



SAFETY DATA SHEET

TEMAFLOOR 401

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

1.1 Product identifier

Product name : TEMAFLOR 401

Product description : A two-component solvent-free epoxy clear lacquer.

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

Recommended use: Painting work

1.3 Details of the supplier of the safety data sheet

Manufacturer or Distributor

Tikkurila Oyj
P.O. Box 53
FI-01301 VANTAA
FINLAND
Telephone +358 20 191 2000

e-mail address of person responsible for this SDS : Tikkurila Oyj,
Product Safety,
e-mail: productsafety@tikkurila.com

1.4 Emergency telephone number

Telephone number : 112
(24h)

Supplier or Manufacturer

Telephone number : Tikkurila Oyj
+358 20 191 2000 (GMT +2) Mon-Fri 8-16

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Skin Irrit. 2, H315

Eye Irrit. 2, H319

Skin Sens. 1, H317

Aquatic Chronic 2, H411

The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended.

2.2 Label elements

Hazard pictograms :



Signal word : Warning

Hazard statements	: H319 - Causes serious eye irritation. H315 - Causes skin irritation. H317 - May cause an allergic skin reaction. H411 - Toxic to aquatic life with long lasting effects.
Precautionary statements	
General	: Not applicable.
Prevention	: P261 - Avoid breathing vapor. P280 - Wear protective gloves/clothing and eye/face protection. P284 - In case of inadequate ventilation wear respiratory protection. P273 - Avoid release to the environment.
Response	: P302 + P352 - IF ON SKIN: Wash with plenty of soap and water. P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Storage	: Not applicable.
Disposal	: Not applicable.
Hazardous ingredients	: bis-(4-(2,3-epoxypropoxy)phenyl)propane oxirane, mono[(C12-14-alkyloxy)methyl] derivs. reaction product of bis(1,2,2,6,6-pentamethyl-4-piperidyl)sebacate and methyl- 1,2,2,6,6-pentamethyl-4-piperidylsebacate
Supplemental label elements	: Not applicable.

2.3 Other hazards

Other hazards which do not result in classification : None known.

SECTION 3: Composition/information on ingredients

3.2 Mixtures : Mixture

Product/ingredient name	Identifiers	%	Classification Regulation (EC) No. 1272/2008 [CLP]	Notes
bis-(4-(2,3-epoxypropoxy)phenyl)propane	REACH #: 01-2119456619-26 EC: 216-823-5 CAS: 1675-54-3 Index: 603-073-00-2	≥75 - ≤90	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Chronic 2, H411	-
oxirane, mono[(C12-14-alkyloxy)methyl] derivs.	REACH #: 01-2119485289-22 EC: 271-846-8 CAS: 68609-97-2 Index: 603-103-00-4	≥10 - ≤25	Skin Irrit. 2, H315 Skin Sens. 1, H317	-
benzyl alcohol	REACH #: 01-2119492630-38 EC: 202-859-9 CAS: 100-51-6	≤5	Acute Tox. 4, H302 Acute Tox. 4, H332 Eye Irrit. 2, H319	-
reaction product of bis(1,2,2,6,6-pentamethyl-4-piperidyl)sebacate and methyl-1,2,2,6,6-pentamethyl-4-piperidylsebacate	REACH #: 01-2119491304-40 EC: 915-687-0 CAS: 1065336-91-5	<3	Skin Sens. 1A, H317 Repr. 2, H361f Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1)	-
bisphenol A	EC: 201-245-8 CAS: 80-05-7 Index: 604-030-00-0	<0.1	Eye Dam. 1, H318 Skin Sens. 1, H317 Repr. 1B, H360F STOT SE 3, H335 Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=10) See Section 16 for the full text of the H statements declared above.	-

Notes, if applicable, refer to Notes given in Annex VI of 1272/2008/EC.

Specific concentration limits and ATE-values

Ingredient name, Specific concentration limits, ATE value

bis-(4-(2,3-epoxypropoxy)phenyl)propane
 Eye Irrit. 2, H319: C ≥ 5 %
 Skin Irrit. 2, H315: C ≥ 5 %

There are no additional ingredients present which, within the current knowledge of the supplier, are classified and contribute to the classification of the substance and hence require reporting in this section.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs or vPvBs or have been assigned a workplace exposure limit and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

SECTION 4: First aid measures**4.1 Description of first aid measures**

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|---------------------|--|
| General | : In all cases of doubt, or when symptoms persist, seek medical attention. Show this safety data sheet or label to the doctor if possible. |
| Eye contact | : Check for and remove any contact lenses. Immediately flush eyes with plenty of lukewarm water, keeping eyelids open. Continue to rinse for at least 15 minutes. Get medical attention if symptoms occur. |
| Inhalation | : Remove to fresh air. Keep person warm and at rest. |
| Skin contact | : Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners. Get medical attention if symptoms occur. |
| Ingestion | : If accidentally swallowed rinse the mouth with plenty of water (only if the person is conscious) and obtain immediate medical attention. Remove to fresh air and keep at rest in a position comfortable for breathing. Do NOT induce vomiting. |

4.2 Most important symptoms and effects, both acute and delayed

Causes skin irritation.

