

AGC FIX-IN TU (-T)

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

1.1. Product identifier

Product name : AGC FIX-IN TU (-T)
Synonyms : AGC FIX-IN TU, touch-up paint for Lacobel (T) and Matelac (T)
Registration number REACH : Not applicable (mixture)
Product type REACH : Mixture

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

1.2.1 Relevant identified uses

Touch-up paint that can be applied to repair small scratches / holes in the paint

1.2.2 Uses advised against

No uses advised against

1.3. Details of the supplier of the safety data sheet

Supplier of the safety data sheet

AGC Glass Europe Headquarters
Avenue Jean Monnet 4
B-1348 Louvain-la-Neuve
☎ +32 2 409 30 00
✉ +32 2 672 44 62
msds@eu.agc.com

Manufacturer of the product

AGC Glass Europe Headquarters
Avenue Jean Monnet 4
B-1348 Louvain-la-Neuve
☎ +32 2 409 30 00
✉ +32 2 672 44 62
msds@eu.agc.com



1.4. Emergency telephone number

24h/24h (Telephone advice: English, French, German, Dutch):
+32 14 58 45 45 (BIG)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classified as dangerous according to the criteria of Regulation (EC) No 1272/2008

Class	Category	Hazard statements
Flam. Liq.	category 3	H226: Flammable liquid and vapour.
Skin Irrit.	category 2	H315: Causes skin irritation.
Eye Dam.	category 1	H318: Causes serious eye damage.
STOT SE	category 3	H336: May cause drowsiness or dizziness.
Skin Sens.	category 1	H317: May cause an allergic skin reaction.
Aquatic Chronic	category 3	H412: Harmful to aquatic life with long lasting effects.

2.2. Label elements



Contains: butan-1-ol; reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight ≤ 700); 2-methylpropan-1-ol.

Signal word : Danger

H-statements

H226 : Flammable liquid and vapour.
H315 : Causes skin irritation.

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H318	Causes serious eye damage.
H336	May cause drowsiness or dizziness.
H317	May cause an allergic skin reaction.
H412	Harmful to aquatic life with long lasting effects.

P-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.
P280	Wear protective gloves, protective clothing and eye protection/face protection.
P271	Use only outdoors or in a well-ventilated area.
P264	Wash hands thoroughly after handling.
P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local/regional/national/international regulation.

2.3. Other hazards

Gas/vapour spreads at floor level: ignition hazard

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name REACH Registration No	CAS No EC No	Conc. (C)	Classification according to CLP	Note	Remark
xylene 01-2119488216-32	1330-20-7 215-535-7	10% <C<12.5%	Flam. Liq. 3; H226 Acute Tox. 4; H332 Acute Tox. 4; H312 Skin Irrit. 2; H315	(1)(2)(10)	Constituent
ethylbenzene	100-41-4 202-849-4	3%<C<5%	Flam. Liq. 2; H225 Acute Tox. 4; H332 Asp. Tox. 1; H304 STOT RE 2; H373	(1)(2)(10)	Constituent
butan-1-ol 01-2119484630-38	71-36-3 200-751-6	3%<C<5%	Flam. Liq. 3; H226 Acute Tox. 4; H302 STOT SE 3; H335 Skin Irrit. 2; H315 Eye Dam. 1; H318 STOT SE 3; H336	(1)(2)(10)	Constituent
reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight ≤ 700) 01-2119456619-26	25068-38-6 500-033-5	3%<C<5%	Eye Irrit. 2; H319 Skin Irrit. 2; H315 Skin Sens. 1; H317 Aquatic Chronic 2; H411	(1)(8)(10)	Constituent
2-methylpropan-1-ol	78-83-1 201-148-0	3%<C<5%	Flam. Liq. 3; H226 STOT SE 3; H335 Skin Irrit. 2; H315 Eye Dam. 1; H318 STOT SE 3; H336	(1)(2)(10)	Constituent
solvent naphtha (petroleum), heavy arom.	64742-94-5 265-198-5	3%<C<5%	Flam. Liq. 3; H226 Asp. Tox. 1; H304 Skin Irrit. 2; H315 STOT SE 3; H336 Aquatic Chronic 2; H411	(1)(2)(10)	Constituent
n-butyl acetate 01-2119485493-29	123-86-4 204-658-1	1%<C<3%	Flam. Liq. 3; H226 STOT SE 3; H336	(1)(2)(10)	Constituent
solvent naphtha (petroleum), light arom.	64742-95-6 265-199-0	1%<C<3%	Flam. Liq. 2; H225 Asp. Tox. 1; H304 Skin Irrit. 2; H315 STOT SE 3; H336 Aquatic Chronic 2; H411	(1)(10)	Constituent

(1) For H-statements in full: see heading 16

(2) Substance with a Community workplace exposure limit

(8) Specific concentration limits, see heading 16

(10) Subject to restrictions of Annex XVII of Regulation (EC) No. 1907/2006

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SECTION 4: First aid measures

4.1. Description of first aid measures

General:

Check the vital functions. Unconscious: maintain adequate airway and respiration. Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform resuscitation. Victim conscious with laboured breathing: half-seated. Victim in shock: on his back with legs slightly raised. Vomiting: prevent asphyxia/aspiration pneumonia. Prevent cooling by covering the victim (no warming up). Keep watching the victim. Give psychological aid. Keep the victim calm, avoid physical strain. Depending on the victim's condition: doctor/hospital.

After inhalation:

Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.

After skin contact:

Wash immediately with lots of water. Soap may be used. Take victim to a doctor if irritation persists.

After eye contact:

Rinse immediately with plenty of water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Do not apply neutralizing agents. Take victim to an ophthalmologist.

After ingestion:

Rinse mouth with water. Do not induce vomiting. Consult a doctor/medical service if you feel unwell.

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

4.2.1 Acute symptoms

After inhalation:

Slight irritation. Central nervous system depression. Narcosis.

After skin contact:

Tingling/irritation of the skin.

After eye contact:

Corrosion of the eye tissue.

After ingestion:

No effects known.

4.2.2 Delayed symptoms

No effects known.

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

If applicable and available it will be listed below.

SECTION 5: Firefighting measures

5.1. Extinguishing media

5.1.1 Suitable extinguishing media:

Polyvalent foam. Carbon dioxide. BC powder.

5.1.2 Unsuitable extinguishing media:

Solid water jet ineffective as extinguishing medium.

5.2. Special hazards arising from the substance or mixture

Upon combustion: formation of CO, CO₂ and small quantities of hydrogen chloride.

5.3. Advice for firefighters

5.3.1 Instructions:

If exposed to fire cool the closed containers by spraying with water. Take account of environmentally hazardous firefighting water. Use water moderately and if possible collect or contain it.

5.3.2 Special protective equipment for fire-fighters:

Gloves. Face-shield. Protective clothing. Heat/fire exposure: compressed air/oxygen apparatus.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Stop engines and no smoking. No naked flames or sparks. Spark- and explosionproof appliances and lighting equipment.

6.1.1 Protective equipment for non-emergency personnel

See heading 8.2

6.1.2 Protective equipment for emergency responders

Gloves. Face-shield. Protective clothing.

Suitable protective clothing

See heading 8.2

6.2. Environmental precautions

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Contain released product. Dam up the liquid spill. Prevent soil and water pollution. Prevent spreading in sewers.

6.3. Methods and material for containment and cleaning up

Take up liquid spill into absorbent material, e.g.: sand/earth. Scoop absorbed substance into closing containers. Carefully collect the spill/leftovers. Clean contaminated surfaces with a soap solution. Take collected spill to manufacturer/competent authority. Wash clothing and equipment after handling.

6.4. Reference to other sections

See heading 13.

SECTION 7: Handling and storage

The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

7.1. Precautions for safe handling

Keep away from naked flames/heat. Insufficient ventilation: keep naked flames/sparks away. Insufficient ventilation: use spark-/explosionproof appliances and lighting system. Insufficient ventilation: take precautions against electrostatic charges. Gas/vapour heavier than air at 20°C. Observe very strict hygiene - avoid contact. Keep container tightly closed. Remove contaminated clothing immediately. Do not discharge the waste into the drain.

7.2. Conditions for safe storage, including any incompatibilities

7.2.1 Safe storage requirements:

Store in a cool area. Keep out of direct sunlight. Ventilation at floor level. Meet the legal requirements.

7.2.2 Keep away from:

Heat sources, ignition sources, oxidizing agents, (strong) acids, (strong) bases.

7.2.3 Suitable packaging material:

No data available

7.2.4 Non suitable packaging material:

No data available

7.3. Specific end use(s)

If applicable and available, exposure scenarios are attached in annex. See information supplied by the manufacturer.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 Occupational exposure

a) Occupational exposure limit values

If limit values are applicable and available these will be listed below.

EU

Ethylbenzene	Time-weighted average exposure limit 8 h (Indicative occupational exposure limit value)	100 ppm
	Time-weighted average exposure limit 8 h (Indicative occupational exposure limit value)	442 mg/m ³
	Short time value (Indicative occupational exposure limit value)	200 ppm
	Short time value (Indicative occupational exposure limit value)	884 mg/m ³
Xylene, mixed isomers, pure	Time-weighted average exposure limit 8 h (Indicative occupational exposure limit value)	50 ppm
	Time-weighted average exposure limit 8 h (Indicative occupational exposure limit value)	221 mg/m ³
	Short time value (Indicative occupational exposure limit value)	100 ppm
	Short time value (Indicative occupational exposure limit value)	442 mg/m ³

Belgium

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Acétate de n-butyle	Time-weighted average exposure limit 8 h	150 ppm
	Time-weighted average exposure limit 8 h	723 mg/m ³
	Short time value	200 ppm
	Short time value	964 mg/m ³
Alcool isobutylique	Time-weighted average exposure limit 8 h	50 ppm
	Time-weighted average exposure limit 8 h	154 mg/m ³
Alcool n-butylique	Time-weighted average exposure limit 8 h	20 ppm
	Time-weighted average exposure limit 8 h	62 mg/m ³
Ethylbenzène	Time-weighted average exposure limit 8 h	100 ppm
	Time-weighted average exposure limit 8 h	442 mg/m ³
	Short time value	125 ppm
	Short time value	551 mg/m ³
Xylène, isomères mixtes, purs	Time-weighted average exposure limit 8 h	50 ppm
	Time-weighted average exposure limit 8 h	221 mg/m ³
	Short time value	100 ppm
	Short time value	442 mg/m ³

