SAFETY DATA SHEET

Based upon Regulation (EC) No 1907/2006, as amended by Regulation (EU) No 2015/830

Primer 150

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

1.1. Product identifier

Product name : Primer 150
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

Primer

1.2.2 Uses advised against

No uses advised against known

1.3. Details of the supplier of the safety data sheet

Supplier of the safety data sheet

SOUDAL N.V.
Everdongenlaan 18-20
B-2300 Turnhout
☎ +32 14 42 42 31
 +32 14 42 65 14
msds@soudal.com

Manufacturer of the product

SOUDAL N.V.
Everdongenlaan 18-20
B-2300 Turnhout
☎ +32 14 42 42 31
 +32 14 42 65 14
msds@soudal.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 2	H225: Highly flammable liquid and vapour.
Repr.	category 2	H361d: Suspected of damaging the unborn child.
Asp. Tox.	category 1	H304: May be fatal if swallowed and enters airways.
STOT RE	category 2	H373: May cause damage to organs through prolonged or repeated exposure if inhaled.
Eye Irrit.	category 2	H319: Causes serious eye irritation.
Skin Irrit.	category 2	H315: Causes skin irritation.
STOT SE	category 3	H336: May cause drowsiness or dizziness.

2.2. Label elements

Contains: toluene.

Signal word Danger

H-statements

H225 Highly flammable liquid and vapour.
H361d Suspected of damaging the unborn child.
H304 May be fatal if swallowed and enters airways.
H373 May cause damage to organs through prolonged or repeated exposure if inhaled.
H319 Causes serious eye irritation.
H315 Causes skin irritation.

H336	May cause drowsiness or dizziness.

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.
P261	Avoid breathing vapours/mist.
P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P501	Dispose of contents/container in accordance with local/regional/national/international regulation.

Supplemental information

EUH208	Contains: n-butyl methacrylate; methyl methacrylate. May produce an allergic reaction.

2.3. Other hazards

May build up electrostatic charges: risk of ignition
Gas/vapour spreads at floor level: ignition hazard
Caution! Substance is absorbed through the skin

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
toluene 01-2119471310-51	108-88-3 203-625-9	C>25%	Flam. Liq. 2; H225 Repr. 2; H361d Asp. Tox. 1; H304 STOT RE 2; H373 Skin Irrit. 2; H315 STOT SE 3; H336	(1)(2)(10)	Constituent
butan-1-ol 01-2119484630-38	71-36-3 200-751-6	1%<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
n-butyl methacrylate 01-2119486394-28	97-88-1 202-615-1	0.1%<C<1%	Flam. Liq. 3; H226 Eye Irrit. 2; H319 STOT SE 3; H335 Skin Irrit. 2; H315 Skin Sens. 1; H317	(1)(2)(10)	Constituent
methyl methacrylate 01-2119452498-28	80-62-6 201-297-1	0.1%<C<1%	Flam. Liq. 2; H225 STOT SE 3; H335 Skin Irrit. 2; H315 Skin Sens. 1; H317	(1)(2)(10)	Constituent

(1) For H-statements in full: see heading 16
(2) Substance with a Community workplace exposure limit
(10) Subject to restrictions of Annex XVII of Regulation (EC) No. 1907/2006

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. Take victim to a doctor if irritation persists.

After eye contact:

Rinse immediately with plenty of water. Do not apply neutralizing agents. Take victim to an ophthalmologist if irritation persists.

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:

EXPOSURE TO HIGH CONCENTRATIONS: Feeling of weakness. Central nervous system depression. Headache. Nausea. Dizziness. Narcosis. Mental confusion. Drunkenness. Coordination disorders. Disturbances of consciousness.

After skin contact:

Red skin. Tingling/irritation of the skin.

After eye contact:

Irritation of the eye tissue.

After ingestion:

Risk of aspiration pneumonia. Nausea. Abdominal pain. Symptoms similar to those listed under inhalation.

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:

Water spray. Polyvalent foam. BC powder. Carbon dioxide.

5.1.2 Unsuitable extinguishing media:

No unsuitable extinguishing media known.

5.2. Special hazards arising from the substance or mixture

Upon combustion: CO and CO2 are formed.

5.3. Advice for firefighters

5.3.1 Instructions:

If exposed to fire cool the closed containers by spraying with water. Do not move the load if exposed to heat.

5.3.2 Special protective equipment for fire-fighters:

Gloves. Protective goggles. Head/neck protection. 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. Protective goggles. Head/neck protection. Protective clothing.

Suitable protective clothing

See heading 8.2

6.2. Environmental precautions

Contain released product. Dam up the liquid spill. Try to reduce evaporation. Prevent spreading in sewers. Use appropriate containment to avoid environmental contamination.

