

Valirex Co 8,5 Toluene

Version 6.1

BE

SDS Number: 300000003288

Revision Date: 29.06.2022

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

Product identifier : Valirex Co 8,5 Toluene

Product code : 300000003288

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

Use of the Sub-
stance/Mixture : Catalyst
Additive

Recommended restrictions
on use : Reserved for industrial and professional use.

1.3 Details of the supplier of the safety data sheet

Company : Umicore Specialty Materials Brugge
Kleine Pathoekeweg 82
8000 Brugge
Belgium

E-mail address of person
responsible for the SDS : sds.usmb@eu.umicore.com

1.4 Emergency telephone number

Poison Center

Telephone : +32 70 245 245

Hours of operation : 24HRS

Supplier

Emergency telephone num-
ber : For transport in Europe, Central- and South America, Israel
and Africa (Non-Arabic speaking countries): (+32) 3 213 15 70
For transport in the Middle East (Israel excluded) & Arabic
speaking Africa: (+32) 3 213 33 79
For transport in the USA and Canada: (+1)-877 986 4267
For transport in Asian and the Pacific (China excluded): (+65)
62 64 78 36
For transport in China: (+86) 400 120 60 11

Hours of operation : This telephone number is available 24 hours per day, 7 days
per week.

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SECTION 2: Hazards identification





2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Flammable liquids, Category 2	H225: Highly flammable liquid and vapour.
Skin irritation, Category 2	H315: Causes skin irritation.
Eye irritation, Category 2	H319: Causes serious eye irritation.
Skin sensitisation, Category 1	H317: May cause an allergic skin reaction.
Reproductive toxicity, Category 1B	H360Fd: May damage fertility. Suspected of damaging the unborn child.
Specific target organ toxicity - single exposure, Category 3, Central nervous system	H336: May cause drowsiness or dizziness.
Specific target organ toxicity - repeated exposure, Category 2	H373: May cause damage to organs through prolonged or repeated exposure.
Short-term (acute) aquatic hazard, Category 1	H400: Very toxic to aquatic life.
Long-term (chronic) aquatic hazard, Category 3	H412: Harmful to aquatic life with long lasting effects.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms	:	   
Signal word	:	Danger
Hazard statements	:	H225 Highly flammable liquid and vapour. H315 Causes skin irritation. H317 May cause an allergic skin reaction. H319 Causes serious eye irritation. H336 May cause drowsiness or dizziness. H360Fd May damage fertility. Suspected of damaging the unborn child. H373 May cause damage to organs through prolonged or repeated exposure. H410 Very toxic to aquatic life with long lasting effects.
Precautionary statements	:	Prevention: P201 Obtain special instructions before use.

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P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P260 Do not breathe mist or vapours.
P273 Avoid release to the environment.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection/ hearing protection.

Response:

P308 + P313 IF exposed or concerned: Get medical advice/ attention.
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.
P391 Collect spillage.

Hazardous components which must be listed on the label:

toluene
cobalt bis(2-ethylhexanoate)

Additional Labelling

The following percentage of the mixture consists of ingredient(s) with unknown acute inhalation toxicity: 53 %

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Ecological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
cobalt bis(2-ethylhexanoate)	136-52-7 205-250-6 01-2119524678-29	Eye Irrit. 2; H319 Skin Sens. 1A; H317 Repr. 1B; H360Fd Aquatic Acute 1; H400 Aquatic Chronic 3; H412 M-Factor (Acute aquatic toxicity): 1	<= 53

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		M-Factor (Chronic aquatic toxicity): 1	
toluene	108-88-3 203-625-9 601-021-00-3 01-2119471310-51	Flam. Liq. 2; H225 Skin Irrit. 2; H315 Repr. 2; H361d STOT SE 3; H336 (Central nervous system) STOT RE 2; H373 Asp. Tox. 1; H304	<= 53
Substances with a workplace exposure limit :			
(2-methoxymethylethoxy)propanol	34590-94-8 252-104-2 01-2119450011-60		<= 3,5

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

- General advice : Move out of dangerous area.
Show this safety data sheet to the doctor in attendance.
Do not leave the victim unattended.
- Protection of first-aiders : If potential for exposure exists refer to Section 8 for specific personal protective equipment.
- If inhaled : Move to fresh air.
Consult a physician after significant exposure.
If unconscious, place in recovery position and get medical attention immediately.
- In case of skin contact : If on skin, rinse well with water.
If on clothes, remove clothes.
If skin irritation persists, call a physician.
Wash contaminated clothing before reuse.
- In case of eye contact : Remove contact lenses.
In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Protect unharmed eye.
Keep eye wide open while rinsing.
- If swallowed : Clean mouth with water and drink afterwards plenty of water.
Keep respiratory tract clear.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.