Causes serious eye irritation.

May cause an allergic skin reaction.

See Section 11 for more detailed information on health effects and symptoms.

4.3 Indication of any immediate medical attention and special treatment needed

None.

SECTION 5: Firefighting measures**5.1 Extinguishing media**

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|---------------------------------------|---|
| Suitable extinguishing media | : Use an extinguishing agent suitable for the surrounding fire. Recommended: Alcohol resistant foam, CO ₂ , powders or water spray/mist. |
| Unsuitable extinguishing media | : Do not use a direct water jet that could spread the fire. |

5.2 Special hazards arising from the substance or mixture

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|--|--|
| Hazards from the substance or mixture | : This product is not classified as flammable. Fire will produce dense black smoke. Exposure to decomposition products may cause a health hazard. |
| Hazardous combustion products | : When exposed to high temperatures, hazardous decomposition products may be produced, such as carbon monoxide and dioxide, smoke, oxides of nitrogen etc. |

5.3 Advice for firefighters

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|---|--|
| Special protective actions for fire-fighters | : Use water spray to keep fire-exposed containers cool. This material is hazardous to aquatic organisms. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain. |
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Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

SECTION 6: Accidental release measures

- 6.1 Personal precautions, protective equipment and emergency procedures** : Provide adequate ventilation. Avoid breathing vapor or mist. Avoid contact with skin and eyes. See Section 8 for information on appropriate personal protective equipment.
- 6.2 Environmental precautions** : Hazardous to aquatic environment. Do not allow to enter drains, water courses or soil.
- 6.3 Methods and materials for containment and cleaning up** : Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Preferably clean with a detergent. Avoid using solvents.
- 6.4 Reference to other sections** : See Section 1 for emergency contact information.
See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

- 7.1 Precautions for safe handling** : Avoid contact with skin and eyes. Avoid breathing vapor. Avoid inhalation of dust from sanding. See Section 8 for information on appropriate personal protective equipment. Eating, drinking and smoking should be prohibited in areas where this material is handled and stored. Wash hands before breaks and immediately after handling the product. Avoid release to the environment.
- 7.2 Conditions for safe storage, including any incompatibilities** : Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10). Keep container tightly closed. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Recommended storage temperature is +5°C ...+25°C. Store in accordance with local regulations.
- 7.3 Specific end use(s)** : None.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

Product/ingredient name	Exposure limit values
Bisphenol A	EU OEL (Europe, 10/2019). Notes: list of indicative occupational exposure limit values TWA: 2 mg/m ³ 8 hours. Form: Inhalable fraction

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

DNELs/DMELs

No DNELs/DMELs available.

PNECs

No PNECs available.

8.2 Exposure controls

Appropriate engineering controls

Provide adequate ventilation. Where reasonably practicable, this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and solvent vapours below the OEL, suitable respiratory protection must be worn (see Personal protection for both components). Contains epoxy constituents. Skin contact with the product and exposure to spray mist and vapor should be avoided. Comply with the health and safety at work laws.

Individual protection measures

- Eye/face protection** : Use safety eyewear designed to protect against splash of liquids (EN166).
- Hand protection** : Always wear approved protective gloves against chemicals. Gloves should be replaced regularly and if there is any sign of damage to the glove material. The instructions and information provided by the glove manufacturer on use, storage, maintenance and replacement must be followed.
Recommended glove material (EN374):
< 1 hour (breakthrough time): nitrile rubber, butyl rubber
> 8 hours (breakthrough time): laminated foil
Not recommended: PVC or natural rubber (latex) gloves
- Skin protection** : Wear suitable protective clothing.
- Respiratory protection** : If ventilation is inadequate, use respirator that will protect against dust/mist. Wear a half mask or full face respirator with gas and vapor filter A and dust filter P2 during sanding (EN140:1998, EN405:2001). During continuous and long-term work the use of motor-driven or air-fed respirators is recommended (EN12941:1998). Be sure to use an approved/certified respirator or equivalent. Check that mask fits tightly and change filter regularly.
- Environmental exposure controls** : For information regarding environmental protection measures, please refer to section 13 for waste handling, section 7 for handling and storage and section 1.2 for relevant identified uses of the substance or mixture and uses advised against.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