The Netherlands

Ethylbenzeen	Time-weighted average exposure limit 8 h (Public occupational exposure limit value)	49 ppm
	Time-weighted average exposure limit 8 h (Public occupational exposure limit value)	215 mg/m ³
	Short time value (Public occupational exposure limit value)	97 ppm
	Short time value (Public occupational exposure limit value)	430 mg/m ³
Xyleen (o-,m- en p-isomeren)	Time-weighted average exposure limit 8 h (Public occupational exposure limit value)	48 ppm
	Time-weighted average exposure limit 8 h (Public occupational exposure limit value)	210 mg/m ³
	Short time value (Public occupational exposure limit value)	100 ppm
	Short time value (Public occupational exposure limit value)	442 mg/m ³

France

Acétate de n-butyle	Time-weighted average exposure limit 8 h (VL: Valeur non réglementaire indicative)	150 ppm
	Time-weighted average exposure limit 8 h (VL: Valeur non réglementaire indicative)	710 mg/m ³
	Short time value (VL: Valeur non réglementaire indicative)	200 ppm
	Short time value (VL: Valeur non réglementaire indicative)	940 mg/m ³
Alcool isobutylique	Time-weighted average exposure limit 8 h (VL: Valeur non réglementaire indicative)	50 ppm
	Time-weighted average exposure limit 8 h (VL: Valeur non réglementaire indicative)	150 mg/m ³
Alcool n-butylique	Short time value (VL: Valeur non réglementaire indicative)	50 ppm
	Short time value (VL: Valeur non réglementaire indicative)	150 mg/m ³
Ethylbenzène	Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante)	20 ppm
	Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante)	88.4 mg/m ³
	Short time value (VRC: Valeur réglementaire contraignante)	100 ppm
	Short time value (VRC: Valeur réglementaire contraignante)	442 mg/m ³
Xylènes, isomères mixtes, purs	Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante)	50 ppm
	Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante)	221 mg/m ³
	Short time value (VRC: Valeur réglementaire contraignante)	100 ppm
	Short time value (VRC: Valeur réglementaire contraignante)	442 mg/m ³

Germany

2-Methylpropan-1-ol	Time-weighted average exposure limit 8 h (TRGS 900)	100 ppm
	Time-weighted average exposure limit 8 h (TRGS 900)	310 mg/m ³
Butan-1-ol	Time-weighted average exposure limit 8 h (TRGS 900)	100 ppm
	Time-weighted average exposure limit 8 h (TRGS 900)	310 mg/m ³
Ethylbenzol	Time-weighted average exposure limit 8 h (TRGS 900)	20 ppm
	Time-weighted average exposure limit 8 h (TRGS 900)	88 mg/m ³
n-Butylacetat	Time-weighted average exposure limit 8 h (TRGS 900)	62 ppm

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n-Butylacetat	Time-weighted average exposure limit 8 h (TRGS 900)	300 mg/m ³
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UK

2-Methylpropan-1-ol	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	50 ppm
	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	154 mg/m ³
	Short time value (Workplace exposure limit (EH40/2005))	75 ppm
	Short time value (Workplace exposure limit (EH40/2005))	231 mg/m ³
Butan-1-ol	Short time value (Workplace exposure limit (EH40/2005))	50 ppm
	Short time value (Workplace exposure limit (EH40/2005))	154 mg/m ³
Butyl acetate	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	150 ppm
	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	724 mg/m ³
	Short time value (Workplace exposure limit (EH40/2005))	200 ppm
	Short time value (Workplace exposure limit (EH40/2005))	966 mg/m ³
Ethylbenzene	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	100 ppm
	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	441 mg/m ³
	Short time value (Workplace exposure limit (EH40/2005))	125 ppm
	Short time value (Workplace exposure limit (EH40/2005))	552 mg/m ³
Xylene, o-,m-,p- or mixed isomers	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	50 ppm
	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	220 mg/m ³
	Short time value (Workplace exposure limit (EH40/2005))	100 ppm
	Short time value (Workplace exposure limit (EH40/2005))	441 mg/m ³

USA (TLV-ACGIH)

Butyl acetates, all isomers	Time-weighted average exposure limit 8 h (TLV - Adopted Value)	50 ppm
	Short time value (TLV - Adopted Value)	150 ppm
Ethyl benzene	Time-weighted average exposure limit 8 h (TLV - Adopted Value)	20 ppm
Isobutanol	Time-weighted average exposure limit 8 h (TLV - Adopted Value)	50 ppm
Kerosene/Jet fuels, as total hydrocarbon vapor	Time-weighted average exposure limit 8 h (TLV - Adopted Value)	200 mg/m ³ (P)
n-Butanol	Time-weighted average exposure limit 8 h (TLV - Adopted Value)	20 ppm
Xylene (all isomers)	Time-weighted average exposure limit 8 h (TLV - Adopted Value)	100 ppm
	Short time value (TLV - Adopted Value)	150 ppm

(P): Application restricted to conditions in which there are negligible aerosol exposures

b) National biological limit values

If limit values are applicable and available these will be listed below.

Germany

Butan-1-ol (1-Butanol) (Butan-1-ol (1-Butanol) (nach Hydrolyse))	Urin: expositionsende, bzw. schichtende	10 mg/g Kreatinin	5/2013 Ständige Senatskommission zur Prüfung gesundheitsschädlicher Arbeitsstoffe der DFG
Butan-1-ol (1-Butanol) (Butan-1-ol (1-Butanol) (nach Hydrolyse))	Urin: vor nachfolgender schicht	2 mg/g Kreatinin	5/2013 Ständige Senatskommission zur Prüfung gesundheitsschädlicher Arbeitsstoffe der DFG
Ethylbenzol (Mandelsäure + Phenylglyoxylsäure)	Urin: expositionsende, bzw. schichtende	300 mg/l	11/2012 Ständige Senatskommission zur Prüfung gesundheitsschädlicher Arbeitsstoffe der DFG

USA (BEI-ACGIH)

Ethyl benzene (Sum of mandelic acid and phenylglyoxylic acid)	Urine: end of shift	0,15 g/g creatinine	Nonspecific - Intended changes
Ethyl benzene (Sum of mandelic acid and phenylglyoxylic acid)	Urine: end of shift	0,15 mg/g creatinine	

8.1.2 Sampling methods

Product name	Test	Number
Butanol (Volatile Organic compounds)	NIOSH	2549
Butyl acetate (Volatile Organic compounds)	NIOSH	2549
Butyl Alcohol	OSHA	7
Camphor	OSHA	7
Ethyl Benzene (Hydrocarbons, Aromatic)	NIOSH	1501

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Product name	Test	Number
Ethyl Benzene	OSHA	1002
Ethyl Benzene	OSHA	7
Isobutyl Alcohol (Alcohols Combined)	NIOSH	1405
Isobutyl Alcohol (Alcohols II)	NIOSH	1401
Isobutyl Alcohol	OSHA	7
Kerosene (Naphthas)	NIOSH	1550
n-Butyl Acetate (Esters I)	NIOSH	1450
n-Butyl Acetate	OSHA	1009
n-Butyl Alcohol (Alcohols Combined)	NIOSH	1405
n-Butyl Alcohol (Alcohols II)	NIOSH	1401
Petroleum Distillate (Naphthas)	NIOSH	1550
Petroleum Distillates Fractions	OSHA	48
Xylene (Volatile Organic compounds)	NIOSH	2549

8.1.3 Applicable limit values when using the substance or mixture as intended

If limit values are applicable and available these will be listed below.

8.1.4 DNEL/PNEC values

DNEL/DMEL - Workers

xylene

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	77 mg/m ³	
	Acute systemic effects inhalation	289 mg/m ³	
	Acute local effects inhalation	289 mg/m ³	
	Long-term systemic effects dermal	180 mg/kg bw/day	

ethylbenzene

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	77 mg/m ³	
	Acute local effects inhalation	293 mg/m ³	
	Long-term systemic effects dermal	180 mg/kg bw/day	

butan-1-ol

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Acute systemic effects inhalation	310 mg/m ³	

reaction product: bisphenol-A-(epichlorohydrin) epoxy resin (number average molecular weight ≤ 700)

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	12.25 mg/m ³	
	Acute systemic effects inhalation	12.25 mg/m ³	
	Long-term systemic effects dermal	8.33 mg/kg bw/day	
	Acute systemic effects dermal	8.33 mg/kg bw/day	

2-methylpropan-1-ol

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term local effects inhalation	310 mg/m ³	

solvent naphtha (petroleum), heavy arom.

Effect level (DNEL/DMEL)	Type	Value	Remark
DMEL	Long-term systemic effects dermal	23.4 ng/kg bw/day	
	Long-term systemic effects inhalation	3.25 mg/m ³	

n-butyl acetate

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	300 mg/m ³	
	Acute systemic effects inhalation	600 mg/m ³	
	Long-term local effects inhalation	300 mg/m ³	
	Acute local effects inhalation	600 mg/m ³	
	Long-term systemic effects dermal	11 mg/kg bw/day	
	Acute systemic effects dermal	11 mg/kg bw/day	

DNEL/DMEL - General population

xylene

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	14.8 mg/m ³	
	Acute systemic effects inhalation	174 mg/m ³	
	Acute local effects inhalation	174 mg/m ³	
	Long-term systemic effects dermal	108 mg/kg bw/day	
	Long-term systemic effects oral	1.6 mg/kg bw/day	

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ethylbenzene

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	15 mg/m ³	
	Long-term systemic effects oral	1.6 mg/kg bw/day	

butan-1-ol

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term local effects inhalation	55 mg/m ³	
	Long-term systemic effects oral	3.125 mg/kg bw/day	

reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight ≤ 700)

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects dermal	3.571 mg/kg bw/day	
	Acute systemic effects dermal	3.571 mg/kg bw/day	
	Long-term systemic effects oral	0.75 mg/kg bw/day	
	Acute systemic effects oral	0.75 mg/kg bw/day	

2-methylpropan-1-ol

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects oral	25 mg/kg bw/day	
	Long-term local effects inhalation	55 mg/m ³	

solvent naphtha (petroleum), heavy arom.

