

Tempilaq® Temperature Indicating Liquid 475 °F (246 °C), 488 °F (253 °C), 500 °F (260 °C)

Safety Data Sheet

according to Regulation (EC) No. 453/2010

Date of issue: 19/03/2015

Version: 1.0

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

1.1. Product identifier

Product form : Mixture

Product name : Tempilaq® Temperature Indicating Liquid 475 °F (246 °C), 488 °F (253 °C), 500 °F (260 °C)

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

1.2.1. Relevant identified uses

Main use category : Industrial use, Professional use

Use of the substance/mixture : Temperature indicator

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

LA-CO Industries Europe S.A.S.
Parc Industriel de la Plaine de
l'Ain - Allée des Combes.
01150.BLYES.France.
Phone: +33 (0)4 74 46 23 23
Fax: +33 (0)4 74 46 23 29
E-mail: info@eu.laco.com
Web: http://www.markal.com



1.4. Emergency telephone number

Emergency number : 24-hour emergency: CHEMTREC- U.S. : 1-800-424-9300 International: +1-703-527-3887

EU Member State	Officieel adviesorgaan	Adres	Noodnummer
AUSTRIA	Vergiftungsinformationszentrale (Poisons Information Centre)	Allgemeines Krankenhaus Waehringer Geurtel 18-20 1090 Wien	+43 1 406 43 43
BELARUS	The Belarus Republican Poisons Centre	Kizhevatova str. 58 220115 Minsk	+375 (0)17 201 9158
BELGIUM	Centre Anti-Poisons/Antigifcentrum c/o Hôpital Central de la Base - Reine Astrid	Rue Bruyn 1 B -1120 Bruxelles/Brussel	+32 70 245 245
BULGARIA	Национален токсикологичен информационен център National Clinical Toxicology Centre, Emergency Medical Institute "Pirogov"	21 Totleben Boulevard 1606 SOFIA	+359 2 9154 409
CROATIA	Poisons Control Centre Institute of Medical Research & Occupational Health	Ksaverska Cesta 2 P.O. Box 291 HR-10000 Zagreb	+385 1 234 8342
CZECH REPUBLIC	Toxikologické informační středisko Clinic For Occupational Medicine, 1st Medical Faculty, Charles University	Na Bojišti 1 120 00 Praha 2	+42 2 2491 9293 +42 2 2491 5402
DENMARK	Gifftlinjen Bispebjerg Hospital	Bispebjerg Bakke 23, 60, 1 DK-2400 København NV	+45 82 12 12 12 +45 35 31 55 55
ESTONIA	Mürgistusteabekeskus	Gonsiori 29 15027 Tallinn	+372 626 93 90
FINLAND	Myrkytystietokeskus	P.O.B 340 (Haartmaninkatu 4) HUS SF - 00029 Helsinki	+358 9 471 977
FRANCE	ORFILA		+33 1 45 42 59 59
GERMANY	Berliner Betrieb für Zentrale Gesundheitliche Aufgaben	Oranienburger Strasse 285 13437 Berlin	+49 30 19240
GERMANY	Informations und Beratungszentrum für Vergiftungsfälle	Kirrberger Straße, Gebäude 9 D-66421 Homburg/Saar	+49 6841 19240
GERMANY	Beratungstelle bei Vergiftungen, Klinische Toxikologie und Beratungstelle bei Vergiftungen	Langenbeckstrasse 1 55131 Mainz	+49 6131 19240
GREECE	Poisons Information Centre	11527 Athens	+30 10 779 3777
HUNGARY	Országos Kémiai Biztonsági Intézet (National Institute of Chemical Safety) Egészségügyi Toxikológiai Tájékoztató Szolgálat (Health Toxicological Information Service)	1437 Budapest PO Box 839 1097 Budapest, Nagyváradi tér 2	+36 80 20 11 99
ICELAND	Eitrunarmiðstöðin	Eitrunarmiðstöðin 108 Reykjavik	+354 543 22 22
IRELAND	National Poisons Information Centre	Beaumont Hospital PO Box 1297 Beaumont Road 9 Dublin	+353 1 809 2166

