

SAFETY DATA SHEET

Testmix, Part Number CP299107

Section 1. Identification

Product identifier : Testmix, Part Number CP299107
Part No. : CP299107

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

Analytical chemistry.
 5 x 1 ml

Supplier/Manufacturer : Agilent Technologies Australia Pty Ltd
 679 Springvale Road
 Mulgrave
 Victoria 3170, Australia
 1800 802 402

Emergency telephone number (with hours of operation) : CHEMTREC®: (61)-290372994

Section 2. Hazard(s) identification

Classification of the substance or mixture

H225 FLAMMABLE LIQUIDS - Category 2
 H315 SKIN CORROSION/IRRITATION - Category 2
 H319 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2A
 H340 GERM CELL MUTAGENICITY - Category 1B
 H350 CARCINOGENICITY - Category 1A
 H360 REPRODUCTIVE TOXICITY (Fertility) - Category 1A
 H360 REPRODUCTIVE TOXICITY (Unborn child) - Category 1A
 H335 SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Respiratory tract irritation) - Category 3
 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
 H401 ACUTE AQUATIC HAZARD - Category 2
 H410 LONG-TERM AQUATIC HAZARD - Category 1

Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 30.6%

Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 15.2%

GHS 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.
 H360 - May damage fertility or the unborn child.
 H304 - May be fatal if swallowed and enters airways.
 H335 - May cause respiratory irritation.

Section 2. Hazard(s) identification

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.
- P202 - Do not handle until all safety precautions have been read and understood.
- P281 - Use personal protective equipment as required.
- P280 - Wear protective gloves. Wear eye or face protection.
- P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P241 - Use explosion-proof electrical, ventilating, lighting and all material-handling equipment.
- P242 - Use only non-sparking tools.
- P243 - Take precautionary measures against static discharge.
- P233 - Keep container tightly closed.
- P271 - Use only outdoors or in a well-ventilated area.
- P273 - Avoid release to the environment.
- P260 - Do not breathe vapour.
- P264 - Wash hands thoroughly after handling.

Response

- : P391 - Collect spillage.
- P314 - Get medical attention if you feel unwell.
- P308 + P313 - IF exposed or concerned: Get medical attention.
- P304 + P340 + P312 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or physician if you feel unwell.
- 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 or shower.
- P302 + P352 + P362 - IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing.
- P332 + P313 - If skin irritation occurs: Get medical attention.
- P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P337 + P313 - If eye irritation persists: Get medical attention.

Storage

- : P405 - Store locked up.
- P403 - Store in a well-ventilated place.
- P235 - Keep cool.

Disposal

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

Supplemental label elements

- : Not applicable.

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

Section 3. Composition and ingredient information

Substance/mixture : Mixture

CAS number/other identifiers

Ingredient name	% (w/w)	CAS number
α-Terpinene	≤10	98-82-8
trans-Bicyclo[4.4.0]decane	≤10	493-02-7
Heptylbenzene	≤5.8	1078-71-3
Decane	≤10	124-18-5
o-xylene	≤10	95-47-6
ethylbenzene	≤10	100-41-4
Butylbenzene	≤5.1	104-51-8
undecane	≤5	1120-21-4

Section 3. Composition and ingredient information

Tetradecane	≤5	629-59-4
Octane	≤4.2	111-65-9
2,2,4-trimethylpentane	≤4.1	540-84-1
dodecane	≤5	112-40-3
methylcyclohexane	≤5	108-87-2
nonane	≤3	111-84-2
benzene	≤3	71-43-2
Toluene	≤3	108-88-3
4-Methylcyclohexene	≤3	591-47-9
n-Heptane	≤2.1	142-82-5
2,3-Dimethylpentane	≤2.1	565-59-3
Cyclohexene	≤3	110-83-8
Cyclohexane	≤1.2	110-82-7
Hex-1-ene	<1	592-41-6

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 and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary 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.
- 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.

Most important symptoms/effects, 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. May cause respiratory irritation.
- 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

Section 4. First aid measures

- Eye contact** : Adverse symptoms may include the following:
 pain or irritation
 watering
 redness
- Inhalation** : Adverse symptoms may include the following:
 respiratory tract irritation
 coughing
 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
- Ingestion** : Adverse symptoms may include the following:
 nausea or vomiting
 reduced foetal weight
 increase in foetal deaths
 skeletal malformations

Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments** : No specific treatment.
- 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.