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects dermal	42.4 mg/m ³	
	Long-term systemic effects inhalation	10.2 mg/m ³	
	Long-term systemic effects oral	2.1 mg/m ³	

n-butyl acetate

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	35.7 mg/m ³	
	Acute systemic effects inhalation	300 mg/m ³	
	Long-term local effects inhalation	35.7 mg/m ³	
	Acute local effects inhalation	300 mg/m ³	
	Long-term systemic effects dermal	6 mg/kg bw/day	
	Acute systemic effects dermal	6 mg/kg bw/day	
	Long-term systemic effects oral	2 mg/kg bw/day	
	Acute systemic effects oral	2 mg/kg bw/day	

PNEC

xylene

Compartments	Value	Remark
Fresh water	0.327 mg/l	
Marine water	0.327 mg/l	
STP	6.58 mg/l	
Fresh water sediment	12.46 mg/kg sediment dw	
Marine water sediment	12.46 mg/kg sediment dw	
Soil	2.31 mg/kg soil dw	

ethylbenzene

Compartments	Value	Remark
Fresh water	0.1 mg/l	
Marine water	0.01 mg/l	
Aqua (intermittent releases)	0.1 mg/l	
STP	9.6 mg/l	
Fresh water sediment	13.7 mg/kg sediment dw	
Marine water sediment	1.37 mg/kg sediment dw	
Soil	2.68 mg/kg soil dw	
Oral	0.02 g/kg food	

butan-1-ol

Compartments	Value	Remark
Fresh water	0.082 mg/l	
Marine water	0.008 mg/l	
Aqua (intermittent releases)	2.25 mg/l	
STP	2476 mg/l	
Fresh water sediment	0.18 mg/kg sediment dw	
Marine water sediment	0.0178 mg/kg sediment dw	
Soil	0.015 mg/kg soil dw	

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reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight ≤ 700)

Compartment	Value	Remark
Fresh water	0.006 mg/l	
Marine water	0.001 mg/l	
Aqua (intermittent releases)	0.018 mg/l	
STP	10 mg/l	
Fresh water sediment	0.996 mg/kg sediment dw	
Marine water sediment	0.1 mg/kg sediment dw	
Soil	0.196 mg/kg soil dw	
Oral	11 mg/kg food	

2-methylpropan-1-ol

Compartment	Value	Remark
Fresh water	0.4 mg/l	
Marine water	0.04 mg/l	
Aqua (intermittent releases)	11 mg/l	
Fresh water sediment	1.52 mg/kg sediment dw	
Marine water sediment	0.152 mg/kg sediment dw	
Soil	0.0699 mg/kg soil dw	
STP	10 mg/l	

n-butyl acetate

Compartment	Value	Remark
Fresh water	0.18 mg/l	
Marine water	0.018 mg/l	
Fresh water sediment	0.981 mg/kg sediment dw	
Marine water sediment	0.0981 mg/kg sediment dw	
Soil	0.0903 mg/kg soil dw	
STP	35.6 mg/l	

8.1.5 Control banding

If applicable and available it will be listed below.

8.2. Exposure controls

The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

8.2.1 Appropriate engineering controls

Keep away from naked flames/heat. Insufficient ventilation: keep naked flames/sparks away. Insufficient ventilation: use spark-/explosionproof appliances and lighting system. Insufficient ventilation: take precautions against electrostatic charges. Measure the concentration in the air regularly. Carry operations in the open/under local exhaust/ventilation or with respiratory protection.

8.2.2 Individual protection measures, such as personal protective equipment

Observe very strict hygiene - avoid contact. Keep container tightly closed. Do not eat, drink or smoke during work.

a) Respiratory protection:

Wear gas mask with filter type A if conc. in air > exposure limit.

b) Hand protection:

Gloves.

- materials (good resistance)

Nitrile rubber, neoprene, viton, rubber, PVC.

c) Eye protection:

Face shield.

d) Skin protection:

Protective clothing.

8.2.3 Environmental exposure controls:

See headings 6.2, 6.3 and 13

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical form	Liquid
Odour	Aromatic odour
Odour threshold	No data available
Colour	No data available on colour
Particle size	Not applicable
Explosion limits	No data available
Flammability	Flammable

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AGC FIX-IN TU (-T)

Log Kow	Not applicable (mixture)
Dynamic viscosity	4.50 Pa.s ; 25 °C
Kinematic viscosity	3333 mm²/s ; 25 °C
Melting point	No data available
Boiling point	118 °C
Flash point	24 °C
Evaporation rate	No data available
Relative vapour density	> 1
Vapour pressure	10 hPa ; 20 °C
Solubility	Water ; insoluble Oils/fats ; soluble
Relative density	1.35
Decomposition temperature	No data available
Auto-ignition temperature	No data available
Explosive properties	No chemical group associated with explosive properties
Oxidising properties	No chemical group associated with oxidising properties
pH	No data available

9.2. Other information

Absolute density	1350 kg/m³
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SECTION 10: Stability and reactivity

10.1. Reactivity

May be ignited by sparks. Gas/vapour spreads at floor level: ignition hazard.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Reacts with (strong) oxidizers and with (strong) acids/bases.

10.4. Conditions to avoid

Keep away from naked flames/heat. Insufficient ventilation: keep naked flames/sparks away. Insufficient ventilation: use spark-/explosionproof appliances and lighting system. Insufficient ventilation: take precautions against electrostatic charges.

10.5. Incompatible materials

Oxidizing agents, (strong) acids, (strong) bases.

10.6. Hazardous decomposition products

Upon combustion: formation of CO, CO2 and small quantities of hydrogen chloride.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

11.1.1 Test results

Acute toxicity

AGC FIX-IN TU (-T)

No (test)data on the mixture available

Classification is based on the relevant ingredients

xylene

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral	LD50	Equivalent to EU Method B.1	3523 mg/kg bw		Rat (male)	Experimental value	
Dermal			category 4			Annex VI	
Inhalation (vapours)			category 4			Annex VI	

Classification of this substance according to Annex VI is debatable as it does not correspond to the conclusion from the test

ethylbenzene

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral	LD50		3500 mg/kg		Rat (male/female)	Experimental value	
Dermal	LD50		15432 mg/kg bw	24 h	Rabbit (male)	Experimental value	
Inhalation (vapours)	LC50		17.8 mg/l	4 h	Rat (male)	Experimental value	

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AGC FIX-IN TU (-T)

butan-1-ol

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral	LD50	Equivalent to OECD 401	2292 mg/kg bw		Rat (female)	Experimental value	
Oral			category 4			Annex VI	
Dermal	LD50	Equivalent to OECD 402	3430 mg/kg bw	24 h	Rabbit (male)	Experimental value	
Inhalation (vapours)	LC0	Equivalent to OECD 403	> 17.76 mg/l air	4 h	Rat (male/female)	Experimental value	

Classification of this substance according to Annex VI is debatable as it does not correspond to the conclusion from the test

reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight ≤ 700)

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral	LD50	OECD 420	> 2000 mg/kg		Rat (female)	Experimental value	
Dermal	LD50	OECD 402	> 2000 mg/kg	24 h	Rat (male/female)	Experimental value	
Inhalation (vapours)	LC0	Other	0.000008 ppm	5 h	Rat (male)	Experimental value	

2-methylpropan-1-ol

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Dermal	LD50	OECD 402	2460 mg/kg bw		Rabbit (female)	Experimental value	
Inhalation	LC50	Other	24.6 mg/l air	4 h	Rat (male/female)	Experimental value	

solvent naphtha (petroleum), heavy arom.

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral	LD50	OECD 420	> 5000 mg/kg bw		Rat (male/female)	Experimental value	
Dermal	LD50	Other	> 2000 mg/kg bw	4 h	Rabbit (male/female)	Experimental value	
Inhalation (vapours)	LC50	Equivalent to OECD 403	> 5.28 mg/l	4 h	Rat (male/female)	Experimental value	

n-butyl acetate

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral	LD50	Equivalent to OECD 423	10760 mg/kg bw - 12789 mg/kg bw		Rat (male/female)	Experimental value	
Dermal	LD50	Equivalent to OECD 402	14112 mg/kg bw		Rabbit (male/female)	Experimental value	

solvent naphtha (petroleum), light arom.

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral	LD50	Equivalent to OECD 401	> 5000 mg/kg bw		Rat (male/female)	Experimental value	
Dermal	LD50	Equivalent to OECD 402	> 2000 mg/kg bw	24 h	Rabbit (male/female)	Experimental value	
Inhalation (vapours)	LC50	Equivalent to OECD 403	> 5610 mg/m ³ air	4 h	Rat (male/female)	Experimental value	
Inhalation (vapours)	LOAEL		4320 mg/m ³ air	1 h	Human (male)	Experimental value	

Conclusion

Not classified as acute toxic if swallowed

Not classified as acute toxic in contact with skin

Not classified as acute toxic if inhaled

Corrosion/irritation

AGC FIX-IN TU (-T)

No (test)data on the mixture available

Classification is based on the relevant ingredients

AGC FIX-IN TU (-T)

xylene

Route of exposure	Result	Method	Exposure time	Time point	Species	Value determination	Remark
Eye	Moderately irritating	Draize Test		24; 48; 72 hours	Rabbit	Experimental value	
Skin	Moderately irritating	Draize Skin Test	24 h - 72 h	24; 72 hours	Rabbit	Experimental value	
Inhalation (vapours)	Irritating		4 h		Human		

Classification of this substance according to Annex VI is debatable as it does not correspond to the conclusion from the test

ethylbenzene

Route of exposure	Result	Method	Exposure time	Time point	Species	Value determination	Remark
Eye	Slightly irritating			7 days	Rabbit	Experimental value	
Skin	Moderately irritating		24 h	24 hours	Rabbit	Experimental value	

butan-1-ol

Route of exposure	Result	Method	Exposure time	Time point	Species	Value determination	Remark
Eye	Serious eye damage	OECD 405		24; 48; 72 hours	Rabbit	Experimental value	
Skin	Irritating	Draize Skin Test		24; 48; 72 hours	Rabbit	Experimental value	
Inhalation (vapours)	Irritating	Other	7 h		Rat		

reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight $\leq$ 700)

Route of exposure	Result	Method	Exposure time	Time point	Species	Value determination	Remark
Eye	Irritating			24; 48; 72 hrs; 8 days	Rabbit	Inconclusive, insufficient data	Single treatment
Skin	Irritating				Rabbit	Inconclusive, insufficient data	

Classification of this substance according to Annex VI is debatable as it does not correspond to the conclusion from the test

2-methylpropan-1-ol

Route of exposure	Result	Method	Exposure time	Time point	Species	Value determination	Remark
Eye	Irritating	OECD 405		24; 48; 72 hours	Rabbit	Experimental value	
Eye	Highly irritating	OECD 405		24; 48; 72 hours	Rabbit	Experimental value	
Dermal	Moderately irritating	OECD 404		24; 48; 72 hours	Rabbit	Experimental value	
Inhalation	Irritating	Other			Rat	Experimental value	

solvent naphtha (petroleum), heavy arom.

