

SAFETY DATA SHEET



Testmix, Part Number CP299103

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

1.1 Product identifier

Product name : Testmix, Part Number CP299103
Part no. : CP299103

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

Material uses : Reagents and Standards for Analytical Chemistry Laboratory Use
1 ml vials

1.3 Details of the supplier of the safety data sheet

Agilent Technologies Manufacturing GmbH & Co. KG
Hewlett-Packard-Str. 8
76337 Waldbronn
Germany
0800 603 1000

e-mail address of person responsible for this SDS : pdl-msds_author@agilent.com

1.4 Emergency telephone number

Emergency telephone number (with hours of operation) : CHEMTREC®: +(44)-870-8200418

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Mixture

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

H225	FLAMMABLE LIQUIDS - Category 2
H315	SKIN CORROSION/IRRITATION - Category 2
H319	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2
H340	GERM CELL MUTAGENICITY - Category 1B
H350	CARCINOGENICITY - Category 1A
H361f	REPRODUCTIVE TOXICITY (Fertility) - Category 2
H336	SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Narcotic effects) - Category 3
H373	SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2
H304	ASPIRATION HAZARD - Category 1
H400	SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1
H410	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 1

Ingredients of unknown toxicity : Percentage of the mixture consisting of ingredient(s) of unknown dermal toxicity: 30 - 60%
Percentage of the mixture consisting of ingredient(s) of unknown inhalation toxicity: 30 - 60%
Percentage of the mixture consisting of ingredient(s) of unknown oral toxicity: 30 - 60%

Ingredients of unknown ecotoxicity : Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 19.2%

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

Date of issue/Date of revision : 22/08/2018

1/22

Testmix, Part Number CP299103

SECTION 2: Hazards identification

2.2 Label elements

Hazard pictograms :



Signal word : Danger

Hazard statements :
H225 - Highly flammable liquid and vapour.
H319 - Causes serious eye irritation.
H315 - Causes skin irritation.
H340 - May cause genetic defects.
H350 - May cause cancer.
H361f - Suspected of damaging fertility.
H304 - May be fatal if swallowed and enters airways.
H336 - May cause drowsiness or dizziness.
H373 - May cause damage to organs through prolonged or repeated exposure.
H410 - Very toxic to aquatic life with long lasting effects.

Precautionary statements

Prevention :
P201 - Obtain special instructions before use.
P280 - Wear protective gloves. Wear protective clothing. Wear eye or face protection.
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P273 - Avoid release to the environment.
P260 - Do not breathe vapour.

Response :
P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P301 + P310 + P331 - IF SWALLOWED: Immediately call a POISON CENTER or physician. Do NOT induce vomiting.
P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.

Storage : P405 - Store locked up.

Disposal : P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

Hazardous ingredients :
- Octane
- Nonane
- Ethylcyclohexane
- cyclohexane
- hexane (containing < 5 %n-hexane (203-777-6))
- n-hexane
- benzene

Supplemental label elements : Not applicable.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles : Restricted to professional users.

Special packaging requirements

Tactile warning of danger : Not applicable.

2.3 Other hazards

Other hazards which do not result in classification : None known.

Testmix, Part Number CP299103

SECTION 3: Composition/information on ingredients

3.2 Mixtures : Mixture

Product/ingredient name	Identifiers	%	Regulation (EC) No. 1272/2008 [CLP]	Type
Isopropylcyclohexane	EC: 211-792-4 CAS: 696-29-7	≤5	Flam. Liq. 3, H226 Asp. Tox. 1, H304 Aquatic Chronic 4, H413	[1]
Octane	EC: 203-892-1 CAS: 111-65-9 Index: 601-009-00-8	≤5	Flam. Liq. 2, H225 Skin Irrit. 2, H315 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1)	[1]
nonane	EC: 203-913-4 CAS: 111-84-2	≤5	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1)	[1]
Ethylcyclohexane	EC: 216-835-0 CAS: 1678-91-7	≤5	Flam. Liq. 3, H226 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 2, H411	[1]
Cyclohexane	EC: 203-806-2 CAS: 110-82-7 Index: 601-017-00-1	≤5	Flam. Liq. 2, H225 Skin Irrit. 2, H315 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1)	[1] [2]
2-Methylpentane	EC: 203-523-4 CAS: 107-83-5 Index: 601-007-00-7	≤5	Flam. Liq. 2, H225 Skin Irrit. 2, H315 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 2, H411	[1]
methylcyclohexane	EC: 203-624-3 CAS: 108-87-2 Index: 601-018-00-7	≤5	Flam. Liq. 2, H225 Skin Irrit. 2, H315 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 2, H411	[1]
n-Heptane	EC: 205-563-8 CAS: 142-82-5 Index: 601-008-00-2	≤5	Flam. Liq. 2, H225 Skin Irrit. 2, H315 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1)	[1] [2]
Hept-1-ene	EC: 209-767-8 CAS: 592-76-7	≤5	Flam. Liq. 2, H225 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Asp. Tox. 1, H304	[1]
n-Hexane	EC: 203-777-6 CAS: 110-54-3 Index: 601-037-00-0	<5	Flam. Liq. 2, H225 Skin Irrit. 2, H315 Repr. 2, H361f (Fertility) STOT SE 3, H336 STOT RE 2, H373 Asp. Tox. 1, H304 Aquatic Chronic 2, H411	[1] [2]
oct-1-ene	EC: 203-893-7 CAS: 111-66-0	≤5	Flam. Liq. 2, H225 Asp. Tox. 1, H304 Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1)	[1]