4.2 Most important symptoms and effects, both acute and delayed

- Symptoms : Skin contact may provoke the following symptoms:
Allergic reactions

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Redness
Inhalation may provoke the following symptoms:
Shortness of breath
Asthma
In case of eye contact
Excessive lachrymation

4.3 Indication of any immediate medical attention and special treatment needed

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Water mist
Water spray jet
Foam
Carbon dioxide (CO₂)
Dry chemical

Unsuitable extinguishing media : High volume water jet

5.2 Special hazards arising from the substance or mixture

Specific hazards during fire-fighting : Do not allow run-off from fire fighting to enter drains or water courses.

Hazardous combustion products : Carbon oxides
Hazardous decomposition products due to incomplete combustion
Metal oxides

5.3 Advice for firefighters

Special protective equipment for firefighters : Wear self-contained breathing apparatus for firefighting if necessary.

Further information : Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
For safety reasons in case of fire, cans should be stored separately in closed containments.
Use a water spray to cool fully closed containers.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Use personal protective equipment.
Ensure adequate ventilation.
Remove all sources of ignition.
Evacuate personnel to safe areas.
Beware of vapours accumulating to form explosive concentra-

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tions. Vapours can accumulate in low areas.
Contaminated surfaces will be extremely slippery.

6.2 Environmental precautions

Environmental precautions : Prevent product from entering drains.
Prevent further leakage or spillage if safe to do so.
If the product contaminates rivers and lakes or drains inform respective authorities.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

6.4 Reference to other sections

For personal protection see section 8., For disposal considerations see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

- Technical measures : Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres.
- Advice on safe handling : Avoid formation of aerosol.
Do not breathe vapours/dust.
Avoid exposure - obtain special instructions before use.
Avoid contact with skin and eyes.
For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the application area.
Take precautionary measures against static discharges.
Provide sufficient air exchange and/or exhaust in work rooms.
Open drum carefully as content may be under pressure.
Persons susceptible to skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.
- Advice on protection against fire and explosion : Do not spray on a naked flame or any incandescent material.
Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapours). Use only explosion-proof equipment. Keep away from open flames, hot surfaces and sources of ignition.
- Hygiene measures : General industrial hygiene practice. Wash hands before breaks and immediately after handling the product.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Store in cool place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Electri-

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cal installations / working materials must comply with the technological safety standards. To maintain product quality, do not store in heat or direct sunlight.

Further information on storage conditions : none

Further information on storage stability : Keep in a dry place.
No decomposition if stored and applied as directed.

7.3 Specific end use(s)

Specific use(s) : No data available

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
toluene	108-88-3	TWA	50 ppm 192 mg/m ³	2006/15/EC
		Further information: Indicative, Identifies the possibility of significant uptake through the skin		
		STEL	100 ppm 384 mg/m ³	2006/15/EC
		Further information: Indicative, Identifies the possibility of significant uptake through the skin		
		TLV 8 hr	20 ppm 77 mg/m ³	BE OEL
		Further information: Absorption of the agent through the skin, the mucous membranes or the eyes makes up an important part of total exposure. This absorption can be the result of direct contact as well as the presence in air.		
		TLV 15 min	100 ppm 384 mg/m ³	BE OEL
		Further information: Absorption of the agent through the skin, the mucous membranes or the eyes makes up an important part of total exposure. This absorption can be the result of direct contact as well as the presence in air.		
		TWA	20 ppm	ACGIH
(2-methoxymethylethoxy)propanol	34590-94-8	TWA	50 ppm 308 mg/m ³	2000/39/EC
		Further information: Identifies the possibility of significant uptake through the skin, Indicative		
		TLV 8 hr	50 ppm 308 mg/m ³	BE OEL
		Further information: Absorption of the agent through the skin, the mucous membranes or the eyes makes up an important part of total exposure. This absorption can be the result of direct contact as well as the presence in air.		

