

Printing date 07/27/2021

Review date 07/27/2021

1 Identification · Product identifier · Trade name: LC UNIVERSAL TEST MIX • Article number 00890893 · Application of the substance / the mixture Laboratory chemicals · Details of the supplier of the safety data sheet • Manufacturer/Supplier: PerkinElmer, Inc. 710 Bridgeport Avenue Shelton, Connecticut 06484 USA CustomerCareUS@perkinelmer.com 203-925-4600 • Emergency telephone number: CHEMTREC (within US) 800-424-9300 CHEMTREC (from outside US) +1 703-527-3887 (call collect) CHEMTREC (within AU) +(61)-290372994 2 Hazard(s) identification · Classification of the substance or mixture Flame Flam. Liq. 2 H225 Highly flammable liquid and vapor. Skull and crossbones Acute Tox. 3 H331 Toxic if inhaled. Health hazard Carc. 2 H351 Suspected of causing cancer. Repr. 2 H361 Suspected of damaging fertility or the unborn child. STOT SE 1 H370 Causes damage to the central nervous system and the visual organs. · Label elements • GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS). · Hazard pictograms GHS02, GHS06, GHS08 · Signal word Danger · Hazard-determining components of labeling: methanol · Hazard statements H225 Highly flammable liquid and vapor. H331 Toxic if inhaled. H351 Suspected of causing cancer. H361 Suspected of damaging fertility or the unborn child.



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Precautionary s P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P210	Keep away from heat/sparks/open flames/hot surfaces No smoking.
P240	Ground/bond container and receiving equipment.
P241	Use explosion-proof electrical/ventilating/lighting/equipment.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P260	Do not breathe dust/fume/gas/mist/vapors/spray.
P264	Wash thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P303+P361+P3	353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water shower.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P321	Specific treatment (see on this label).
P370+P378	In case of fire: Use for extinction: CO2, powder or water spray.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P403+P235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.
Classification s	
NFPA ratings (scale 0 - 4)
н	lealth = l
	Fire = 3
	eactivity = 0
	euclivity – 0

FIRE3Fire = 3REACTIVITY0Reactivity = 0

• Other hazards

The product does not contain any organic halogen compounds (AOX), nitrates, heavy metal compounds or formaldehydes.

- · Results of PBT and vPvB assessment
- · **PBT:** Not applicable.
- · **vPvB:** Not applicable.

3 Composition/information on ingredients

• CAS No. Description 67-56-1 Methanol

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	characterization: Mixtures	×	Contd. of page 2
•	n: Mixture of the substances listed below with nonhazard s components:	dous additions.	
67-56-1	methanol Flam. Liq. 2, H225 Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. STOT SE 1, H370	3, H331	89.2385%
	cumene Flam. Liq. 3, H226 Carc. 2, H351; Asp. Tox. 1, H304 Aquatic Chronic 2, H411 Acute Tox. 4, H302; STOT SE 3, H335		0.1992%
-	ethylbenzene Flam. Liq. 2, H225 Carc. 2, H351; STOT RE 2, H373; Asp. Tox. 1, H304 Acute Tox. 4, H332		0.1992%
	toluene Flam. Liq. 2, H225 Repr. 2, H361; STOT RE 2, H373; Asp. Tox. 1, H304 Skin Irrit. 2, H315; STOT SE 3, H336		0.1992%
·Additional	Components		
7732-18-5	Water		9.9597%
98-06-6	tert-butylbenzene	 Flam. Liq. 3, H226 Acute Tox. 4, H332 	0.1992%
7647-14-5	sodium chloride		0.004%
120-12-7	anthracene	& <i>Carc. 1B, H350</i> <i>PBT</i>	0.001%

4 First-aid measures

· Description of first aid measures

• General information:

Immediately remove any clothing soiled by the product.

Remove breathing apparatus only after contaminated clothing have been completely removed.

In case of irregular breathing or respiratory arrest provide artificial respiration.