See toxicological information (Section 11)

Section 5. Firefighting measures

Extinguishing media

- Suitable extinguishing media** : Use dry chemical, CO₂, water spray (fog) or foam.
- Unsuitable extinguishing media** : Do not use water jet.

Specific hazards arising from the chemical : Highly flammable liquid and vapour. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Runoff to sewer may create fire or explosion hazard. 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 thermal decomposition products** : Decomposition products may include the following materials:
 carbon dioxide
 carbon monoxide

Section 5. Firefighting measures

- Special protective actions 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.
- Hazchem code** : ~~3~~YE

Section 6. Accidental release measures

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** : 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".
- 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.

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.

Section 7. Handling and storage

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.

Section 7. Handling and storage

Conditions for safe storage, including any incompatibilities : 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.

Section 8. Exposure controls and personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
α-Terpinene	Safe Work Australia (Australia, 1/2014). Absorbed through skin. STEL: 375 mg/m ³ 15 minutes. STEL: 75 ppm 15 minutes. TWA: 125 mg/m ³ 8 hours. TWA: 25 ppm 8 hours.
trans-Bicyclo[4.4.0]decane	TRGS900 AGW (Germany, 11/2015). PEAK: 58 mg/m ³ 15 minutes. PEAK: 10 ppm 15 minutes. TWA: 29 mg/m ³ 8 hours. TWA: 5 ppm 8 hours.
Decane	TRGS900 AGW (Germany, 11/2015). TWA: 600 mg/m ³ 8 hours. PEAK: 1200 mg/m ³ 15 minutes.
o-xylene	Safe Work Australia (Australia, 1/2014). STEL: 655 mg/m ³ 15 minutes. STEL: 150 ppm 15 minutes. TWA: 350 mg/m ³ 8 hours. TWA: 80 ppm 8 hours.
ethylbenzene	Safe Work Australia (Australia, 1/2014). STEL: 543 mg/m ³ 15 minutes. STEL: 125 ppm 15 minutes. TWA: 434 mg/m ³ 8 hours. TWA: 100 ppm 8 hours.
undecane	TRGS900 AGW (Germany, 11/2015). TWA: 600 mg/m ³ 8 hours. PEAK: 1200 mg/m ³ 15 minutes.
Tetradecane	TRGS900 AGW (Germany, 11/2015). TWA: 600 mg/m ³ 8 hours. PEAK: 1200 mg/m ³ 15 minutes.
Octane	Safe Work Australia (Australia, 1/2014). STEL: 1750 mg/m ³ 15 minutes. STEL: 375 ppm 15 minutes. TWA: 1400 mg/m ³ 8 hours. TWA: 300 ppm 8 hours.
2,2,4-trimethylpentane	ACGIH TLV (United States, 3/2016). TWA: 300 ppm 8 hours.
dodecane	TRGS900 AGW (Germany, 11/2015). TWA: 600 mg/m ³ 8 hours. PEAK: 1200 mg/m ³ 15 minutes.
methylcyclohexane	Safe Work Australia (Australia, 1/2014). TWA: 1610 mg/m ³ 8 hours. TWA: 400 ppm 8 hours.
nonane	Safe Work Australia (Australia, 1/2014). TWA: 1050 mg/m ³ 8 hours. TWA: 200 ppm 8 hours.

Section 8. Exposure controls and personal protection

benzene	Safe Work Australia (Australia, 1/2014). TWA: 3.2 mg/m ³ 8 hours. TWA: 1 ppm 8 hours.
Toluene	Safe Work Australia (Australia, 1/2014). Absorbed through skin. STEL: 574 mg/m ³ 15 minutes. STEL: 150 ppm 15 minutes. TWA: 191 mg/m ³ 8 hours. TWA: 50 ppm 8 hours.
n-Heptane	Safe Work Australia (Australia, 1/2014). STEL: 2050 mg/m ³ 15 minutes. STEL: 500 ppm 15 minutes. TWA: 1640 mg/m ³ 8 hours. TWA: 400 ppm 8 hours.
2,3-Dimethylpentane	ACGIH TLV (United States, 3/2016). TWA: 400 ppm 8 hours. TWA: 1640 mg/m ³ 8 hours. STEL: 500 ppm 15 minutes. STEL: 2050 mg/m ³ 15 minutes.
Cyclohexene	Safe Work Australia (Australia, 1/2014). TWA: 1010 mg/m ³ 8 hours. TWA: 300 ppm 8 hours.
Cyclohexane	Safe Work Australia (Australia, 1/2014). TWA: 350 mg/m ³ 8 hours. TWA: 100 ppm 8 hours. STEL: 300 ppm 15 minutes. STEL: 1050 mg/m ³ 15 minutes.
Hex-1-ene	ACGIH TLV (United States, 3/2016). TWA: 50 ppm 8 hours.

