

SAFETY DATA SHEET

GC - MS Multi-Component Checkout Sample, Part Number 5185-5840

Section 1. Identification

1.1 Product identifier

Product name : GC - MS Multi-Component Checkout Sample, Part Number 5185-5840
Part no. (chemical kit) : 5185-5840
Part no. : Benzophenone in isooctane, 100 pg/μl 8500-5440-1
 OFN in Isooctane, 1 pg/μl 8500-5441-1
 GC/MS Checkout Sample, 10 ng/ul 05970-60045-1
Validation date : 8/21/2018

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

Material uses : Reagents and Standards for Analytical Chemistry Laboratory Use
 Benzophenone in isooctane, 100 pg/μl 1 x 1 ml
 OFN in Isooctane, 1 pg/μl 2 x 1 ml
 GC/MS Checkout Sample, 10 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 : Benzophenone in isooctane, 100 pg/μl This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
 OFN in Isooctane, 1 pg/μl This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
 GC/MS Checkout Sample, 10 ng/ul This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture

Benzophenone in isooctane, 100 pg/μl

H225 FLAMMABLE LIQUIDS - Category 2
 H315 SKIN IRRITATION - Category 2
 H319 EYE IRRITATION - Category 2A
 H335 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
 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

OFN in Isooctane, 1 pg/μl

H225 FLAMMABLE LIQUIDS - Category 2
 H315 SKIN IRRITATION - Category 2
 H319 EYE IRRITATION - Category 2A

Section 2. Hazards identification













H335	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
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, 10 ng/ul

H225	FLAMMABLE LIQUIDS - Category 2
H315	SKIN IRRITATION - Category 2
H319	EYE IRRITATION - Category 2A
H335	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
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

: Benzophenone in isooctane, 100 pg/μl	▶				
OFN in Isooctane, 1 pg/μl	▶				
GC/MS Checkout Sample, 10 ng/ul	▶				

Signal word

: Benzophenone in isooctane, 100 pg/μl	: Danger
OFN in Isooctane, 1 pg/μl	: Danger
GC/MS Checkout Sample, 10 ng/ul	: Danger

Hazard statements

: Benzophenone in isooctane, 100 pg/μl	H225 - Highly flammable liquid and vapor. H319 - Causes serious eye irritation. H315 - Causes skin irritation. H304 - May be fatal if swallowed and enters airways. H335 - May cause respiratory irritation. H336 - May cause drowsiness or dizziness. H410 - Very toxic to aquatic life with long lasting effects.
OFN in Isooctane, 1 pg/μl	H225 - Highly flammable liquid and vapor. H319 - Causes serious eye irritation. H315 - Causes skin irritation. H304 - May be fatal if swallowed and enters airways. H335 - May cause respiratory irritation. H336 - May cause drowsiness or dizziness.

Section 2. Hazards identification

GC/MS Checkout Sample, 10 ng/ul

H410 - Very toxic to aquatic life with long lasting effects.
 H225 - Highly flammable liquid and vapor.
 H319 - Causes serious eye irritation.
 H315 - Causes skin irritation.
 H304 - May be fatal if swallowed and enters airways.
 H335 - May cause respiratory irritation.
 H336 - May cause drowsiness or dizziness.
 H410 - Very toxic to aquatic life with long lasting effects.

Precautionary statements

Prevention

: Benzophenone in isooctane, 100 pg/μl

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.
 P261 - Avoid breathing vapor.
 P264 - Wash hands thoroughly after handling.

OFN in Isooctane, 1 pg/μl

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.
 P261 - Avoid breathing vapor.
 P264 - Wash hands thoroughly after handling.

GC/MS Checkout Sample, 10 ng/ul

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.
 P261 - Avoid breathing vapor.

Section 2. Hazards identification

Response

: Benzophenone in isooctane, 100
pg/μl

P264 - Wash hands thoroughly after handling.

P391 - Collect spillage.

P304 + P340 + P312 - IF INHALED: Remove person to fresh air and keep 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+P364 - IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse.

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.

P391 - Collect spillage.

P304 + P340 + P312 - IF INHALED: Remove person to fresh air and keep 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+P364 - IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse.

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.

P391 - Collect spillage.