Testmix, Part Number CP299103

SECTION 3: Composition/information on ingredients

Non-1-ene	EC: 204-681-7 CAS: 124-11-8	≤5	EUH066 Flam. Liq. 3, H226 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 Asp. Tox. 1, H304 Aquatic Chronic 2, H411	[1]
Decane	EC: 204-686-4 CAS: 124-18-5	≤5	Flam. Liq. 3, H226 Asp. Tox. 1, H304 Aquatic Chronic 3, H412 EUH066	[1]
undecane	EC: 214-300-6 CAS: 1120-21-4	≤5	Flam. Liq. 3, H226 Asp. Tox. 1, H304 EUH066	[1]
dodecane	EC: 203-967-9 CAS: 112-40-3	≤5	Eye Irrit. 2, H319 Asp. Tox. 1, H304 EUH066	[1]
tert-butylcyclohexane	EC: 221-652-4 CAS: 3178-22-1	≤5	Flam. Liq. 3, H226 Aquatic Chronic 4, H413	[1]
Dec-1-ene	EC: 212-819-2 CAS: 872-05-9	≤3	Flam. Liq. 3, H226 Asp. Tox. 1, H304 Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1)	[1]
pentamethylbenzene	EC: 211-837-8 CAS: 700-12-9	≤3	Flam. Sol. 1, H228 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 Aquatic Chronic 4, H413	[1]
cyclopentane	EC: 206-016-6 CAS: 287-92-3 Index: 601-030-00-2	≤3	Flam. Liq. 2, H225 Aquatic Chronic 3, H412	[1]
Toluene	EC: 203-625-9 CAS: 108-88-3 Index: 601-021-00-3	<3	Flam. Liq. 2, H225 Skin Irrit. 2, H315 Repr. 2, H361d (Unborn child) STOT SE 3, H336 STOT RE 2, H373 Asp. Tox. 1, H304	[1] [2]
o-xylene	EC: 202-422-2 CAS: 95-47-6 Index: 601-022-00-9	≤3	Flam. Liq. 3, H226 Acute Tox. 4, H312 Acute Tox. 4, H332 Skin Irrit. 2, H315	[1] [2]
sec-butylbenzene	EC: 205-227-0 CAS: 135-98-8	≤3	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Aquatic Chronic 2, H411	[1]
benzene	EC: 200-753-7 CAS: 71-43-2 Index: 601-020-00-8	≤3	Flam. Liq. 2, H225 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Muta. 1B, H340 Carc. 1A, H350 STOT RE 1, H372 Asp. Tox. 1, H304	[1] [2]
ethylbenzene	EC: 202-849-4 CAS: 100-41-4 Index: 601-023-00-4	≤3	Flam. Liq. 2, H225 Acute Tox. 4, H332 STOT RE 2, H373 (hearing organs) Asp. Tox. 1, H304	[1] [2]
cumene	EC: 202-704-5 CAS: 98-82-8 Index: 601-024-00-X	≤3	Flam. Liq. 3, H226 STOT SE 3, H335 Asp. Tox. 1, H304 Aquatic Chronic 2, H411	[1] [2]
1,2,3-Trimethylbenzene	EC: 208-394-8 CAS: 526-73-8	≤3	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Eye Irrit. 2, H319	[1] [2]

Testmix, Part Number CP299103

SECTION 3: Composition/information on ingredients

1,2,3,4-Tetramethylbenzene	EC: 207-673-1 CAS: 488-23-3	≤3	Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335	[1]
cis-bicyclo[4.4.0]decane	EC: 207-770-9 CAS: 493-01-6	≤3	Flam. Liq. 3, H226 Acute Tox. 4, H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335	[1]
Hex-1-ene	EC: 209-753-1 CAS: 592-41-6	≤3	Aquatic Chronic 4, H413 Flam. Liq. 2, H225 Asp. Tox. 1, H304	[1]
1-Methylcyclopentene	EC: 211-762-0 CAS: 693-89-0	≤3	Aquatic Chronic 1, H410 (M=1) Flam. Liq. 2, H225 Asp. Tox. 1, H304	[1]
pentane	EC: 203-692-4 CAS: 109-66-0 Index: 601-006-00-1	≤3	Flam. Liq. 2, H225 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 2, H411 EUH066	[1] [2]
pent-1-ene	EC: 203-694-5 CAS: 109-67-1	≤3	Flam. Liq. 1, H224 Asp. Tox. 1, H304 Aquatic Chronic 3, H412	[1]
2-Methylhexane	EC: 209-730-6 CAS: 591-76-4 Index: 601-008-00-2	≤3	Flam. Liq. 2, H225 Skin Irrit. 2, H315 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1)	[1]
2-methylheptane	EC: 209-747-9 CAS: 592-27-8 Index: 601-009-00-8	≤3	Flam. Liq. 2, H225 Skin Irrit. 2, H315 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1)	[1]
			See Section 16 for the full text of the H statements declared above.	