Biological occupational exposure limits

Substance name	CAS-No.	Control parameters	Sampling time	Basis
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toluene	108-88-3	Toluene: 0,02 mg/l (In blood)	Prior to last shift of workweek	ACGIH BEI
		Toluene: 0,03 mg/l (Urine)	End of shift (As soon as possible after exposure ceases)	ACGIH BEI
		o-Cresol: 0.3 mg/g Creatinine (Urine)	End of shift (As soon as possible after exposure ceases)	ACGIH BEI

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Substance name	End Use	Exposure routes	Potential health ef- fects	Value
toluene	Workers	Inhalation	Acute local effects	384 mg/m3
	Workers	Inhalation	Acute systemic ef- fects	384 mg/m3
	Workers	Inhalation	Long-term local ef- fects	192 mg/m3
	Workers	Inhalation	Long-term systemic effects	192 mg/m3
	Workers	Dermal	Long-term systemic effects	384 mg/kg
	Consumers	Inhalation	Acute local effects	226 mg/m3
	Consumers	Oral	Long-term systemic effects	8,13 mg/kg
	Consumers	Dermal	Long-term systemic effects	226 mg/kg
cobalt bis(2- ethylhexanoate)	Workers	Inhalation	Long-term local ef- fects	0,2351 mg/m3
	Consumers	Inhalation	Long-term local ef- fects	0,037 mg/m3
	Consumers	Inhalation	Long-term systemic effects	0,175 mg/m3
(2- methoxymethyleth- oxy)propanol	Workers	Inhalation	Long-term systemic effects	308 mg/m3
	Workers	Dermal	Long-term systemic effects	283 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	37,2 mg/m3
	Consumers	Dermal	Long-term systemic effects	121 mg/kg bw/day
	Consumers	Oral	Long-term systemic effects	36 mg/kg bw/day

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Substance name	Environmental Compartment	Value
toluene	Fresh water	0,68 mg/l
	Marine water	0,68 mg/l
	Fresh water sediment	16,39 mg/l
	Marine sediment	16,39 mg/l
	Soil	2,89 mg/kg dry weight (d.w.)

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	Sewage treatment plant	13,61 mg/l
cobalt bis(2-ethylhexanoate)	Fresh water	1,06 µg/l
Remarks:	unit expressed as metal	
	Marine sediment	2,36 µg/l
	Sewage treatment plant	0,37 mg/l
	Fresh water sediment	53,8 mg/kg dry weight (d.w.)
	Marine sediment	69,8 mg/kg dry weight (d.w.)
	Soil	10,9 mg/kg dry weight (d.w.)
(2-methoxymethylethoxy)propanol	Fresh water	19 mg/l
	Marine water	1,9 mg/l
	Fresh water sediment	70,2 mg/kg dry weight (d.w.)
	Marine sediment	7,02 mg/kg dry weight (d.w.)
	Soil	2,74 mg/kg dry weight (d.w.)
	Sewage treatment plant	4168 mg/l

8.2 Exposure controls

Engineering measures

Handle only in a place equipped with local exhaust (or other appropriate exhaust).

Personal protective equipment

Eye protection : Wear safety glasses with side shields or goggles.

Hand protection

Material : Nitrile rubber
Break through time : > 480 min
Glove thickness : 0,3 mm
Glove length : Long sleeve gloves

Material : Nitrile rubber
Break through time : > 480 min
Glove thickness : 0,3 mm
Glove length : Long sleeve gloves

Skin and body protection : Impervious clothing
Footwear protecting against chemicals

Protective suit

Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place.

Working clothes must not consist of textiles, which show a dangerous melting behaviour in case of fire.

Respiratory protection : In the case of vapour formation use a respirator with an approved filter.
When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

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In the case of vapour formation use a respirator with an approved filter.

