TESSAROL ENAMEL FOR RADIATORS white

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1. Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product	**TESSAROL ENAMEL FOR RADIATORS white**
Item code(s):	409301

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

Use, scope:	Top coating - special enamel The product is used in consumer and professional use.
Use:	Suitable for application with spraying, brush and roller.
Restrictions on use	No restrictions known.

1.3. Details of the supplier of the safety data sheet

Producer	HELIOS TBLUS d.o.o. Količevo 65 • 1230 Domžale, Slovenija T +386 1 722 40 00 F +386 1 722 43 10
Responsible person	Matija Podobnik, e-mail: matija.podobnik@helios.si

1.4. Emergency telephone number

Phone	In case of health hazard, consult a private or a doctor on duty. For additional information please call phone number +386 (1) 722 4383 HSE dept.).

2. Hazards identification

2.1. Classification of the substance or mixture

Classification (EU 1272/2008)

Categories of danger	Flammable Liquid 3 Specific Target Organ Systemic Toxicity (STOT) - Single Exposure 3

2.2. Label elements

EU 1272/2008:

Signal Word	**Warning**

Contains:	2-butanone oxime May produce an allergic reaction.
Hazard phrases (H-phrases):	H226 - Flammable liquid and vapour. H336 - May cause drowsiness or dizziness.
Precautionary statements:	P101 - If medical advice is needed, have product container or label at hand. P102 - Keep out of reach of children. P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P261 - Avoid breathing dust/fume/gas/mist/vapours/spray. P271 - Use only outdoors or in a well-ventilated area. P501 - Dispose of contents/container to authorized disposal organisation.

2.3. Other hazards

	Product contains organic solvents. EUH066 Repeated exposure may cause skin dryness or cracking.

3. Composition/information on ingredients

3.2. Mixtures

Chemical composition:	Enamel based on alkyd binder and pigments in organic solvents.

Chemical Name	**Concentration [weight %]**	**CAS EINECS EU INDEX REACH reg.no.**	**Classification (REGULATION (EC) No. 1272/2008) Notes**
hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclic, <2% aromatics	30-49,99	- 919-857-5 - 01-2119463258-33	Asp.Tox.1; H304 STOT SE 3; H336 Flam. Liq. 3; H226
1-methoxypropan-2-ol	1,0-2,99	107-98-2 203-539-1 603-064-00-3 01-2119457435-35	STOT SE 3; H336 Flam. Liq. 3; H226
naphtha (petroleum), hydrotreated heavy	1,0-2,99	64742-48-9 265-150-3 649-327-00-6 01-2119457273-39	Asp.Tox.1; H304 P
2-butanone oxime	0,1- 0,49	96-29-7 202-496-6 616-014-00-0 01-2119539477-28	Carc. 2; H351 Skin Sens. 1; H317 Eye Dam. 1; H318 Acute Tox. 4; H312

Notes:	P: weight % of benzene in substance is lower than 0,1 wght. %, there is no carcinogenic classification.

4. First aid measures

4.1. Description of first aid measures

In case of excessive inhalation:	If there are any symptoms transfer the victim to clean air.
In case of contact with skin:	Remove contaminated clothing. Wash skin with soap and water. Do not use organic solvents or thinners.
In case of contact with eyes:	Flush eyes with water to remove product residue.
In case of ingestion:	Do not eat. Rinse mouth with water. Do not induce vomiting.

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

In case of excessive inhalation:	No data.
In case of contact with skin:	Prolonged exposure (contact) with the product causes loss of fat in the skin which can cause inflammation of the skin.
In case of contact with eyes:	Redness, tearing and irritation at sensitive persons.
In case of ingestion:	In the case of large ingested amounts of product, sensitive individuals may experience nausea, vomiting and diarrhea.

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

	No data available

5. Firefighting measures

5.1. Extinguishing media

Fire Extinguishing Media:	SUITABLE: Foam, powder, carbon dioxide, inert gas or INERGEN FM 200 (started phase fire fighting), water fog. UNSUITABLE: Water jet, unless USED ONLY for water mist to cool containers with flammable products. Remove all possible sources of ignition: open flame, lit cigarette, sparkling of tools and equipment. Close packagings with product.
Unsuitable extinguishing media:	Open water jet

5.2. Special hazards arising from the substance or mixture

Specific methods of extinguishing fire:	Extinguish fire in wind direction. Cool down vessels with product, which do not burn with dispersed water, prevent leakage of the product and place them in a safety place. The possibility of formation man harmful gases and thick smoke during the fire. The use of protective mask with filter A is mandatory.

5.3. Advice for firefighters

Special equipment to protect firefighters:	Independent fire extinguisher on compressed air, a full fire-fighting equipment to protect the body.