- Physical state** : Liquid.
- Color** : Clear.
- Odor** : Strong.
- Odor threshold** : Not relevant for the hazard assessment of the product.
- pH** : Not relevant for the hazard assessment of the product.
- Melting point/freezing point** : -15.4°C (benzyl alcohol)
- Initial boiling point and boiling range** : 205.3°C (benzyl alcohol)
- Flash point** : >100 °C
- Evaporation rate** : 0.007 (butyl acetate = 1) (benzyl alcohol)
- Flammability (solid, gas)** : Not applicable. Product is a liquid.
- Upper/lower flammability or explosive limits** : Lower: 1.3% (benzyl alcohol)
Upper: 13% (benzyl alcohol)
- Vapor pressure** : 0.0067 kPa [room temperature] (benzyl alcohol)
- Vapor density** : 3.7 (benzyl alcohol)
- Density** : 1.12 g/cm³
- Solubility(ies)** : Not available.
- Partition coefficient: n-octanol/ water** : Not applicable.
- Auto-ignition temperature** : 436°C (benzyl alcohol)
- Decomposition temperature** : Not relevant for the hazard assessment of the product.
- Viscosity** : Not relevant for the hazard assessment of the product.
- Explosive properties** : No explosive ingredients present.
- Oxidizing properties** : No oxidizing ingredients present.

Particle characteristics

- Median particle size** : Not applicable.

9.2 Other information

No additional information.

SECTION 10: Stability and reactivity

10.1 Reactivity : See Section 10.5.

10.2 Chemical stability : Stable under recommended storage and handling conditions (see Section 7).

10.3 Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 Conditions to avoid : Avoid extreme heat and freezing.

10.5 Incompatible materials : Keep away from the following materials to prevent strong exothermic reactions:
oxidizing agents
strong acids
strong alkalis

10.6 Hazardous decomposition products : When exposed to high temperatures, hazardous decomposition products may be produced, such as carbon monoxide and dioxide, smoke, oxides of nitrogen etc.

SECTION 11: Toxicological information

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

There is no testdata available on the product itself.

The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended.

Based on the properties of the epoxy constituent(s) and considering toxicological data on similar mixtures, this mixture may be a skin sensitizer and an irritant. It contains low-molecular weight epoxy constituents which are irritating to eyes, mucous membranes and skin. Repeated skin contact may lead to irritation and to sensitization, possibly with cross-sensitization to other epoxies.

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
benzyl alcohol	LC50 Inhalation Dusts and mists	Rat	4.178 mg/l	4 hours
	LD50 Oral	Rat	1230 mg/kg	-

Not classified.

Irritation/Corrosion

Causes skin irritation. Causes serious eye irritation.

Sensitization

May cause an allergic skin reaction.

The product contains sensitizing substances mentioned in sections 2 and 3.

Mutagenicity

Not classified.

Carcinogenicity

Not classified.

Reproductive toxicity

Not classified.

Teratogenicity

Not classified.

Specific target organ toxicity (single exposure)

Not classified.

Specific target organ toxicity (repeated exposure)

Not classified.

Aspiration hazard

Not classified.

11.2 Information on other hazards

11.2.1 Endocrine disrupting properties

Not applicable.

11.2.2 Other information

Not available.

SECTION 12: Ecological information

Ecological testing has not been conducted on this product.

The product is classified as environmetally hazardous according to Regulation (EC) 1272/2008.

Toxic to aquatic life with long lasting effects.

Do not allow to enter drains, water courses or soil.

12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
reaction product of bis (1,2,2,6,6-pentamethyl-4-piperidyl)sebacate and methyl-1,2,2,6,6-pentamethyl-4-piperidylsebacate	LC50 0.9 mg/l	Fish - Brachydanio rerio	96 hours
	LC50 0.97 mg/l	Fish - Lepomis macrochirus	96 hours

12.2 Persistence and degradability

: No specific data.

12.3 Bioaccumulative potential

Product/ingredient name	LogP _{ow}	Bioconcentration factor [BCF]	Potential
Bisphenol A	3.4	20 to 67	low
reaction product of bis (1,2,2,6,6-pentamethyl-4-piperidyl)sebacate and methyl-1,2,2,6,6-pentamethyl-4-piperidylsebacate	-	9.65	low
benzyl alcohol	0.87	1.37	low
oxirane, mono[(C12-14-alkyloxy)methyl] derivs.	3.77	160 to 263	low

12.4 Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

Mobility : Not available.