Recommended Filter type:

Filter type : ABEK-filter

Protective measures : Avoid contact with skin.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	: solution
Colour	: blue
Odour	: hydrocarbon-like
Odour Threshold	: not determined
	: not determined
	: > 35 °C
Upper explosion limit / Upper flammability limit	: 7,1 %(V)
Lower explosion limit / Lower flammability limit	: 1,1 %(V)
Flash point	: 4 - 22 °C Method: closed cup
Auto-ignition temperature	: 480 °C
pH	: Not applicable
Viscosity	
Viscosity, dynamic	: not determined
Viscosity, kinematic	: > 20,5 mm ² /s (40 °C)
Solubility(ies)	
Water solubility	: not determined
Partition coefficient: n-octanol/water	: No data available
Vapour pressure	: not determined
Relative density	: 0,98 - 1,02

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Acute dermal toxicity : Remarks: No data available

Components:

cobalt bis(2-ethylhexanoate):

Acute oral toxicity : LD50 (Rat, female): 3.129 mg/kg
Method: OECD Test Guideline 425
GLP: yes

Acute inhalation toxicity : Assessment: No data available
Remarks: data waiving in REACH dossier

Acute dermal toxicity : LD50 (Rat, male and female): > 5.000 mg/kg
Method: OECD Test Guideline 402
GLP: no
Remarks: Based on read across from structural related substance
bis(4-oxopent-2-en-2-olate) cobalt dihydrate

toluene:

Acute oral toxicity : LD50 (Rat): > 5.000 mg/kg

Acute inhalation toxicity : LC50 (Rat, female): 30 mg/l
Exposure time: 4 h
Test atmosphere: vapour
Method: OECD Test Guideline 403
GLP: no

Acute dermal toxicity : LD50 (Rabbit): > 14.000 mg/kg

(2-methoxymethylethoxy)propanol:

Acute oral toxicity : LD50 (Rat, male and female): > 5.000 mg/kg
Method: OECD Test Guideline 401
GLP: no

Acute inhalation toxicity : LC0 (Rat, male and female): 275 ppm
Exposure time: 7 h
Test atmosphere: vapour

Acute dermal toxicity : LD50 Dermal (Rabbit, male): 9.510 mg/kg
Method: OECD Test Guideline 402
GLP: no

Skin corrosion/irritation

Components:

cobalt bis(2-ethylhexanoate):

Result : No skin irritation

Remarks : May cause skin irritation in susceptible persons.

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toluene:

Species : Rabbit
Result : Skin irritation

(2-methoxymethylethoxy)propanol:

Species : Rabbit
Exposure time : 2 h
Method : OECD Test Guideline 404
Result : No skin irritation
GLP : no

Serious eye damage/eye irritation

Components:

cobalt bis(2-ethylhexanoate):

Result : Eye irritation

(2-methoxymethylethoxy)propanol:

Species : Humans
Result : No eye irritation
GLP : Not specified

Respiratory or skin sensitisation

Components:

cobalt bis(2-ethylhexanoate):

Exposure routes : Dermal
Species : Mouse
Method : OECD Test Guideline 429
Result : The product is a skin sensitizer, sub-category 1A.
GLP : yes

Remarks : Based on read across from structural related substance
Cobalt acetylacetonate

(2-methoxymethylethoxy)propanol:

Test Type : adjuvant and patch test
Exposure routes : Skin contact
Species : Humans
Result : Not a skin sensitizer.
GLP : no

Germ cell mutagenicity

Product:

Genotoxicity in vitro : Remarks: No data available

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Components:

cobalt bis(2-ethylhexanoate):

- Genotoxicity in vitro : Test Type: Ames test
Test system: Salmonella typhimurium TA 97a, TA98, TA100, TA1535 & E. coli WP2 uvr
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative
GLP: yes
Remarks: Based on read across from structural related substance
cobalt dichloride hexahydrate
- Genotoxicity in vivo : Test Type: Micronucleus test
Species: Mouse (male and female)
Strain: B6C3F1
Application Route: inhalation (dust/mist/fume)
Exposure time: 91 d
Dose: 0.625, 1.25, 2.5, 5.0, 10.0
Method: OECD Test Guideline 474
Result: negative
GLP: yes
Remarks: Based on read across from structural related substance
Cobalt

(2-methoxymethylethoxy)propanol:

- Genotoxicity in vitro : Test Type: reverse mutation assay
Test system: Salmonella typhimurium
Method: Mutagenicity (Salmonella typhimurium - reverse mutation assay)
Result: negative
GLP: yes
- Genotoxicity in vivo : Remarks: No data available

Carcinogenicity

Product:

- Remarks : No data available

Components:

(2-methoxymethylethoxy)propanol:

- Species : Rat, male and female
Application Route : inhalation (vapour)
Exposure time : 2 Years
Frequency of Treatment : 6 h daily
 : 18.184,5 mg/m³
Method : OECD Test Guideline 453
Result : negative
Symptoms : No symptoms known or expected.