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

Type

- [1] Substance classified with a health or environmental hazard
- [2] Substance with a workplace exposure limit
- [3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII
- [4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII
- [5] Substance of equivalent concern
- [6] Additional disclosure due to company policy

SECTION 4: First aid measures

4.1 Description of first aid measures

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.

SECTION 4: First aid measures

- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

4.2 Most important symptoms and effects, both acute and delayed

Potential acute health effects

- Eye contact** : Causes serious eye irritation.
- Inhalation** : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.
- Skin contact** : Causes skin irritation.
- Ingestion** : Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:
pain or irritation
watering
redness
- Inhalation** : Adverse symptoms may include the following:
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness
reduced foetal weight
increase in foetal deaths
skeletal malformations
- Skin contact** : Adverse symptoms may include the following:
irritation
redness
reduced foetal weight
increase in foetal deaths
skeletal malformations

Testmix, Part Number CP299103

SECTION 4: First aid measures

Ingestion : Adverse symptoms may include the following:
nausea or vomiting
reduced foetal weight
increase in foetal deaths
skeletal malformations

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments : No specific treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Use dry chemical, CO₂, water spray (fog) or foam.

Unsuitable extinguishing media : Do not use water jet.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture : Highly flammable liquid and vapour. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. This material is very toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Hazardous combustion products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide

5.3 Advice for firefighters

Special precautions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

6.2 Environmental precautions

: Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.

Date of issue/Date of revision : 22/08/2018

7/22

Testmix, Part Number CP299103

SECTION 6: Accidental release measures

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

6.4 Reference to other sections : See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapour or mist. Do not swallow. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities

Storage : Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Seveso Directive - Reporting thresholds (in tonnes)

Danger criteria

Category	Notification and MAPP threshold	Safety report threshold
P5c	5000	50000
E1	100	200

7.3 Specific end use(s)

Recommendations : Industrial applications, Professional applications.

Industrial sector specific solutions : Not applicable.

Testmix, Part Number CP299103

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

Product/ingredient name	Exposure limit values
Cyclohexane	EH40/2005 WELs (United Kingdom (UK), 12/2011). STEL: 1050 mg/m ³ 15 minutes. STEL: 300 ppm 15 minutes. TWA: 100 ppm 8 hours. TWA: 350 mg/m ³ 8 hours.
n-Heptane	EH40/2005 WELs (United Kingdom (UK), 12/2011). TWA: 500 ppm 8 hours.
n-Hexane	EH40/2005 WELs (United Kingdom (UK), 12/2011). TWA: 72 mg/m ³ 8 hours. TWA: 20 ppm 8 hours.
Toluene	EH40/2005 WELs (United Kingdom (UK), 12/2011). Absorbed through skin. STEL: 384 mg/m ³ 15 minutes. TWA: 191 mg/m ³ 8 hours. TWA: 50 ppm 8 hours. STEL: 100 ppm 15 minutes.
o-xylene	EH40/2005 WELs (United Kingdom (UK), 12/2011). Absorbed through skin. STEL: 441 mg/m ³ 15 minutes. TWA: 50 ppm 8 hours. TWA: 220 mg/m ³ 8 hours. STEL: 100 ppm 15 minutes.
benzene	EH40/2005 WELs (United Kingdom (UK), 12/2011). Absorbed through skin. TWA: 1 ppm 8 hours.
ethylbenzene	EH40/2005 WELs (United Kingdom (UK), 12/2011). Absorbed through skin. STEL: 552 mg/m ³ 15 minutes. STEL: 125 ppm 15 minutes. TWA: 100 ppm 8 hours. TWA: 441 mg/m ³ 8 hours.
cumene	EH40/2005 WELs (United Kingdom (UK), 12/2011). Absorbed through skin. STEL: 250 mg/m ³ 15 minutes. STEL: 50 ppm 15 minutes. TWA: 25 ppm 8 hours. TWA: 125 mg/m ³ 8 hours.
1,2,3-Trimethylbenzene	EH40/2005 WELs (United Kingdom (UK), 12/2011). TWA: 25 ppm 8 hours. TWA: 125 mg/m ³ 8 hours.
pentane	EH40/2005 WELs (United Kingdom (UK), 12/2011). TWA: 600 ppm 8 hours. TWA: 1800 mg/m ³ 8 hours.