Route of exposure	Result	Method	Exposure time	Time point	Species	Value determination	Remark
Eye	Not irritating	EPA OTS 798.4500		24; 48; 72 hours	Rabbit	Experimental value	
Skin	Irritating	Other	24 h	24; 72 hours	Rabbit	Experimental value	

n-butyl acetate

Route of exposure	Result	Method	Exposure time	Time point	Species	Value determination	Remark
Eye	Not irritating	OECD 405		24; 48; 72 hours	Rabbit	Experimental value	
Dermal	Not irritating	Equivalent to OECD 404		24; 48; 72 hours	Rabbit	Experimental value	

solvent naphtha (petroleum), light arom.

Route of exposure	Result	Method	Exposure time	Time point	Species	Value determination	Remark
Eye	Not irritating	Equivalent to OECD 405		24; 48; 72 hours	Rabbit	Experimental value	Single exposure
Skin	Irritating	OECD 404	4 h	1; 24; 48; 72; 168 hours	Rabbit	Experimental value	

Conclusion

- Causes skin irritation.
- Causes serious eye damage.
- Not classified as irritating to the respiratory system

Respiratory or skin sensitisation

AGC FIX-IN TU (-T)

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AGC FIX-IN TU (-T)

No (test)data on the mixture available

Classification is based on the relevant ingredients

xylene

Route of exposure	Result	Method	Exposure time	Observation time point	Species	Value determination	Remark
Skin	Not sensitizing	OECD 429			Mouse	Experimental value	

ethylbenzene

Route of exposure	Result	Method	Exposure time	Observation time point	Species	Value determination	Remark
Skin	Not sensitizing	Human observation		48; 72 hours	Human	Inconclusive, insufficient data	

butan-1-ol

Route of exposure	Result	Method	Exposure time	Observation time point	Species	Value determination	Remark
Skin	Not sensitizing	Equivalent to OECD 406		24 hours	Guinea pig	Read-across	

reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight ≤ 700)

Route of exposure	Result	Method	Exposure time	Observation time point	Species	Value determination	Remark
Dermal (on the ears)	Sensitizing	OECD 429			Mouse (female)	Experimental value	

2-methylpropan-1-ol

Route of exposure	Result	Method	Exposure time	Observation time point	Species	Value determination	Remark
Dermal	Not sensitizing	Equivalent to OECD 406		24 hours	Guinea pig	Read-across	

solvent naphtha (petroleum), heavy arom.

Route of exposure	Result	Method	Exposure time	Observation time point	Species	Value determination	Remark
Skin	Not sensitizing	Equivalent to OECD 406	24 h	24, 48 hours	Guinea pig (male)	Experimental value	

n-butyl acetate

Route of exposure	Result	Method	Exposure time	Observation time point	Species	Value determination	Remark
Skin	Not sensitizing	Equivalent to OECD 408			Guinea pig	Experimental value	

solvent naphtha (petroleum), light arom.

Route of exposure	Result	Method	Exposure time	Observation time point	Species	Value determination	Remark
Skin	Not sensitizing	Equivalent to OECD 406	6 h	24, 48 hours	Guinea pig (male)	Experimental value	

Conclusion

May cause an allergic skin reaction.

Not classified as sensitizing for inhalation

Specific target organ toxicity

AGC FIX-IN TU (-T)

No (test)data on the mixture available

Classification is based on the relevant ingredients

xylene

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
Oral (stomach tube)	LOAEL	Equivalent to OECD 408	150 mg/kg bw/day	Liver	Weight gain	90 days (1x/day)	Rat (male)	Experimental value
Oral (stomach tube)	NOAEL	Equivalent to OECD 408	150 mg/kg bw/day	Liver	No effect	90 days (1x/day)	Rat (female)	Experimental value
Inhalation (vapours)	NOAEC	Subchronic toxicity test	$\geq 3515 \text{ mg/m}^3$		No effect	13 weeks (6h/day, 5)	Rat (male)	Experimental value

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AGC FIX-IN TU (-T)

ethylbenzene

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
Oral (stomach tube)	NOAEL	OECD 407	75 mg/kg bw/day	Liver	No effect	28 day(s)	Rat (male/female)	Experimental value
Oral	NOAEL	OECD 408	75 mg/kg bw/day	Liver	No effect	13 week(s)	Rat (male/female)	Experimental value
Oral	LOAEL	OECD 408	250 mg/kg bw/day	Liver	Enlargement/affection of the liver	13 week(s)	Rat (male/female)	Experimental value
Inhalation	NOAEC	Equivalent to OECD 412	800 ppm	Liver	No effect	4 weeks (6h/day, 5 days/week)	Mouse (male/female)	Experimental value
Inhalation (vapours)	NOAEC	Equivalent to OECD 453	250 ppm		No effect	4 weeks (6h/day, 5 days/week)	Rat (male)	Experimental value
Inhalation (vapours)	LOAEC	Equivalent to OECD 453	75 ppm	Kidney	Affection of the renal tissue	104 weeks (6h/day, 5	Rat (male/female)	Experimental value

Due to differences in metabolism the relevance for humans if swallowed is questioned

butan-1-ol

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
Oral (stomach tube)	NOAEL	Subchronic toxicity test	125 mg/kg bw/day		No effect	13 weeks (daily)	Rat (male/female)	Experimental value
Inhalation (vapours)	NOAEL	EPA OTS 798.2450	2.35 mg/l air		No effect	13 weeks (6h/day, 5	Rat (male/female)	Read-across

reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight ≤ 700)

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
Oral (stomach tube)	NOAEL	OECD 408	50 mg/kg bw/day		No effect	14 weeks (daily)	Rat (male/female)	Experimental value
Dermal	NOAEL	OECD 411	100 mg/kg bw/day		No adverse systemic effects	13 weeks (3 times/week)	Mouse (male)	Experimental value

2-methylpropan-1-ol

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
Oral	NOAEL	OECD 408	> 1450 mg/kg bw/day		No effect	90 days (continuous)	Rat (male/female)	Experimental value
Inhalation	NOAEL (P)	Guideline 82-7, subdivision F	≥ 7.5 mg/l air		No effect	17 week(s)	Rat (male/female)	Experimental value

solvent naphtha (petroleum), heavy arom.

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
Oral	NOAEL		750 mg/kg bw/day			21 week(s)	Rat (female)	Experimental value
Oral	LOAEL		1500 mg/kg bw/day		Systemic toxicity	21 week(s)	Rat (female)	Experimental value
Dermal	LOAEL	OECD 410	0.01 ml/kg/day	Skin	Irritation	4 weeks (6h/day, 5 days/week)	Rat (male/female)	Experimental value
Inhalation (vapours)	NOAEL	Equivalent to OECD 413	≥ 1000 mg/m ³ air			90 days (continuous)	Rat (female)	Experimental value
Inhalation (vapours)	NOAEC	Equivalent to OECD 412	≥ 24 mg/m ³ air			90 days (continuous)	Rat (female)	Calculated value
Inhalation	NOAEC	Human observation study	50 ppm	Central nervous system	No effect		Human	Read-across

n-butyl acetate

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
Inhalation	NOAEC	EPA OTS 798.2450	500 ppm		No adverse systemic effects	13 weeks (daily, 5 days/week)	Rat (male/female)	Experimental value

AGC FIX-IN TU (-T)

solvent naphtha (petroleum), light arom.

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
Oral	NOEL		< 500 mg/kg bw/day	Kidney	No effect	4 weeks (5 days/week)	Rat (male)	Experimental value
Dermal	NOAEL	Equivalent to OECD 410	3750 mg/kg bw/day	General	No adverse systemic effects	4 weeks (daily)	Rat (male/female)	Experimental value
Inhalation (vapours)	NOAEC	Equivalent to OECD 453	1402 mg/m ³ air	General	No effect	107 weeks (6h/day, 5 days/week) - 109 weeks (6h/day, 5 days/week)	Rat (male/female)	Experimental value
Inhalation (vapours)		Human observation		Central nervous system	Drowsiness, dizziness		Human	Literature study

Conclusion

May cause drowsiness or dizziness.

Mutagenicity (in vitro)

AGC FIX-IN TU (-T)

No (test)data on the mixture available

xylene

Result	Method	Test substrate	Effect	Value determination
Negative with metabolic activation, negative without metabolic activation	Equivalent to EU Method B.10	Chinese hamster ovary (CHO)		Experimental value
Negative with metabolic activation, negative without metabolic activation	Equivalent to EU Method B.19	Chinese hamster ovary (CHO)		Experimental value

ethylbenzene

Result	Method	Test substrate	Effect	Value determination
Negative with metabolic activation, negative without metabolic activation	OECD 476	Mouse (lymphoma L5178Y cells)	No effect	Experimental value
Negative with metabolic activation, negative without metabolic activation	Equivalent to OECD 473	Chinese hamster ovary (CHO)	No effect	Experimental value

butan-1-ol

Result	Method	Test substrate	Effect	Value determination
Negative	OECD 476	Chinese hamster lung fibroblasts (V79)	No effect	Experimental value

reaction product: bisphenol-A-(epichlorohydrin) epoxy resin (number average molecular weight < 700)

Result	Method	Test substrate	Effect	Value determination
Negative with metabolic activation, negative without metabolic activation	OECD 472	Bacteria (S.typhimurium)	No effect	Experimental value
Positive	Other	Mouse (lymphoma L5178Y cells)		Experimental value

2-methylpropan-1-ol

Result	Method	Test substrate	Effect	Value determination
Negative	Equivalent to OECD 471	Bacteria (S.typhimurium)		Experimental value
Negative	OECD 476	Mouse (lymphoma L5178Y cells)		Experimental value

solvent naphtha (petroleum), heavy arom.

Result	Method	Test substrate	Effect	Value determination
Negative	Equivalent to OECD 476	Mouse (lymphoma L5178Y cells)		Experimental value
Negative	Equivalent to OECD 479	Chinese hamster ovary (CHO)		Experimental value
Negative	Equivalent to OECD 471	Bacteria (S.typhimurium)		Experimental value

n-butyl acetate

Result	Method	Test substrate	Effect	Value determination
Negative	OECD 471	Bacteria (S.typhimurium)		Experimental value
Negative	OECD 473	Chinese hamster lung fibroblasts (V79)		Experimental value

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AGC FIX-IN TU (-T)

solvent naphtha (petroleum), light arom.