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LATVIA	Valsts Toksikoloģijas centra Saindēšanās un zāļu informācijas centrs	2 Hipocrate Street LV 1038 Riga	+371 67 04 24 73
LITHUANIA	Apsinuodijimų kontrolės ir informacijos biuras	Siltnamiu 29 2043 Vilnius	+370 5 236 20 52/+370 687 53 378
MALTA	Medicines & Poisons Info Office	Mater Dei Hospital, Msida MSD 2090 Malta	25450000
NETHERLANDS	Nationaal Vergiftigingen Informatie Centrum National Institute for Public Health and the Environment, NB this service is only available to health professionals	Huispostnummer B.00.118, PO Box 85500 3508 GA Utrecht	+31 30 274 88 88
PORTUGAL	Centro de Informação Antivenenos Instituto Nacional de Emergência Médica (INEM)	Rua Almirante Barroso, 36 1000-013 Lisboa	808 250 143 (for use only in Portugal), +351 21 330 3284
ROMANIA	Biroul pentru Regulamentul Sanitar International si Informare Toxicologica	Str. Dr. Leonte Anastasievici Nr.1-3, Sector 5 50463 Bucuresti	+40 21 318 36 06
SLOVAKIA	Národné toxikologické informačné centrum University Hospital Bratislava	Limbová 5 833 05 Bratislava	+421 2 54 77 4 166
SPAIN	Servicio de Información Toxicológica Instituto Nacional de Toxicología, Departamento de Madrid	Calle Luis Cabrera 9 E-28002 Madrid	+34 91 562 04 20
SWEDEN	Giftinformationscentralen Swedish Poisons Information Centre, Karolinska Hospital	Box 60 500 SE-171 76 Stockholm	+46 8 33 12 31 (International) 112 (National)
SWITZERLAND	Centre Suisse d'Information Toxicologique	Freiestrasse 16 Postfach CH-8028 Zurich	+41 44 251 51 51 (International) 145 (National)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Skin Irrit. 2 H315
Eye Irrit. 2 H319
Muta. 2 H341
Carc. 1B H350
Repr. 1B H360
STOT SE 3 H335
STOT SE 3 H336
STOT RE 2 H373

Full text of H-phrases: see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

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

Hazard pictograms (CLP) :



GHS07

GHS08

Signal word (CLP) :

Danger

Hazardous ingredients :

Phenolphthalein, Toluene, 1,2-epoxybutane, 1-bromopropane

Hazard statements (CLP) :

H315 - Causes skin irritation
H319 - Causes serious eye irritation
H335 - May cause respiratory irritation
H336 - May cause drowsiness or dizziness
H341 - Suspected of causing genetic defects
H350 - May cause cancer
H360 - May damage fertility or the unborn child
H373 - May cause damage to organs through prolonged or repeated exposure

Precautionary statements (CLP) :

P201 - Obtain special instructions before use
P202 - Do not handle until all safety precautions have been read and understood
P260 - Do not breathe mist, vapours
P264 - Wash hands thoroughly after handling

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P271 - Use only outdoors or in a well-ventilated area
P280 - Wear eye protection, protective gloves, protective clothing
P302+P352 - IF ON SKIN: Wash with plenty of water
P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P308+P313 - IF exposed or concerned: Get medical advice/attention
P312 - Call a poison center or doctor if you feel unwell
P321 - Specific treatment (see First aid measures on this label)
P332+P313 - If skin irritation occurs: Get medical advice/attention
P337+P313 - If eye irritation persists: Get medical advice/attention
P362+P364 - Take off contaminated clothing and wash it before reuse
P403+P233 - Store in a well-ventilated place. Keep container tightly closed
P405 - Store locked up
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation

Unknown acute toxicity (CLP: Classification, Labelling, Packaging.) - SDS

: 1.22% of the mixture consists of ingredient(s) of unknown acute oral toxicity
1.22% of the mixture consists of ingredient(s) of unknown acute dermal toxicity
1.22% percent of the mixture consists of ingredient(s) of unknown acute inhalation (dust/mist) toxicity