Recommended monitoring procedures

: If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for

Testmix, Part Number CP299103

SECTION 8: Exposure controls/personal protection

methods for the determination of hazardous substances will also be required.

DNELs/DMELs

No DNELs/DMELs available.

PNECs

No PNECs available

8.2 Exposure controls

Appropriate engineering controls : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapour or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves. Refer to European Standard EN 1149 for further information on material and design requirements and test methods.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Testmix, Part Number CP299103

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state	: Liquid. [Clear.]
Colour	: Colourless.
Odour	: Gasoline-like
Odour threshold	: Not available.
pH	: Not available.
Melting point/freezing point	: Not available.
Initial boiling point and boiling range	: Not available.
Flash point	: Not available.
Evaporation rate	: Not available.
Flammability (solid, gas)	: Not applicable.
Upper/lower flammability or explosive limits	: Not available.
Vapour pressure	: Not available.
Vapour density	: Not available.
Relative density	: 0.8 [Water = 1]
Density	: 0.8 g/cm ³
Solubility(ies)	: Insoluble in the following materials: cold water and hot water.
Partition coefficient: n-octanol/water	: Not available.
Auto-ignition temperature	: Not available.
Decomposition temperature	: Not available.
Viscosity	: Not available.
Explosive properties	: Not available.
Oxidising properties	: Not available.

9.2 Other information

No additional information.

SECTION 10: Stability and reactivity

- | | |
|---|---|
| 10.1 Reactivity | : No specific test data related to reactivity available for this product or its ingredients. |
| 10.2 Chemical stability | : The product is stable. |
| 10.3 Possibility of hazardous reactions | : Under normal conditions of storage and use, hazardous reactions will not occur. |
| 10.4 Conditions to avoid | : Avoid all possible sources of ignition (spark or flame). Do not pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. |
| 10.5 Incompatible materials | : Reactive or incompatible with the following materials:
oxidizing materials |
| 10.6 Hazardous decomposition products | : Under normal conditions of storage and use, hazardous decomposition products should not be produced. |

Testmix, Part Number CP299103

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Isopropylcyclohexane	LC50 Inhalation Dusts and mists	Rat - Male, Female	>5.04 mg/l	4 hours
	LD50 Oral	Rat - Male, Female	>10000 mg/kg	-
Octane	LC50 Inhalation Vapour	Rat	118 g/m ³	4 hours
	LC50 Inhalation Vapour	Rat	25260 ppm	4 hours
	LD50 Oral	Rat	>5000 mg/kg	-
nonane	LC50 Inhalation Vapour	Rat	3200 ppm	4 hours
	LD50 Oral	Rat - Male, Female	>5000 mg/kg	-
Cyclohexane	LC50 Inhalation Vapour	Rat - Male, Female	>32880 mg/m ³	4 hours
	LD50 Oral	Rat	6240 mg/kg	-
n-Heptane	LC50 Inhalation Vapour	Rat	103 g/m ³	4 hours
	LC50 Inhalation Vapour	Rat	48000 ppm	4 hours
n-Hexane	LC50 Inhalation Vapour	Rat - Male, Female	>31.86 mg/l	4 hours
	LC50 Inhalation Vapour	Rat	48000 ppm	4 hours
oct-1-ene	LD50 Oral	Rat	15840 mg/kg	-
	LD50 Oral	Rat	>10000 mg/kg	-
Decane	LD50 Dermal	Rabbit - Male, Female	>5000 mg/kg	-
	LD50 Oral	Rat - Male, Female	>5000 mg/kg	-
undecane	LC50 Inhalation Dusts and mists	Rat - Male, Female	>5600 mg/m ³	4 hours
	LD50 Oral	Rat - Male, Female	>5000 mg/kg	-
dodecane	LC50 Inhalation Dusts and mists	Rat - Male, Female	5.6 mg/l	4 hours
	LD50 Dermal	Rabbit - Male, Female	>5000 mg/kg	-
	LD50 Oral	Rat - Male, Female	>5000 mg/kg	-
cyclopentane	LC50 Inhalation Vapour	Rat - Male, Female	>25.3 mg/l	4 hours
	LD50 Oral	Rat	11400 mg/kg	-
Toluene	LC50 Inhalation Vapour	Rat	49 g/m ³	4 hours
	LD50 Oral	Rat	636 mg/kg	-
o-xylene	LC50 Inhalation Gas.	Rat	6350 ppm	4 hours
	LD50 Oral	Rat	6300 mg/kg	-
sec-butylbenzene	LD50 Oral	Rat	930 mg/kg	-
	LD50 Dermal	Rabbit	>5000 mg/kg	-
benzene	LD50 Oral	Rat	3500 mg/kg	-
	LD50 Oral	Rat	39000 mg/m ³	4 hours
ethylbenzene	LD50 Dermal	Rabbit	>5000 mg/kg	-
	LD50 Oral	Rat	1400 mg/kg	-
cumene	LC50 Inhalation Dusts and mists	Rat	6408 mg/kg	-
	LD50 Oral	Rat	32000 ppm	4 hours
1,2,3,4-Tetramethylbenzene	LD50 Oral	Rat	364 g/m ³	4 hours
	LD50 Oral	Rat	175000 mg/m ³	4 hours
Hex-1-ene	LC50 Inhalation Vapour	Rat	32000 ppm	4 hours
pentane	LC50 Inhalation Vapour	Rat	364 g/m ³	4 hours
pent-1-ene	LC50 Inhalation Dusts and mists	Rat	175000 mg/m ³	4 hours