Result	Method	Test substrate	Effect	Value determination
Negative	Equivalent to OECD 476	Mouse (lymphoma L5178Y cells)	No effect	Experimental value
Negative	Equivalent to OECD 471	Bacteria (S.typhimurium)	No effect	Experimental value

Mutagenicity (in vivo)

AGC FIX-IN TU (-T)

No (test) data on the mixture available

Classification is based on the relevant ingredients

xylene

Result	Method	Exposure time	Test substrate	Organ	Value determination
Negative	Equivalent to OECD 478		Mouse (male/female)		Experimental value

ethylbenzene

Result	Method	Exposure time	Test substrate	Organ	Value determination
Negative	OECD 486	6 h	Mouse (male/female)		Experimental value
Negative	OECD 474	48 h	Mouse (male)		Experimental value

butan-1-ol

Result	Method	Exposure time	Test substrate	Organ	Value determination
Negative	OECD 474		Mouse (male/female)		Experimental value

reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight ≤ 700)

Result	Method	Exposure time	Test substrate	Organ	Value determination
Negative	Chromosome aberration assay		Mouse (male)		Experimental value

2-methylpropan-1-ol

Result	Method	Exposure time	Test substrate	Organ	Value determination
Negative	OECD 474		Mouse (male/female)		Experimental value

solvent naphtha (petroleum), heavy arom.

Result	Method	Exposure time	Test substrate	Organ	Value determination
Negative	OECD 475	48 h	Rat (male/female)		Experimental value
Negative	Equivalent to OECD 478	8 weeks (6h/day, 5 days/week)	Mouse (male)		Experimental value
Negative	Equivalent to OECD 478		Rat (male)		Experimental value
Negative	Equivalent to OECD 479	20 h - 22 h	Mouse (female)		Experimental value
Positive	Equivalent to OECD 479	20 h - 22 h	Mouse (male)		Experimental value

n-butyl acetate

Result	Method	Exposure time	Test substrate	Organ	Value determination
Negative	OECD 474		Mouse (male/female)		Read-across

solvent naphtha (petroleum), light arom.

Result	Method	Exposure time	Test substrate	Organ	Value determination
Negative	Equivalent to OECD 475	4 weeks (6h/day, 5 days/week)	Rat (male/female)	General	Experimental value

Conclusion

Not classified for mutagenic or genotoxic toxicity

Carcinogenicity

AGC FIX-IN TU (-T)

No (test) data on the mixture available

Classification is based on the relevant ingredients

xylene

Route of exposure	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Oral	Dose level	Equivalent to EU Method B.32	≥ 500 mg/kg bw/day	103 weeks (5 days/week)	Rat (male/female)	No carcinogenic effect		Experimental value

ethylbenzene

Route of exposure	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Inhalation (vapours)	NOAEC	Equivalent to OECD 453	250 ppm	104 weeks (6h/day, 5 days/week)	Rat (male/female)	No carcinogenic effect		Experimental value

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AGC FIX-IN TU (-T)

reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight ≤ 700)

Route of exposure	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Oral	NOAEL	OECD 453	15 mg/kg/d - 100 mg/kg/d	104 weeks (daily)	Rat (male/female)	No carcinogenic effect		Experimental value

solvent naphtha (petroleum), heavy arom.

Route of exposure	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
	NOAEL	Equivalent to OECD 451	≥ 500 mg/kg bw/day	103 weeks (5 days/week)	Mouse (male/female)			Experimental value

solvent naphtha (petroleum), light arom.

Route of exposure	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Dermal	NOAEL	Equivalent to OECD 451	0.05 ml	102 weeks (3 times/week)	Mouse (male)	No effect	General	Experimental value

Conclusion

Not classified for carcinogenicity

Reproductive toxicity

AGC FIX-IN TU (-T)

No (test) data on the mixture available

Classification is based on the relevant ingredients

xylene

	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Developmental toxicity	NOAEC	Equivalent to OECD 414	100 ppm	15 days (6h/day)	Rat (male/female)	No effect		Experimental value
Maternal toxicity	NOAEC	OECD 414	500 ppm	15 days (6h/day)	Rat	No effect		Experimental value
Effects on fertility	NOAEC (P)	EPA OPPTS 870.3800	≥ 500 ppm	70 days (6h/day)	Rat (male/female)	No effect		Experimental value

ethylbenzene

	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Developmental toxicity	NOAEC	OECD 414	500 ppm	15 days (gestation, daily)	Rat (female)	No effect	Foetus	Experimental value
Maternal toxicity	NOAEC	OECD 414	500 ppm	15 days (gestation, daily)	Rat	No effect		Experimental value
Effects on fertility	NOAEC (P/F1/F2)	OECD 416	500 ppm	70 days (6h/day)	Rat (male/female)	No effect		Experimental value
	NOAEC (P)	Equivalent to OECD 415	1000 ppm	2 week(s)	Rat (male/female)	No effect		Experimental value

butan-1-ol

	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Developmental toxicity	NOAEL		1454 mg/kg bw/day	20 day(s)	Rat	No effect	Foetus	Experimental value
Maternal toxicity	NOAEL		1454 mg/kg bw/day	20 day(s)	Rat	No effect		Experimental value
Effects on fertility	NOAEL (P)		18.5 mg/l air	20 days (7h/day)	Rat (male/female)	No effect		Experimental value

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AGC FIX-IN TU (-T)

reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight ≤ 700)

	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Developmental toxicity	NOAEL	OECD 414	> 540 mg/kg/d	6 days (gestation, daily) - 15 days (gestation, daily)	Rat (female)	No effect	Foetus	Experimental value
Maternal toxicity	NOAEL	OECD 414	180 mg/kg bw/day	6 days (gestation, daily) - 15 days (gestation, daily)	Rat (female)	No effect		Experimental value
Effects on fertility	NOEL	OECD 416	750 mg/kg bw/day	238 day(s)	Rat (male/female)	No effect		Experimental value

2-methylpropan-1-ol

	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Developmental toxicity	NOAEL	OECD 414	10 mg/l air	6 days (gestation, daily) - 15 days (gestation, daily)	Rat	No effect		Experimental value
Effects on fertility	NOAEL (F2)	EPA OPPTS 870.3800	≥ 7.5 mg/l air	> 10 week(s)	Rat (male/female)	No effect		Experimental value

solvent naphtha (petroleum), heavy arom.

	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Developmental toxicity	NOAEC	OECD 414	≥ 364 ppm	10 day(s)	Rat			Experimental value
	NOAEL	OECD 414	1000 mg/kg bw/day	10 day(s)	Rat			Experimental value
	LOAEL	OECD 414	1500 mg/kg bw/day	10 day(s)	Rat (male/female)	Embryotoxicity		Experimental value
Effects on fertility	NOAEL		3000 mg/kg bw/day	70 day(s) - 90 day(s)	Rat (male)			Experimental value
	NOAEL		1500 mg/kg bw/day	21 week(s)	Rat (female)			Experimental value
	NOAEL	OECD 421	≥ 494 mg/kg bw/day		Rat (male/female)			Experimental value

n-butyl acetate

	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Developmental toxicity	LOAEC	Equivalent to OECD 414	1500 ppm		Rat	Body weight, organ weight, food consumption		Experimental value
	NOAEC	Equivalent to OECD 414	1500 ppm		Rabbit			Experimental value
Effects on fertility	NOAEC	OECD 416	2000 ppm	> 90 day(s)	Rat (male/female)	No effect		Experimental value

solvent naphtha (petroleum), light arom.

	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Developmental toxicity	NOAEL (P/F1)	Equivalent to OECD 414	23900 mg/m ³ air	20 days (gestation, daily)	Rat (female)	No effect	Foetus	Experimental value
Effects on fertility	NOAEC (P/F1)	Equivalent to OECD 416	≥ 20000 mg/m ³ air	13 weeks (6h/day, 7 days/week)	Rat (male/female)	No effect	General	Experimental value
	NOAEL (F1)	Equivalent to OECD 421	24700 mg/m ³ air	8 weeks (6h/day, 7 days/week) - 11 weeks (6h/day, 7 days/week)	Rat (male/female)	No effect	General	Experimental value

Conclusion

Not classified for reprotoxic or developmental toxicity

Reason for revision: 2;3

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AGC FIX-IN TU (-T)

Toxicity other effects

AGC FIX-IN TU (-T)

No (test)data on the mixture available

2-methylpropan-1-ol

Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
NOAEL	Guideline 82-7, subdivision F	≥ 7.5 mg/l air		No effect	13 weeks (daily, 5 days/week)	Rat (male/female)	Experimental value
LOEL	EPA OTS 798.6050	4.5 mg/l air			6 h	Rat (male/female)	Experimental value
LOEL	EPA OTS 798.6050	1500 ppm		Hypoactivity	6 h	Rat (male/female)	Experimental value

solvent naphtha (petroleum), heavy arom.

Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
				Photoirritation	6 h	Rabbit (female)	Experimental value

n-butyl acetate

Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
NOEC	EPA OTS 798.6050	1500 ppm		Hypoactivity	6 h	Rat (male/female)	Experimental value
NOAEC	EPA OTS 798.6050	500 ppm		no neurotoxic effects	13 week(s)	Rat (male/female)	Experimental value

Chronic effects from short and long-term exposure

AGC FIX-IN TU (-T)

Skin rash/inflammation.

SECTION 12: Ecological information

12.1. Toxicity

AGC FIX-IN TU (-T)

No (test)data on the mixture available

xylene

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50	OECD 203	2.6 mg/l	96 h	Oncorhynchus mykiss	Static system	Fresh water	Read-across; Lethal
Acute toxicity crustacea	EC50		3.82 mg/l	48 h	Daphnia magna	Flow-through system	Fresh water	Read-across
Toxicity algae and other aquatic plants	EC50	OECD 201	4.36 mg/l	73 h	Pseudokirchneriella subcapitata	Static system	Fresh water	Experimental value; Growth rate
Long-term toxicity fish	NOEC		> 1.3 mg/l	56 day(s)	Oncorhynchus mykiss	Flow-through system	Fresh water	Experimental value; Lethal
Long-term toxicity aquatic crustacea	NOEC	US EPA	1.17 mg/l	7 day(s)	Ceriodaphnia dubia		Fresh water	Read-across; Reproduction

ethylbenzene

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50	OECD 203	4.2 mg/l	96 h	Salmo gairdneri	Semi-static system	Fresh water	Experimental value
Acute toxicity crustacea	EC50	US EPA	1.8 mg/l - 2.4 mg/l	48 h	Daphnia magna	Static system	Fresh water	Experimental value
Toxicity algae and other aquatic plants	EC50	US EPA	5.4 mg/l	72 h	Pseudokirchneriella subcapitata	Static system	Fresh water	Experimental value; Cell numbers
Long-term toxicity fish	ChV	ECOSAR v1.00	1.13 mg/l	30 day(s)	Pisces			QSAR
Long-term toxicity aquatic crustacea	NOEC	US EPA	0.96 mg/l	7 day(s)	Ceriodaphnia dubia	Semi-static system	Fresh water	Experimental value; Reproduction
Toxicity aquatic micro-organisms	EC50	OECD 209	600 mg/l	30 minutes	Activated sludge			Experimental value