- 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.
- 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.
- 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

Section 8. Exposure controls and personal protection

- 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.
- 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. Recommended: Ensure an MSHA/NIOSH-approved respirator or equivalent is used.

Section 9. Physical and chemical properties

Appearance

- Physical state** : Liquid. [Clear.]
- Colour** : Colourless.
- Odour** : Gasoline-like
- Odour threshold** : Not available.
- pH** : Not available.
- Melting point** : Not available.
- Boiling point** : Not available.
- Flash point** : Closed cup: -18 to 23°C (-0.4 to 73.4°F)
- Evaporation rate** : Not available.
- Flammability (solid, gas)** : Not applicable.
- Lower and upper explosive (flammable) limits** : Not available.
- Vapour pressure** : Not available.
- Vapour density** : Not available.
- Relative density** : 0.8 [Water = 1]
- Density** : 0.8 g/cm³
- Solubility** : 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.

Section 10. Stability and reactivity

- Reactivity** : No specific test data related to reactivity available for this product or its ingredients.
- Chemical stability** : The product is stable.
- Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.
- 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.

Section 10. Stability and reactivity

Incompatible materials : Reactive or incompatible with the following materials:
oxidizing materials

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
<input checked="" type="checkbox"/> Cumene	LC50 Inhalation Dusts and mists	Rat	39000 mg/m ³	4 hours
	LD50 Oral	Rat	1400 mg/kg	-
Decane	LD50 Dermal	Rabbit - Male, Female	>5000 mg/kg	-
	LD50 Oral	Rat - Male, Female	>5000 mg/kg	-
o-xylene	LC50 Inhalation Vapour	Rat	5300 ppm	4 hours
	LD50 Oral	Rat	3000 mg/kg	-
ethylbenzene	LC50 Inhalation Vapour	Rat	17200 mg/m ³	4 hours
	LC50 Inhalation Vapour	Rat	4000 ppm	4 hours
	LD50 Dermal	Rabbit	>5000 mg/kg	-
	LD50 Oral	Rat	3500 mg/kg	-
undecane	LC50 Inhalation Vapour	Rat - Male, Female	>9300 mg/m ³	4 hours
	LD50 Oral	Rat - Male, Female	>15000 mg/kg	-
Tetradecane	LD50 Dermal	Rabbit - Male, Female	>5000 mg/kg	-
	LD50 Oral	Rat - Male, Female	>5000 mg/kg	-
Octane	LC50 Inhalation Vapour	Rat	118 g/m ³	4 hours
	LC50 Inhalation Vapour	Rat	25260 ppm	4 hours
2,2,4-trimethylpentane	LC50 Inhalation Vapour	Rat - Male, Female	>33.52 mg/l	4 hours
	LD50 Oral	Rat - Male, Female	>5000 mg/kg	-
dodecane	LD50 Dermal	Rabbit - Male, Female	>5000 mg/kg	-
	LD50 Oral	Rat - Male, Female	>5000 mg/kg	-
nonane	LC50 Inhalation Vapour	Rat	3200 ppm	4 hours
benzene	LD50 Oral	Rat	930 mg/kg	-
Toluene	LC50 Inhalation Vapour	Rat	49 g/m ³	4 hours
	LD50 Oral	Rat	636 mg/kg	-
n-Heptane	LC50 Inhalation Vapour	Rat	103 g/m ³	4 hours
	LC50 Inhalation Vapour	Rat	48000 ppm	4 hours
Cyclohexene	LD50 Oral	Rat	1300 mg/kg	-
Cyclohexane	LD50 Oral	Rat	6240 mg/kg	-
Hex-1-ene	LC50 Inhalation Vapour	Rat	32000 ppm	4 hours

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
<input checked="" type="checkbox"/> 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	-
ethylbenzene	Skin - Mild irritant	Rabbit	-	24 hours 15 milligrams	-

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Tetradecane	Skin - Mild irritant	Rabbit	-	-	-
dodecane	Eyes - Mild irritant	Rabbit	-	-	-
	Skin - Moderate irritant	Rat	-	96 hours 300 microliters	-
	Skin - Moderate irritant	Rabbit	-	24 hours 0.05 Milliliters	-
methylcyclohexane	Eyes - Mild irritant	Rabbit	-	24 hours 100 microliters	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 microliters	-
nonane	Skin - Moderate irritant	Rat	-	96 hours 300 microliters	-
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	-
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	-

Conclusion/Summary

Skin : Repeated exposure may cause skin dryness or cracking.

