Conforms to US OSHA Hazard Communication 29CFR1910.1200

SAFETY DATA SHEET

Agilent Technologies

GC/MS Checkout Sample

Section 1. Identification

1.1 Product identifier

Product name : GC/MS Checkout Sample

Part no. (chemical kit) : 05970-60045

Part no. :

GC/MS Checkout Sample, 10 ng/ul	05970-60045-1
GC/MS Checkout Sample (100 pg/uL)	05970-60045-2
GC/MS Checkout Sample (100 ng/uL)	05970-60045-3

Validation date : 5/29/2024

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

Identified uses : Reagents and Standards for Analytical Chemistry Laboratory Use

GC/MS Checkout Sample, 10 ng/ul	1 x 1 ml
GC/MS Checkout Sample (100 pg/uL)	1 x 1 ml
GC/MS Checkout Sample (100 ng/uL)	1 x 1 ml

1.3 Details of the supplier of the safety data sheet

Supplier/Manufacturer : Agilent Technologies, Inc.
5301 Stevens Creek Blvd
Santa Clara, CA 95051, USA
800-227-9770

1.4 Emergency telephone number

In case of emergency : CHEMTREC®: 1-800-424-9300

Section 2. Hazards identification

2.1 Classification of the substance or mixture

OSHA/HCS status :

GC/MS Checkout Sample, 10 ng/ul	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
GC/MS Checkout Sample (100 pg/uL)	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
GC/MS Checkout Sample (100 ng/uL)	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture

GC/MS Checkout Sample, 10 ng/ul

H225	FLAMMABLE LIQUIDS - Category 2
H315	SKIN IRRITATION - Category 2
H336	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
H304	ASPIRATION HAZARD - Category 1
H400	AQUATIC HAZARD (ACUTE) - Category 1
H410	AQUATIC HAZARD (LONG-TERM) - Category 1

GC/MS Checkout Sample (100 pg/uL)

H225	FLAMMABLE LIQUIDS - Category 2
H315	SKIN IRRITATION - Category 2
H336	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
H304	ASPIRATION HAZARD - Category 1
H400	AQUATIC HAZARD (ACUTE) - Category 1

Section 2. Hazards identification

H410	AQUATIC HAZARD (LONG-TERM) - Category 1

GC/MS Checkout Sample (100 ng/uL)

H225	FLAMMABLE LIQUIDS - Category 2
H315	SKIN IRRITATION - Category 2
H336	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
H304	ASPIRATION HAZARD - Category 1
H400	AQUATIC HAZARD (ACUTE) - Category 1
H410	AQUATIC HAZARD (LONG-TERM) - Category 1

2.2 GHS label elements

Hazard pictograms :

GC/MS Checkout Sample, 10 ng/ul

GC/MS Checkout Sample (100 pg/uL)

GC/MS Checkout Sample (100 ng/uL)

Signal word :

GC/MS Checkout Sample, 10 ng/ul	Danger
GC/MS Checkout Sample (100 pg/uL)	Danger
GC/MS Checkout Sample (100 ng/uL)	Danger

Hazard statements :

GC/MS Checkout Sample, 10 ng/ul

H225 - Highly flammable liquid and vapor.
H304 - May be fatal if swallowed and enters airways.
H315 - Causes skin irritation.
H336 - May cause drowsiness or dizziness.
H410 - Very toxic to aquatic life with long lasting effects.

GC/MS Checkout Sample (100 pg/uL)

H225 - Highly flammable liquid and vapor.
H304 - May be fatal if swallowed and enters airways.
H315 - Causes skin irritation.
H336 - May cause drowsiness or dizziness.
H410 - Very toxic to aquatic life with long lasting effects.

GC/MS Checkout Sample (100 ng/uL)

H225 - Highly flammable liquid and vapor.
H304 - May be fatal if swallowed and enters airways.
H315 - Causes skin irritation.
H336 - May cause drowsiness or dizziness.
H410 - Very toxic to aquatic life with long lasting effects.