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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+P364 - IF ON SKIN: Wash with plenty of soap and water. Take off

OFN in Isooctane, 1 pg/μl

GC/MS Checkout Sample, 10 ng/ul

Section 2. Hazards identification

		contaminated clothing and wash it before reuse. 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	: Benzophenone in isooctane, 100 pg/ μ l	P405 - Store locked up.
	OFN in Isooctane, 1 pg/ μ l	P403 - Store in a well-ventilated place. P235 - Keep cool. P405 - Store locked up.
	GC/MS Checkout Sample, 10 ng/ μ l	P403 - Store in a well-ventilated place. P235 - Keep cool. P405 - Store locked up.
Disposal	: Benzophenone in isooctane, 100 pg/ μ l	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
	OFN in Isooctane, 1 pg/ μ l	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
	GC/MS Checkout Sample, 10 ng/ μ l	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
Supplemental label elements	: Benzophenone in isooctane, 100 pg/ μ l	None known.
	OFN in Isooctane, 1 pg/ μ l	None known.
	GC/MS Checkout Sample, 10 ng/ μ l	None known.
2.3 Other hazards		
Hazards not otherwise classified	: Benzophenone in isooctane, 100 pg/ μ l	None known.
	OFN in Isooctane, 1 pg/ μ l	None known.
	GC/MS Checkout Sample, 10 ng/ μ l	None known.

Section 3. Composition/information on ingredients

Substance/mixture	: Benzophenone in isooctane, 100 pg/ μ l	Mixture
	OFN in Isooctane, 1 pg/ μ l	Mixture
	GC/MS Checkout Sample, 10 ng/ μ l	Mixture

Ingredient name	%	CAS number
Benzophenone in isooctane, 100 pg/μl 2,2,4-trimethylpentane	≥ 90	540-84-1
OFN in Isooctane, 1 pg/μl 2,2,4-trimethylpentane	≥ 90	540-84-1
GC/MS Checkout Sample, 10 ng/μl 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 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

4.1 Description of necessary first aid measures

Eye contact	: Benzophenone in isooctane, 100 pg/μl	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.
	OFN in Isooctane, 1 pg/μl	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, 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.
Inhalation	: Benzophenone in isooctane, 100 pg/μl	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.
	OFN in Isooctane, 1 pg/μl	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, 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

Section 4. First aid measures

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

: Benzophenone in isooctane, 100 pg/μl

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.

OFN in Isooctane, 1 pg/μl

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, 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.

Ingestion

: Benzophenone in isooctane, 100 pg/μl

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.

OFN in Isooctane, 1 pg/μl

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.

GC/MS Checkout Sample, 10 ng/ul

Get medical attention immediately. Call a poison

Section 4. First aid measures

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.

4.2 Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact	: Benzophenone in isooctane, 100 pg/µl	Causes serious eye irritation.
	OFN in Isooctane, 1 pg/µl	Causes serious eye irritation.
	GC/MS Checkout Sample, 10 ng/ul	Causes serious eye irritation.
Inhalation	: Benzophenone in isooctane, 100 pg/µl	Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.
	OFN in Isooctane, 1 pg/µl	Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.
	GC/MS Checkout Sample, 10 ng/ul	Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.
Skin contact	: Benzophenone in isooctane, 100 pg/µl	Causes skin irritation.
	OFN in Isooctane, 1 pg/µl	Causes skin irritation.
	GC/MS Checkout Sample, 10 ng/ul	Causes skin irritation.
Ingestion	: Benzophenone in isooctane, 100 pg/µl	Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.
	OFN in Isooctane, 1 pg/µl	Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.
	GC/MS Checkout Sample, 10 ng/ul	Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

Over-exposure signs/symptoms

Eye contact	: Benzophenone in isooctane, 100 pg/µl	Adverse symptoms may include the following: pain or irritation watering redness
	OFN in Isooctane, 1 pg/µl	Adverse symptoms may include the following: pain or irritation watering redness
	GC/MS Checkout Sample, 10 ng/ul	Adverse symptoms may include the following: pain or irritation

Section 4. First aid measures

		watering redness
Inhalation	: Benzophenone in isooctane, 100 pg/ μ l	Adverse symptoms may include the following: respiratory tract irritation coughing nausea or vomiting headache drowsiness/fatigue dizziness/vertigo unconsciousness
	OFN in Isooctane, 1 pg/ μ l	Adverse symptoms may include the following: respiratory tract irritation coughing nausea or vomiting headache drowsiness/fatigue dizziness/vertigo unconsciousness
	GC/MS Checkout Sample, 10 ng/ μ l	Adverse symptoms may include the following: respiratory tract irritation coughing nausea or vomiting headache drowsiness/fatigue dizziness/vertigo unconsciousness
Skin contact	: Benzophenone in isooctane, 100 pg/ μ l	Adverse symptoms may include the following: irritation redness
	OFN in Isooctane, 1 pg/ μ l	Adverse symptoms may include the following: irritation redness
	GC/MS Checkout Sample, 10 ng/ μ l	Adverse symptoms may include the following: irritation redness
Ingestion	: Benzophenone in isooctane, 100 pg/ μ l	Adverse symptoms may include the following: nausea or vomiting
	OFN in Isooctane, 1 pg/ μ l	Adverse symptoms may include the following: nausea or vomiting
	GC/MS Checkout Sample, 10 ng/ μ l	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	: Benzophenone in isooctane, 100 pg/ μ l	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	OFN in Isooctane, 1 pg/ μ l	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	GC/MS Checkout Sample, 10 ng/ μ l	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Section 4. First aid measures