2.3. Other hazards

PBT: not yet assessed

vPvB: not yet assessed

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
1-bromopropane substance listed as REACH Candidate (1-bromopropane (n-propyl bromide))	(CAS No) 106-94-5 (EC no) 203-445-0 (EC index no) 602-019-00-5	60 – 80	Flam. Liq. 2, H225 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Repr. 1B, H360FD STOT SE 3, H335 STOT SE 3, H336 STOT RE 2, H373
Phenolphthalein substance listed as REACH Candidate	(CAS No) 77-09-8 (EC no) 201-004-7 (EC index no) 604-076-00-1	20 – 30	Muta. 2, H341 Carc. 1B, H350 Repr. 2, H361f
1,1,1 Tris Ethane	(CAS No) 27955-94-8 (EC no) 405-800-7 (EC index no) 604-048-00-9	0 – 4	Aquatic Chronic 2, H411
Toluene	(CAS No) 108-88-3 (EC no) 203-625-9 (EC index no) 601-021-00-3	0 – 2	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-epoxybutane	(CAS No) 106-88-7 (EC no) 203-438-2 (EC index no) 603-102-00-9	0 – 1	Flam. Liq. 2, H225 Carc. 2, H351 Acute Tox. 4 (Inhalation), H332 Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Oral), H302 Eye Irrit. 2, H319 STOT SE 3, H335 Skin Irrit. 2, H315 Aquatic Chronic 3, H412
nitromethane	(CAS No) 75-52-5 (EC no) 200-876-6 (EC index no) 609-036-00-7	0 – 1	Flam. Liq. 3, H226 Acute Tox. 4 (Oral), H302
Xylene	(CAS No) 1330-20-7 (EC no) 215-535-7 (EC index no) 601-022-00-9	0 – 1	Flam. Liq. 3, H226 Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Inhalation:dust,mist), H332 Skin Irrit. 2, H315
ethylbenzene	(CAS No) 100-41-4 (EC no) 202-849-4 (EC index no) 601-023-00-4	0 – 0.1	Flam. Liq. 2, H225 Acute Tox. 4 (Inhalation), H332 STOT RE 2, H373 Asp. Tox. 1, H304
Polyethylene Glycol	(CAS No) 25322-68-3 (EC no) 500-038-2	0 – 0.1	Not classified
barium sulfate	(CAS No) 7727-43-7 (EC no) 231-784-4	0 – 0.1	Not classified

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Name	Product identifier	Specific concentration limits
Phenolphthalein	(CAS No) 77-09-8 (EC no) 201-004-7 (EC index no) 604-076-00-1	(C >= 1) Carc. 1A, H350

Full text of R- and H-phrases: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: IF exposed or concerned: Get medical advice/attention.
First-aid measures after inhalation	: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
First-aid measures after skin contact	: Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation occurs: Get medical advice/attention.
First-aid measures after eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
First-aid measures after ingestion	: Drink plenty of water. Immediately call a POISON CENTER or doctor/physician. Do NOT induce vomiting.

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

Symptoms/injuries	: Suspected of causing genetic defects. May cause cancer. May damage fertility or the unborn child. May cause damage to organs through prolonged or repeated exposure.
Symptoms/injuries after inhalation	: May cause respiratory irritation. May cause drowsiness or dizziness.
Symptoms/injuries after skin contact	: Causes skin irritation.
Symptoms/injuries after eye contact	: Causes serious eye irritation.

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

All treatments should be based on observed signs and symptoms of distress in the patient.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Carbon dioxide. Dry powder. Foam. Sand. Water fog.
Unsuitable extinguishing media	: Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Fire hazard	: Burning produces irritating, toxic and noxious fumes.
Explosion hazard	: Product is not explosive.

5.3. Advice for firefighters

Firefighting instructions	: Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Do not allow run-off from fire fighting to enter drains or water courses.
Protection during firefighting	: Do not enter fire area without proper protective equipment, including respiratory protection. Wear fire/flame resistant/retardant clothing. Wear a self contained breathing apparatus. EN469.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures	: Avoid all eye and skin contact and do not breathe vapour and mist.
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6.1.1. For non-emergency personnel

Protective equipment	: Chemical goggles or safety glasses. Wear suitable protective clothing and gloves.
Emergency procedures	: Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment	: Chemical goggles or safety glasses. Wear suitable protective clothing and gloves.
Emergency procedures	: Stop leak if safe to do so. Ventilate area.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment	: Absorb and/or contain spill with inert material, then place in suitable container. Do not allow minor leaks or spills to accumulate on walking surfaces.
Methods for cleaning up	: Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Take up in non-combustible absorbent material and shove into container for disposal.

6.4. Reference to other sections

Section 13: disposal information. Section 7: safe handling. Section 8: personal protective equipment.

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SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Obtain special instructions before use. Use personal protective equipment as required. Do not handle until all safety precautions have been read and understood. Avoid breathing mist, vapours. Use only outdoors or in a well-ventilated area.