6.3. Methods and material for containment and cleaning up

Take up liquid spill into a non combustible material e.g.: sand slaked lime or soda ash. Scoop absorbed substance into closing containers. Carefully collect the spill/leftovers. Clean contaminated surfaces with an excess of water. 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: use spark-/explosionproof appliances and lighting system. Insufficient ventilation: take precautions against electrostatic charges. Gas/vapour heavier than air at 20°C. Observe strict hygiene. 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 at room temperature. Store in a dry area. Meet the legal requirements. Max. storage time: 1 year(s).

7.2.2 Keep away from:

Heat sources, ignition sources, oxidizing agents.

7.2.3 Suitable packaging material:

Tin.

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

Methyl methacrylate	Time-weighted average exposure limit 8 h (Indicative occupational exposure limit value)	50 ppm
	Short time value (Indicative occupational exposure limit value)	100 ppm
Toluene	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)	192 mg/m³
	Short time value (Indicative occupational exposure limit value)	100 ppm
	Short time value (Indicative occupational exposure limit value)	384 mg/m³

Belgium

Alcool n-butylique	Time-weighted average exposure limit 8 h	20 ppm
	Time-weighted average exposure limit 8 h	62 mg/m³
Méthacrylate de méthyle	Time-weighted average exposure limit 8 h	50 ppm
	Time-weighted average exposure limit 8 h	208 mg/m³
	Short time value	100 ppm
	Short time value	416 mg/m³
Toluène	Time-weighted average exposure limit 8 h	20 ppm
	Time-weighted average exposure limit 8 h	77 mg/m³
	Short time value	100 ppm
	Short time value	384 mg/m³

The Netherlands

1-Butanol	Short time value (Private occupational exposure limit value)	15 ppm
	Short time value (Private occupational exposure limit value)	45 mg/m³
Methylmethacrylaat	Time-weighted average exposure limit 8 h (Public occupational exposure limit value)	49.2 ppm
	Time-weighted average exposure limit 8 h (Public occupational exposure limit value)	205 mg/m³
	Short time value (Public occupational exposure limit value)	98.4 ppm
	Short time value (Public occupational exposure limit value)	410 mg/m³
n-Butylmethacrylaat	Time-weighted average exposure limit 8 h (Private occupational exposure limit value)	10 ppm
	Time-weighted average exposure limit 8 h (Private occupational exposure limit value)	59 mg/m³
Tolueen	Time-weighted average exposure limit 8 h (Public occupational exposure limit value)	39 ppm
	Time-weighted average exposure limit 8 h (Public occupational exposure limit value)	150 mg/m³
	Short time value (Public occupational exposure limit value)	100 ppm
	Short time value (Public occupational exposure limit value)	384 mg/m³

France

Alcool n-butylique	Short time value (VL: Valeur non réglementaire indicative)	50 ppm
	Short time value (VL: Valeur non réglementaire indicative)	150 mg/m³
Méthacrylate de méthyle	Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante)	50 ppm
	Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante)	205 mg/m³
	Short time value (VRC: Valeur réglementaire contraignante)	100 ppm
	Short time value (VRC: Valeur réglementaire contraignante)	410 mg/m³

Toluène	Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante)	20 ppm
	Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante)	76.8 mg/m³
	Short time value (VRC: Valeur réglementaire contraignante)	100 ppm
	Short time value (VRC: Valeur réglementaire contraignante)	384 mg/m³

Germany

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/m³
Methyl-methacrylat	Time-weighted average exposure limit 8 h (TRGS 900)	50 ppm
	Time-weighted average exposure limit 8 h (TRGS 900)	210 mg/m³
Toluol	Time-weighted average exposure limit 8 h (TRGS 900)	50 ppm
	Time-weighted average exposure limit 8 h (TRGS 900)	190 mg/m³

UK

Butan-1-ol	Short time value (Workplace exposure limit (EH40/2005))	50 ppm
	Short time value (Workplace exposure limit (EH40/2005))	154 mg/m³
Methyl methacrylate	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))	208 mg/m³
	Short time value (Workplace exposure limit (EH40/2005))	100 ppm
	Short time value (Workplace exposure limit (EH40/2005))	416 mg/m³
Toluene	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))	191 mg/m³
	Short time value (Workplace exposure limit (EH40/2005))	100 ppm
	Short time value (Workplace exposure limit (EH40/2005))	384 mg/m³

USA (TLV-ACGIH)

Methyl methacrylate	Time-weighted average exposure limit 8 h (TLV - Adopted Value)	50 ppm
	Short time value (TLV - Adopted Value)	100 ppm
n-Butanol	Time-weighted average exposure limit 8 h (TLV - Adopted Value)	20 ppm
Toluene	Time-weighted average exposure limit 8 h (TLV - Adopted Value)	20 ppm

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
Toluol (o-Kresol (nach Hydrolyse))	Urin: bei langzeitexposition: nach mehreren vorangegangenen schichten expositionsende, bzw. schichtende	1,5 mg/l	11/2012 Ständige Senatskommission zur Prüfung gesundheitsschädlicher Arbeitsstoffe der DFG
Toluol (Toluol)	Vollblut: expositionsende, bzw. schichtende	600 µg/l	11/2012 Ständige Senatskommission zur Prüfung gesundheitsschädlicher Arbeitsstoffe der DFG

USA (BEI-ACGIH)

Toluene (o-Cresol)	Urine: end of shift	0,3 mg/g creatinine	
Toluene (Toluene)	Blood: prior to last shift of workweek	0,02 mg/L	
Toluene (Toluene)	urine: end of shift	0,03 mg/L	

8.1.2 Sampling methods

If applicable and available it will be listed below.

