist, seek medical attention.

4.2 Inhalation
Remove to fresh air, keep patient warm and at rest.

4.3 Skin contact
Remove contaminated clothing. Wash skin throughly with soap and water or use recognized skin cleanser.

4.4 Eye contact
Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart and seek medical advice.

4.5 Ingestion
If accidentally swallowed obtain immediate medical attention. Keep at rest. DO NOT induce vomiting.

5. FIRE-FIGHTING MEASURES

5.1 Suitable extinguishing media
Use foam, CO2, powder or water spray.

5.2 Extinguishing media which must not be used for safety reasons
Waterjet

5.3 Specific hazards
Fire will produce dense black smoke, which contains decomposition products. Avoid breathing the smoke.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions
Avoid breathing vapours. Exclude sources of ignition.

6.2 Environmental precautions
Do not allow to enter drains or water courses.

6.3 Methods for cleaning up
Contain and collect spillage with non-combustible absorbent materials, e.g. sand or vermiculite and place in a container for disposal according to local regulations. Clean preferably with a detergent; avoid the use of solvents. Note! Products containing oxidative drying oil or alkyd (linseed oil varnish, alkyd paints and -lacquers) have a possibility of auto-ignition in porous materials damped by the product. This kind of waste must be collected and stored e.g. in water before disposal or incinerated immediately.

7. HANDLING AND STORAGE

7.1 Handling
Vapours are heavier than air and may form explosive mixtures with air. Good ventilation must be provided. Keep away from sources of ignition. Take precautionary measures against static discharges.

7.2 Storage
Keep containers tightly closed. Store in a cool, dry, well ventilated place away from sources of heat and direct sunlight.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Exposure Limit Values

8.1.1 Occupational exposure limit values

1-Methoxy-2-propanol	100 ppm (8 h)
Xylene	100 ppm (8 h)
Isopropanol	200 ppm (8 h)
Ethylbenzene	100 ppm (8 h)

8.1.2 Information on limit values
TLV-TWA = Threshold Limit Values - Time-weighted average / ACGIH 2007

8.2 Exposure controls

8.2.1 Occupational exposure controls

Provide adequate ventilation. Comply with the health and safety at work laws.

8.2.1.1 Respiratory protection

Use appropriate certified respirators, with gas and vapour filter A, during sanding with dust filter P2, if ventilation is insufficient. During spray-application use respirators with gas, vapour and dust filter AP. During continuous and long-term work the use of air-fed or motor-driven respirators is recommended.

8.2.1.2 Hand protection

Always wear protective gloves (e.g. nitrile rubber). Barrier creams may also help to protect the exposed areas of the skin.

8.2.1.3 Eye protection

Safety eyewear must be used, specially during spray-application.

8.2.1.4 Skin and body protection

Protective clothing must be used during spray-application.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 General Information (appearance, odour)

Grey paste

9.2 Important Health Safety and Environmental Information

9.2.2	**Boiling point/range**	82 °C *)
9.2.3	**Flash point**	12 °C *)
9.2.5	**Explosive properties**	
9.2.5.1	**Lower explosion limit**	2,0 vol-% *)
9.2.5.2	**Upper explosion limit**	13,5 vol-% *)
9.2.7	**Vapour pressure**	4,2 kPa (20 °C) *)
9.2.8	**Relative density**	3,09
9.2.9	**Solubility**	
9.2.9.1	**Water solubility**	Insoluble

9.3 Other data

Evaporation rate (BuAc=1) :2,2 *)
*) = Isopropanol

10. STABILITY AND REACTIVITY

10.1 Conditions to avoid

Solvent vapours may form explosive mixtures with air.

10.2 Materials to avoid

Keep away from oxidizing agents, strongly alkaline and strongly acid materials in order to avoid exothermic reactions.

10.3 Hazardous decomposition products

Fire will produce dense black smoke. Exposure to decomposition products may cause a health hazard.

11. TOXICOLOGICAL INFORMATION

11.1 Acute toxicity

See section 11.5.