Hygiene measures : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep container tightly closed. Keep only in the original container in a cool well ventilated place.

Incompatible products : Strong acids. Strong bases.

Incompatible materials : Heat sources. Direct sunlight.

Prohibitions on mixed storage : Incompatible materials.

7.3. Specific end use(s)

Temperature indicator.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Polyethylene Glycol (25322-68-3)		
Austria	MAK (mg/m ³)	1000 mg/m ³ (einatembare Fraktion)
Austria	MAK Short time value (mg/m ³)	4000 mg/m ³ max. 4x15 min./Schicht (einatembare Fraktion)
Denmark	Grænseværdie (langvarig) (mg/m ³)	1000 mg/m ³
Denmark	Grænseværdie (kortvarig) (mg/m ³)	2000 mg/m ³
Denmark	Anmærkninger (DK)	(Polyethylenglycol (PEG) med middelmolvægt på 200-600)
Germany	TRGS 900 Occupational exposure limit value (mg/m ³)	1000 mg/m ³
Germany	TRGS 900 Limitation of exposure peaks (mg/m ³)	8000 mg/m ³
Germany	Remark (TRGS 900)	(einatembare Fraktion)
Slovakia	NPHV (priemerná) (mg/m ³)	1000 mg/m ³
Slovakia	Upozornenie (SK)	krátkodobý: kategória II.
Switzerland	VME (ppm)	1000 ppm
Switzerland	Remark (CH)	(mittlere Molmasse 200–600)
Toluene (108-88-3)		
EU	IOELV TWA (mg/m ³)	192 mg/m ³
EU	IOELV TWA (ppm)	50 ppm
EU	IOELV STEL (mg/m ³)	384 mg/m ³
EU	IOELV STEL (ppm)	100 ppm
EU	Notes	Skin
Denmark	Grænseværdie (kortvarig) (mg/m ³)	188 mg/m ³
Denmark	Grænseværdie (kortvarig) (ppm)	50 ppm
France	Note (FR)	Peau
Germany	TRGS 903 (BGW)	3 mg/l o-Kresol (Urin; bei Langzeitexposition/Expositionsende bzw. Schichtende) 1 mg/l Toluol (Blut; Expositionsende bzw. Schichtende)
Slovakia	NPHV (priemerná) (mg/m ³)	192 mg/m ³ (K)
Slovakia	NPHV (priemerná) (ppm)	50 ppm (K) 600 ppm (Toluén) 1.5 ppm (O-krezol) 2401 ppm (Kyselina hippurová)
Sweden	Anmärkning (SE)	(B,H)
1-bromopropane (106-94-5)		
Spain	VLA-ED (ppm)	10 ppm
Spain	Notes	TR1B
nitromethane (75-52-5)		
Denmark	Grænseværdie (kortvarig) (mg/m ³)	100 mg/m ³

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nitromethane (75-52-5)		
Denmark	Grænseværdie (kortvarig) (ppm)	40 ppm
barium sulfate (7727-43-7)		
Belgium	Remark (BE)	(sulfate de)
Slovakia	NPHV (priemerná) (mg/m ³)	1.5 mg/m ³ (respirabilná frakcia) 4 mg/m ³ (inhalovateľná frakcia)
United Kingdom	WEL TWA (mg/m ³)	10 mg/m ³ inhalable aerosol 4 mg/m ³ respirable aerosol
ethylbenzene (100-41-4)		
Denmark	Grænseværdie (kortvarig) (mg/m ³)	434 mg/m ³
Denmark	Grænseværdie (kortvarig) (ppm)	100 ppm
France	VME (mg/m ³)	88.4 mg/m ³
France	VME (ppm)	20 ppm
France	VLE (mg/m ³)	442 mg/m ³
France	VLE (ppm)	100 ppm
France	Note (FR)	Peau
Germany	TRGS 903 (BGW)	1 mg/l Ethylbenzol (Blut; Expositionsende bzw. Schichtende) 800 mg/l Mandelsäure + Phenylglyoxylsäure (Urin; Expositionsende bzw. Schichtende)
Slovakia	NPHV (priemerná) (mg/m ³)	442 mg/m ³ (K)
Slovakia	NPHV (priemerná) (ppm)	100 ppm (K) 12 ppm (2 - a 4 -Etylfenol) 1600 ppm (Kyselina mandlová a kyselina fenylglyoxylová)
Spain	VLA-ED (mg/m ³)	441 mg/m ³ vía dérmica, VLB, VLI
Spain	VLA-ED (ppm)	100 ppm vía dérmica, VLB, VLI 700 ppm I, S "(Suma del ácido mandélico y el ácido fenilgloxílico en orina; Final de la semana laboral 1)"
Spain	VLA-EC (mg/m ³)	884 mg/m ³ vía dérmica, VLB, VLI
Spain	VLA-EC (ppm)	200 ppm vía dérmica, VLB, VLI
Xylene (1330-20-7)		
Denmark	Grænseværdie (kortvarig) (mg/m ³)	218 mg/m ³
Denmark	Grænseværdie (kortvarig) (ppm)	50 ppm
Finland	Huomautus (FI)	iho
Netherlands	Grenswaarde TGG 8H (ppm)	50 ppm
Poland	NDSch (mg/m ³)	350 mg/m ³
Slovakia	NPHV (priemerná) (mg/m ³)	221 mg/m ³ (K)
Slovakia	NPHV (priemerná) (ppm)	50 ppm (K) 1.5 ppm (Xylén) 2000 ppm (Suma kyselín 2,3,4-metylhippurových)
Sweden	Anmärkning (SE)	(H)