12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

12.6 Endocrine disrupting properties : Not applicable.

12.7 Other adverse effects : Not available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Methods of disposal : Gather residues into waste containers. Liquid residue and cleaning liquids are hazardous waste and must not be emptied into drains or sewage system, but handled in accordance with national regulations. Product residues should be left at special companies which have permission for gathering this kind of wastes.

European waste catalogue (EWC)

Waste code	Waste designation
08 01 11*	waste paint and varnish containing organic solvents or other hazardous substances

If this product is mixed with other wastes, the original waste product code may no longer apply and the appropriate code should be assigned. For further information, contact your local waste authority.

Packaging

Methods of disposal : Empty packaging should be disposed of in accordance with national regulations.

Special precautions : **Note!** The ready for use mixture of paint and hardener generates much heat. Allow the remainder of the mixture to harden in a safe place, e.g. in the open.

SECTION 14: Transport information

	ADR/RID	IMDG	IATA
14.1 UN number or ID number	UN3082	UN3082	UN3082
14.2 UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Paint)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (PAINT)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (PAINT)
14.3 Transport hazard class(es)	9	9	9
14.4 Packing group	III	III	III
14.5 Environmental hazards	Yes.	Yes.	Yes.

Additional information

ADR/RID : This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8.

IMDG : This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8.

Emergency schedules F-A,S-F

IATA : This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 5.0.2.4.1, 5.0.2.6.1.1 and 5.0.2.8.

14.6 Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.


14.7 Maritime transport in bulk according to IMO instruments : Not available.

SECTION 15: Regulatory information

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

EU Regulation (EC) No. 1907/2006 (REACH)

Substances of very high concern

Ingredient name	Intrinsic property	Status	Reference number	Date of revision
 Bisphenol A 4,4'-isopropylidenediphenol; bisphenol A; BPA	Toxic to reproduction Substance of equivalent concern for human health	Candidate Recommended	- ED/01/2018	- 10/1/2019
4,4'-isopropylidenediphenol; bisphenol A; BPA	Substance of equivalent concern for environment	Recommended	ED/01/2018	10/1/2019

Other EU regulations

Europe inventory : Not determined.

Persistent Organic Pollutants

Not listed.

VOC Directive : This product is in scope of Directive 2004/42/CE.

15.2 Chemical Safety Assessment : This product contains substances for which Chemical Safety Assessments are still required.

SECTION 16: Other information

 Indicates information that has changed from previously issued version.


Abbreviations and acronyms :

- ATE = Acute Toxicity Estimate
- CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
- DMEL = Derived Minimal Effect Level
- DNEL = Derived No Effect Level
- EUH statement = CLP-specific Hazard statement
- PBT = Persistent, Bioaccumulative and Toxic
- PNEC = Predicted No Effect Concentration
- RRN = REACH Registration Number
- vPvB = Very Persistent and Very Bioaccumulative

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification	Justification
Skin Irrit. 2, H315	Calculation method
Eye Irrit. 2, H319	Calculation method
Skin Sens. 1, H317	Calculation method
Aquatic Chronic 2, H411	Calculation method

Full text of abbreviated H statements :


-  H302 Harmful if swallowed.
- H332 Harmful if inhaled.
- H318 Causes serious eye damage.
- H319 Causes serious eye irritation.
- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.
- H335 May cause respiratory irritation.
- H360F May damage fertility.
- H361f Suspected of damaging fertility.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

H411 Toxic to aquatic life with long lasting effects.

**Full text of classifications
[CLP/GHS]**

:  Acute Tox. 4	ACUTE TOXICITY - Category 4
Aquatic Acute 1	AQUATIC HAZARD (ACUTE) - Category 1
Aquatic Chronic 1	AQUATIC HAZARD (LONG-TERM) - Category 1
Aquatic Chronic 2	AQUATIC HAZARD (LONG-TERM) - Category 2
Eye Dam. 1	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1
Eye Irrit. 2	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2
Repr. 1B	TOXIC TO REPRODUCTION - Category 1B
Repr. 2	TOXIC TO REPRODUCTION - Category 2
Skin Irrit. 2	SKIN CORROSION/IRRITATION - Category 2
Skin Sens. 1	SKIN SENSITIZATION - Category 1
Skin Sens. 1A	SKIN SENSITIZATION - Category 1A
STOT SE 3	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 3

Date of issue/ Date of revision : 1/4/2023

Date of previous issue : 7/12/2022

Version : 5

Notice to reader

This Safety Data Sheet is prepared in accordance with Annex II (EU) No 878/2020 to Regulation (EC) No 1907/2006 (REACH). The information contained in this Safety Data Sheet is based on the present state of knowledge and current EU and national legislation. It provides guidance on health, safety and environmental aspects of the product and should not be construed as any guarantee of technical performance or suitability for particular applications.