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions:	Remove possible sources of ignition (flame, lit cigarette, sparkling etc.). Protect respiratory system against inhalation of vapours. Provide good ventilation.

6.2. Environmental precautions

Environmental precautions:	Prevent leakage into water, water dams, cellars, caves or sewage system.

6.3. Methods and material for containment and cleaning up

Methods of cleaning up:	Absorb the outflown product and mix it with soil, sand or other absorptive materials for liquids. Leave waste to the authorized waste collectors.

6.4. Reference to other sections	Disposal of waste - Chapter 13, personal protective equipment - Chapter 8.

7. Handling and storage

7.1. Precautions for safe handling

Personal precautions:	At the use product vapours may produce flammable/explosive mixtures of vapours and air. During the pumping static electrification may occur. Emptying of static electrification, which could cause fire. At the decanting of larger quantities assure conductivity with binding and earthing of complete equipment. Prevent contact with hot objects, sparkles, flame and sources of ignition.
Advice on safe handling:	Do not smoke, drink or eat while handling the product. Do not breathe vapors, avoid contact with skin and eyes. At work wear cotton overalls or coveralls, nitrile rubber gloves and safety glasses with side shields.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures and conditions:	SUITABLE: Store in tightly closed vessels in a cool and ventilated room. Prevent the formation of static electrification. UNSUITABLE: Storage in the room together with chemicals (oxidants, acids) may cause fire. In the warehouse there should be no tools or machines, which are the source of sparkling. Store in an upright position.
Storage Class:	3A (German VCI Guideline)

7.3. Specific end use(s)	No further relevant information available.

8. Exposure controls/personal protection

8.1. Control parameters

The prescribed of threshold limit value (TLV) for occupational exposure to hazardous substances in the atmosphere post the Regulation on the safety of employees from risks against chemical substance exposure at work:

Data on components:

Chemical Name	TLV (mg/m3)	TLV (ml/m3, PPM)	STL	Note
1-methoxypropan-2-ol	375	100	1	K EU
naphtha (petroleum), hydrotreated heavy	1200			

Biological limit values for components:

Chemical Name	Characteristic indication | Biological sample | Sampling time | Biological limit values
2-butanone oxime	2-butanone oxime | urine | after working shift 4.08 mol/mol creathinine*

DNEL = Derived No Effect Level
Component Data:

Chemical Name	Population | Exposure | Effects | Values (units)
hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclic, <2% aromatics	Workers Longterm inhalational Systemic effects 1500 mg/m3 Workers Longterm dermal Systemic effects 300 mg/kg/bw/day Consumers Longterm inhalational Systemic effects 900 mg/m3 Consumers Longterm dermal Systemic effects 300 mg/kg/bw/day Consumers Longterm oral Systemic effects 300 mg/kg/bw/day
1-methoxypropan-2-ol	Workers Longterm inhalational Systemic effects 369 mg/m3 Workers Shortterm inhalational Systemic effects 553.5 mg/m3 Workers Shortterm inhalational Local effects 553.5 mg/m3 Workers Longterm dermal Systemic effects 183 mg/kg/bw/day Workers Longterm inhalational Systemic effects 43.9 mg/m3 Consumers Longterm dermal Systemic effects 78 mg/kg/bw/day Consumers Longterm oral Systemic effects 33 mg/kg/bw/day
naphtha (petroleum), hydrotreated heavy	Workers Longterm inhalational Systemic effects 1500 mg/m3 Workers Longterm dermal Systemic effects 300 mg/kg/bw/day Consumers Longterm inhalational Systemic effects 900 mg/m3 Consumers Longterm dermal Systemic effects 300 mg/kg/bw/day Consumers Longterm oral Systemic effects 300 mg/kg/bw/day
2-butanone oxime	Workers Longterm inhalational Systemic effects 9 mg/m3 Workers Longterm inhalational Local effects 3.33 mg/m3 Workers Longterm dermal Systemic effects 1.3 mg/kg/bw/day Workers Shortterm dermal Systemic effects 2.5 mg/kg/bw/day Consumers Longterm inhalational Systemic effects 2.7 mg/m3 Consumers Longterm inhalational Local effects 2 mg/m3 Consumers Longterm dermal Systemic effects 0.78 mg/kg/bw/day Consumers Shortterm dermal Systemic effects 1.5 mg/kg/bw/day

PNEC = Predicted No Effect Concentration
Component Data:

Chemical Name	Media detail | Values
1-methoxypropan-2-ol	Fresh water = 10 mg/l intermittent releases = 100 mg/l Sea water = 1 mg/l Cleaning device = 100 mg/l Sediment in fresh water = 52.3 mg/kg dry weight Sediment in sea water = 5.2 mg/kg dry weight Earth = 4.59 mg/kg dry weight
2-butanone oxime	Fresh water = 0.256 mg/l intermittent releases = 0.118 mg/l Cleaning device = 177 mg/l

8.2. Exposure controls

Respiratory protection:	When used in confined spaces, prolonged work, wear protective mask for the whole face with filter "A". In case that the oxygen concentration in the air of work room falls under 17 %, use independent respirator with an open circle on the compressed air.
Hand protection:	At several contacts with the product use gloves made of nytril rubber with thickness 0,40 mm, in contact with drops of product (minor contacts) the gloves made of nytril rubber of thickness 0,11 mm.
Eye protection:	At the low concentrations in the air wear protective goggles, at high concentrations the protective mask for the whole face.