8.2. Exposure controls

Appropriate engineering controls	: Avoid creating mist or spray. Avoid splashing. Either local exhaust or general room ventilation is usually required.
Personal protective equipment	: Avoid all unnecessary exposure.
Hand protection	: Use rubber gloves. EN 374.
Eye protection	: Chemical goggles or safety glasses. EN 166.
Skin and body protection	: Wear suitable protective clothing. Long sleeved protective clothing.
Respiratory protection	: Where exposure through inhalation may occur from use, respiratory protection equipment is recommended. Use an approved respirator equipped with oil/mist cartridges. EN 12083.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Opaque liquid.

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Colour	: Variable.
Odour	: Solvent.
Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: None (CC)
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Solubility	: No data available
Log Pow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

9.2. Other information

VOC content : 68.6 – 70%

SECTION 10: Stability and reactivity

10.1. Reactivity

No dangerous reactions known.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4. Conditions to avoid

Direct sunlight. Heat.

10.5. Incompatible materials

Strong bases. Strong acids.

10.6. Hazardous decomposition products

Burning produces irritating, toxic and noxious fumes. Carbon dioxide. Carbon monoxide. Hydrogen halide. Bromides.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

Phenolphthalein (77-09-8)	
LD50 oral rat	> 2000 mg/kg bodyweight
1,1,1 Tris Ethane (27955-94-8)	
LD50 oral rat	> 5000 mg/kg bodyweight
LD50 dermal rat	> 2000 mg/kg bodyweight
Polyethylene Glycol (25322-68-3)	
LD50 oral rat	47000 mg/kg
LD50 dermal rat	> 20000 mg/kg
ATE CLP (oral)	47000.000 mg/kg bodyweight
Toluene (108-88-3)	
LD50 oral rat	5580 mg/kg EU Method B.1 (Acute Toxicity (Oral))
LC50 inhalation rat (mg/l)	> 20 mg/l/4h OECD Guideline 403 (Acute Inhalation Toxicity)