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GLP : yes
Remarks : Based on read across from structural related substance

Reproductive toxicity

Product:

Effects on fertility : Remarks: No data available

Effects on foetal development : Remarks: No data available

Components:

cobalt bis(2-ethylhexanoate):

Effects on fertility : Test Type: Fertility
Species: Rat, male and female
Strain: CD
Application Route: oral (gavage)
Dose: 3, 10, 30 milligram per kilogram
Duration of Single Treatment: 90 d
General Toxicity - Parent: NOAEL: 30 mg/kg body weight
Method: OECD Test Guideline 408
GLP: yes
Remarks: Based on read across from structural related substance
cobalt dichloride hexahydrate

Effects on foetal development : Test Type: Embryo-foetal development
Species: Rat, male and female
Strain: CD
Application Route: oral (gavage)
Dose: 25, 50, 100 milligram per kilogram
Duration of Single Treatment: 13 d
General Toxicity Maternal: NOAEL: 25 mg/kg body weight
Developmental Toxicity: NOAEL: 100 mg/kg body weight
Method: OECD Test Guideline 414
GLP: yes
Remarks: Based on read across from structural related substance
cobalt dichloride hexahydrate

Reproductive toxicity - Assessment : Clear evidence of adverse effects on sexual function and fertility, based on animal experiments., Some evidence of adverse effects on development, based on animal experiments.

toluene:

Reproductive toxicity - Assessment : Some evidence of adverse effects on development, based on animal experiments.

(2-methoxymethylethoxy)propanol:

Effects on fertility : Test Type: Two-generation study
Species: Rat, male and female

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Strain: Sprague-Dawley
Application Route: inhalation (vapour)
Dose: 300, 1000, 3000 parts per million
General Toxicity - Parent: NOAEL: 300 ppm
General Toxicity F1: NOAEL: 1.000 ppm
General Toxicity F2: NOAEL: 1.000 ppm
Fertility: NOEC: 6.061,35 mg/m³
Method: OECD Test Guideline 416
Result: Animal testing did not show any effects on fertility.
GLP: yes
Remarks: Based on read across from structural related substance

Effects on foetal development : Species: Rabbit
Strain: New Zealand White
Application Route: Inhalation
Dose: 50, 150, 300 parts per million
Duration of Single Treatment: 10 DAYS
Frequency of Treatment: 6 hours/day
Developmental Toxicity: NOEC: 1.818,4 mg/m³
Method: No guideline followed
Result: No adverse effects
GLP: yes

STOT - single exposure

Product:

Remarks : No data available

Components:

toluene:

Assessment : May cause drowsiness or dizziness.

(2-methoxymethylethoxy)propanol:

Remarks : Not classified due to data which are conclusive although insufficient for classification.

STOT - repeated exposure

Product:

Remarks : No data available

Components:

toluene:

Exposure routes : Inhalation
Assessment : May cause damage to organs through prolonged or repeated exposure.

Exposure routes : Skin contact
Assessment : May cause damage to organs through prolonged or repeated

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exposure.

Exposure routes : Ingestion
Assessment : May cause damage to organs through prolonged or repeated exposure.

(2-methoxymethylethoxy)propanol:

Remarks : Not classified due to data which are conclusive although insufficient for classification.

Repeated dose toxicity

Components:

cobalt bis(2-ethylhexanoate):

Species : Rat, male and female
NOAEL : 3 mg/kg
Application Route : oral (gavage)
Exposure time : 90 d
Number of exposures : daily
Dose : 3, 10, 30 mg/kg
Method : OECD Test Guideline 408
GLP : yes
Remarks : Based on read across from structural related substance cobalt dichloride hexahydrate

Species : Rat, male and female
LOAEL : 5 mg/kg
Application Route : Oral
Exposure time : 14 d
Dose : 30, 300, 600 mg/kg/day
Method : 14-day dose range-finder

Species : Rat, male and female
LOAEL : 5 mg/kg
Application Route : oral (gavage)
Exposure time : 48 d
Number of exposures : daily
Dose : 5, 15, 45
Method : OECD Test Guideline 422
GLP : yes
Remarks : Based on read across from structural related substance Neodecanoic acid, cobalt salt