Butanol (Volatile Organic compounds)	NIOSH	2549
Butyl Alcohol	OSHA	7
Methyl ester of methacrylic acid	NIOSH	2537
Methyl Methacrylate	NIOSH	2537
Methyl Methacrylate	NON	36
Methyl Methacrylate	OSHA	94
n-Butyl Alcohol (Alcohols Combined)	NIOSH	1405
n-Butyl Alcohol (Alcohols II)	NIOSH	1401
Toluene (Hydrocarbons, aromatic)	NIOSH	1501
Toluene (organic and inorganic gases by Extractive FTIR)	NIOSH	3800
Toluene (Volatile Organic compounds)	NIOSH	2549

Toluene in blood	NIOSH	8007
Toluene	NIOSH	4000
Toluene	NIOSH	8002
Toluene	NIOSH	95-117
Toluene	OSHA	111

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

toluene

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	192 mg/m³	
	Acute systemic effects inhalation	384 mg/m³	
	Long-term local effects inhalation	192 mg/m³	
	Acute local effects inhalation	384 mg/m³	
	Long-term systemic effects dermal	384 mg/kg bw/day	

butan-1-ol

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Acute systemic effects inhalation	310 mg/m³	

n-butyl methacrylate

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	415.9 mg/m³ air	
	Long-term local effects inhalation	409 mg/m³ air	
	Long-term systemic effects dermal	5 mg/kg bw/day	
	Long-term local effects dermal	1 %	
	Acute local effects dermal	1 %	

methyl methacrylate

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	208 mg/m³	
	Long-term local effects inhalation	208 mg/m³	
	Long-term systemic effects dermal	13.67 mg/kg bw/day	
	Acute systemic effects dermal	1.5 mg/cm²	
	Long-term local effects dermal	1.5 mg/cm²	

DNEL/DMEL - General population

toluene

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	56.5 mg/m³	
	Acute systemic effects inhalation	226 mg/m³	
	Long-term local effects inhalation	56.5 mg/m³	
	Acute local effects inhalation	226 mg/m³	
	Long-term systemic effects dermal	226 mg/kg bw/day	
	Long-term systemic effects oral	8.13 mg/kg bw/day	

butan-1-ol

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term local effects inhalation	55 mg/m³	
	Long-term systemic effects oral	3.125 mg/kg bw/day	

n-butyl methacrylate

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	66.5 mg/m³ air	
	Long-term local effects inhalation	366.4 mg/m³	
	Long-term systemic effects dermal	3 mg/kg bw/day	
	Long-term local effects dermal	1 %	
	Acute local effects dermal	1 %	

methyl methacrylate

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	74.3 mg/m³	
	Long-term local effects inhalation	104 mg/m³	
	Long-term systemic effects dermal	8.2 mg/kg bw/day	
	Long-term local effects dermal	1.5 mg/cm²	
	Acute systemic effects dermal	1.5 mg/cm²	

PNEC

toluene

Compartments	Value	Remark
Fresh water	0.68 mg/l	
Marine water	0.68 mg/l	
Aqua (intermittent releases)	0.68 mg/l	
STP	13.61 mg/l	
Fresh water sediment	16.39 mg/kg sediment dw	
Marine water sediment	16.39 mg/kg sediment dw	
Soil	2.89 mg/kg soil dw	

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	

n-butyl methacrylate

Compartments	Value	Remark
Fresh water	0.169 mg/l	
Marine water	0.169 mg/l	
Aqua (intermittent releases)	0.169 mg/l	
STP	31.7 mg/l	

methyl methacrylate

Compartments	Value	Remark
Fresh water	0.94 mg/l	
Marine water	0.94 mg/l	
Aqua (intermittent releases)	0.94 mg/l	
STP	10 mg/l	
Fresh water sediment	5.74 mg/kg sediment dw	
Soil	1.47 mg/kg soil dw	

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: use spark-/explosionproof appliances and lighting system. Insufficient ventilation: take precautions against electrostatic charges. Measure the concentration in the air regularly. Work under local exhaust/ventilation.