Precautionary statements

Section 2. Hazards identification

Prevention	:	GC/MS Checkout Sample, 10 ng/ul	P280 - Wear protective gloves. P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P241 - Use explosion-proof electrical, ventilating or lighting equipment. P242 - Use non-sparking tools. P243 - Take action to prevent static discharges. P273 - Avoid release to the environment. P261 - Avoid breathing vapor. P264 - Wash thoroughly after handling.
		GC/MS Checkout Sample (100 pg/uL)	P280 - Wear protective gloves. P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P241 - Use explosion-proof electrical, ventilating or lighting equipment. P242 - Use non-sparking tools. P243 - Take action to prevent static discharges. P273 - Avoid release to the environment. P261 - Avoid breathing vapor. P264 - Wash thoroughly after handling.
		GC/MS Checkout Sample (100 ng/uL)	P280 - Wear protective gloves. P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P241 - Use explosion-proof electrical, ventilating or lighting equipment. P242 - Use non-sparking tools. P243 - Take action to prevent static discharges. P273 - Avoid release to the environment. P261 - Avoid breathing vapor. P264 - Wash thoroughly after handling.
Response	:	GC/MS Checkout Sample, 10 ng/ul	P391 - Collect spillage. P304 + P312 - IF INHALED: Call a POISON CENTER or doctor if you feel unwell. P301 + P310, P331 - IF SWALLOWED: Immediately call a POISON CENTER or doctor. Do NOT induce vomiting. P362 + P364 - Take off contaminated clothing and wash it before reuse. P302 + P352 - IF ON SKIN: Wash with plenty of water.
		GC/MS Checkout Sample (100 pg/uL)	P391 - Collect spillage. P304 + P312 - IF INHALED: Call a POISON CENTER or doctor if you feel unwell. P301 + P310, P331 - IF SWALLOWED: Immediately call a POISON CENTER or doctor. Do NOT induce vomiting. P362 + P364 - Take off contaminated clothing and wash it before reuse. P302 + P352 - IF ON SKIN: Wash with plenty of water.
		GC/MS Checkout Sample (100 ng/uL)	P391 - Collect spillage. P304 + P312 - IF INHALED: Call a POISON CENTER or doctor if you feel unwell.

Section 2. Hazards identification

			P301 + P310, P331 - IF SWALLOWED: Immediately call a POISON CENTER or doctor. Do NOT induce vomiting. P362 + P364 - Take off contaminated clothing and wash it before reuse. P302 + P352 - IF ON SKIN: Wash with plenty of water.
Storage	:	GC/MS Checkout Sample, 10 ng/ul	P403 + P233 - Store in a well-ventilated place. Keep container tightly closed. P403 + P235 - Keep cool.
		GC/MS Checkout Sample (100 pg/uL)	P403 + P233 - Store in a well-ventilated place. Keep container tightly closed. P403 + P235 - Keep cool.
		GC/MS Checkout Sample (100 ng/uL)	P403 + P233 - Store in a well-ventilated place. Keep container tightly closed. P403 + P235 - Keep cool.
Disposal	:	GC/MS Checkout Sample, 10 ng/ul	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
		GC/MS Checkout Sample (100 pg/uL)	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
		GC/MS Checkout Sample (100 ng/uL)	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
Supplemental label elements	:	GC/MS Checkout Sample, 10 ng/ul	None known.
		GC/MS Checkout Sample (100 pg/uL)	None known.
		GC/MS Checkout Sample (100 ng/uL)	None known.

2.3 Other hazards

Hazards not otherwise classified	:	GC/MS Checkout Sample, 10 ng/ul	None known.
		GC/MS Checkout Sample (100 pg/uL)	None known.
		GC/MS Checkout Sample (100 ng/uL)	None known.

Section 3. Composition/information on ingredients

Substance/mixture	:	GC/MS Checkout Sample, 10 ng/ul	Mixture
		GC/MS Checkout Sample (100 pg/uL)	Mixture
		GC/MS Checkout Sample (100 ng/uL)	Mixture

Ingredient name	%	CAS number
GC/MS Checkout Sample, 10 ng/ul		
2,2,4-trimethylpentane	≥90	540-84-1
GC/MS Checkout Sample (100 pg/uL)		
2,2,4-trimethylpentane	≥90	540-84-1
GC/MS Checkout Sample (100 ng/uL)		
2,2,4-trimethylpentane	≥90	540-84-1

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

Section 3. Composition/information on ingredients

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified and hence require reporting in this section.

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

Section 4. First aid measures

4.1 Description of necessary first aid measures

Eye contact	:	GC/MS Checkout Sample, 10 ng/ul	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.
		GC/MS Checkout Sample (100 pg/uL)	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.
		GC/MS Checkout Sample (100 ng/uL)	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	:	GC/MS Checkout Sample, 10 ng/ul	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.
		GC/MS Checkout Sample (100 pg/uL)	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.
		GC/MS Checkout Sample (100 ng/uL)	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

Section 4. First aid measures

			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	:	GC/MS Checkout Sample, 10 ng/ul	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.
		GC/MS Checkout Sample (100 pg/uL)	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.
		GC/MS Checkout Sample (100 ng/uL)	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.
Ingestion	:	GC/MS Checkout Sample, 10 ng/ul	Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. 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.
		GC/MS Checkout Sample (100 pg/uL)	Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. 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.
		GC/MS Checkout Sample (100 ng/uL)	Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. 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

Section 4. First aid measures

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.