	Parameter	Method	Value	Duration	Species	Value determination
Toxicity soil macro-organisms	LC50	OECD 207	0.042 mg/cm ² - 0.053 mg/cm ²	48 h	Eisenia fetida	Experimental value

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AGC FIX-IN TU (-T)

butan-1-ol

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50	OECD 203	1376 mg/l	96 h	Pimephales promelas	Static system	Fresh water	Experimental value; GLP
Acute toxicity crustacea	EC50	OECD 202	1328 mg/l	48 h	Daphnia magna	Static system	Fresh water	Experimental value; GLP
Toxicity algae and other aquatic plants	EC50	OECD 201	225 mg/l	96 h	Pseudokirchneria lla subcapitata	Static system	Fresh water	Experimental value; GLP
Long-term toxicity aquatic crustacea	NOEC	OECD 211	4.1 mg/l	21 day(s)	Daphnia magna	Static system	Fresh water	Experimental value
Toxicity aquatic micro-organisms	EC50	DIN 38412-8	4390 mg/l	17 h	Pseudomonas putida	Static system	Fresh water	Experimental value; Nominal concentration

reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight ≤ 700)

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50	OECD 203	2.3 mg/l	96 h	Oncorhynchus mykiss	Semi-static system	Fresh water	Experimental value; Nominal concentration
Acute toxicity crustacea	EC50	Equivalent to OECD 202	1.1 mg/l - 2.8 mg/l	48 h	Daphnia magna	Static system	Fresh water	Experimental value; Locomotor effect
Toxicity algae and other aquatic plants	ErC50	EPA 660/3 - 75/009	> 11 mg/l	72 h	Scenedesmus sp.	Static system	Fresh water	Experimental value
	NOEC	EPA 660/3 - 75/009	4.2 mg/l	72 h	Scenedesmus sp.	Static system	Fresh water	Experimental value
Long-term toxicity fish								Data waiving
Long-term toxicity aquatic crustacea	NOEC	Equivalent to OECD 211	0.3 mg/l	21 day(s)	Daphnia magna	Semi-static system	Fresh water	Experimental value; GLP
Toxicity aquatic micro-organisms	IC50		> 100 mg/l	3 h	Activated sludge	Static system	Fresh water	Experimental value; Nominal concentration

2-methylpropan-1-ol

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50	Other	1430 mg/l	96 h	Pimephales promelas	Flow-through system	Fresh water	Experimental value
Acute toxicity crustacea	EC50	ASTM	1100 mg/l	48 h	Daphnia pulex	Static system	Fresh water	Experimental value
Toxicity algae and other aquatic plants	EC50	OECD 201	593 mg/l	72 h	Pseudokirchneria lla subcapitata	Static system	Fresh water	Experimental value
	NOEC	OECD 201	< 53 mg/l	72 h	Pseudokirchneria lla subcapitata	Static system	Fresh water	Experimental value
Long-term toxicity aquatic crustacea	NOEC	Other	20 mg/l	21 day(s)	Daphnia magna		Fresh water	Experimental value
Toxicity aquatic micro-organisms	IC50	Other	> 1000 mg/l	16 h		Static system	Fresh water	Experimental value

solvent naphtha (petroleum), heavy arom.

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50	OECD 203	6.1 mg/l	96 h	Oncorhynchus mykiss	Static system	Fresh water	Experimental value; GLP
Acute toxicity crustacea	EC50	OECD 202	2.9 mg/l	48 h	Daphnia magna	Static system	Fresh water	Experimental value; GLP
Toxicity algae and other aquatic plants	ErC50	OECD 201	1.4 mg/l	72 h	Pseudokirchneria lla subcapitata	Static system	Fresh water	Experimental value; GLP

AGC FIX-IN TU (-T)

n-butyl acetate

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50	Equivalent to OECD 203	18 mg/l	96 h	Pimephales promelas	Flow-through system	Fresh water	Experimental value
Acute toxicity crustacea	EC50	Other	44 mg/l	48 h	Daphnia sp.	Static system	Fresh water	Experimental value
Toxicity algae and other aquatic plants	EC50	Other	674.7 mg/l	72 h	Desmodesmus subspicatus	Static system	Fresh water	Experimental value
	NOEC	Other	200 mg/l	72 h	Desmodesmus subspicatus	Static system	Fresh water	Experimental value
Long-term toxicity aquatic crustacea	NOEC	OECD 211	23 mg/l	21 day(s)	Daphnia magna		Fresh water	Read-across

	Parameter	Method	Value	Duration	Species	Value determination
Toxicity terrestrial plants	EC50	Equivalent to OECD 208	> 1000 mg/kg soil dw	14 day(s)	Lactuca sativa	Experimental value

solvent naphtha (petroleum), light arom.

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50	OECD 203	10 mg/l	96 h	Oncorhynchus mykiss	Semi-static system	Fresh water	Experimental value; GLP
Acute toxicity crustacea	EC50	OECD 202	4.5 mg/l	48 h	Daphnia magna	Static system	Fresh water	Experimental value; GLP
Toxicity algae and other aquatic plants	EC50	OECD 201	3.1 mg/l	72 h	Pseudokirchneriella subcapitata	Static system	Fresh water	Experimental value; GLP
Long-term toxicity fish	NOEL	OECD 204	2.6 mg/l	14 day(s)	Pimephales promelas	Semi-static system	Fresh water	Experimental value; GLP
Long-term toxicity aquatic crustacea	NOEL	OECD 211	2.6 mg/l	21 day(s)	Daphnia magna	Semi-static system	Fresh water	Experimental value; GLP
Toxicity aquatic micro-organisms	EC50		15 mg/l - 41 mg/l	40 h	Tetrahymena pyriformis		Fresh water	QSAR; Nominal concentration

Classification is based on the relevant ingredients

Conclusion

Harmful to aquatic life with long lasting effects.

12.2. Persistence and degradability

xylene

Biodegradation water

Method	Value	Duration	Value determination
OECD 301: Ready Biodegradability	100 %	12 day(s)	Experimental value

ethylbenzene

Biodegradation water

Method	Value	Duration	Value determination
ISO 14593	70 % - 80 %; GLP	28 day(s)	Experimental value

Half-life soil (t1/2 soil)

Method	Value	Primary degradation/mineralisation	Value determination
	3 day(s) - 10 day(s)		Literature study

butan-1-ol

Biodegradation water

Method	Value	Duration	Value determination
Other	92 %; Oxygen consumption	20 day(s)	Experimental value

reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight ≤ 700)

Biodegradation water

Method	Value	Duration	Value determination
OECD 301F: Manometric Respirometry Test	5 %; Oxygen consumption	28 day(s)	Experimental value

Phototransformation air (DT50 air)

Method	Value	Conc. OH-radicals	Value determination
AOPWIN v1.91	6.44 h	500000 /cm ³	Calculated value

Half-life water (t1/2 water)

Method	Value	Primary degradation/mineralisation	Value determination
OECD 111: Hydrolysis as a function of pH	86 h; pH = 7		Experimental value

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AGC FIX-IN TU (-T)

2-methylpropan-1-ol

Biodegradation water

Method	Value	Duration	Value determination
OECD 301D: Closed Bottle Test	70 % - 80 %	28 day(s)	Experimental value

Phototransformation air (DT50 air)

Method	Value	Conc. OH-radicals	Value determination
SRC AOP v1.91	56 h	500000 /cm ³	Calculated value

Half-life soil (t1/2 soil)

Method	Value	Primary degradation/mineralisation	Value determination
	2.4 day(s) - 11.3 day(s)		

solvent naphtha (petroleum), heavy arom.

Biodegradation water

Method	Value	Duration	Value determination
OECD 301F: Manometric Respirometry Test	0 %; GLP	28 day(s)	Experimental value

n-butyl acetate

Biodegradation water

Method	Value	Duration	Value determination
OECD 301D: Closed Bottle Test	83 %	28 day(s)	Experimental value

Phototransformation air (DT50 air)

Method	Value	Conc. OH-radicals	Value determination
AOPWIN v1.92	3.3 day(s)	500000 /cm ³	Experimental value

solvent naphtha (petroleum), light arom.

Biodegradation water

Method	Value	Duration	Value determination
OECD 301F: Manometric Respirometry Test	77.05 %; GLP	28 day(s)	Experimental value

Conclusion

Contains non readily biodegradable component(s)

12.3. Bioaccumulative potential

AGC FIX-IN TU (-T)

Log Kow

Method	Remark	Value	Temperature	Value determination
	Not applicable (mixture)			

xylene

BCF fishes

Parameter	Method	Value	Duration	Species	Value determination
BCF		7 - 26	8 week(s)	Oncorhynchus mykiss	Experimental value

Log Kow

Method	Remark	Value	Temperature	Value determination
		3.2	20 °C	Conclusion by analogy

ethylbenzene

BCF fishes

Parameter	Method	Value	Duration	Species	Value determination
BCF	Other	1 - 2.4	6 week(s)	Oncorhynchus kisutch	Experimental value

Log Kow

Method	Remark	Value	Temperature	Value determination
EU Method A.8		3.6	20 °C	Experimental value

butan-1-ol

BCF other aquatic organisms

Parameter	Method	Value	Duration	Species	Value determination
BCF	BCFWIN	3.16			Calculated value

Log Kow

Method	Remark	Value	Temperature	Value determination
OECD 117		1	25 °C	Experimental value

AGC FIX-IN TU (-T)

reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight ≤ 700)

BCF other aquatic organisms

Parameter	Method	Value	Duration	Species	Value determination
BCF	Other	31; Fresh weight			Estimated value

Log Kow

Method	Remark	Value	Temperature	Value determination
OECD 117		2.64 - 3.78	25 °C	Experimental value

2-methylpropan-1-ol

Log Kow

Method	Remark	Value	Temperature	Value determination
		1	25 °C	Practical experience/observation

solvent naphtha (petroleum), heavy arom.

BCF other aquatic organisms

Parameter	Method	Value	Duration	Species	Value determination
BCF	BCFBAF v3.00	26 - 18000			QSAR

Log Kow

Method	Remark	Value	Temperature	Value determination
OECD 117		3.1 - 4.7	25 °C	Experimental value

n-butyl acetate

BCF fishes

Parameter	Method	Value	Duration	Species	Value determination
BCF		15.3			Calculated value

Log Kow

Method	Remark	Value	Temperature	Value determination
OECD 117		2.3	25 °C	Test data

solvent naphtha (petroleum), light arom.