Skin protection:	In normal conditions wear clothes made of cotton and suitable footwear. In case the possibility of outflow is high, use the clothes and footwear resistant to chemicals (PVC, rubber).

9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

(a) Appearance:	Liquid
(b) Odour:	Specific for organic solvents
(c) Odour threshold:	Product components have a high limit of odor detection.
(d) pH:	No data available
e) Melting point/freezing point:	< 0 °C [ASTM D97/87] ; computational method, based on component data ; hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclic, <2% aromatics
(f) Initial boiling point and boiling range:	2500 - 3000 °C ; computational method, based on component data ; titanium dioxide
(g) Flash point:	34 (°C); ISO 3679:2015, closed cup ;
(h) Evaporation rate:	; computational method, based on component data ; No data
(i) Flammability (solid, gas):	Flammable liquid and vapour.
(l) Vapour density:	No data
(m) Relative density(kg/l):	1,1-1,15 ISO 2811
(n) Solubility(ies):	Insoluble
(o) Partition coefficient: n-octanol/water:	; computational method, based on component data
(p) Auto-ignition temperature:	; computational method, based on component data ; No data
(q) Decomposition temperature:	No data
(r) Viscosity:	DIN4 20°C 180 - 200 s
Kinematic viscosity:	> 21 mm²/s, 40 °C
(s) Explosive properties:	Product is not explosive. However, formation of explosive steam/air mixtures is possible.
(t) Oxidising properties:	No data
9.2. Other information	
Solids content: (calculated, %)	64-68
Organic solvents (wght. %)	34
Water content: (calculated, %)	0.00

10. Stability and reactivity

10.1. Reactivity

Reactivity:	Stable - when used in accordance with the instructions.

10.2. Chemical stability

Stability:	The product is stable under conditions in accordance with the instructions

	and proper storage.

10.3. Possibility of hazardous reactions

Hazardous conditions:	The presence of open flame or hazardous materials. Avoid contact of product with heat, sparks, flames and other ignition sources.

10.4. Conditions to avoid

Unwanted conditions:	No data available

10.5. Incompatible materials

Incompatibility:	The product is non-reactive and compatible with majority of substances, except with extreme oxidants. Keep the product in the original packaging. Do not mix with other products.

10.6. Hazardous decomposition products

	No data available

11. Toxicological information

11.1. Information on toxicological effects

(a) acute toxicity:

ORAL	None data known.
DERMAL	Product contains components which may cause effects in case of contact with skin and may cause problems to some individuals. Such components are: ; computational method, based on component data 2-butanone oxime
INHALATIONAL	None data known.
Special precautionary measures:	Wash hands thoroughly after handling. Do no eat, drink or smoke when using this product.

Data on components:

Chemical Name	LC50 inhalation	Oral LD50	Dermal LD50
1-methoxypropan-2-ol	LC50-4 hours Rat 55 mg/l	OLD50 Rat 5200 mg/kg	D LD50 Rabbit 13 g/kg
naphtha (petroleum), hydrotreated heavy		OLD50 Rat > 5000 mg/kg	D LD50 Rabbit > 3160 mg/kg
2-butanone oxime	LC50-4 hours Rat 20 mg/l	OLD50 Rat 930 mg/kg	D LD50 Rabbit 0 mg/kg

(b) skin corrosion/irritation:

Skin:	None data known.
Special precautionary measures:	Product does not contain components classified as corrosive/irritant to skin.

(c) serious eye damage/irritation:

Eyes:	Product contains components which may cause effects in case of contact with eyes and may cause problems to some individuals.
Special precautionary measures:	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

(d) respiratory or skin sensitisation:

Skin:	Product contains components which may cause skin sensitivity and may cause problems to some individuals.

Special precautionary measures:	Wear protective gloves/protective clothing/eye protection/face protection.

(e) germ cell mutagenicity:

Exposure to product:	None data known.
Special precautionary measures:	Product does not contain components classified as mutagenic.

(f) carcinogenicity:

Exposure to product:	Product contains components which are suspected to cause cancer, but below the threshold to classify the product itself.
Special precautionary measures:	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. IF exposed or concerned: Get medical advice/attention.