8.2.2 Individual protection measures, such as personal protective equipment

Observe strict hygiene. 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.

c) Eye protection:

Protective goggles.

d) Skin protection:

Head/neck 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	Solvent-like odour
Odour threshold	No data available
Colour	Colourless
Particle size	No data available
Explosion limits	1.2 - 7 vol %
Flammability	Highly flammable liquid and vapour.
Log Kow	Not applicable (mixture)
Dynamic viscosity	No data available
Kinematic viscosity	No data available
Melting point	No data available

Boiling point	No data available
Flash point	8 °C
Evaporation rate	No data available
Relative vapour density	> 1
Vapour pressure	29 hPa ; 20 °C
	109 hPa ; 50 °C
Solubility	No data available
	water ; insoluble
Relative density	0.9
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	920 kg/m³

SECTION 10: Stability and reactivity

10.1. Reactivity

May build up electrostatic charges: risk of ignition. 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

No data available.

10.4. Conditions to avoid

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

10.5. Incompatible materials

Oxidizing agents.

10.6. Hazardous decomposition products

Upon combustion: CO and CO2 are formed.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

11.1.1 Test results

Acute toxicity

Primer 150

No (test)data on the mixture available

toluene

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral (one dose)	LD50	Equivalent to EU Method B.1	5580 mg/kg bw		Rat (male)	Experimental value	
Dermal	LD50	Other	> 5000 mg/kg bw	24 h	Rabbit (male)	Experimental value	
Inhalation (vapours)	LC50	Equivalent to OECD 403	25.7 mg/l air	4 h	Rat (male)	Experimental value	

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	

n-butyl methacrylate

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral	LD0	OECD 401	≥ 2000 mg/kg bw		Rat (male/female)	Experimental value	
Dermal	LD0	OECD 402	≥ 2000 mg/kg bw	24 h	Rabbit (male/female)	Experimental value	
Inhalation (mixture of vapour and aerosol)	Min LD	OECD 403	29 mg/l air	4 h	Rat (male/female)	Experimental value	

methyl methacrylate

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral	LD50	Equivalent to OECD 401	9400 mg/kg bw		Rat (male/female)	Experimental value	
Dermal	LD50	Equivalent to OECD 402	> 5000 mg/kg bw	24 h	Rabbit (male)	Experimental value	
Inhalation (vapours)	LC50	Equivalent to OECD 403	29.8 mg/l air	4 h	Rat (male/female)	Experimental value	

Judgement is based on the relevant ingredients

Conclusion

Not classified for acute toxicity

Corrosion/irritation

Primer 150

No (test)data on the mixture available

toluene

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	Single treatment
Skin	Irritating	EU Method B.4	4 h	24; 48; 72 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		

n-butyl methacrylate

Route of exposure	Result	Method	Exposure time	Time point	Species	Value determination	Remark
Eye	Irritating; category 2					Annex VI	
Eye	Slightly irritating	OECD 405		24; 48; 72 hours	Rabbit	Experimental value	
Skin	Irritating		24 h	24; 72 hours	Rabbit	Experimental value	

methyl methacrylate

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

Classification is based on the relevant ingredients

Conclusion

Causes serious eye irritation.

Causes skin irritation.

Not classified as irritating to the respiratory system

Respiratory or skin sensitisation

Primer 150

No (test)data on the mixture available

toluene

Route of exposure	Result	Method	Exposure time	Observation time point	Species	Value determination	Remark
Skin	Not sensitizing	EU Method B.6			Guinea pig (female)	Experimental value	

butan-1-ol

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

n-butyl methacrylate

Route of exposure	Result	Method	Exposure time	Observation time point	Species	Value determination	Remark
Skin	Sensitizing	OECD 406		24; 48 hours	Guinea pig (male/female)	Experimental value	

methyl methacrylate

Route of exposure	Result	Method	Exposure time	Observation time point	Species	Value determination	Remark
Skin	Sensitizing	Equivalent to OECD 429			Mouse	Experimental value	

Judgement is based on the relevant ingredients

Conclusion

Not classified as sensitizing for inhalation

Not classified as sensitizing for skin

Specific target organ toxicity

Primer 150

No (test)data on the mixture available

toluene

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
Oral	NOAEL	Equivalent or similar to EU Method B.26	625 mg/kg bw/day		neurotoxic effects		Rat (male/female)	Experimental value
Oral	LOAEL	Equivalent or similar to EU Method B.26	1250 mg/kg bw/day	Liver; kidney	neurotoxic effects		Rat (male/female)	Experimental value
Dermal								Data waiving
Inhalation (vapours)	LOAEC	Equivalent to OECD 453	600 ppm	Respiratory tract	Erosion/degeneration nasal epithelia	103 weeks (6h/day, 5 days/week)	Rat (male/female)	Experimental value
Inhalation	NOAEC	Human observation	50 ppm	Central nervous system	No effect	4.5 h	Human (male)	Experimental value
Inhalation			STOT RE cat.2	Central nervous system	neurotoxic effects			Annex VI