Species : Mouse, male and female
Dose : 0,61 mg/m³
Application Route : inhalation (aerosol)
Exposure time : 14 Weeks
Number of exposures : 5 d/w
Dose : 0.61, 1.23, 2.5, 5,10 mg/m³
Method : OECD Test Guideline 413
GLP : yes
Remarks : Based on read across from structural related substance Cobalt

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Species : Rat, male and female
: 0,61 mg/m³
Application Route : inhalation (aerosol)
Exposure time : 14 Weeks
Number of exposures : 5 d/w
Dose : 0.61, 1.23, 2.5, 5,10 mg/m³
Method : OECD Test Guideline 413
GLP : yes
Remarks : Based on read across from structural related substance
Copper sulphate

(2-methoxymethylethoxy)propanol:

Species : Rat, male and female
NOAEL : 1.000 mg/kg
Application Route : Oral
Exposure time : 4 weeks
Number of exposures : daily
Dose : 40, 200, 1000 mg/kg
GLP : yes

Species : Rat, male and female
NOAEL : 1232 mg/m³
Application Route : inhalation (vapour)
Exposure time : 13 weeks
Number of exposures : 6 hours/day; 5 days/week
Dose : 15, 50, 200 ppm
Method : OECD Test Guideline 413
GLP : yes

Species : Rabbit, male
NOAEL : 2.850 mg/kg
Application Route : Dermal
Exposure time : 90 days
Number of exposures : 5 days/week
Dose : 1, 3, 5, 10 ml/kg
Method : OECD Test Guideline 411
GLP : no

Aspiration toxicity

Components:

toluene:

May be fatal if swallowed and enters airways.

(2-methoxymethylethoxy)propanol:

Not classified due to data which are conclusive although insufficient for classification.

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11.2 Information on other hazards

Endocrine disrupting properties

Product:

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Further information

Product:

Remarks : Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.
Concentrations substantially above the TLV value may cause narcotic effects.
Solvents may degrease the skin.

Components:

cobalt bis(2-ethylhexanoate):

Remarks : No data available

SECTION 12: Ecological information

12.1 Toxicity

Product:

Toxicity to fish : Remarks: No data available

Toxicity to daphnia and other aquatic invertebrates : Remarks: No data available

Toxicity to algae/aquatic plants : Remarks: No data available

Toxicity to microorganisms : Remarks: No data available

Components:

cobalt bis(2-ethylhexanoate):

M-Factor (Acute aquatic toxicity) : 1

Toxicity to fish (Chronic toxicity) : LC50: 41,6 mg/l
Exposure time: 28 d
Species: Cyprinodon variegatus (sheepshead minnow)
GLP: yes
Remarks: Based on read across from structural related sub-

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stance
cobalt dichloride hexahydrate

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : EC10: 0,0197 mg/l
Exposure time: 7 d
Species: Ceriodaphnia dubia (Water flea)
Remarks: Based on read across from structural related substance
cobalt 2-ethylhexanoate
Fresh water

M-Factor (Chronic aquatic toxicity) : 1

Ecotoxicology Assessment

Acute aquatic toxicity : Very toxic to aquatic life.

Chronic aquatic toxicity : Harmful to aquatic life with long lasting effects.

toluene:

Toxicity to algae/aquatic plants : EC50 (Pseudokirchneriella subcapitata (green algae)): 500 mg/l
Exposure time: 96 h
Remarks: Fresh water

(2-methoxymethylethoxy)propanol:

Toxicity to fish : LC50 (Fish): > 1.000 mg/l
Exposure time: 96 h
Test Type: static test
Analytical monitoring: yes
Method: OECD Test Guideline 203
GLP: yes
Remarks: Fresh water

Toxicity to daphnia and other aquatic invertebrates : LC50 (Daphnia (water flea)): 1.919 mg/l
Exposure time: 48 h
Test Type: static test
Analytical monitoring: no
Method: OECD Test Guideline 202
GLP: no
Remarks: Fresh water

Toxicity to algae/aquatic plants : EC50 (Pseudokirchneriella subcapitata (green algae)): > 1.000 mg/l
Exposure time: 4 days
Test Type: Growth inhibition
Method: OECD Test Guideline 201
GLP: yes

Toxicity to microorganisms : EC10 (Pseudomonas putida): 4.168 mg/l
Exposure time: 18 h
Test Type: Growth inhibition
GLP: yes