BCF other aquatic organisms

Parameter	Method	Value	Duration	Species	Value determination
BCF	BCFWIN	10 - 2500			Calculated value

Log Kow

Method	Remark	Value	Temperature	Value determination
	No data available			

Conclusion

Contains bioaccumulative component(s)

12.4. Mobility in soil

ethylbenzene

(log) Koc

Parameter	Method	Value	Value determination
log Koc	PCKOCWIN v1.66	2.71	QSAR

Volatility (Henry's Law constant H)

Value	Method	Temperature	Remark	Value determination
0.00843 atm m ³ /mol		25 °C		Experimental value

Percent distribution

Method	Fraction air	Fraction biota	Fraction sediment	Fraction soil	Fraction water	Value determination
Mackay level I	99.45 %		0.05 %	0.05 %	0.45 %	Calculated value

butan-1-ol

(log) Koc

Parameter	Method	Value	Value determination
log Koc	PCKOCWIN v1.66	0.388	Calculated value

Volatility (Henry's Law constant H)

Value	Method	Temperature	Remark	Value determination
0.0539 Pa.m ³ /mol				Calculated value

Percent distribution

Method	Fraction air	Fraction biota	Fraction sediment	Fraction soil	Fraction water	Value determination
Mackay level I	27.07 %		0.04 %	0.04 %	72.85 %	Calculated value

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AGC FIX-IN TU (-T)

reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight ≤ 700)

(log) Koc

Parameter	Method	Value	Value determination
log Koc	SRC PCKOCWIN v2.0	2.65	QSAR

Percent distribution

Method	Fraction air	Fraction biota	Fraction sediment	Fraction soil	Fraction water	Value determination
Mackay level III	0 %		1.9 %	84.3 %	13.8 %	Calculated value

2-methylpropan-1-ol

(log) Koc

Parameter	Method	Value	Value determination
log Koc	SRC PCKOCWIN v1.66	0.31	Calculated value

Volatility (Henry's Law constant H)

Value	Method	Temperature	Remark	Value determination
1.012 atm m ³ /mol	SRC HENRYWIN v3.10	25 °C		Calculated value

Percent distribution

Method	Fraction air	Fraction biota	Fraction sediment	Fraction soil	Fraction water	Value determination
Mackay level I	32.02 %		0.03 %	0.03 %	67.92 %	Calculated value

n-butyl acetate

(log) Koc

Parameter	Method	Value	Value determination
log Koc	SRC PCKOCWIN v2.0	1.268 - 1.844	QSAR

Volatility (Henry's Law constant H)

Value	Method	Temperature	Remark	Value determination
28.5 Pa.m ³ /mol		25 °C		Experimental value

solvent naphtha (petroleum), light arom.

(log) Koc

Parameter	Method	Value	Value determination
Koc	PCKOCWIN v1.66	60.7 - 229.2	Calculated value
log Koc	PCKOCWIN v1.66	1.783 - 2.36	Calculated value

Percent distribution

Method	Fraction air	Fraction biota	Fraction sediment	Fraction soil	Fraction water	Value determination
Mackay level III	93.02 %		0.81 %	0.34 %	5.83 %	Calculated value

Conclusion

Contains component(s) that adsorb(s) into the soil

Contains component(s) with potential for mobility in the soil

12.5. Results of PBT and vPvB assessment

Does not contain component(s) that meet(s) the criteria of PBT and/or vPvB as listed in Annex XIII of Regulation (EC) No 1907/2006.

12.6. Other adverse effects

AGC FIX-IN TU (-T)

Fluorinated greenhouse gases (Regulation (EU) No 517/2014)

None of the known components is included in the list of fluorinated greenhouse gases (Regulation (EU) No 517/2014)

Ozone-depleting potential (ODP)

Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009)

xylene

Ground water

Ground water pollutant

butan-1-ol

Ground water

Ground water pollutant

solvent naphtha (petroleum), heavy arom.

Ground water

Ground water pollutant

n-butyl acetate

Ground water

Ground water pollutant

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AGC FIX-IN TU (-T)

solvent naphtha (petroleum), light arom.

Ground water

Ground water pollutant

SECTION 13: Disposal considerations

The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

13.1. Waste treatment methods

13.1.1 Provisions relating to waste

European Union

Hazardous waste according to Directive 2008/98/EC, as amended by Regulation (EU) No 1357/2014.

Waste material code (Directive 2008/98/EC, Decision 2000/0532/EC).

08 01 11* (wastes from MFSU and removal of paint and varnish: waste paint and varnish containing organic solvents or other hazardous substances).

Depending on branch of industry and production process, also other waste codes may be applicable.

13.1.2 Disposal methods

Recycle/reuse. Incinerate under surveillance with energy recovery. Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Do not discharge into drains or the environment.

13.1.3 Packaging/Container

European Union

Waste material code packaging (Directive 2008/98/EC).

15 01 10* (packaging containing residues of or contaminated by dangerous substances).

SECTION 14: Transport information

Road (ADR)

14.1. UN number

UN number	1263
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14.2. UN proper shipping name

Proper shipping name	Paint related material
----------------------	------------------------

14.3. Transport hazard class(es)

Hazard identification number	30
Class	3
Classification code	F1

14.4. Packing group

Packing group	III
Labels	3

14.5. Environmental hazards

Environmentally hazardous substance mark	no
--	----

14.6. Special precautions for user

Special provisions	163
Special provisions	367
Special provisions	650
Limited quantities	Combination packagings: not more than 5 liters per inner packaging for liquids. A package shall not weigh more than 30 kg. (gross mass)

Rail (RID)

14.1. UN number

UN number	1263
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14.2. UN proper shipping name

Proper shipping name	Paint related material
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14.3. Transport hazard class(es)

Hazard identification number	30
Class	3
Classification code	F1

14.4. Packing group

Packing group	III
Labels	3

14.5. Environmental hazards

Environmentally hazardous substance mark	no
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14.6. Special precautions for user

Reason for revision: 2;3

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Revision number: 0100

Product number: 52098

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AGC FIX-IN TU (-T)

Special provisions	163
Special provisions	367
Special provisions	650
Limited quantities	Combination packagings: not more than 5 liters per inner packaging for liquids. A package shall not weigh more than 30 kg. (gross mass)

Inland waterways (ADN)

14.1. UN number	UN number	1263
14.2. UN proper shipping name	Proper shipping name	Paint related material
14.3. Transport hazard class(es)	Class	3
	Classification code	F1
14.4. Packing group	Packing group	III
	Labels	3
14.5. Environmental hazards	Environmentally hazardous substance mark	no
14.6. Special precautions for user	Special provisions	163
	Special provisions	367
	Special provisions	650
	Limited quantities	Combination packagings: not more than 5 liters per inner packaging for liquids. A package shall not weigh more than 30 kg. (gross mass)

Sea (IMDG/IMSBC)

14.1. UN number	UN number	1263
14.2. UN proper shipping name	Proper shipping name	paint related material
14.3. Transport hazard class(es)	Class	3
14.4. Packing group	Packing group	III
	Labels	3
14.5. Environmental hazards	Marine pollutant	
	Environmentally hazardous substance mark	no
14.6. Special precautions for user	Special provisions	163
	Special provisions	223
	Special provisions	367
	Special provisions	955
	Limited quantities	Combination packagings: not more than 5 liters per inner packaging for liquids. A package shall not weigh more than 30 kg. (gross mass)
14.7. Transport in bulk according to Annex II of Marpol and the IBC Code	Annex II of MARPOL 73/78	Not applicable, based on available data

Air (ICAO-TI/IATA-DGR)

14.1. UN number	UN number	1263
14.2. UN proper shipping name	Proper shipping name	Paint related material
14.3. Transport hazard class(es)	Class	3
14.4. Packing group	Packing group	III
	Labels	3
14.5. Environmental hazards	Environmentally hazardous substance mark	no
14.6. Special precautions for user	Special provisions	A3

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Product number: 52098

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AGC FIX-IN TU (-T)

Special provisions	A72
Special provisions	A192
limited quantities: maximum net quantity per packaging	10 L

SECTION 15: Regulatory information

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

European legislation:

VOC content Directive 2010/75/EU

VOC content	Remark
32 %	Calculated
432 g/l	

Indicative occupational exposure limit values (Directive 98/24/EC, 2000/39/EC and 2009/161/EU)

Product name	Skin resorption
Ethylbenzene	Skin
Xylene, mixed isomers, pure	Skin

European drinking water standards (Directive 98/83/EC)

reaction product: bisphenol-A-(epichlorohydrin) epoxy resin (number average molecular weight ≤ 700)

Parameter	Parametric value	Note	Reference
Epichlorohydrin	0,1 µg/l		Listed in Annex I, Part B, of Directive 98/83/EC on the quality of water intended for human consumption.

REACH Annex XVII - Restriction

Contains component(s) subject to restrictions of Annex XVII of Regulation (EC) No 1907/2006: restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles.

	Designation of the substance, of the group of substances or of the mixture	Conditions of restriction
- ethylbenzene - butan-1-ol - reaction product: bisphenol-A-(epichlorohydrin) epoxy resin (number average molecular weight ≤ 700) 2-methylpropan-1-ol - solvent naphtha (petroleum), heavy arom. - n-butyl acetate - solvent naphtha (petroleum), light arom.	Liquid substances or mixtures which are regarded as dangerous in accordance with Directive 1999/45/EC or are fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: (a) hazard classes 2.1 to 2.4, 2.6 and 2.7, 2.8 types A and B, 2.9, 2.10, 2.12, 2.13 categories 1 and 2, 2.14 categories 1 and 2, 2.15 types A to F; (b) hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10; (c) hazard class 4.1; (d) hazard class 5.1.	1. Shall not be used in: — ornamental articles intended to produce light or colour effects by means of different phases, for example in ornamental lamps and ashtrays, — tricks and jokes, — games for one or more participants, or any article intended to be used as such, even with ornamental aspects. 2. Articles not complying with paragraph 1 shall not be placed on the market. 3. Shall not be placed on the market if they contain a colouring agent, unless required for fiscal reasons, or perfume, or both, if they: — can be used as fuel in decorative oil lamps for supply to the general public, and, — present an aspiration hazard and are labelled with R65 or H304. 4. Decorative oil lamps for supply to the general public shall not be placed on the market unless they conform to the European Standard on Decorative oil lamps (EN 14059) adopted by the European Committee for Standardisation (CEN). 5. Without prejudice to the implementation of other Community provisions relating to the classification, packaging and labelling of dangerous substances and mixtures, suppliers shall ensure, before the placing on the market, that the following requirements are met: a) lamp oils, labelled with R65 or H304, intended for supply to the general public are visibly, legibly and indelibly marked as follows: "Keep lamps filled with this liquid out of the reach of children"; and, by 1 December 2010, "Just a sip of lamp oil — or even sucking the wick of lamps — may lead to life-threatening lung damage"; b) grill lighter fluids, labelled with R65 or H304, intended for supply to the general public are legibly and indelibly marked by 1 December 2010 as follows: "Just a sip of grill lighter may lead to life threatening lung damage"; c) lamp oils and grill lighters, labelled with R65 or H304, intended for supply to the general public are packaged in black opaque containers not exceeding 1 litre by 1 December 2010. 6. No later than 1 June 2014, the Commission shall request the European Chemicals Agency to prepare a dossier, in accordance with Article 69 of the present Regulation with a view to ban, if appropriate, grill lighter fluids and fuel for decorative lamps, labelled R65 or H304, intended for supply to the general public. 7. Natural or legal persons placing on the market for the first time lamp oils and grill lighter fluids, labelled with R65 or H304, shall by 1 December 2011, and annually thereafter, provide data on alternatives to lamp oils and grill lighter fluids labelled R65 or H304 to the competent authority in the Member State concerned. Member States shall make those data available to the Commission.
- xylene - ethylbenzene - butan-1-ol 2-methylpropan-1-ol - solvent naphtha (petroleum), heavy arom. - n-butyl acetate - solvent naphtha (petroleum), light arom.	Substances classified as flammable gases category 1 or 2, flammable liquids categories 1, 2 or 3, flammable solids category 1 or 2, substances and mixtures which, in contact with water, emit flammable gases, category 1, 2 or 3, pyrophoric liquids category 1 or pyrophoric solids category 1, regardless of whether they appear in Part 3 of Annex VI to that Regulation or not.	1. Shall not be used, as substance or as mixtures in aerosol dispensers where these aerosol dispensers are intended for supply to the general public for entertainment and decorative purposes such as the following: — metallic glitter intended mainly for decoration, — artificial snow and frost, — "whoopie" cushions, — silly string aerosols, — imitation excrement, — horns for parties, — decorative flakes and foams, — artificial cobwebs, — stink bombs. 2. Without prejudice to the application of other Community provisions on the classification, packaging and labelling of substances, suppliers shall ensure before the placing on the market that the packaging of aerosol dispensers referred to above is marked