• After inhalation:

Supply fresh air or oxygen; call for doctor.

In case of unconsciousness place patient stably in side position for transportation.

• After skin contact: Immediately wash with water and soap and rinse thoroughly.

• After eye contact: Rinse opened eye for several minutes under running water. Then consult a doctor.

- After swallowing: Do not induce vomiting; immediately call for medical help.
- Most important symptoms and effects, both acute and delayed No further relevant information available.
- · Indication of any immediate medical attention and special treatment needed

No further relevant information available.

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5 Fire-fighting measures

· Extinguishing media

- Suitable extinguishing agents:
- CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- · Special hazards arising from the substance or mixture
- During heating or in case of fire poisonous gases are produced.
- · Advice for firefighters
- · Protective equipment: Mouth respiratory protective device.

6 Accidental release measures

· Personal precautions, protective equipment and emergency procedures Mount respiratory protective device.

Wear protective equipment. Keep unprotected persons away.

- **Environmental precautions:**
- Inform respective authorities in case of seepage into water course or sewage system. Prevent seepage into sewage system, workpits and cellars.

Dilute with plenty of water.

• Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Dispose contaminated material as waste according to item 13. Ensure adequate ventilation.

· Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

· Protective Action Criteria for Chemicals

67-56-1 methanol	530 ppm
98-06-6 tert-butylbenzene	1.7 ppm
98-82-8 cumene	50 ppm
100-41-4 ethylbenzene	33 ppm
108-88-3 toluene	67 ppm
120-12-7 anthracene	48 mg/m
PAC-2:	
67-56-1 methanol	2,100 ppm
98-06-6 tert-butylbenzene	18 ppm
98-82-8 cumene	300 ppm
100-41-4 ethylbenzene	1100* ppr
108-88-3 toluene	560 ppm
120-12-7 anthracene	530 mg/m
PAC-3:	
	7200* ppm



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		(Contd. of page 4)
98-06-6	tert-butylbenzene	110 ppm
98-82-8	cumene	730 ppm
100-41-4	ethylbenzene	1800* ppm
108-88-3		3700* ppm
120-12-7	anthracene	3,200 mg/m ³

7 Handling and storage

· Handling:

- **Precautions for safe handling** Ensure good ventilation/exhaustion at the workplace. Open and handle receptacle with care. Prevent formation of aerosols.
- Information about protection against explosions and fires: Keep ignition sources away - Do not smoke. Protect against electrostatic charges. Keep respiratory protective device available.
- · Conditions for safe storage, including any incompatibilities

· Storage:

- Requirements to be met by storerooms and receptacles: Store in a cool location.
- · Information about storage in one common storage facility: Not required.

• Further information about storage conditions:

Keep receptacle tightly sealed.

- Store in cool, dry conditions in well sealed receptacles.
- Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

• Additional information about design of technical systems: No further data; see item 7.

67-5	i6-1 methanol	
PEL	Long-term value: 260 mg/m ³ , 200 ppm	
REL	Short-term value: 325 mg/m ³ , 250 ppm	
	Long-term value: 260 mg/m ³ , 200 ppm	
	Skin	
TLV	Short-term value: 328 mg/m ³ , 250 ppm	
	Long-term value: 262 mg/m ³ , 200 ppm	
	Skin; BEI	
98-82	2-8 cumene	
PEL	Long-term value: 245 mg/m ³ , 50 ppm	
	Skin	