4.2 Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact	:	GC/MS Checkout Sample, 10 ng/ul	No known significant effects or critical hazards.
		GC/MS Checkout Sample (100 pg/uL)	No known significant effects or critical hazards.
		GC/MS Checkout Sample (100 ng/uL)	No known significant effects or critical hazards.
Inhalation	:	GC/MS Checkout Sample, 10 ng/ul	Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.
		GC/MS Checkout Sample (100 pg/uL)	Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.
		GC/MS Checkout Sample (100 ng/uL)	Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.
Skin contact	:	GC/MS Checkout Sample, 10 ng/ul	Causes skin irritation.
		GC/MS Checkout Sample (100 pg/uL)	Causes skin irritation.
		GC/MS Checkout Sample (100 ng/uL)	Causes skin irritation.
Ingestion	:	GC/MS Checkout Sample, 10 ng/ul	Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.
		GC/MS Checkout Sample (100 pg/uL)	Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.
		GC/MS Checkout Sample (100 ng/uL)	Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

Over-exposure signs/symptoms

Eye contact	:	GC/MS Checkout Sample, 10 ng/ul	Adverse symptoms may include the following: pain or irritation watering redness
		GC/MS Checkout Sample (100 pg/uL)	Adverse symptoms may include the following: pain or irritation watering redness
		GC/MS Checkout Sample (100 ng/uL)	Adverse symptoms may include the following: pain or irritation watering redness

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Inhalation	:	GC/MS Checkout Sample, 10 ng/ul	Adverse symptoms may include the following: nausea or vomiting headache drowsiness/fatigue dizziness/vertigo unconsciousness
		GC/MS Checkout Sample (100 pg/uL)	Adverse symptoms may include the following: nausea or vomiting headache drowsiness/fatigue dizziness/vertigo unconsciousness
		GC/MS Checkout Sample (100 ng/uL)	Adverse symptoms may include the following: nausea or vomiting headache drowsiness/fatigue dizziness/vertigo unconsciousness
Skin contact	:	GC/MS Checkout Sample, 10 ng/ul	Adverse symptoms may include the following: irritation redness
		GC/MS Checkout Sample (100 pg/uL)	Adverse symptoms may include the following: irritation redness
		GC/MS Checkout Sample (100 ng/uL)	Adverse symptoms may include the following: irritation redness
Ingestion	:	GC/MS Checkout Sample, 10 ng/ul	Adverse symptoms may include the following: nausea or vomiting
		GC/MS Checkout Sample (100 pg/uL)	Adverse symptoms may include the following: nausea or vomiting
		GC/MS Checkout Sample (100 ng/uL)	Adverse symptoms may include the following: nausea or vomiting

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

Notes to physician	:	GC/MS Checkout Sample, 10 ng/ul	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
		GC/MS Checkout Sample (100 pg/uL)	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
		GC/MS Checkout Sample (100 ng/uL)	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments	:	GC/MS Checkout Sample, 10 ng/ul	No specific treatment.
		GC/MS Checkout Sample (100 pg/uL)	No specific treatment.
		GC/MS Checkout Sample (100 ng/uL)	No specific treatment.

Section 4. First aid measures

Protection of first-aiders	:	GC/MS Checkout Sample, 10 ng/ul	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.
		GC/MS Checkout Sample (100 pg/uL)	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.
		GC/MS Checkout Sample (100 ng/uL)	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.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media	:	GC/MS Checkout Sample, 10 ng/ul	Use dry chemical, CO_2, water spray (fog) or foam.
		GC/MS Checkout Sample (100 pg/uL)	Use dry chemical, CO_2, water spray (fog) or foam.
		GC/MS Checkout Sample (100 ng/uL)	Use dry chemical, CO_2, water spray (fog) or foam.
Unsuitable extinguishing media	:	GC/MS Checkout Sample, 10 ng/ul	Do not use water jet.
		GC/MS Checkout Sample (100 pg/uL)	Do not use water jet.
		GC/MS Checkout Sample (100 ng/uL)	Do not use water jet.

5.2 Special hazards arising from the substance or mixture

Specific hazards arising from the chemical	:	GC/MS Checkout Sample, 10 ng/ul	Highly flammable liquid and vapor. 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. The vapor/gas is heavier than air and will spread along the ground. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. 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.
		GC/MS Checkout Sample (100 pg/uL)	Highly flammable liquid and vapor. 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. The vapor/gas is heavier than air and will spread along the ground. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. This material is very toxic to aquatic life with long lasting effects. Fire water contaminated

Section 5. Fire-fighting measures

		with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
	GC/MS Checkout Sample (100 ng/uL)	Highly flammable liquid and vapor. 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. The vapor/gas is heavier than air and will spread along the ground. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. 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 :	GC/MS Checkout Sample, 10 ng/ul	Decomposition products may include the following materials: carbon dioxide carbon monoxide
	GC/MS Checkout Sample (100 pg/uL)	Decomposition products may include the following materials: carbon dioxide carbon monoxide
	GC/MS Checkout Sample (100 ng/uL)	Decomposition products may include the following materials: carbon dioxide carbon monoxide

5.3 Advice for firefighters

Special protective actions for fire-fighters :	GC/MS Checkout Sample, 10 ng/ul	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.
	GC/MS Checkout Sample (100 pg/uL)	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.
	GC/MS Checkout Sample (100 ng/uL)	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 :	GC/MS Checkout Sample, 10 ng/ul	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	GC/MS Checkout Sample (100 pg/uL)	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	GC/MS Checkout Sample (100 ng/uL)	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive

Section 5. Fire-fighting measures

pressure mode.