Reason for revision: 2;3

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visibly, legibly and indelibly with:

"For professional users only".3. By way of derogation, paragraphs 1 and 2 shall not apply to the aerosol dispensers referred to Article 8 (1a) of Council Directive 75/ 324/EEC.4. The aerosol dispensers referred to in paragraphs 1 and 2 shall not be placed on the market unless they conform to the requirements indicated.

National legislation Belgium

AGC FIX-IN TU (-T)

No data available

xylene

Résorption peau	Xylène, isomères mixtes, purs; D; La mention "D" signifie que la résorption de l'agent, via la peau, les muqueuses ou les yeux, constitue une partie importante de l'exposition totale. Cette résorption peut se faire tant par contact direct que par présence de l'agent dans l'air.
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ethylbenzene

Résorption peau	Ethylbenzène; D; La mention "D" signifie que la résorption de l'agent, via la peau, les muqueuses ou les yeux, constitue une partie importante de l'exposition totale. Cette résorption peut se faire tant par contact direct que par présence de l'agent dans l'air.
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butan-1-ol

Résorption peau	Alcool n-butylique; D; La mention "D" signifie que la résorption de l'agent, via la peau, les muqueuses ou les yeux, constitue une partie importante de l'exposition totale. Cette résorption peut se faire tant par contact direct que par présence de l'agent dans l'air.
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National legislation The Netherlands

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Waste identification (the Netherlands)	LWCA (the Netherlands): KGA category 03
Waterbezwaarlijkheid	Z (2)

xylene

Huidopname (wettelijk)	Xyleen (o-,m- en p-isomeren); H
SZW - Lijst van voor de voortplanting giftige stoffen (ontwikkeling)	xyleen; 2; Suspected of damaging the unborn child.

ethylbenzene

Huidopname (wettelijk)	Ethylbenzeen; H
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solvent naphtha (petroleum), heavy arom.

SZW - Lijst van kankerverwekkende stoffen	(complexe) aardolie- en steenkoolderivaten; Listed in SZW-list of carcinogenic substances
SZW - Lijst van mutagene stoffen	(complexe) aardolie- en steenkoolderivaten; Listed in SZW-list of mutagenic substances

solvent naphtha (petroleum), light arom.

SZW - Lijst van kankerverwekkende stoffen	(complexe) aardolie- en steenkoolderivaten; Listed in SZW-list of carcinogenic substances
SZW - Lijst van mutagene stoffen	(complexe) aardolie- en steenkoolderivaten; Listed in SZW-list of mutagenic substances

National legislation France

AGC FIX-IN TU (-T)

No data available

xylene

Risque de pénétration percutanée	Xylènes, isomères mixtes, purs; PP
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ethylbenzene

Risque de pénétration percutanée	Ethylbenzène; PP
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National legislation Germany

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WGK	2; Classification water polluting based on the components in compliance with Verwaltungsvorschrift wassergefährdender Stoffe (VwVwS) of 27 July 2005 (Anhang 4)
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xylene

TA-Luft	5.2.5; I
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ethylbenzene

TA-Luft	5.2.5; I
TRGS900 - Risiko der Fruchtschädigung	Ethylbenzol; Y; Risiko der Fruchtschädigung braucht bei Einhaltung des Arbeitsplatzgrenzwertes und des biologischen Grenzwertes nicht befürchtet zu werden
Hautresorptive Stoffe	Ethylbenzol; H; Hautresorptiv

Reason for revision: 2;3

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butan-1-ol

TA-Luft	5.2.5
TRGS900 - Risiko der Fruchtschädigung	Butan-1-ol; Y; Risiko der Fruchtschädigung braucht bei Einhaltung des Arbeitsplatzgrenzwertes und des biologischen Grenzwertes nicht befürchtet zu werden

reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight ≤ 700)

TA-Luft	5.2.5; I
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2-methylpropan-1-ol

TA-Luft	5.2.5
TRGS900 - Risiko der Fruchtschädigung	2-Methylpropan-1-ol; Y; Risiko der Fruchtschädigung braucht bei Einhaltung des Arbeitsplatzgrenzwertes und des biologischen Grenzwertes nicht befürchtet zu werden

solvent naphtha (petroleum), heavy arom.

TA-Luft	5.2.5; I
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n-butyl acetate

TA-Luft	5.2.5; I
TRGS900 - Risiko der Fruchtschädigung	n-Butylacetat; Y; Risiko der Fruchtschädigung braucht bei Einhaltung des Arbeitsplatzgrenzwertes und des biologischen Grenzwertes nicht befürchtet zu werden

solvent naphtha (petroleum), light arom.

TA-Luft	5.2.5; I
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National legislation United Kingdom

AGC FIX-IN TU (-T)

No data available

xylene

Skin absorption	Xylene, o-,m-,p- or mixed isomers; Sk
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ethylbenzene

Skin absorption	Ethylbenzene; Sk
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butan-1-ol

Skin absorption	Butan-1-ol; Sk
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Other relevant data

AGC FIX-IN TU (-T)

No data available

xylene

TLV - Carcinogen	Xylene (all isomers); A4
IARC - classification	3; Xylenes

ethylbenzene

IARC - classification	2B; Ethylbenzene
TLV - Carcinogen	Ethylbenzene; A3

solvent naphtha (petroleum), heavy arom.

Skin absorption	Kerosene/Jet fuels, as total hydrocarbon vapor; Skin; Danger of cutaneous absorption
TLV - Carcinogen	Kerosene/Jet fuels, as total hydrocarbon vapor; A3

15.2. Chemical safety assessment

No chemical safety assessment has been conducted for the mixture.

reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight ≤ 700)

A chemical safety assessment has been performed.

SECTION 16: Other information

Full text of any H-statements referred to under headings 2 and 3:

- H225 Highly flammable liquid and vapour.
- H226 Flammable liquid and vapour.
- H302 Harmful if swallowed.
- H304 May be fatal if swallowed and enters airways.
- H312 Harmful in contact with skin.
- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.
- H318 Causes serious eye damage.
- H319 Causes serious eye irritation.
- H332 Harmful if inhaled.
- H335 May cause respiratory irritation.
- H336 May cause drowsiness or dizziness.
- H373 May cause damage to organs (ears (hearing damage)) through prolonged or repeated exposure.
- H411 Toxic to aquatic life with long lasting effects.
- H412 Harmful to aquatic life with long lasting effects.

AGC FIX-IN TU (-T)

(*)	INTERNAL CLASSIFICATION BY BIG
CLP (EU-GHS)	Classification, labelling and packaging (Globally Harmonised System in Europe)
DMEL	Derived Minimal Effect Level
DNEL	Derived No Effect Level
EC50	Effect Concentration 50 %
ErC50	EC50 in terms of reduction of growth rate
LC50	Lethal Concentration 50 %
LD50	Lethal Dose 50 %
NOAEL	No Observed Adverse Effect Level
NOEC	No Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
PBT	Persistent, Bioaccumulative & Toxic
PNEC	Predicted No Effect Concentration
STP	Sludge Treatment Process
vPvB	very Persistent & very Bioaccumulative

Specific concentration limits CLP

reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight ≤ 700)	C $\geq$ 5%	Eye Irrit. 2; H319	CLP Annex VI (ATP 0)
	C $\geq$ 5 %	Skin Irrit. 2; H315	CLP Annex VI (ATP 0)

The information in this safety data sheet is based on data and samples provided to BIG. The sheet was written to the best of our ability and according to the state of knowledge at that time. The safety data sheet only constitutes a guideline for the safe handling, use, consumption, storage, transport and disposal of the substances/preparations/mixtures mentioned under point 1. New safety data sheets are written from time to time. Only the most recent versions may be used. Old versions must be destroyed. Unless indicated otherwise word for word on the safety data sheet, the information does not apply to substances/preparations/mixtures in purer form, mixed with other substances or in processes. The safety data sheet offers no quality specification for the substances/preparations/mixtures in question. Compliance with the instructions in this safety data sheet does not release the user from the obligation to take all measures dictated by common sense, regulations and recommendations or which are necessary and/or useful based on the real applicable circumstances. BIG does not guarantee the accuracy or exhaustiveness of the information provided and **cannot be held liable** for any changes by third parties. This safety data sheet has been elaborated for use within the European Union, Switzerland, Iceland, Norway and Lichtenstein. It may be consulted in other countries, where local legislation with regards to the set-up of safety data sheets will take precedence. It is your obligation to verify and apply such local legislation. Use of this safety data sheet is subject to the licence and liability limiting conditions as stated in your BIG licence agreement or when this is failing the general conditions of BIG. All intellectual property rights to this sheet are the property of BIG and its distribution and reproduction are limited. Consult the mentioned agreement/conditions for details.

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