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Toxicity to fish (Chronic toxicity) : Remarks: data waiving in REACH dossier

12.2 Persistence and degradability

Product:

Biochemical Oxygen Demand (BOD) : Remarks: No data available

Chemical Oxygen Demand (COD) : Remarks: No data available

Components:

(2-methoxymethylethoxy)propanol:

Biodegradability : Inoculum: activated sludge
Result: Readily biodegradable.
Biodegradation: 75 %
Exposure time: 28 days
Method: OECD Test Guideline 301F
GLP: yes

12.3 Bioaccumulative potential

Components:

cobalt bis(2-ethylhexanoate):

Bioaccumulation : Bioconcentration factor (BCF): 180 - 4.000

toluene:

Bioaccumulation : Bioconcentration factor (BCF): 90

Partition coefficient: n-octanol/water : log Pow: 2,73

(2-methoxymethylethoxy)propanol:

Partition coefficient: n-octanol/water : log Pow: 0,004 (25 °C)

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

Product:

Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher..

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12.6 Endocrine disrupting properties

Product:

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7 Other adverse effects

Product:

Additional ecological information : Very toxic to aquatic life.
Harmful to aquatic life with long lasting effects.

Components:

cobalt bis(2-ethylhexanoate):

Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Harmful to aquatic life with long lasting effects.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product : Dispose of in accordance with the European Directives on waste and hazardous waste.
According to the European Waste Catalogue, Waste Codes are not product specific, but application specific.
Waste codes should be assigned by the user, preferably in discussion with the waste disposal authorities.

The product should not be allowed to enter drains, water courses or the soil.
Do not contaminate ponds, waterways or ditches with chemical or used container.
Send to a licensed waste management company.
Dispose of as hazardous waste in compliance with local and national regulations.

Contaminated packaging : Empty remaining contents.
Dispose of contaminated packaging as if unused product.
Do not re-use empty containers.

SECTION 14: Transport information

14.1 UN number

ADN : UN 1993
ADR : UN 1993

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RID : UN 1993

IMDG : UN 1993

IATA : UN 1993

14.2 UN proper shipping name

ADN : FLAMMABLE LIQUID, N.O.S.
(toluene, hexanoic acid, 2-ethyl-, cobalt(2+) salt)

ADR : FLAMMABLE LIQUID, N.O.S.
(toluene, hexanoic acid, 2-ethyl-, cobalt(2+) salt)

RID : FLAMMABLE LIQUID, N.O.S.
(toluene, hexanoic acid, 2-ethyl-, cobalt(2+) salt)

IMDG : FLAMMABLE LIQUID, N.O.S.
(toluene, hexanoic acid, 2-ethyl-, cobalt(2+) salt)

IATA : Flammable liquid, n.o.s.
(toluene, hexanoic acid, 2-ethyl-, cobalt(2+) salt)

14.3 Transport hazard class(es)

ADR : 3



RID : 3



IMDG : 3



IATA : 3



14.4 Packing group

ADN
Packing group : II
Classification Code : F1
Hazard Identification Number : 33
Labels : 3

ADR

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Packing group : II
Classification Code : F1
Hazard Identification Number : 33
Labels : 3
Tunnel restriction code : (D/E)
Limited quantity : 1,00 L

RID

Packing group : II
Classification Code : F1
Hazard Identification Number : 33
Labels : 3

IMDG

Packing group : II
Labels : 3
EmS Code : F-E, S-E

IATA (Cargo)

Packing instruction (cargo aircraft) : 364
Maximum quantity : 60,00 L
Packing instruction (LQ) : Y341
Packing group : II
Labels : Flammable Liquids

IATA (Passenger)

Packing instruction (passenger aircraft) : 353
Maximum quantity : 5,00 L
Packing instruction (LQ) : Y341
Packing group : II
Labels : Flammable Liquids

14.5 Environmental hazards

ADN

Environmentally hazardous : yes

ADR

Environmentally hazardous : yes

RID

Environmentally hazardous : yes

IMDG

Marine pollutant : yes

IATA (Passenger)

Environmentally hazardous : yes

IATA (Cargo)

Environmentally hazardous : yes

14.6 Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

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14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable for product as supplied.