(g) reproductive toxicity:

Exposure to product:	None data known.
Special precautionary measures:	Product does not contain components classified as being reprotoxic.

(h) STOT-single exposure:

Exposure to product:	May cause drowsiness or dizziness.
Special precautionary measures:	Use only outdoors or in a well-ventilated area.

(i) STOT-repeated exposure:

Special precautionary measures:	Product does not contain components classified as causing harmful effect to organs on repeated or prolonged exposure.

(j) aspiration hazard:

INHALATIONAL	Product contains components which may cause aspiration hazard, but kinematic viskosity is high enough that product is not classified with aspiration hazard.
Special precautionary measures:	Do NOT induce vomiting.

12. Ecological information

12.1. Toxicity

Ecotoxicity - Data on components:	Product (based on the data component) is not classified as dangerous for the environment.

Chemical Name	Ecotoxicity conc.
1-methoxypropan-2-ol	Aquatic LC50 Algae > 1000 mg/l Aquatic LC50 Daphnia > 1000 mg/l Aquatic LC50 fish > 1000 mg/l
naphtha (petroleum), hydrotreated heavy	Aquatic LC50 (96h) fish > 1000 mg/l Aquatic LC50 Daphnia > 1000 mg/l

12.2. Persistence and degradability

Biodegradation	No data available

12.3. Bioaccumulative potential

Bioconcentration:	No data available

12.4. Mobility in soil

Mobility	No data

12.5. Results of PBT and vPvB assessment

PBT and vPvB:	No data available

12.6. Other adverse effects

Ecotoxicity - Data on components:	Based on the classification of components, product is not recognised to have adverse effects on the environment.

13. Disposal considerations

13.1. Waste treatment methods

Product:	The product leftovers , waste and useless packaging should be handled in accordance with the Regulations on processing of special and dangerous waste (dir. 91/689/EEC, dir. 2000/532/EC). Waste classification number: 08 01 11 Waste hazardeous characteristic: H3-B The recommended dgradation method is the use of the controlled high temperature incineration or disposal to the deposits for dangerous substances.
Packaging:	In case the metal packaging can not be reused, it will be recycled in the ironworks or disposed at special deposits (dir. 94/62/EC, dir. 1999/177/EC).

14. Transport information

	Transport by road/by railway - ADR/RID:	Transport by sea – IMDG:	Air transport (IATA):
Reliefs, exemptions:	In case a product is transported in the packaging units smaller than 450 l, it will not be classified as dangerous according to ADR/RID, in accordance with the concession 2.2.3.1.5.	In case a product is transported in the packaging units smaller than 450 l, it will not be classified as dangerous according to IMDG, in accordance with transport IMDG-code 2.3.2.5	
14.1. UN number	1263	1263	1263
14.2. UN proper shipping name	PAINT	PAINT	PAINT

14.3. Transport hazard class(es)	3	3	3
14.4. Packing group	III	III	III
Label:			
Hazard number:	30	30	30
Tunnel restriction code:	(D/E)		
Instructions for emergency EmS:		F-E, S-E	
14.5. Environmental hazards	No	No	No
14.6. Special precautions for user	Transport with respecting transport labels and the requests of transportation legislation.		
14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable		

15. Regulatory information

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

This Safety Data Sheet has been prepared in accordance with a comprehensive chemicals legislation - REACH Regulation on chemicals and the Regulation for classification, labeling and packaging (CLP/GHS).

The product is under the scope of Directive (EU 2004/42), "DECO VOC". Under the terms of directive, the product is classified into: A.i - One-pack performance coatings, solvent-borne coatings (SB) 490 g/l

15.2. Chemical safety assessment

Has not been conducted.

16. Other information

The importance of H phrases from Chapter 3:
H351 - Suspected of causing cancer.
H318 - Causes serious eye damage.
H317 - May cause an allergic skin reaction.
H312 - Harmful in contact with skin.
H304 - May be fatal if swallowed and enters airways.
H336 - May cause drowsiness or dizziness.
H226 - Flammable liquid and vapour.

Changes from previous revisions:	Changes to the sheet were made in section: 2., 3., 8., 9., 11., 12., 14., 15., 16.
Literature / Data Sources:	Supplier's / manufacturer's safety data, references to toxicological databases.

The information in this Safety Data Sheet refer only to the mentioned product in the form as delivered and it is not necessary valid when this material is used in the combination with other materials or in the processes, which are not foreseen in the instructions for use. This information is correct to the supplier's best of knowledge and reliable at the time of the publication of this Safety data sheet. It is the user's responsibility to ascertain the suitability of the product for a specific use.

The data in this Safety data sheet do not prove the quality of the product, they are only the instructions for the safe use of the product with the user.
In case of non-compliance with the measures or incorrect use of the product , stated in the Safety data sheet we do not accept any responsibility for the consequences.