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Toluene (108-88-3)	
ATE CLP (oral)	5580.000 mg/kg bodyweight
1,2-epoxybutane (106-88-7)	
LD50 oral rat	1100 µl/kg
LC50 inhalation rat (Vapours - mg/l/4h)	30 minute exposure- 5/5 died, All unconscious when removed. Died by end of day. 12 minute exposure- 5/5 died, All unsteady when removed and died two hours after exposure. 6 minute exposure- 0/3 died.
ATE CLP (oral)	500.000 mg/kg bodyweight
ATE CLP (dermal)	1100.000 mg/kg bodyweight
ATE CLP (gases)	4500.000 ppmv/4h
ATE CLP (vapours)	11.000 mg/l/4h
ATE CLP (dust,mist)	1.500 mg/l/4h
1-bromopropane (106-94-5)	
LD50 oral rat	> 2000
LD50 dermal rat	> 2000 mg/kg
LC50 inhalation rat (ppm)	14374 ppm/4h
ATE CLP (gases)	14374.000 ppmv/4h
nitromethane (75-52-5)	
LD50 oral rat	1506 mg/kg
LD50 dermal rabbit	> 2000 mg/kg
LC50 inhalation rat (mg/l)	> 12.75 mg/l 1 h
ATE CLP (oral)	1506.000 mg/kg bodyweight
barium sulfate (7727-43-7)	
LD50 oral rat	307 g/kg
LD50 dermal rat	> 2000 mg/kg
ATE CLP (oral)	307000.000 mg/kg bodyweight
ethylbenzene (100-41-4)	
LD50 oral rat	3500 mg/kg
LD50 dermal rabbit	17.8 ml/kg
LC50 inhalation rat (ppm)	< 1500 ppm
ATE CLP (oral)	3500.000 mg/kg bodyweight
ATE CLP (dust,mist)	1.500 mg/l/4h
Xylene (1330-20-7)	
LD50 oral rat	> 3500 mg/kg
ATE CLP (dermal)	1100.000 mg/kg bodyweight
ATE CLP (dust,mist)	1.500 mg/l/4h
Unknown acute toxicity (CLP: Classification, Labelling, Packaging.) - SDS	: 1.22% of the mixture consists of ingredient(s) of unknown acute oral toxicity 1.22% of the mixture consists of ingredient(s) of unknown acute dermal toxicity 1.22% percent of the mixture consists of ingredient(s) of unknown acute inhalation (dust/mist) toxicity
Skin corrosion/irritation	: Causes skin irritation.
Serious eye damage/irritation	: Causes serious eye irritation.
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Suspected of causing genetic defects.
Carcinogenicity	: May cause cancer.
barium sulfate (7727-43-7)	
NOAEL (chronic, oral, animal/male, 2 years)	60 mg/kg bodyweight
NOAEL (chronic, oral, animal/female, 2 years)	75 mg/kg bodyweight
Reproductive toxicity	: May damage fertility or the unborn child.
Specific target organ toxicity (single exposure)	: May cause respiratory irritation. May cause drowsiness or dizziness.
Specific target organ toxicity (repeated exposure)	: May cause damage to organs through prolonged or repeated exposure.
Toluene (108-88-3)	
LOAEL (inhalation, rat, gas, 90 days)	1250 ppmv/6h/day

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Toluene (108-88-3)	
NOAEL (oral, rat, 90 days)	625 mg/kg bodyweight/day EU Method B.26. Increased relative weights of liver and kidney are interpreted as toxicologically insignificant differences in the absence of histological findings.
NOAEL (inhalation, rat, gas, 90 days)	300 ppmv/6h/day OECD Guideline 453

1-bromopropane (106-94-5)	
NOAEL (inhalation, rat, dust/mist/fume, 90 days)	1 mg/l/6h/day

Aspiration hazard : Not classified

SECTION 12: Ecological information

12.1. Toxicity

Phenolphthalein (77-09-8)	
EC50 Daphnia 1	> 100 mg/l

1,1,1 Tris Ethane (27955-94-8)	
LC50 fish 1	>= 18.7 no mortalities
EC50 Daphnia 1	> 18 mg/l
ErC50 (algae)	8.6 mg/l
NOEC (acute)	18.7 mg/l
NOEC chronic crustacea	0.16 mg/l 21 d
NOEC chronic algae	0.23 mg/l 72-hour

Polyethylene Glycol (25322-68-3)	
LC50 fish 1	> 100 mg/l
LC50 other aquatic organisms 1	1000 mg/l

Toluene (108-88-3)	
LC50 fish 1	5.5 mg/l
EC50 Daphnia 2	3.78 mg/l
ErC50 (algae)	134 mg/l
LOEC (chronic)	2.77 mg/l
NOEC chronic fish	1.39 mg/l
NOEC chronic crustacea	0.74 mg/l

1,2-epoxybutane (106-88-7)	
LC50 fish 1	> 100 mg/l 96 h
EC50 Daphnia 1	70 mg/l 48 h
ErC50 (algae)	> 500 mg/l 72 h

1-bromopropane (106-94-5)	
EC50 Daphnia 1	203 mg/l 24 h
ErC50 (algae)	52.4 mg/l

nitromethane (75-52-5)	
LC50 fish 1	659.2 mg/l 96 h
EC50 Daphnia 1	> 103 mg/l 48 h

barium sulfate (7727-43-7)	
LC50 fish 1	> 3.5 mg/l 96 h
EC50 Daphnia 1	14500 µg/l 48 h

ethylbenzene (100-41-4)	
LC50 fish 1	5.1 mg/l
EC50 other aquatic organisms 1	7.7 mg/l
NOEC (acute)	3.3 mg/l

12.2. Persistence and degradability

1,1,1 Tris Ethane (27955-94-8)	
Persistence and degradability	Not readily biodegradable.
Biodegradation	8 %

Toluene (108-88-3)	
Persistence and degradability	Readily biodegradable.