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
Oral (stomach tube)	LOAEL	Subchronic toxicity test	500 mg/kg bw/day	Central nervous system	Central nervous system depression	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 days/week)	Rat (male/female)	Read-across

n-butyl methacrylate

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
Oral (stomach tube)	NOAEL	OECD 408	120 mg/kg bw/day	Liver; kidney	No effect	3 month(s)	Rat (male/female)	Experimental value
Oral (stomach tube)	NOAEL	Subchronic toxicity test	360 mg/kg bw/day	Central nervous system	No effect	3 month(s)	Rat (male/female)	Experimental value
Dermal								Data waiving
Inhalation (aerosol)	NOAEC local effects	OECD 412	310 ppm	Nose	No effect	4 weeks (6h/day, 5 days/week)	Rat (male/female)	Experimental value
Inhalation (aerosol)	NOAEC systemic effects	OECD 412	1891 ppm		No adverse systemic effects	4 weeks (6h/day, 5 days/week)	Rat (male/female)	Experimental value

methyl methacrylate

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
Oral (drinking water)	NOAEL		≥ 124.1 mg/kg bw/day		No effect	104 week(s)	Rat (male)	Experimental value
Oral (drinking water)	NOAEL		≥ 164 mg/kg bw/day		No effect	104 week(s)	Rat (female)	Experimental value
Inhalation (vapours)	NOAEC systemic effects	Equivalent to OECD 453	1640 mg/m³ air		No adverse systemic effects	104 weeks (6h/day, 5 days/week)	Rat (male/female)	Experimental value
Inhalation (vapours)	LOAEC local effects	Equivalent to OECD 453	416 mg/m³ air	Nose	Affection of the nasal septum	104 weeks (6h/day, 5 days/week)	Rat (male/female)	Experimental value
Inhalation (vapours)	NOAEC local effects	Equivalent to OECD 453	104 mg/m³ air	Nose	No effect	104 weeks (6h/day, 5 days/week)	Rat (male/female)	Experimental value

Classification is based on the relevant ingredients

Conclusion

May cause drowsiness or dizziness.

May cause damage to organs through prolonged or repeated exposure if inhaled.

Mutagenicity (in vitro)

Primer 150

No (test)data on the mixture available

toluene

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

butan-1-ol

Result	Method	Test substrate	Effect	Value determination
Negative	OECD 476	Chinese hamster lung fibroblasts (V79)	No effect	Experimental value
Negative	Ames test	Bacteria (S.typhimurium)	No effect	Experimental value
Negative	OECD 479	Chinese hamster ovary (CHO)	No effect	Experimental value

n-butyl methacrylate

Result	Method	Test substrate	Effect	Value determination
Negative	OECD 476	Chinese hamster lung fibroblasts (V79)	No effect	Experimental value
Negative	OECD 471	Bacteria (S.typhimurium)	No effect	Experimental value
Negative	OECD 473	Chinese hamster lung fibroblasts (V79)	No effect	Experimental value

methyl methacrylate

Result	Method	Test substrate	Effect	Value determination
Ambiguous	Equivalent to OECD 473	Chinese hamster ovary (CHO)		Experimental value
Negative	Equivalent to OECD 471	Bacteria (S.typhimurium)		Literature study

Mutagenicity (in vivo)

Primer 150

No (test)data on the mixture available

toluene

Result	Method	Exposure time	Test substrate	Organ	Value determination
Negative	Equivalent to OECD 478	8 weeks (6h/day, 5 days/week)	Mouse (male)		Experimental value

butan-1-ol

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

n-butyl methacrylate

Result	Method	Exposure time	Test substrate	Organ	Value determination
Negative	OECD 474		Mouse (male/female)		Experimental value
Negative	Equivalent to OECD 478	5 days (6h/day)	Mouse (male)		Experimental value

methyl methacrylate

Result	Method	Exposure time	Test substrate	Organ	Value determination
Ambiguous	Equivalent to OECD 475	5 days (5h/day)	Rat (male)	Bone marrow	Experimental value
Negative	Equivalent to OECD 478	5 days (6h/day)	Mouse (male)		Experimental value

Classification is based on the relevant ingredients

Conclusion

Not classified for mutagenic or genotoxic toxicity

Carcinogenicity

Primer 150

No (test)data on the mixture available

toluene

Route of exposure	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Inhalation (vapours)	NOAEC	Equivalent to OECD 453	1200 ppm	103 weeks (6h/day, 5 days/week)	Rat (male/female)	No effect		Experimental value
Dermal	NOAEL	Carcinogenic toxicity study	0.05 ml (twice a week)		Mouse (male)	No effect		Experimental value