Acute toxicity estimates

Route	ATE value
Dermal	30690 mg/kg
Inhalation (gases)	174625 ppm
Inhalation (vapours)	151.3 mg/l

Testmix, Part Number CP299103

SECTION 11: Toxicological information

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Nonane	Skin - Moderate irritant	Rat	-	96 hours 300 microliters	-
methylcyclohexane	Eyes - Mild irritant	Rabbit	-	24 hours 100 microliters	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 microliters	-
n-Hexane	Eyes - Mild irritant	Rabbit	-	10 milligrams	-
dodecane	Skin - Moderate irritant	Rat	-	96 hours 300 microliters	-
	Skin - Moderate irritant	Rabbit	-	24 hours 0.05 Milliliters	-
Toluene	Eyes - Mild irritant	Rabbit	-	0.5 minutes 100 milligrams	-
	Eyes - Mild irritant	Rabbit	-	870 Micrograms	-
	Skin - Mild irritant	Rabbit	-	435 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-
	Skin - Moderate irritant	Rabbit	-	500 milligrams	-
sec-butylbenzene	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 100 milligrams	-
benzene	Eyes - Moderate irritant	Rabbit	-	88 milligrams	-
	Skin - Mild irritant	Rat	-	8 hours 60 microliters	-
	Skin - Mild irritant	Rabbit	-	24 hours 15 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-
ethylbenzene	Eyes - Severe irritant	Rabbit	-	500 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 15 milligrams	-
cumene	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Eyes - Mild irritant	Rabbit	-	86 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 10 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 100 milligrams	-
1,2,3,4-Tetramethylbenzene	Skin - Mild irritant	Rabbit	-	24 hours 100 milligrams	-

Sensitiser

Product/ingredient name	Route of exposure	Species	Result
oct-1-ene	skin	Guinea pig	Not sensitizing
Hex-1-ene	skin	Guinea pig	Not sensitizing

Mutagenicity

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : Not available.

Testmix, Part Number CP299103

SECTION 11: Toxicological information

Reproductive toxicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Specific target organ toxicity (single exposure)

Product/ingredient name	Category	Route of exposure	Target organs
Octane	Category 3	Not applicable.	Narcotic effects
nonane	Category 3	Not applicable.	Narcotic effects
Ethylcyclohexane	Category 3	Not applicable.	Narcotic effects
Cyclohexane	Category 3	Not applicable.	Narcotic effects
2-Methylpentane	Category 3	Not applicable.	Narcotic effects
methylcyclohexane	Category 3	Not applicable.	Narcotic effects
n-Heptane	Category 3	Not applicable.	Narcotic effects
n-Hexane	Category 3	Not applicable.	Narcotic effects
Non-1-ene	Category 3	Not applicable.	Respiratory tract irritation
pentamethylbenzene	Category 3	Not applicable.	Respiratory tract irritation
Toluene	Category 3	Not applicable.	Narcotic effects
cumene	Category 3	Not applicable.	Respiratory tract irritation
1,2,3,4-Tetramethylbenzene	Category 3	Not applicable.	Respiratory tract irritation
cis-bicyclo[4.4.0]decane	Category 3	Not applicable.	Respiratory tract irritation
pentane	Category 3	Not applicable.	Narcotic effects
2-Methylhexane	Category 3	Not applicable.	Narcotic effects
2-methylheptane	Category 3	Not applicable.	Narcotic effects

Specific target organ toxicity (repeated exposure)

Product/ingredient name	Category	Route of exposure	Target organs
n-Hexane	Category 2	Not determined	Not determined
Toluene	Category 2	Not determined	Not determined
benzene	Category 1	Not determined	Not determined
ethylbenzene	Category 2	Not determined	hearing organs

Aspiration hazard

Product/ingredient name	Result
Testmix, Part Number CP299103	ASPIRATION HAZARD - Category 1
isopropylcyclohexane	ASPIRATION HAZARD - Category 1
Octane	ASPIRATION HAZARD - Category 1
nonane	ASPIRATION HAZARD - Category 1
Ethylcyclohexane	ASPIRATION HAZARD - Category 1
Cyclohexane	ASPIRATION HAZARD - Category 1
2-Methylpentane	ASPIRATION HAZARD - Category 1
methylcyclohexane	ASPIRATION HAZARD - Category 1
n-Heptane	ASPIRATION HAZARD - Category 1
Hept-1-ene	ASPIRATION HAZARD - Category 1
n-Hexane	ASPIRATION HAZARD - Category 1
oct-1-ene	ASPIRATION HAZARD - Category 1
Non-1-ene	ASPIRATION HAZARD - Category 1
Decane	ASPIRATION HAZARD - Category 1
undecane	ASPIRATION HAZARD - Category 1
dodecane	ASPIRATION HAZARD - Category 1
Dec-1-ene	ASPIRATION HAZARD - Category 1
Toluene	ASPIRATION HAZARD - Category 1
benzene	ASPIRATION HAZARD - Category 1