SECTION 15: Regulatory information

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

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII) : Conditions of restriction for the following entries should be considered:
Number on list 3

toluene (Number on list 48)

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59). : Not applicable

Regulation (EC) No 1005/2009 on substances that deplete the ozone layer : Not applicable

Regulation (EU) 2019/1021 on persistent organic pollutants (recast) : Not applicable

Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals : cobalt bis(2-ethylhexanoate)

REACH - List of substances subject to authorisation (Annex XIV) : Not applicable

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances. E1 ENVIRONMENTAL HAZARDS

P5c FLAMMABLE LIQUIDS

Volatile organic compounds : Directive 2010/75/EU of 24 November 2010 on industrial emissions (integrated pollution prevention and control)
Volatile organic compounds (VOC) content: 56,5 %

Other regulations:

Take note of Directive 94/33/EC on the protection of young people at work or stricter national regulations, where applicable.

Take note of Directive 92/85/EEC regarding maternity protection or stricter national regulations, where applicable.

The components of this product are reported in the following inventories:

TSCA : All substances listed as active on the TSCA inventory

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AIIC	:	On the inventory, or in compliance with the inventory
DSL	:	All components of this product are on the Canadian DSL
ENCS	:	On the inventory, or in compliance with the inventory
ISHL	:	On the inventory, or in compliance with the inventory
KECI	:	On the inventory, or in compliance with the inventory
PICCS	:	On the inventory, or in compliance with the inventory
IECSC	:	On the inventory, or in compliance with the inventory
NZIoC	:	Not in compliance with the inventory
CH INV	:	On the inventory, or in compliance with the inventory
TCSI	:	On the inventory, or in compliance with the inventory
TECI	:	On the inventory, or in compliance with the inventory

15.2 Chemical safety assessment

SECTION 16: Other information

Full text of H-Statements

H225	:	Highly flammable liquid and vapour.
H304	:	May be fatal if swallowed and enters airways.
H315	:	Causes skin irritation.
H317	:	May cause an allergic skin reaction.
H319	:	Causes serious eye irritation.
H336	:	May cause drowsiness or dizziness.
H360Fd	:	May damage fertility. Suspected of damaging the unborn child.
H361d	:	Suspected of damaging the unborn child.
H373	:	May cause damage to organs through prolonged or repeated exposure.
H400	:	Very toxic to aquatic life.
H412	:	Harmful to aquatic life with long lasting effects.

Full text of other abbreviations

Aquatic Acute	:	Short-term (acute) aquatic hazard
Aquatic Chronic	:	Long-term (chronic) aquatic hazard
Asp. Tox.	:	Aspiration hazard
Eye Irrit.	:	Eye irritation
Flam. Liq.	:	Flammable liquids
Repr.	:	Reproductive toxicity
Skin Irrit.	:	Skin irritation
Skin Sens.	:	Skin sensitisation
STOT RE	:	Specific target organ toxicity - repeated exposure
STOT SE	:	Specific target organ toxicity - single exposure
2000/39/EC	:	Europe. Commission Directive 2000/39/EC establishing a first list of indicative occupational exposure limit values

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2006/15/EC	:	Europe. Indicative occupational exposure limit values
ACGIH	:	USA. ACGIH Threshold Limit Values (TLV)
ACGIH BEI	:	ACGIH - Biological Exposure Indices (BEI)
BE OEL	:	Belgium. Occupational exposure limit values
2000/39/EC / TWA	:	Limit Value - eight hours
2006/15/EC / TWA	:	Limit Value - eight hours
2006/15/EC / STEL	:	Short term exposure limit
ACGIH / TWA	:	8-hour, time-weighted average
BE OEL / TLV 8 hr	:	Long term exposure limit
BE OEL / TLV 15 min	:	Short term exposure limit

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; AIIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Further information

Training advice	:	Provide adequate information, instruction and training for operators.
Other information	:	This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.
Contact Point	:	This reference is available upon request.
Sources of key data used to	:	Information taken from reference works and the literature.

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Classification of the mixture:

Flam. Liq. 2	H225
Skin Irrit. 2	H315
Eye Irrit. 2	H319
Skin Sens. 1	H317
Repr. 1B	H360Fd
STOT SE 3	H336
STOT RE 2	H373
Aquatic Acute 1	H400
Aquatic Chronic 3	H412

Classification procedure:

Based on product data or assessment
Calculation method
Calculation method
Calculation method
Calculation method
Calculation method
Calculation method
Calculation method
Calculation method

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