Section 6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	:	GC/MS Checkout Sample, 10 ng/ul	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 spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
		GC/MS Checkout Sample (100 pg/uL)	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 spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
		GC/MS Checkout Sample (100 ng/uL)	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 spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
For emergency responders	:	GC/MS Checkout Sample, 10 ng/ul	If specialized 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".
		GC/MS Checkout Sample (100 pg/uL)	If specialized 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".
		GC/MS Checkout Sample (100 ng/uL)	If specialized 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	:	GC/MS Checkout Sample, 10 ng/ul	Avoid dispersal of spilled 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.
		GC/MS Checkout Sample (100 pg/uL)	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers,

Section 6. Accidental release measures

		waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.
	GC/MS Checkout Sample (100 ng/uL)	Avoid dispersal of spilled 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.

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up :	GC/MS Checkout Sample, 10 ng/ul	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.
	GC/MS Checkout Sample (100 pg/uL)	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.
	GC/MS Checkout Sample (100 ng/uL)	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

7.1 Precautions for safe handling

Protective measures :	GC/MS Checkout Sample, 10 ng/ul	Put on appropriate personal protective equipment (see Section 8). Do not swallow. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. 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.
	GC/MS Checkout Sample (100 pg/uL)	Put on appropriate personal protective equipment (see Section 8). Do not swallow. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Avoid release to the environment. Use

Section 7. Handling and storage

		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.
	GC/MS Checkout Sample (100 ng/uL)	Put on appropriate personal protective equipment (see Section 8). Do not swallow. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. 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 :	GC/MS Checkout Sample, 10 ng/ul	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.
	GC/MS Checkout Sample (100 pg/uL)	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.
	GC/MS Checkout Sample (100 ng/uL)	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

7.2 Conditions for safe storage, including any incompatibilities	:	GC/MS Checkout Sample, 10 ng/ul	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 unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
		GC/MS Checkout Sample (100 pg/uL)	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 unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
		GC/MS Checkout Sample (100 ng/uL)	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 unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

7.3 Specific end use(s)

Recommendations	:	GC/MS Checkout Sample, 10 ng/ul	Industrial applications, Professional applications.
		GC/MS Checkout Sample (100 pg/uL)	Industrial applications, Professional applications.
		GC/MS Checkout Sample (100 ng/uL)	Industrial applications, Professional applications.
Industrial sector specific solutions	:	GC/MS Checkout Sample, 10 ng/ul	Not available.
		GC/MS Checkout Sample (100 pg/uL)	Not available.
		GC/MS Checkout Sample (100 ng/uL)	Not available.

Section 8. Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
GC/MS Checkout Sample, 10 ng/ul 2,2,4-trimethylpentane	**ACGIH TLV (United States, 1/2023). [Octane]** TWA: 300 ppm 8 hours.
GC/MS Checkout Sample (100 pg/uL) 2,2,4-trimethylpentane	**ACGIH TLV (United States, 1/2023). [Octane]** TWA: 300 ppm 8 hours.
GC/MS Checkout Sample (100 ng/uL) 2,2,4-trimethylpentane	**ACGIH TLV (United States, 1/2023). [Octane]** TWA: 300 ppm 8 hours.

Biological exposure indices

No exposure indices known.

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, vapor 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 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.

Section 8. Exposure controls/personal protection

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.

Section 9. Physical and chemical properties and safety characteristics

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

Appearance

Physical state	:	GC/MS Checkout Sample, 10 ng/ul	Liquid.
		GC/MS Checkout Sample (100 pg/ uL)	Liquid.
		GC/MS Checkout Sample (100 ng/ uL)	Liquid.
Color	:	GC/MS Checkout Sample, 10 ng/ul	Clear. / Colorless.
		GC/MS Checkout Sample (100 pg/ uL)	Clear. / Colorless.
		GC/MS Checkout Sample (100 ng/ uL)	Clear. / Colorless.
Odor	:	GC/MS Checkout Sample, 10 ng/ul	Gasoline-like
		GC/MS Checkout Sample (100 pg/ uL)	Gasoline-like
		GC/MS Checkout Sample (100 ng/ uL)	Gasoline-like
Odor threshold	:	GC/MS Checkout Sample, 10 ng/ul	Not available.
		GC/MS Checkout Sample (100 pg/ uL)	Not available.
		GC/MS Checkout Sample (100 ng/ uL)	Not available.
pH	:	GC/MS Checkout Sample, 10 ng/ul	Not available.
		GC/MS Checkout Sample (100 pg/ uL)	Not available.
		GC/MS Checkout Sample (100 ng/ uL)	Not available.
Melting point/freezing point	:	GC/MS Checkout Sample, 10 ng/ul	-107°C (-160.6°F)
		GC/MS Checkout Sample (100 pg/ uL)	-107°C (-160.6°F)
		GC/MS Checkout Sample (100 ng/ uL)	-107°C (-160.6°F)
Boiling point, initial boiling point, and boiling range	:	GC/MS Checkout Sample, 10 ng/ul	99.2°C (210.6°F)
		GC/MS Checkout Sample (100 pg/ uL)	99.2°C (210.6°F)
		GC/MS Checkout Sample (100 ng/ uL)	99.2°C (210.6°F)
Flash point	:	GC/MS Checkout Sample, 10 ng/ul	Closed cup: -18 to 23°C (-0.4 to 73.4°F) [Based on solvent.] Open cup: 4.5°C (40.1°F)
		GC/MS Checkout Sample (100 pg/ uL)	Closed cup: -18 to 23°C (-0.4 to 73.4°F) [Based on solvent.] Open cup: 4.5°C (40.1°F)
		GC/MS Checkout Sample (100 ng/ uL)	Closed cup: -18 to 23°C (-0.4 to 73.4°F) [Based on solvent.] Open cup: 4.5°C (40.1°F)