n-butyl methacrylate

Route of exposure	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Inhalation (vapours)	NOAEC	Equivalent to OECD 451	≥ 4.1 mg/l air	102 weeks (6h/day, 5 days/week)	Mouse (male/female)	No carcinogenic effect		Experimental value
Inhalation (vapours)	NOAEC	Equivalent to OECD 451	≥ 2.05 mg/l air	102 weeks (6h/day, 5 days/week)	Rat (female)	No carcinogenic effect		Experimental value
Inhalation (vapours)	NOAEC	Equivalent to OECD 451	≥ 4.1 mg/l air	102 weeks (6h/day, 5 days/week)	Rat (male)	No carcinogenic effect		Experimental value
Oral (drinking water)	NOAEL	Carcinogenic toxicity study	≥ 90.3 mg/kg bw/day	104 weeks (daily)	Rat (male)	No carcinogenic effect		Experimental value
Oral (drinking water)	NOAEL	Carcinogenic toxicity study	≥ 193.8 mg/kg bw/day	104 weeks (daily)	Rat (female)	No carcinogenic effect		Experimental value

methyl methacrylate

Route of exposure	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Inhalation	NOAEC	Equivalent to OECD 451	≥ 2.05 mg/l air	102 weeks (6h/day, 5 days/week)	Rat (female)	No carcinogenic effect		Experimental value
Inhalation	NOAEC	Equivalent to OECD 451	≥ 4.1 mg/l air	102 weeks (6h/day, 5 days/week)	Rat (male)	No carcinogenic effect		Experimental value
Oral (drinking water)	NOAEL	Carcinogenic toxicity study	≥ 90.3 mg/kg bw/day	104 weeks (daily)	Rat (male)	No carcinogenic effect		Experimental value
Oral (drinking water)	NOAEL	Carcinogenic toxicity study	≥ 193.8 mg/kg bw/day	104 weeks (daily)	Rat (female)	No carcinogenic effect		Experimental value

Classification is based on the relevant ingredients

Conclusion

Not classified for carcinogenicity

Reproductive toxicity

Primer 150

No (test)data on the mixture available

toluene

	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Developmental toxicity	NOAEC	EPA OTS 798.4350	750 ppm	20 days (6h/day)	Rat (female)	No effect		Experimental value
Maternal toxicity	NOAEC	EPA OTS 798.4350	750 ppm	20 days (6h/day)	Rat (female)	Maternal toxicity		Experimental value
Effects on fertility	NOAEC	OECD 416	2000 ppm	11 weeks (6h/day, 7 days/week)	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

n-butyl methacrylate

	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Developmental toxicity	NOAEL	Equivalent to OECD 414	300 ppm	15 days (6h/day)	Rat	No effect	Foetus	Experimental value
	NOAEL	OECD 414	300 mg/kg bw/day	29 day(s)	Rabbit	No effect	Foetus	Experimental value
Maternal toxicity	NOAEL	OECD 414	100 mg/kg bw/day	29 day(s)	Rabbit	No effect		Experimental value
Effects on fertility	NOAEL (P/F1)	OECD 416	400 mg/kg bw/day		Rat (male/female)	No effect		Experimental value

methyl methacrylate

	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Developmental toxicity	NOAEC	OECD 414	≥ 8.3 mg/l air	10 days (6h/day)	Rat	No effect	Foetus	Experimental value
Maternal toxicity	NOAEC	OECD 414	0.41 mg/l air	10 days (6h/day)	Rat	No effect		Experimental value
Effects on fertility	NOAEL	OECD 416	400 mg/kg bw/day		Rat (male/female)	No effect		Experimental value

Classification is based on the relevant ingredients

Conclusion

Suspected of damaging the unborn child.

Aspiration hazard

Classification is based on the relevant ingredients

May be fatal if swallowed and enters airways.

Toxicity other effects

Primer 150

No (test)data on the mixture available

Chronic effects from short and long-term exposure

Primer 150

ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Dry skin. Skin rash/inflammation. Impairment of the nervous system. Impaired memory. Impaired concentration. Brain affection. Change in the haemogramme/blood composition.

SECTION 12: Ecological information

12.1. Toxicity

Primer 150

No (test)data on the mixture available

toluene

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50		5.5 mg/l	96 h	Oncorhynchus kisutch	Flow-through system	Fresh water	Experimental value
Acute toxicity crustacea	LC50	US EPA	3.78 mg/l	48 h	Ceriodaphnia dubia		Fresh water	Experimental value
Toxicity algae and other aquatic plants	EC50		12.5 mg/l	72 h	Selenastrum capricornutum			Literature study
Long-term toxicity fish	NOEC		1.39 mg/l	40 day(s)	Oncorhynchus kisutch	Flow-through system	Fresh water	Experimental value; Growth rate
Long-term toxicity aquatic crustacea	NOEC	US EPA	0.74 mg/l	7 day(s)	Ceriodaphnia dubia		Fresh water	Experimental value; Reproduction
Toxicity aquatic micro-organisms	EC50		84 mg/l	24 h	Nitrosomonas	Static system	Fresh water	Experimental value