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1,2-epoxybutane (106-88-7)	
Persistence and degradability	Readily biodegradable.
1-bromopropane (106-94-5)	
Persistence and degradability	Readily biodegradable.
nitromethane (75-52-5)	
Persistence and degradability	Not readily biodegradable.
Biodegradation	9.9 % 28 d
ethylbenzene (100-41-4)	
Persistence and degradability	Not established.

12.3. Bioaccumulative potential

Phenolphthalein (77-09-8)	
Log Kow	2.4
1,1,1 Tris Ethane (27955-94-8)	
Log Kow	3.88
Toluene (108-88-3)	
Bioconcentration factor (BCF REACH)	90
Log Kow	2.73
1,2-epoxybutane (106-88-7)	
Log Pow	0.86
1-bromopropane (106-94-5)	
BCF fish 1	11.29 L/kg ww
Log Pow	2.16
nitromethane (75-52-5)	
Log Pow	-0.241
barium sulfate (7727-43-7)	
BCF fish 1	68.4 L/kg
ethylbenzene (100-41-4)	
Bioaccumulative potential	Not established.
Xylene (1330-20-7)	
BCF fish 1	1.3 mg/l
Bioaccumulative potential	Not expected to bioaccumulate.

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

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PBT: not yet assessed	
vPvB: not yet assessed	
Component	
Phenolphthalein (77-09-8)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
Toluene (108-88-3)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
1-bromopropane (106-94-5)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods	: Do not dispose in household garbage.
Sewage disposal recommendations	: Do not dispose of waste into sewer.
Waste disposal recommendations	: Dispose in a safe manner in accordance with local/national regulations.
European List of Waste (LoW) code	: For disposal within the EC, the appropriate code according to the European Waste Catalogue (EWC) should be used.

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H code	: H10 - 'Toxic for reproduction': substances and preparations which, if they are inhaled or ingested or if they penetrate the skin, may induce non-hereditary congenital malformations or increase their incidence. H4 - 'Irritant': non-corrosive substances and preparations which, through immediate, prolonged or repeated contact with the skin or mucous membrane, can cause inflammation. H5 - 'Harmful': substances and preparations which, if they are inhaled or ingested or if they penetrate the skin, may involve limited health risks. H7 - 'Carcinogenic': substances and preparations which, if they are inhaled or ingested or if they penetrate the skin, may induce cancer or increase its incidence. H11 - 'Mutagenic': substances and preparations which, if they are inhaled or ingested or if they penetrate the skin, may induce hereditary genetic defects or increase their incidence.
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SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number

Not considered a dangerous good for transport regulations

14.2. UN proper shipping name

Proper Shipping Name (ADR) :

14.3. Transport hazard class(es)

Not applicable

14.4. Packing group

Not applicable

14.5. Environmental hazards

Other information : No supplementary information available.

14.6. Special precautions for user

14.6.1. Overland transport

No additional information available

14.6.2. Transport by sea

No additional information available

14.6.3. Inland waterway transport

Carriage prohibited (ADN) : No

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

Contains no substances with Annex XVII restrictions

Contains substance on the REACH candidate list in concentration $\geq 0.1\%$ or with a lower specific limit: Phenolphthalein (EC 201-004-7, CAS 77-09-8), 1-bromopropane (n-propyl bromide) (EC 203-445-0, CAS 106-94-5)

Contains no REACH Annex XIV substances

VOC content : 68.6 – 70%

15.1.2. National regulations

Germany

Water hazard class (WGK) : 3 - severe hazard to waters

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

according to Regulation (EC) No. 453/2010

Indication of changes:

Original Document.