Section 9. Physical and chemical properties and safety characteristics

Evaporation rate :
- GC/MS Checkout Sample, 10 ng/ul: Not available.
- GC/MS Checkout Sample (100 pg/uL): Not available.
- GC/MS Checkout Sample (100 ng/uL): Not available.

Flammability :
- GC/MS Checkout Sample, 10 ng/ul: Not applicable.
- GC/MS Checkout Sample (100 pg/uL): Not applicable.
- GC/MS Checkout Sample (100 ng/uL): Not applicable.

Lower and upper explosion limit/flammability limit :
- GC/MS Checkout Sample, 10 ng/ul: Lower: 1.1% Upper: 6%
- GC/MS Checkout Sample (100 pg/uL): Lower: 1.1% Upper: 6%
- GC/MS Checkout Sample (100 ng/uL): Lower: 1.1% Upper: 6%

Vapor pressure :
- GC/MS Checkout Sample, 10 ng/ul: 5.5 kPa (41 mm Hg)
- GC/MS Checkout Sample (100 pg/uL): 5.5 kPa (41 mm Hg)
- GC/MS Checkout Sample (100 ng/uL): 5.5 kPa (41 mm Hg)

Relative vapor density :
- GC/MS Checkout Sample, 10 ng/ul: 3.93 [Air = 1]
- GC/MS Checkout Sample (100 pg/uL): 3.93 [Air = 1]
- GC/MS Checkout Sample (100 ng/uL): 3.93 [Air = 1]

Relative density :
- GC/MS Checkout Sample, 10 ng/ul: Not available.
- GC/MS Checkout Sample (100 pg/uL): Not available.
- GC/MS Checkout Sample (100 ng/uL): Not available.

Solubility(ies) :

Media	Result
GC/MS Checkout Sample, 10 ng/ul	
water	Insoluble
GC/MS Checkout Sample (100 pg/uL)	
water	Insoluble
GC/MS Checkout Sample (100 ng/uL)	
water	Insoluble

Partition coefficient: n-octanol/water :
- GC/MS Checkout Sample, 10 ng/ul: Not applicable.
- GC/MS Checkout Sample (100 pg/uL): Not applicable.
- GC/MS Checkout Sample (100 ng/uL): Not applicable.

Auto-ignition temperature :
- GC/MS Checkout Sample, 10 ng/ul: 418°C (784.4°F)
- GC/MS Checkout Sample (100 pg/uL): 418°C (784.4°F)
- GC/MS Checkout Sample (100 ng/uL): 418°C (784.4°F)

Decomposition temperature :
- GC/MS Checkout Sample, 10 ng/ul: Not available.
- GC/MS Checkout Sample (100 pg/uL): Not available.
- GC/MS Checkout Sample (100 ng/uL): Not available.

Section 9. Physical and chemical properties and safety characteristics

Viscosity	:	GC/MS Checkout Sample, 10 ng/ul	Not available.
		GC/MS Checkout Sample (100 pg/uL)	Not available.
		GC/MS Checkout Sample (100 ng/uL)	Not available.
Particle characteristics			
Median particle size	:	GC/MS Checkout Sample, 10 ng/ul	Not applicable.
		GC/MS Checkout Sample (100 pg/uL)	Not applicable.
		GC/MS Checkout Sample (100 ng/uL)	Not applicable.