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	Pseudokirchneriella 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

n-butyl methacrylate

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50	OECD 203	11 mg/l	96 h	Pimephales promelas	Flow-through system	Fresh water	Experimental value; GLP
Acute toxicity crustacea	EC50	OECD 202	32 mg/l	48 h	Daphnia magna	Static system	Fresh water	Experimental value; GLP
Toxicity algae and other aquatic plants	EC50	OECD 201	31.2 mg/l	72 h	Selenastrum capricornutum	Static system		Experimental value; Growth rate
Long-term toxicity aquatic crustacea	NOEC	OECD 211	2.6 mg/l	21 day(s)	Daphnia magna	Flow-through system	Fresh water	Experimental value; GLP
	LOEC	OECD 211	4.9 mg/l	21 day(s)	Daphnia magna	Flow-through system	Fresh water	Experimental value; GLP

methyl methacrylate

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50	EPA OTS 797.1400	> 79 mg/l	96 h	Oncorhynchus mykiss	Flow-through system	Fresh water	Experimental value; GLP
Acute toxicity crustacea	EC50	EPA OTS 797.1300	69 mg/l	48 h	Daphnia magna	Flow-through system	Fresh water	Experimental value; GLP
Toxicity algae and other aquatic plants	EC50	OECD 201	> 110 mg/l	72 h	Selenastrum capricornutum	Static system	Fresh water	Experimental value; Growth rate
	NOEC	OECD 201	49 mg/l	72 h	Selenastrum capricornutum	Static system	Fresh water	Experimental value; Biomass
Long-term toxicity fish	NOEC	OECD 210	9.4 mg/l	35 day(s)	Danio rerio	Flow-through system	Fresh water	Experimental value; GLP
Long-term toxicity aquatic crustacea	NOEC	OECD 211	37 mg/l	21 day(s)	Daphnia magna	Flow-through system	Fresh water	Experimental value; GLP

	Parameter	Method	Value	Duration	Species	Value determination
Toxicity soil micro-organisms	NOEC	Other	> 1000 mg/kg soil dw	28 day(s)	Soil micro-organisms	Experimental value

Classification of the mixture is based on the relevant ingredients

Conclusion

Not classified as dangerous for the environment according to the criteria of Regulation (EC) No 1272/2008

Not classified as dangerous for the environment according to the criteria of Directive 1999/45/EC

12.2. Persistence and degradability

toluene

Biodegradation water

Method	Value	Duration	Value determination
OECD 301C: Modified MITI Test (I)	100 %	14 day(s)	Experimental value

Half-life soil (t1/2 soil)

Method	Value	Primary degradation/mineralisation	Value determination
	2.6 day(s)		Literature study

butan-1-ol

Biodegradation water

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

n-butyl methacrylate

Biodegradation water

Method	Value	Duration	Value determination
OECD 301C: Modified MITI Test (I)	88 %	28 day(s)	Experimental value

Phototransformation air (DT50 air)

Method	Value	Conc. OH-radicals	Value determination
SRC AOP v1.92	10 h		

methyl methacrylate

Biodegradation water

Method	Value	Duration	Value determination
OECD 301C: Modified MITI Test (I)	94 %; Oxygen consumption	14 day(s)	Experimental value

Phototransformation air (DT50 air)

Method	Value	Conc. OH-radicals	Value determination
AOPWIN v1.92	6.997 h	500000 /cm³	QSAR

Half-life water (t1/2 water)

Method	Value	Primary degradation/mineralisation	Value determination
	53 month(s); pH = 7		Experimental value

Conclusion

Contains readily biodegradable component(s)

12.3. Bioaccumulative potential

Primer 150

Log Kow

Method	Remark	Value	Temperature	Value determination
	Not applicable (mixture)			

toluene

BCF fishes

Parameter	Method	Value	Duration	Species	Value determination
BCF		90	72 h	Leuciscus idus	Experimental value

Log Kow

Method	Remark	Value	Temperature	Value determination
Other		2.73	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

n-butyl methacrylate

Log Kow

Method	Remark	Value	Temperature	Value determination
		2.26 - 3.01		

methyl methacrylate

BCF fishes

Parameter	Method	Value	Duration	Species	Value determination
BCF		2.97 - 3.5		Pisces	QSAR

Log Kow

Method	Remark	Value	Temperature	Value determination
OECD 107		1.32 - 1.38	20 °C	Experimental value

Conclusion

Does not contain bioaccumulative component(s)

12.4. Mobility in soil

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.m³/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

n-butyl methacrylate

(log) Koc

Parameter	Method	Value	Value determination
Koc	OECD 106	1480	Experimental value

Volatility (Henry's Law constant H)

Value	Method	Temperature	Remark	Value determination
0.000496 atm m³/mol		25 °C		Calculated value

Percent distribution

Method	Fraction air	Fraction biota	Fraction sediment	Fraction soil	Fraction water	Value determination
Mackay level I	96.17 %		0.25 %	0.26 %	3.32 %	Calculated value

methyl methacrylate

(log) Koc

Parameter	Method	Value	Value determination
log Koc	Other	0.94 - 1.86	Experimental value

Volatility (Henry's Law constant H)