11.2 Primary irritation

See section 11.5.

11.3 Sensitisation

11.5 Human experience

11.5.1 Inhalation: Solvent vapours and spray mist harmful if inhaled. Long term exposure to component solvent vapours concentration in excess of the stated occupational exposure limit may result in adverse health effect such as mucous membrane and respiratory system irritation and adverse effect on kidney, liver and central nervous system. Symptoms and signs include headache and dizziness.
11.5.2 Skin contact: Repeated or prolonged contact with the preparation may cause removal of the natural fat from the skin resulting in contact dermatitis. Splashes in the eyes may cause irritation.
11.5.3 Other effects: Harmful if taken internally.

12. ECOLOGICAL INFORMATION

12.1 Ecotoxicity

12.1.1 Aquatic toxicity

Zinc: LC50 = 0,8 mg/l, oncorhynchus mykiss, 96 h; very toxic. LC50 = 0,16 mg/l, daphnia magna, 48 h; very toxic.Zinc oxide: EC50 = 0,17 mg/l, selenastrum capricornutum, 72 h; very toxic.
Zinc chloride: LC50 (96h, fish) > 0,9 mg/l, EC50 (48h, Daphnia) = 0.21 - 1,67 mg/l, IC50 (96h, Chlorella vulgaris) = 2,4 mg/l

12.4 Bioaccumulative potential

Zinc chloride: BCF (fish) = 1,0 - 2,0

12.6 Other adverse effects

There is no data available on the preparation itself. The product should not be allowed to enter drains or water courses.

13. DISPOSAL CONSIDERATIONS

13.1 Product residues: Gather residues into waste containers. Destroy according to the rules given by local authorities. EWC-code for liquid waste is e.g 08 01 11 (waste paint and varnish containing organic solvents or other dangerous substances).
13.2 Packaging waste: Empty cans should be recycled or disposed of in accordance with local regulations.

14. TRANSPORT INFORMATION

14.1	**UN No**	1263
14.2	**Packing group**	II
14.3	**Land transport**	
14.3.1	**ADR/RID Class**	3
14.3.3	**Description of the goods**	paint
14.4	**Sea transport**	
14.4.1	**IMDG Class**	3
14.4.2	**Proper shipping name**	paint
14.4.3	**Further Information**	EmS: F-E,S-E
14.5	**Air transport**	
14.5.1	**ICAO/IATA Class**	3
14.5.2	**Proper shipping name**	paint

15. REGULATORY INFORMATION

15.1 Information on the warning label

15.1.1 Letter code of the warning symbol and indications of danger for the preparation

F	Highly flammable
N	Dangerous for the environment

15.1.2 Names of the ingredients given on the warning label

Isopropanol
Zinc powder

15.1.3 R-phrase(s)

R11	Highly flammable.
R15	Contact with water liberates extremely flammable gases.
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

15.1.4 S-phrase(s)

S16	Keep away from sources of ignition - No smoking.
S23	Do not breathe vapour/spray.
S29	Do not empty into drains.
S33	Take precautionary measures against static discharges.
S38	In case of insufficient ventilation, wear suitable respiratory equipment.

16. OTHER INFORMATION

16.1 Full text of R-phrases referred to under sections 2 and 3

R20	Harmful by inhalation.
R11	Highly flammable.
R15	Contact with water liberates extremely flammable gases.
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R10	Flammable.
R20/21	Harmful by inhalation and in contact with skin.
R34	Causes burns.
R36	Irritating to eyes.
R38	Irritating to skin.
R67	Vapours may cause drowsiness and dizziness.

16.4 Additional information

The information of this MSDS is based on the present state of our knowledge and on current EC laws. It is meant as a description of the safety requirements of our product: it is not to be considered as a guarantee of the products' properties.
Additional information available from: Tikkurila Oy, Product Safety, P.O. Box 53, FIN-01301 VANTAA, FINLAND, Telephone +358 9 857 71, Fax +358 9 8577 6936, E-mail: productsafety@tikkurila.com

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