Section 10. Stability and reactivity

10.1 Reactivity	:	GC/MS Checkout Sample, 10 ng/ul	No specific test data related to reactivity available for this product or its ingredients.
		GC/MS Checkout Sample (100 pg/uL)	No specific test data related to reactivity available for this product or its ingredients.
		GC/MS Checkout Sample (100 ng/uL)	No specific test data related to reactivity available for this product or its ingredients.
10.2 Chemical stability	:	GC/MS Checkout Sample, 10 ng/ul	The product is stable.
		GC/MS Checkout Sample (100 pg/uL)	The product is stable.
		GC/MS Checkout Sample (100 ng/uL)	The product is stable.
10.3 Possibility of hazardous reactions	:	GC/MS Checkout Sample, 10 ng/ul	Under normal conditions of storage and use, hazardous reactions will not occur.
		GC/MS Checkout Sample (100 pg/uL)	Under normal conditions of storage and use, hazardous reactions will not occur.
		GC/MS Checkout Sample (100 ng/uL)	Under normal conditions of storage and use, hazardous reactions will not occur.
10.4 Conditions to avoid	:	GC/MS Checkout Sample, 10 ng/ul	Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow vapor to accumulate in low or confined areas.
		GC/MS Checkout Sample (100 pg/uL)	Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow vapor to accumulate in low or confined areas.
		GC/MS Checkout Sample (100 ng/uL)	Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow vapor to accumulate in low or confined areas.
10.5 Incompatible materials	:	GC/MS Checkout Sample, 10 ng/ul	Reactive or incompatible with the following materials: oxidizing materials
		GC/MS Checkout Sample (100 pg/uL)	Reactive or incompatible with the following materials: oxidizing materials
		GC/MS Checkout Sample (100 ng/uL)	Reactive or incompatible with the following materials:

Section 10. Stability and reactivity

oxidizing materials

10.6 Hazardous decomposition products :

GC/MS Checkout Sample, 10 ng/ul	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
GC/MS Checkout Sample (100 pg/uL)	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
GC/MS Checkout Sample (100 ng/uL)	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
GC/MS Checkout Sample, 10 ng/ul				
2,2,4-trimethylpentane	LC50 Inhalation Vapor	Rat - Male, Female	>33.52 mg/l	4 hours
	LD50 Oral	Rat - Male, Female	>5000 mg/kg	-
GC/MS Checkout Sample (100 pg/uL)				
2,2,4-trimethylpentane	LC50 Inhalation Vapor	Rat - Male, Female	>33.52 mg/l	4 hours
	LD50 Oral	Rat - Male, Female	>5000 mg/kg	-
GC/MS Checkout Sample (100 ng/uL)				
2,2,4-trimethylpentane	LC50 Inhalation Vapor	Rat - Male, Female	>33.52 mg/l	4 hours
	LD50 Oral	Rat - Male, Female	>5000 mg/kg	-

Irritation/Corrosion

Not available.

Sensitization

Not available.

Mutagenicity

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : Not available.

Reproductive toxicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Specific target organ toxicity (single exposure)

Section 11. Toxicological information

Name	Category	Route of exposure	Target organs
GC/MS Checkout Sample, 10 ng/ul			
2,2,4-trimethylpentane	Category 3	-	Narcotic effects
GC/MS Checkout Sample (100 pg/uL)			
2,2,4-trimethylpentane	Category 3	-	Narcotic effects
GC/MS Checkout Sample (100 ng/uL)			
2,2,4-trimethylpentane	Category 3	-	Narcotic effects

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Name	Result
GC/MS Checkout Sample, 10 ng/ul	
GC/MS Checkout Sample, 10 ng/ul	ASPIRATION HAZARD - Category 1
2,2,4-trimethylpentane	ASPIRATION HAZARD - Category 1
GC/MS Checkout Sample (100 pg/uL)	
GC/MS Checkout Sample (100 pg/uL)	ASPIRATION HAZARD - Category 1
2,2,4-trimethylpentane	ASPIRATION HAZARD - Category 1
GC/MS Checkout Sample (100 ng/uL)	
GC/MS Checkout Sample (100 ng/uL)	ASPIRATION HAZARD - Category 1
2,2,4-trimethylpentane	ASPIRATION HAZARD - Category 1

Information on the likely routes of exposure :

- GC/MS Checkout Sample, 10 ng/ul: Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.
- GC/MS Checkout Sample (100 pg/uL): Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.
- GC/MS Checkout Sample (100 ng/uL): Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.

Potential acute health effects

Eye contact :

- GC/MS Checkout Sample, 10 ng/ul: No known significant effects or critical hazards.
- GC/MS Checkout Sample (100 pg/uL): No known significant effects or critical hazards.
- GC/MS Checkout Sample (100 ng/uL): No known significant effects or critical hazards.

Inhalation :

- GC/MS Checkout Sample, 10 ng/ul: Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.
- GC/MS Checkout Sample (100 pg/uL): Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.
- GC/MS Checkout Sample (100 ng/uL): Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.

Skin contact :

- GC/MS Checkout Sample, 10 ng/ul: Causes skin irritation.
- GC/MS Checkout Sample (100 pg/uL): Causes skin irritation.
- GC/MS Checkout Sample (100 ng/uL): Causes skin irritation.