Sensitisation

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

Mutagenicity

Not available.

Carcinogenicity

Not available.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
Cumene	Category 3	Not applicable.	Respiratory tract irritation
trans-Bicyclo[4.4.0]decane	Category 3	Not applicable.	Respiratory tract irritation
o-xylene	Category 3	Not applicable.	Respiratory tract irritation
Octane	Category 3	Not applicable.	Narcotic effects
2,2,4-trimethylpentane	Category 3	Not applicable.	Narcotic effects

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methylcyclohexane	Category 3	Not applicable.	Narcotic effects
nonane	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
4-Methylcyclohexene	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
n-Heptane	Category 3	Not applicable.	Narcotic effects
2,3-Dimethylpentane	Category 3	Not applicable.	Narcotic effects
Cyclohexene	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Cyclohexane	Category 3	Not applicable.	Narcotic effects

Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
benzene	Category 1	Not determined	Not determined
Toluene	Category 2	Not determined	Not determined

Aspiration hazard

Name	Result
Testmix, Part Number CP299107	ASPIRATION HAZARD - Category 1
cumene	ASPIRATION HAZARD - Category 1
Decane	ASPIRATION HAZARD - Category 1
undecane	ASPIRATION HAZARD - Category 1
Tetradecane	ASPIRATION HAZARD - Category 1
Octane	ASPIRATION HAZARD - Category 1
2,2,4-trimethylpentane	ASPIRATION HAZARD - Category 1
dodecane	ASPIRATION HAZARD - Category 1
methylcyclohexane	ASPIRATION HAZARD - Category 1
nonane	ASPIRATION HAZARD - Category 1
benzene	ASPIRATION HAZARD - Category 1
4-Methylcyclohexene	ASPIRATION HAZARD - Category 1
n-Heptane	ASPIRATION HAZARD - Category 1
2,3-Dimethylpentane	ASPIRATION HAZARD - Category 1
Cyclohexene	ASPIRATION HAZARD - Category 1
Cyclohexane	ASPIRATION HAZARD - Category 1
Hex-1-ene	ASPIRATION HAZARD - Category 1

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

Potential acute health effects

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

Symptoms related to the physical, chemical and toxicological characteristics

- Eye contact** : Adverse symptoms may include the following:
 pain or irritation
 watering
 redness

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- Inhalation** : Adverse symptoms may include the following:
 respiratory tract irritation
 coughing
 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
- Ingestion** : Adverse symptoms may include the following:
 nausea or vomiting
 reduced foetal weight
 increase in foetal deaths
 skeletal malformations

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

Not available.

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

Carcinogenicity : May cause cancer. Risk of cancer depends on duration and level of exposure.

Mutagenicity : May cause genetic defects.

Teratogenicity : May damage the unborn child.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : May damage fertility.

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Oral	73296.7 mg/kg
Dermal	14755.3 mg/kg
Inhalation (vapours)	58.55 mg/l

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
Cumene	Acute EC50 2600 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	72 hours
	Acute EC50 7500 µg/l Fresh water	Crustaceans - Artemia sp. - Nauplii	48 hours
Decane	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
	Acute EC50 89 mg/l Fresh water	Algae - Pseudokirchneriella subcapitata	96 hours
	Acute LC50 18000 to 24000 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
o-xylene	Acute LC50 >500 ppm Marine water	Fish - Cyprinodon variegatus - Juvenile (Fledgling, Hatchling, Weanling)	96 hours
	Acute EC50 4700 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	72 hours
ethylbenzene	Acute EC50 12700 µg/l Fresh water	Crustaceans - Artemia sp. - Nauplii	48 hours
	Acute EC50 1390 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 7600 µg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
Butylbenzene	Acute EC50 4600 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	72 hours
	Acute EC50 3600 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	96 hours
	Acute EC50 6530 µg/l Fresh water	Crustaceans - Artemia sp. - Nauplii	48 hours
	Acute EC50 2970 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
methylcyclohexane	Acute LC50 4200 µg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
	Acute EC50 380 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
benzene	Acute LC50 5800 µg/l Marine water	Fish - Morone saxatilis - Juvenile (Fledgling, Hatchling, Weanling)	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
Toluene	Acute LC50 5.28 ul/L Fresh water	Fish - Oncorhynchus gorbuscha - Fry	96 hours
	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 12500 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	72 hours
	Acute EC50 11600 µg/l Fresh water	Crustaceans - Gammarus pseudolimnaeus - Adult	48 hours
n-Heptane	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
	Chronic NOEC 0.74 mg/l	Daphnia - Ceriodaphnia dubia	7 days
Cyclohexene	Acute LC50 375000 µg/l Fresh water	Fish - Oreochromis mossambicus	96 hours
	Acute EC50 5300 µg/l Fresh water	Daphnia - Daphnia magna	48 hours