Testmix, Part Number CP299103

SECTION 11: Toxicological information

ethylbenzene	ASPIRATION HAZARD - Category 1
cumene	ASPIRATION HAZARD - Category 1
Hex-1-ene	ASPIRATION HAZARD - Category 1
1-Methylcyclopentene	ASPIRATION HAZARD - Category 1
pentane	ASPIRATION HAZARD - Category 1
pent-1-ene	ASPIRATION HAZARD - Category 1
2-Methylhexane	ASPIRATION HAZARD - Category 1
2-methylheptane	ASPIRATION HAZARD - Category 1

Information on likely routes of exposure : Routes of entry anticipated: Oral, Dermal, Inhalation.

Potential acute health effects

- Inhalation** : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.
- Ingestion** : Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.
- Skin contact** : Causes skin irritation.
- Eye contact** : Causes serious eye irritation.

Symptoms related to the physical, chemical and toxicological characteristics

- Inhalation** : Adverse symptoms may include the following:
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness
reduced foetal weight
increase in foetal deaths
skeletal malformations
- Ingestion** : Adverse symptoms may include the following:
nausea or vomiting
reduced foetal weight
increase in foetal deaths
skeletal malformations
- Skin contact** : Adverse symptoms may include the following:
irritation
redness
reduced foetal weight
increase in foetal deaths
skeletal malformations
- Eye contact** : Adverse symptoms may include the following:
pain or irritation
watering
redness

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Short term exposure

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

Long term exposure

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

Potential chronic health effects

- General** : May cause damage to organs through prolonged or repeated exposure.

Testmix, Part Number CP299103

SECTION 11: Toxicological information

Carcinogenicity	: May cause cancer. Risk of cancer depends on duration and level of exposure.
Mutagenicity	: May cause genetic defects.
Teratogenicity	: No known significant effects or critical hazards.
Developmental effects	: No known significant effects or critical hazards.
Fertility effects	: Suspected of damaging fertility.
Other information	: Adverse symptoms may include the following: Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.

SECTION 12: Ecological information

12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
methylcyclohexane	Acute LC50 8800 µg/l Marine water	Fish - Morone saxatilis - Juvenile (Fledgling, Hatchling, Weanling)	96 hours
Cyclohexane	Acute LC50 4530 µg/l Fresh water	Fish - Pimephales promelas	96 hours
methylcyclohexane	Acute EC50 0.326 mg/l Fresh water	Daphnia	48 hours
	Acute LC50 5800 µg/l Marine water	Fish - Morone saxatilis - Juvenile (Fledgling, Hatchling, Weanling)	96 hours
n-Heptane	Acute LC50 375000 µg/l Fresh water	Fish - Oreochromis mossambicus	96 hours
n-Hexane	Acute LC50 2500 µg/l Fresh water	Fish - Pimephales promelas	96 hours
oct-1-ene	Acute LC50 4.8 mg/l Fresh water	Fish - Danio rerio - Young	96 hours
Non-1-ene	Acute EC50 3.2 to 10 mg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 10 mg/l Fresh water	Fish - Danio rerio - Young	96 hours
Decane	Acute EC50 89 mg/l Fresh water	Algae - Pseudokirchneriella subcapitata	96 hours
	Acute LC50 18000 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 >500 ppm Marine water	Fish - Cyprinodon variegatus - Juvenile (Fledgling, Hatchling, Weanling)	96 hours
Toluene	Acute EC50 433 ppm Marine water	Algae - Skeletonema costatum	96 hours
	Acute EC50 12500 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	72 hours
	Acute EC50 11600 µg/l Fresh water	Crustaceans - Gammarus pseudolimnaeus - Adult	48 hours
	Acute EC50 6000 µg/l Fresh water	Daphnia - Daphnia magna - Juvenile (Fledgling, Hatchling, Weanling)	48 hours
	Acute LC50 5500 µg/l Fresh water	Fish - Oncorhynchus kisutch - Fry	96 hours
o-xylene	Chronic NOEC 0.74 mg/l	Daphnia - Ceriodaphnia dubia	7 days
	Acute EC50 4700 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	72 hours
	Acute EC50 10700 µg/l Fresh water	Crustaceans - Artemia sp. - Nauplii	48 hours
	Acute EC50 1390 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
benzene	Acute LC50 7600 µg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
	Acute EC50 29000 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	72 hours
	Acute EC50 1600000 µg/l Fresh water	Algae - Selenastrum sp.	96 hours
	Acute EC50 9230 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 21 mg/l Marine water	Crustaceans - Artemia salina	48 hours
	Acute LC50 5.28 µl/L Fresh water	Fish - Oncorhynchus gorbuscha - Fry	96 hours
	Chronic EC10 >1360 mg/l Fresh water	Algae - Scenedesmus subspicatus	96 hours