Value	Method	Temperature	Remark	Value determination
14.7 Pa.m³/mol	SRC HENRYWIN v3.20	25 °C		QSAR

Percent distribution

Method	Fraction air	Fraction biota	Fraction sediment	Fraction soil	Fraction water	Value determination
Mackay level I	91.53 %		0.02 %	0.02 %	8.44 %	QSAR

Conclusion

No (test)data on mobility of the components available

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

Primer 150

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)

toluene

Ground water

Ground water pollutant

butan-1-ol

Ground water

Ground water pollutant

n-butyl methacrylate

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.
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	1993

14.2. UN proper shipping name

Proper shipping name	Flammable liquid, n.o.s. (toluene)

14.3. Transport hazard class(es)

Hazard identification number	33
Class	3
Classification code	F1

14.4. Packing group

Packing group	II
Labels	3

14.5. Environmental hazards

Environmentally hazardous substance mark	no

14.6. Special precautions for user

Special provisions	274
Special provisions	601
Special provisions	640D
Limited quantities	Combination packagings: not more than 1 liter per inner packaging for liquids. A package shall not weigh more than 30 kg. (gross mass)

Rail (RID)

14.1. UN number

UN number	1993

14.2. UN proper shipping name

Proper shipping name	Flammable liquid, n.o.s. (toluene)

14.3. Transport hazard class(es)

Hazard identification number	33
Class	3
Classification code	F1

14.4. Packing group

Packing group	II
Labels	3

14.5. Environmental hazards

Environmentally hazardous substance mark	no

14.6. Special precautions for user

Special provisions	274
Special provisions	601
Special provisions	640D
Limited quantities	Combination packagings: not more than 1 liter 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	1993

14.2. UN proper shipping name

Proper shipping name	Flammable liquid, n.o.s. (toluene)

14.3. Transport hazard class(es)

Class	3
Classification code	F1

14.4. Packing group

Packing group	II
Labels	3

14.5. Environmental hazards

Environmentally hazardous substance mark	no

14.6. Special precautions for user

Special provisions	274
Special provisions	601
Special provisions	640D
Limited quantities	Combination packagings: not more than 1 liter 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	1993

14.2. UN proper shipping name

Proper shipping name	Flammable liquid, n.o.s. (toluene)

14.3. Transport hazard class(es)

Class	3

14.4. Packing group

Packing group	II
Labels	3

14.5. Environmental hazards

Marine pollutant	-
Environmentally hazardous substance mark	no

14.6. Special precautions for user

Special provisions	274
Limited quantities	Combination packagings: not more than 1 liter 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	1993

14.2. UN proper shipping name

Proper shipping name	Flammable liquid, n.o.s. (toluene)

14.3. Transport hazard class(es)

Class	3

14.4. Packing group

Packing group	II
Labels	3

14.5. Environmental hazards

Environmentally hazardous substance mark	no

14.6. Special precautions for user

Special provisions	A3
limited quantities: maximum net quantity per packaging	1 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
86 %	

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

Product name	Skin resorption
Toluene	Skin

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
· toluene · butan-1-ol · n-butyl methacrylate · methyl methacrylate	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.'
· toluene · butan-1-ol · n-butyl methacrylate · methyl methacrylate	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, — "whoopee" 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 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.
· toluene	Toluene	Shall not be placed on the market, or used, as a substance or in mixtures in a concentration equal to or greater than 0,1 % by weight where the substance or mixture is used in adhesives or spray paints intended for supply to the general public.

National legislation Belgium

Primer 150

No data available

toluene

Résorption peau	Toluène; 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.

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.

National legislation The Netherlands

Primer 150

Waste identification (the Netherlands)	LWCA (the Netherlands): KGA category 03

toluene

SZW - Lijst van voor de voortplanting giftige stoffen (ontwikkeling)	Tolueen; 2; Suspected of damaging the unborn child.

National legislation France

Primer 150

No data available

toluene

VME - Risque de pénétration percutanée	Toluène; PP

National legislation Germany

Primer 150

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

toluene

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

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

methyl methacrylate

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

National legislation United Kingdom

Primer 150

No data available

toluene

Skin absorption	Toluene; Sk

butan-1-ol

Skin absorption	Butan-1-ol; Sk

Other relevant data

Primer 150

No data available

toluene

TLV - Carcinogen	Toluene; A4
IARC - classification	3; Toluene

methyl methacrylate

Skin Sensitisation	Methyl methacrylate; SEN; Sensitization
TLV - Carcinogen	Methyl methacrylate; A4
IARC - classification	3; Methyl methacrylate

15.2. Chemical safety assessment

No chemical safety assessment has been conducted for the mixture.

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.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.
H336 May cause drowsiness or dizziness.
H361d Suspected of damaging the unborn child.
H373 May cause damage to organs through prolonged or repeated exposure if inhaled.
H373 May cause damage to organs (central nervous system) through prolonged or repeated exposure if inhaled.

(*)	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

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.