Section 12. Ecological information

Cyclohexane	Acute EC50 4500 µg/l Fresh water Acute LC50 8300 µg/l Marine water	Fish - Poecilia reticulata Fish - Morone saxatilis - Juvenile (Fledgling, Hatchling, Weanling)	96 hours 96 hours
Hex-1-ene	Acute EC50 4.4 mg/l Fresh water Acute NOEC 0.0034 mg/l Fresh water	Daphnia - Daphnia magna Fish - Oncorhynchus mykiss	48 hours 96 hours

Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
✓ Tetradecane	OECD 301F Ready Biodegradability - Manometric Respirometry Test	80 % - Readily - 28 days	-	22 mg/l Activated sludge

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
✓ o-xylene	-	-	Inherent
ethylbenzene	-	-	Readily
Tetradecane	-	-	Readily
Toluene	-	-	Readily
Hex-1-ene	-	-	Not readily

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
✓ Cumene	3.55	35.48	low
trans-Bicyclo[4.4.0]decane	-	1905.46	high
Heptylbenzene	5.37	-	high
Decane	5.86	-	high
o-xylene	3.12	8.1 to 25.9	low
ethylbenzene	3.6	-	low
Butylbenzene	4.38	-	high
undecane	6.42	-	high
Tetradecane	8.11	-	high
Octane	5.18	198.7	low
2,2,4-trimethylpentane	4.08	231	low
dodecane	6.98	239.88	low
methylcyclohexane	3.61	186.21	low
nonane	5.65	105	low
benzene	2.13	11	low
Toluene	2.73	90	low
n-Heptane	4.66	552	high
Cyclohexene	2.99	23 to 45	low
Cyclohexane	3.44	167	low
Hex-1-ene	3.87	2.59	low

Mobility in soil

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

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

Section 13. Disposal considerations

Disposal methods : 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. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. 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

Regulatory information

ADG / IMDG / IATA : Not regulated as Dangerous Goods according to the ADG Code .

Additional information : **Remarks**
De minimis quantities

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.

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

Section 15. Regulatory information

Standard Uniform Schedule of Medicine and Poisons

7

Model Work Health and Safety Regulations - Scheduled Substances

<u>Ingredient name</u>	<u>Schedule</u>
benzene	Restricted carcinogen [All uses involving benzene as a feedstock containing more than 50% of benzene by volume; Restricted use - Genuine research or analysis; For spray painting if the substance contains more than 1% by volume]

Australia inventory (AICS) : Not determined.

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.

Section 15. Regulatory information

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

International lists

National inventory

Canada	: Not determined.
China	: Not determined.
Europe	: All components are listed or exempted.
Japan	: <input checked="" type="checkbox"/> 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.
Turkey	: Not determined.
United States	: Not determined.

Section 16. Any other relevant information

History

Date of issue/Date of revision : 29/09/2016

Date of previous issue : 16/09/2014.

Version : 4

Key to abbreviations

: ADG = Australian Dangerous Goods
ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
NOHSC = National Occupational Health and Safety Commission
SUSMP = Standard Uniform Schedule of Medicine and Poisons
UN = United Nations

Procedure used to derive the classification

Classification	Justification
<input checked="" type="checkbox"/> Flam. Liq. 2, H225	On basis of test data
Skin Irrit. 2, H315	Calculation method
Eye Irrit. 2A, H319	Calculation method
Muta. 1B, H340	Calculation method
Carc. 1A, H350	Calculation method
Repr. 1A, H360 (Fertility)	Calculation method
Repr. 1A, H360 (Unborn child)	Calculation method
STOT SE 3, H335	Calculation method
STOT SE 3, H336	Calculation method
STOT RE 2, H373	Calculation method
Asp. Tox. 1, H304	Expert judgment
Aquatic Acute 2, H401	Calculation method
Aquatic Chronic 1, H410	Calculation method

References : Not available.

Indicates information that has changed from previously issued version.

Section 16. Any other relevant information

[Notice to reader](#)

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