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	(Contd. of page
REL Long-term value: 245 mg/m ³ , 50 ppm Skin	
TLV Long-term value: (246) NIC-25 mg/m ³ , (50) NIC-5 ppm NIC-A3	
100-41-4 ethylbenzene	
PEL Long-term value: 435 mg/m ³ , 100 ppm	
REL Short-term value: 545 mg/m ³ , 125 ppm Long-term value: 435 mg/m ³ , 100 ppm	
TLV Long-term value: 87 mg/m ³ , 20 ppm BEI	
108-88-3 toluene	
PEL Long-term value: 200 ppm Ceiling limit value: 300; 500* ppm *10-min peak per 8-hr shift	
REL Short-term value: 560 mg/m ³ , 150 ppm Long-term value: 375 mg/m ³ , 100 ppm	
TLV Long-term value: 20 ppm BEI, NIC-OTO	
· Ingredients with biological limit values:	
67-56-1 methanol	
BEI 15 mg/L Medium: urine Time: end of shift Parameter: Methanol (background, nonspecific)	
100-41-4 ethylbenzene	
· · · · · · · · · · · · · · · · · · ·	
BEI 0.7 g/g creatinine Medium: urine Time: end of shift at end of workweek Parameter: Sum of mandelic acid and phenylglyoxylic acid (nonspecific, semi-quantitative)	
-	
Medium: end-exhaled air	
Time: not critical Parameter: Ethyl benzene (semi-quantitative)	
	(Contd. on page



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(Contd. of page 6) 108-88-3 toluene BEI 0.02 mg/LMedium: blood Time: prior to last shift of workweek Parameter: Toluene 0.03 mg/LMedium: urine Time: end of shift Parameter: Toluene 0.3 mg/g creatinine Medium: urine *Time: end of shift* Parameter: o-Cresol with hydrolysis (background) • Additional information: The lists that were valid during the creation were used as basis. · Exposure controls · Personal protective equipment: • General protective and hygienic measures: Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at the end of work. Store protective clothing separately. • Breathing equipment: In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air. Protection of hands: Protective gloves The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation · Material of gloves The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application. · Penetration time of glove material The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed. (Contd. on page 8) USA



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• Eye protection:



Tightly sealed goggles or safety glasses

Information on basic physical and c	hemical properties
· General Information	
· Appearance:	Linuid
Form: Color:	Liquid Transparent
· Odor:	Alcohol-like
· Odor threshold:	Not determined.
pH-value:	Not determined.
· Change in condition	
Melting point/Melting range:	-98 °C (-144.4 °F)
Boiling point/Boiling range:	64 °C (147.2 °F)
· Flash point:	11 °C (51.8 °F)
· Flammability (solid, gaseous):	Not applicable.
Ignition temperature:	455 °C (851 °F)
Decomposition temperature:	Not determined.
· Auto igniting:	Product is not selfigniting.
Danger of explosion:	Product is not explosive. However, formation of explosive air/vap mixtures are possible.
· Explosion limits:	
Lower:	5.5 Vol %
Upper:	44 Vol %
· Vapor pressure at 20 °C (68 °F):	128 hPa (96 mm Hg)
• Density at 20 •C (68 •F):	0.81111 g/cm ³ (6.76871 lbs/gal)
· Relative density	Not determined.
· Vapor density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with	
Water:	Fully miscible.
· Partition coefficient (n-octanol/wate	r): Not determined.
· Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.



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		(Contd. of page 8
· Solvent content:		
Organic solvents:	89.8 %	
Water:	10.0 %	
VOC content:	89.84 %	
• Other information	No further relevant information available.	

10 Stability and reactivity

· Reactivity No further relevant information available.

• Chemical stability

• Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.

· Possibility of hazardous reactions No dangerous reactions known.

· Conditions to avoid No further relevant information available.

- · Incompatible materials: No further relevant information available.
- · Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological information

· Information on toxicological effects

• Acute toxicity:

· LD/LC50 values that are relevant for classification:

67-56-1 methanol

Oral LD50 5628 mg/kg (rat)

Dermal LD50 15800 mg/kg (rabbit)

• Primary irritant effect:

• on the skin: No irritant effect.

• on the eye: No irritating effect.

• Sensitization: No sensitizing effects known.