Section 11. Toxicological information

Ingestion :

GC/MS Checkout Sample, 10 ng/ul	Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.
GC/MS Checkout Sample (100 pg/uL)	Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.
GC/MS Checkout Sample (100 ng/uL)	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 :

GC/MS Checkout Sample, 10 ng/ul	Adverse symptoms may include the following: pain or irritation watering redness
GC/MS Checkout Sample (100 pg/uL)	Adverse symptoms may include the following: pain or irritation watering redness
GC/MS Checkout Sample (100 ng/uL)	Adverse symptoms may include the following: pain or irritation watering redness

Inhalation :

GC/MS Checkout Sample, 10 ng/ul	Adverse symptoms may include the following: nausea or vomiting headache drowsiness/fatigue dizziness/vertigo unconsciousness
GC/MS Checkout Sample (100 pg/uL)	Adverse symptoms may include the following: nausea or vomiting headache drowsiness/fatigue dizziness/vertigo unconsciousness
GC/MS Checkout Sample (100 ng/uL)	Adverse symptoms may include the following: nausea or vomiting headache drowsiness/fatigue dizziness/vertigo unconsciousness

Skin contact :

GC/MS Checkout Sample, 10 ng/ul	Adverse symptoms may include the following: irritation redness
GC/MS Checkout Sample (100 pg/uL)	Adverse symptoms may include the following: irritation redness
GC/MS Checkout Sample (100 ng/uL)	Adverse symptoms may include the following: irritation redness

Section 11. Toxicological information

Ingestion	:	GC/MS Checkout Sample, 10 ng/ul	Adverse symptoms may include the following: nausea or vomiting
		GC/MS Checkout Sample (100 pg/uL)	Adverse symptoms may include the following: nausea or vomiting
		GC/MS Checkout Sample (100 ng/uL)	Adverse symptoms may include the following: nausea or vomiting

Delayed and immediate effects and also 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	:	GC/MS Checkout Sample, 10 ng/ul	No known significant effects or critical hazards.
		GC/MS Checkout Sample (100 pg/uL)	No known significant effects or critical hazards.
		GC/MS Checkout Sample (100 ng/uL)	No known significant effects or critical hazards.
Carcinogenicity	:	GC/MS Checkout Sample, 10 ng/ul	No known significant effects or critical hazards.
		GC/MS Checkout Sample (100 pg/uL)	No known significant effects or critical hazards.
		GC/MS Checkout Sample (100 ng/uL)	No known significant effects or critical hazards.
Mutagenicity	:	GC/MS Checkout Sample, 10 ng/ul	No known significant effects or critical hazards.
		GC/MS Checkout Sample (100 pg/uL)	No known significant effects or critical hazards.
		GC/MS Checkout Sample (100 ng/uL)	No known significant effects or critical hazards.
Reproductive toxicity	:	GC/MS Checkout Sample, 10 ng/ul	No known significant effects or critical hazards.
		GC/MS Checkout Sample (100 pg/uL)	No known significant effects or critical hazards.
		GC/MS Checkout Sample (100 ng/uL)	No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

N/A

Other information	:	GC/MS Checkout Sample, 10 ng/ul	Adverse symptoms may include the following: Repeated exposure may cause skin dryness or cracking.
		GC/MS Checkout Sample (100 pg/uL)	Adverse symptoms may include the following: Repeated exposure may cause skin dryness or cracking.
		GC/MS Checkout Sample (100 ng/uL)	Adverse symptoms may include the following: Repeated exposure may cause skin dryness or cracking.

Section 12. Ecological information

12.1 Toxicity

Not available.

12.2 Persistence and degradability

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
GC/MS Checkout Sample, 10 ng/ul			
2,2,4-trimethylpentane	-	-	Inherent
GC/MS Checkout Sample (100 pg/uL)			
2,2,4-trimethylpentane	-	-	Inherent
GC/MS Checkout Sample (100 ng/uL)			
2,2,4-trimethylpentane	-	-	Inherent

12.3 Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
GC/MS Checkout Sample, 10 ng/ul			
2,2,4-trimethylpentane	4.08	231	Low
GC/MS Checkout Sample (100 pg/uL)			
2,2,4-trimethylpentane	4.08	231	Low
GC/MS Checkout Sample (100 ng/uL)			
2,2,4-trimethylpentane	4.08	231	Low

12.4 Mobility in soil

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

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

Section 13. Disposal considerations

13.1 Waste treatment methods

Disposal methods : The generation of waste should be avoided or minimized 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. Vapor 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 spilled material and runoff and contact

Section 13. Disposal considerations

with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations. Local regulations may be more stringent than regional or national requirements.

The information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

Section 14. Transport information

DOT / TDG / Mexico / IMDG / IATA : Not regulated.

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 IMO instruments : Not available.