Testmix, Part Number CP299103

SECTION 12: Ecological information

ethylbenzene	Chronic NOEC 98 mg/l Fresh water	Daphnia - Daphnia magna	21 days
	Chronic NOEC 1.5 to 5.4 ul/L Marine water	Fish - Morone saxatilis - Juvenile (Fledgling, Hatchling, Weanling)	4 weeks
	Acute EC50 4600 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	72 hours
	Acute EC50 3600 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	96 hours
cumene	Acute EC50 6530 µg/l Fresh water	Crustaceans - Artemia sp. - Nauplii	48 hours
	Acute EC50 2930 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 4200 µg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
	Acute EC50 2600 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	72 hours
Hex-1-ene	Acute EC50 7400 µg/l Fresh water	Crustaceans - Artemia sp. - Nauplii	48 hours
	Acute EC50 10600 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 2700 µg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
pent-1-ene	Acute EC50 4.4 mg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute NOEC 0.0034 mg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
	EC50 34 mg/l Fresh water	Algae - Desmodesmus subspicatus	72 hours
	EC50 35 mg/l Fresh water	Daphnia - Daphnia magna	48 hours
	NOEC 20 mg/l Fresh water	Daphnia - Daphnia magna	48 hours

12.2 Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
isopropylcyclohexane	OECD 310 Ready Biodegradability - CO2 in Sealed Vessels (Headspace Test)	1 % - Not readily - 28 days	-	-
methylcyclohexane	OECD 301D Ready Biodegradability - Closed Bottle Test	0 % - Not readily - 28 days	2.45 mg/l	-
undecane	OECD 301F Ready Biodegradability - Manometric Respirometry Test	80 % - Readily - 28 days	-	-
dodecane	OECD 301F Ready Biodegradability - Manometric Respirometry Test	76.6 % - Readily - 28 days	-	-
cyclopentane	OECD 301F Ready Biodegradability - Manometric Respirometry Test	0 % - Not readily - 28 days	-	-
pent-1-ene	OECD 310	0 % - Not readily - 28 days	-	-

Testmix, Part Number CP299103

SECTION 12: Ecological information

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
isopropylcyclohexane	-	-	Not readily
Octane	-	-	Readily
methylcyclohexane	-	-	Not readily
undecane	-	-	Readily
dodecane	-	-	Readily
cyclopentane	-	-	Not readily
Toluene	-	-	Readily
o-xylene	-	-	Readily
ethylbenzene	-	-	Readily
1,2,3,4-Tetramethylbenzene	-	-	Readily
Hex-1-ene	-	-	Readily
pent-1-ene	-	-	Not readily

12.3 Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
isopropylcyclohexane	6	-	high
Octane	5.18	198.7	low
nonane	5.65	105	low
Ethylcyclohexane	4.56	-	high
Cyclohexane	3.44	167	low
2-Methylpentane	3.74	-	low
methylcyclohexane	3.61	186.21	low
n-Heptane	4.66	552	high
Hept-1-ene	3.99	-	low
n-Hexane	4	501.187	high
oct-1-ene	4.47	3.1	low
Non-1-ene	5.15	1479.11	high
Decane	5.86	-	high
undecane	6.42	-	high
dodecane	6.98	239.88	low
tert-butylcyclohexane	5.04	-	high
Dec-1-ene	5.12	3.65	low
pentamethylbenzene	4.56	-	high
cyclopentane	3	70.8	low
Toluene	2.73	90	low
o-xylene	3.12	8.1 to 25.9	low
sec-butylbenzene	4.57	-	high
benzene	2.13	11	low
ethylbenzene	3.6	-	low
cumene	3.55	35.48	low
1,2,3-Trimethylbenzene	3.66	194.98	low
1,2,3,4-Tetramethylbenzene	4	-	high
cis-bicyclo[4.4.0]decane	-	1621.81	high
Hex-1-ene	3.87	2.59	low
pentane	3.45	171	low
pent-1-ene	2.66	-	low

12.4 Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

Date of issue/Date of revision : 22/08/2018

Testmix, Part Number CP299103

SECTION 12: Ecological information

Mobility : Not available.

12.5 Results of PBT and vPvB assessment

PBT : Not applicable.

vPvB : Not applicable.

12.6 Other adverse effects : No known significant effects or critical hazards.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

Hazardous waste : The classification of the product may meet the criteria for a hazardous waste.

Packaging

Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

Special precautions : This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapour from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

ADR/RID / IMDG / IATA : Not regulated.