Abbreviations and acronyms:

ACGIH (American Conference of Government Industrial Hygienists)

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	ATE: Acute Toxicity Estimate
	CAS (Chemical Abstracts Service) number
	CLP: Classification, Labelling, Packaging.
	EC50: Environmental Concentration associated with a response by 50% of the test population.
	GHS: Globally Harmonized System (of Classification and Labeling of Chemicals).
	LD50: Lethal Dose for 50% of the test population
	OSHA: Occupational Safety & Health Administration
	PBT: Persistent, Bioaccumulative, Toxic
	PNEC: Predicted No Effect Level
	STEL: Short Term Exposure Limits
	TSCA: Toxic Substances Control Act
	TWA: Time Weight Average

Data sources

: ACGIH 2000.

ESIS (European chemical Substances Information System; accessed at: <http://esis.jrc.ec.europa.eu/index.php?PGM=cla>.

OSHA 29CFR 1910.1200 Hazard Communication Standard.

European Chemicals Agency (ECHA) Registered Substances list. Accessed at <http://echa.europa.eu/>.

Krister Forsberg and S.Z. Mansdorf, "Quick Selection Guide to Chemical Protective Clothing", Fifth Edition.

National Fire Protection Association; Fire Protection Guide to Hazardous Materials; 10th edition.

REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

TSCA Chemical Substance Inventory. Accessed at <http://www.epa.gov/oppt/existingchemicals/pubs/tscainventory/howto.html>.

Other information

: None.

Full text of R-, H- and EUH-phrases:

Acute Tox. 4 (Dermal)	Acute toxicity (dermal), Category 4
Acute Tox. 4 (Inhalation)	Acute toxicity (inhal.), Category 4
Acute Tox. 4 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Chronic 2	Hazardous to the aquatic environment — Chronic Hazard, Category 2
Aquatic Chronic 3	Hazardous to the aquatic environment — Chronic Hazard, Category 3
Asp. Tox. 1	Aspiration hazard, Category 1
Carc. 1B	Carcinogenicity, Category 1B
Carc. 2	Carcinogenicity, Category 2
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Flam. Liq. 2	Flammable liquids, Category 2
Flam. Liq. 3	Flammable liquids, Category 3
Muta. 2	Germ cell mutagenicity, Category 2
Repr. 1B	Reproductive toxicity, Category 1B
Repr. 1B	Reproductive toxicity, Category 1B
Repr. 2	Reproductive toxicity, Category 2
Repr. 2	Reproductive toxicity, Category 2
Skin Irrit. 2	Skin corrosion/irritation, Category 2
STOT RE 2	Specific target organ toxicity — Repeated exposure, Category 2
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Narcosis
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
H319	Causes serious eye irritation
H332	Harmful if inhaled
H335	May cause respiratory irritation

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H336	May cause drowsiness or dizziness
H341	Suspected of causing genetic defects
H350	May cause cancer
H351	Suspected of causing cancer
H360	May damage fertility or the unborn child
H360FD	May damage fertility. May damage the unborn child
H361d	Suspected of damaging the unborn child
H361f	Suspected of damaging fertility
H373	May cause damage to organs through prolonged or repeated exposure
H411	Toxic to aquatic life with long lasting effects
H412	Harmful to aquatic life with long lasting effects
R10	Flammable
R11	Highly flammable
R20	Harmful by inhalation
R20/21	Harmful by inhalation and in contact with skin
R20/21/22	Harmful by inhalation, in contact with skin and if swallowed
R22	Harmful if swallowed
R36/37/38	Irritating to eyes, respiratory system and skin
R38	Irritating to skin
R40	Limited evidence of a carcinogenic effect
R45	May cause cancer
R48/20	Harmful: danger of serious damage to health by prolonged exposure through inhalation
R5	Heating may cause an explosion
R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
R52/53	Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment
R60	May impair fertility
R62	Possible risk of impaired fertility
R63	Possible risk of harm to the unborn child
R65	Harmful: may cause lung damage if swallowed
R67	Vapours may cause drowsiness and dizziness
R68	Possible risk of irreversible effects
F	Highly flammable
N	Dangerous for the environment
Xi	Irritant
Xn	Harmful

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Skin Irrit. 2	H315	Calculation method
Eye Irrit. 2	H319	Calculation method
Muta. 2	H341	Calculation method
Carc. 1B	H350	Expert judgment
Repr. 1B	H360	Calculation method
STOT SE 3	H335	Calculation method
STOT SE 3	H336	Calculation method
STOT RE 2	H373	Calculation method

LA-CO EU CLP SDS

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This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product