· Additional toxicological information:

The product shows the following dangers according to internally approved calculation methods for preparations: Toxic

· Carcinogenic categories

· IARC (In	ternational Agency for Research on Cancer)	
98-82-8	cumene	2B
100-41-4	ethylbenzene	2B
108-88-3	toluene	3
120-12-7	anthracene	3
· NTP (Nat	ional Toxicology Program)	
98-82-8	cumene	R
120-12-7	anthracene	R
		(Contd. on page 10)



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· OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

12 Ecological information

· Toxicity

- Aquatic toxicity: No further relevant information available.
- Persistence and degradability No further relevant information available.
- · Behavior in environmental systems:
- · Bioaccumulative potential No further relevant information available.
- *Mobility in soil* No further relevant information available.
- Additional ecological information:
- · General notes:

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

- · Results of PBT and vPvB assessment
- · PBT: Not applicable.
- vPvB: Not applicable.
- · Other adverse effects No further relevant information available.

13 Disposal considerations

· Waste treatment methods

· Recommendation:

Dispose of container and materials in accordance with local, regional and national regulations.

- · Uncleaned packagings:
- Recommendation: Disposal must be made according to official regulations.
- · Recommended cleansing agent: Water, if necessary with cleansing agents.

14 Transport information

UN-Number DOT, ADR, IMDG, IATA	UN1992
UN proper shipping name DOT ADR IMDG, IATA	Flammable liquids, toxic, n.o.s. (Methanol) 1992 FLAMMABLE LIQUID, TOXIC, N.O.S. (METHANOL) FLAMMABLE LIQUID, TOXIC, N.O.S. (METHANOL)
Transport hazard class(es)	
Class	3 Flammable liquids
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	(Contd. of pag
Label	3, 6.1
ADR	
Class	3 (FT1) Flammable liquids
Label	3+6.1
IMDG	
Class	3 Flammable liquids
Label	3/6.1
IATA	
Class Label	3 Flammable liquids 3 (6.1)
Packing group DOT, ADR, IMDG, IATA	Π
Environmental hazards: Marine pollutant:	No
Special precautions for user	Warning: Flammable liquids
Hazard identification number (Kemler code). EMS Number:	: 336 F-E,S-D
Stowage Category	<i>Б</i>
Stowage Code	SW2 Clear of living quarters.
Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
Transport/Additional information:	
DOT	
Quantity limitations	On passenger aircraft/rail: 1 L On cargo aircraft only: 60 L
ADR	
Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml
	Maximum not quantity nor inner nackaging: 31 ml



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	(Contd. of page 11)
·IMDG	
· Limited quantities (LQ)	1L
\cdot Excepted quantities (EQ)	Code: E2
	Maximum net quantity per inner packaging: 30 ml
	Maximum net quantity per outer packaging: 500 ml
·IATA	
· Remarks:	Excepted qty up to 30ml inner packaging, 500ml outer pack
· UN ''Model Regulation'':	UN 1992 FLAMMABLE LIQUID, TOXIC, N.O.S. (METHANOL), 3 (6.1), II

	15 R	legul	lat	ory i	inj	format	tion
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· Safety, hea	lth and environmental regulations/legislation specific for the substance or mixt	ure
	methanol	89.2385%
	 Flam. Liq. 2, H225 Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331 STOT SE 1, H370 	
7732-18-5	Water	9.9597%
98-06-6	tert-butylbenzene Flam. Liq. 3, H226 Acute Tox. 4, H332	0.1992%
· Sara		

· Section 3.	Section 355 (extremely hazardous substances):	
None of th	he ingredients is listed.	
· Section 3.	13 (Specific toxic chemical listings):	
67-56-1	methanol	
98-82-8	cumene	
100-41-4	ethylbenzene	
108-88-3	toluene	
120-12-7	anthracene	
• TSCA (Toxic Substances Control Act):		
All ingredients are listed.		