Additional information

Remarks: De minimis quantities

14.6 Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code : Not available.

SECTION 15: Regulatory information

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

EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorisation

Annex XIV

None of the components are listed.

Substances of very high concern

None of the components are listed.

Testmix, Part Number CP299103

SECTION 15: Regulatory information

Annex XVII - Restrictions : Restricted to professional users.
on the manufacture,
placing on the market
and use of certain
dangerous substances,
mixtures and articles

Other EU regulations

Ozone depleting substances (1005/2009/EU)

Not listed.

Prior Informed Consent (PIC) (649/2012/EU)

Ingredient name	Annex	Status
Benzene	Annex I - Part 1	Listed

Seveso Directive

This product is controlled under the Seveso Directive.

Danger criteria

Category
5c E1

National regulations

Product/ingredient name	List name	Name on list	Classification	Notes
benzene	UK Occupational Exposure Limits EH40 - WEL	benzene; benzol	Carc.	-

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol (Annexes A, B, C, E)

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

Australia	: Not determined.
Canada	: Not determined.
China	: Not determined.
Europe	: All components are listed or exempted.
Japan	: Japan inventory (ENCS) : Not determined. Japan inventory (ISHL) : Not determined.
Malaysia	: Not determined.
New Zealand	: Not determined.
Philippines	: Not determined.
Republic of Korea	: Not determined.
Taiwan	: All components are listed or exempted.

Date of issue/Date of revision : 22/08/2018

20/22

Testmix, Part Number CP299103

SECTION 15: Regulatory information

Thailand	: Not determined.
Turkey	: Not determined.
United States	: Not determined.
Viet Nam	: Not determined.

15.2 Chemical safety assessment : This product contains substances for which Chemical Safety Assessments might still be required.

SECTION 16: Other information

☑ Indicates information that has changed from previously issued version.

Abbreviations and acronyms	: ATE = Acute Toxicity Estimate
	CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
	DNEL = Derived No Effect Level
	EUH statement = CLP-specific Hazard statement
	PNEC = Predicted No Effect Concentration
	RRN = REACH Registration Number

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification	Justification
☑ Flam. Liq. 2, H225	On basis of test data
Skin Irrit. 2, H315	Calculation method
Eye Irrit. 2, H319	Calculation method
Muta. 1B, H340	Calculation method
Carc. 1A, H350	Calculation method
Repr. 2, H361f (Fertility)	Calculation method
STOT SE 3, H336	Calculation method
STOT RE 2, H373	Calculation method
Asp. Tox. 1, H304	Expert judgment
Aquatic Acute 1, H400	Calculation method
Aquatic Chronic 1, H410	Calculation method

Full text of abbreviated H statements

H224	Extremely flammable liquid and vapour.
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H228	Flammable solid.
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.
H336	May cause drowsiness or dizziness.
H340	May cause genetic defects.
H350	May cause cancer.
H361d	Suspected of damaging the unborn child.
H361f	Suspected of damaging fertility.
H372	Causes damage to organs through prolonged or repeated exposure.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
H413	May cause long lasting harmful effects to aquatic life.

Full text of classifications [CLP/GHS]

Date of issue/Date of revision : 22/08/2018

21/22

Testmix, Part Number CP299103

SECTION 16: Other information

Acute Tox. 4, H312	ACUTE TOXICITY (dermal) - Category 4
Acute Tox. 4, H332	ACUTE TOXICITY (inhalation) - Category 4
Aquatic Acute 1, H400	SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1
Aquatic Chronic 1, H410	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 1
Aquatic Chronic 2, H411	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2
Aquatic Chronic 3, H412	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3
Aquatic Chronic 4, H413	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 4
Asp. Tox. 1, H304	ASPIRATION HAZARD - Category 1
Carc. 1A, H350	CARCINOGENICITY - Category 1A
EUH066	Repeated exposure may cause skin dryness or cracking.
Eye Irrit. 2, H319	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2
Flam. Liq. 1, H224	FLAMMABLE LIQUIDS - Category 1
Flam. Liq. 2, H225	FLAMMABLE LIQUIDS - Category 2
Flam. Liq. 3, H226	FLAMMABLE LIQUIDS - Category 3
Flam. Sol. 1, H228	FLAMMABLE SOLIDS - Category 1
Muta. 1B, H340	GERM CELL MUTAGENICITY - Category 1B
Repr. 2, H361d	REPRODUCTIVE TOXICITY (Unborn child) - Category 2
Repr. 2, H361f	REPRODUCTIVE TOXICITY (Fertility) - Category 2
Skin Irrit. 2, H315	SKIN CORROSION/IRRITATION - Category 2
STOT RE 1, H372	SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 1
STOT RE 2, H373	SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2
STOT SE 3, H335	SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Respiratory tract irritation) - Category 3
STOT SE 3, H336	SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Narcotic effects) - Category 3

Date of issue/ Date of revision : 22/08/2018

Date of previous issue : 23/03/2017

Version : 2

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