Section 15. Regulatory information

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

U.S. Federal regulations : **TSCA 6 final risk management**: 4-Chlorobiphenyl

TSCA 8(a) PAIR: Biphenyl

TSCA 8(a) CDR Exempt/Partial exemption: Not determined

Clean Water Act (CWA) 307: 4-Chlorobiphenyl

Clean Water Act (CWA) 311: 4-Chlorobiphenyl

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Section 15. Regulatory information

Classification :

GC/MS Checkout Sample, 10 ng/ul	FLAMMABLE LIQUIDS - Category 2 SKIN IRRITATION - Category 2 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 ASPIRATION HAZARD - Category 1
GC/MS Checkout Sample (100 pg/uL)	FLAMMABLE LIQUIDS - Category 2 SKIN IRRITATION - Category 2 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 ASPIRATION HAZARD - Category 1
GC/MS Checkout Sample (100 ng/uL)	FLAMMABLE LIQUIDS - Category 2 SKIN IRRITATION - Category 2 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 ASPIRATION HAZARD - Category 1

Composition/information on ingredients

Name	%	Classification
GC/MS Checkout Sample, 10 ng/ul		
2,2,4-trimethylpentane	≥90	FLAMMABLE LIQUIDS - Category 2 SKIN IRRITATION - Category 2 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 ASPIRATION HAZARD - Category 1 HNOC - Static-accumulating flammable liquid
GC/MS Checkout Sample (100 pg/uL)		
2,2,4-trimethylpentane	≥90	FLAMMABLE LIQUIDS - Category 2 SKIN IRRITATION - Category 2 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 ASPIRATION HAZARD - Category 1 HNOC - Static-accumulating flammable liquid
GC/MS Checkout Sample (100 ng/uL)		
2,2,4-trimethylpentane	≥90	FLAMMABLE LIQUIDS - Category 2 SKIN IRRITATION - Category 2 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 ASPIRATION HAZARD - Category 1 HNOC - Static-accumulating flammable liquid

SARA 313

	Product name	CAS number	%
Form R - Reporting requirements	**GC/MS Checkout Sample, 10 ng/ul**		
	4-Chlorobiphenyl	2051-62-9	<0.1
	GC/MS Checkout Sample (100 pg/uL)		
	4-Chlorobiphenyl	2051-62-9	<0.1
	GC/MS Checkout Sample (100 ng/uL)		
	4-Chlorobiphenyl	2051-62-9	<0.1
Supplier notification	**GC/MS Checkout Sample, 10 ng/ul**		
	4-Chlorobiphenyl	2051-62-9	<0.1
	GC/MS Checkout Sample (100 pg/uL)		
	4-Chlorobiphenyl	2051-62-9	<0.1
	GC/MS Checkout Sample (100 ng/uL)		
	4-Chlorobiphenyl	2051-62-9	<0.1

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

Section 15. Regulatory information

State regulations

Massachusetts : The following components are listed: ISOOCTANE

New York : The following components are listed: 2,2,4-Trimethylpentane

New Jersey : The following components are listed: ISOOCTANE

Pennsylvania : The following components are listed: PENTANE, 2,2,4-TRIMETHYL-

California Prop. 65

⚠ **WARNING**: This product can expose you to Polychlorinated biphenyls, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Ingredient name	No significant risk level	Maximum acceptable dosage level
GC/MS Checkout Sample, 10 ng/ul Polychlorinated biphenyls	Yes.	-
GC/MS Checkout Sample (100 pg/uL) Polychlorinated biphenyls	Yes.	-
GC/MS Checkout Sample (100 ng/uL) Polychlorinated biphenyls	Yes.	-

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

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 : All components are listed or exempted.

Japan : **Japan inventory (CSCL)**: Not determined.
Japan inventory (ISHL): Not determined.

New Zealand : Not determined.

Philippines : Not determined.

Republic of Korea : Not determined.

Taiwan : All components are listed or exempted.

Thailand : Not determined.

Turkey : Not determined.

United States : Not determined.

Viet Nam : All components are listed or exempted.

Section 16. Other information

Procedure used to derive the classification

Classification	Justification
GC/MS Checkout Sample, 10 ng/ul	
FLAMMABLE LIQUIDS - Category 2	On basis of test data
SKIN IRRITATION - Category 2	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3	Calculation method
ASPIRATION HAZARD - Category 1	Expert judgment
AQUATIC HAZARD (ACUTE) - Category 1	Calculation method
AQUATIC HAZARD (LONG-TERM) - Category 1	Calculation method
GC/MS Checkout Sample (100 pg/uL)	
FLAMMABLE LIQUIDS - Category 2	On basis of test data
SKIN IRRITATION - Category 2	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3	Calculation method
ASPIRATION HAZARD - Category 1	Expert judgment
AQUATIC HAZARD (ACUTE) - Category 1	Calculation method
AQUATIC HAZARD (LONG-TERM) - Category 1	Calculation method
GC/MS Checkout Sample (100 ng/uL)	
FLAMMABLE LIQUIDS - Category 2	On basis of test data
SKIN IRRITATION - Category 2	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3	Calculation method
ASPIRATION HAZARD - Category 1	Expert judgment
AQUATIC HAZARD (ACUTE) - Category 1	Calculation method
AQUATIC HAZARD (LONG-TERM) - Category 1	Calculation method

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Key to abbreviations : 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)
N/A = Not available
UN = United Nations

Indicates information that has changed from previously issued version.

Notice to reader

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