67-56-1	methanol	ACTIVE
7732-18-5	Water	ACTIVE
98-06-6	tert-butylbenzene	ACTIVE
98-82-8	cumene	ACTIVE
100-41-4	ethylbenzene	ACTIVE
108-88-3		ACTIVE
7647-14-5	sodium chloride	ACTIVE
120-12-7	anthracene	ACTIVE
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· Hazardoi	us Air Pollutants	
67-56-1	6-1 methanol	
98-82-8	cumene	
100-41-4	ethylbenzene	
108-88-3	toluene	
120-12-7	anthracene	
· Propositi	on 65	
· Chemica	ls known to cause cancer:	
98-82-8	cumene	
100-41-4	ethylbenzene	
· Chemica	ls known to cause reproductive toxicity for females:	
None of t	he ingredients is listed.	
· Chemica	ls known to cause reproductive toxicity for males:	
None of t	he ingredients is listed.	
· Chemica	ls known to cause developmental toxicity:	
67-56-1	methanol	
108-88-3	toluene	
· Cancerog	genity categories	
· EPA (En	vironmental Protection Agency)	
98-82-8	cumene	D, CBL
100-41-4	ethylbenzene	D
108-88-3	toluene	II
120-12-7	anthracene	D
TLV (Th	reshold Limit Value established by ACGIH)	I
100-41-4	ethylbenzene	A
108-88-3	toluene	A
NIOSH-0	Ca (National Institute for Occupational Safety and Health)	
None of t	he ingredients is listed.	

· National regulations:

· Information about limitation of use:

Workers are not allowed to be exposed to this hazardous material. Exceptions can be made by the authorities in certain cases.

• Water hazard class: Water hazard class 1 (Self-assessment): slightly hazardous for water.

· Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

Disclaimer

The information provided in this Material Safety Data Sheet is based on our present knowledge, and believed to be correct at the date of publication. However, no representation is made concerning its accuracy and completeness. It is intended as guidance only, and is not to be considered a warranty or quality specification. All materials may present unknown hazards, and

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should be used with caution. Although certain hazards are described, we cannot guarantee that	
these are the only hazards which exist. PerkinElmer shall not be held	
liable for any damage resulting from handling or from contact with the product.	
Department issuing SDS: Environmental, Health and Safety	
Contact:	
Within the USA: 1-(800)-762-4000	
Outside the USA: 1-(203)-712-8488	
Abbreviations and acronyms:	
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regula	tions Concerning the
International Transport of Dangerous Goods by Rail)	alons Concerning ine
ICAO: International Civil Aviation Organisation	
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concert	ning the Internationa
Carriage of Dangerous Goods by Road)	ting the International
IMDG: International Maritime Code for Dangerous Goods	
DOT: US Department of Transportation	
IATA: International Air Transport Association	
ACGIH: American Conference of Governmental Industrial Hygienists	
EINECS: European Inventory of Existing Commercial Chemical Substances	
ELINCS: European List of Notified Chemical Substances	
CAS: Chemical Abstracts Service (division of the American Chemical Society)	
NFPA: National Fire Protection Association (USA)	
HMIS: Hazardous Materials Identification System (USA)	
VOC: Volatile Organic Compounds (USA, EU)	
LC50: Lethal concentration, 50 percent	
LD50: Lethal dose, 50 percent	
PBT: Persistent, Bioaccumulative and Toxic	
vPvB: very Persistent and very Bioaccumulative	
NIOSH: National Institute for Occupational Safety	
OSHA: Occupational Safety & Health	
TLV: Threshold Limit Value	
PEL: Permissible Exposure Limit	
REL: Recommended Exposure Limit	
BEI: Biological Exposure Limit	
Flam. Liq. 2: Flammable liquids – Category 2	
Flam. Liq. 3: Flammable liquids – Category 3	
Acute Tox. 3: Acute toxicity – Category 3	
Acute Tox. 4: Acute toxicity – Category 4	
Skin Irrit. 2: Skin corrosion/irritation – Category 2	
Carc. 2: Carcinogenicity – Category 2	
Repr. 2: Reproductive toxicity – Category 2	
STOT SE 1: Specific target organ toxicity (single exposure) – Category 1	
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3	
STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2	
Asp. Tox. 1: Aspiration hazard – Category 1	
Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2	
* Data compared to the previous version altered.	
-	US