Specific treatments	: Benzophenone in isooctane, 100 pg/µl OFN in Isooctane, 1 pg/µl GC/MS Checkout Sample, 10 ng/ul	No specific treatment. No specific treatment. No specific treatment.
Protection of first-aiders	: Benzophenone in isooctane, 100 pg/µl OFN in Isooctane, 1 pg/µl 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. 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. 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	: Benzophenone in isooctane, 100 pg/µl OFN in Isooctane, 1 pg/µl GC/MS Checkout Sample, 10 ng/ul	Use dry chemical, CO ₂ , water spray (fog) or foam. Use dry chemical, CO ₂ , water spray (fog) or foam. Use dry chemical, CO ₂ , water spray (fog) or foam.
Unsuitable extinguishing media	: Benzophenone in isooctane, 100 pg/µl OFN in Isooctane, 1 pg/µl GC/MS Checkout Sample, 10 ng/ul	Do not use water jet. Do not use water jet. Do not use water jet.

5.2 Special hazards arising from the substance or mixture

Specific hazards arising from the chemical	: Benzophenone in isooctane, 100 pg/µl OFN in Isooctane, 1 pg/µl	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. 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
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Section 5. Fire-fighting measures

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, 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.

Hazardous thermal decomposition products

: Benzophenone in isooctane, 100 pg/μl

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

OFN in Isooctane, 1 pg/μl

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

GC/MS Checkout Sample, 10 ng/ul

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

5.3 Advice for firefighters

Special protective actions for fire-fighters

: Benzophenone in isooctane, 100 pg/μl

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.

OFN in Isooctane, 1 pg/μl

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, 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.

Section 5. Fire-fighting measures

Special protective equipment for fire-fighters	: Benzophenone in isooctane, 100 pg/μl	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	OFN in Isooctane, 1 pg/μl	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, 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.

Section 6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	: Benzophenone in isooctane, 100 pg/μl	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.
	OFN in Isooctane, 1 pg/μl	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, 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.
For emergency responders	: Benzophenone in isooctane, 100 pg/μl	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".
	OFN in Isooctane, 1 pg/μl	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, 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".

Section 6. Accidental release measures

6.2 Environmental precautions

: Benzophenone in isooctane, 100 pg/μl

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.

OFN in Isooctane, 1 pg/μl

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, 10 ng/ul

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6.3 Methods and materials for containment and cleaning up

Methods for cleaning up

: Benzophenone in isooctane, 100 pg/μl

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.

OFN in Isooctane, 1 pg/μl

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, 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.

Section 7. Handling and storage

7.1 Precautions for safe handling

Protective measures

: Benzophenone in isooctane, 100 pg/μl

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

Section 7. Handling and storage

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.

OFN in Isooctane, 1 pg/µl

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, 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.

Advice on general occupational hygiene

: Benzophenone in isooctane, 100 pg/µl

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.

OFN in Isooctane, 1 pg/µl

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

Section 7. Handling and storage

	GC/MS Checkout Sample, 10 ng/ul	for additional information on hygiene measures. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
7.2 Conditions for safe storage, including any incompatibilities	: Benzophenone in isooctane, 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.
	OFN in Isooctane, 1 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, 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.

7.3 Specific end use(s)

Recommendations

: Benzophenone in isooctane, 100 pg/ul	Industrial applications, Professional applications.
OFN in Isooctane, 1 pg/ul	Industrial applications, Professional applications.
GC/MS Checkout Sample, 10 ng/ul	Industrial applications, Professional applications.

Section 7. Handling and storage

Industrial sector specific solutions	: Benzophenone in isooctane, 100 pg/μl	Not applicable.
	OFN in Isooctane, 1 pg/μl	Not applicable.
	GC/MS Checkout Sample, 10 ng/ul	Not applicable.

Section 8. Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Benzophenone in isooctane, 100 pg/μl 2,2,4-trimethylpentane	ACGIH TLV (United States, 3/2017). TWA: 300 ppm 8 hours.
OFN in Isooctane, 1 pg/μl 2,2,4-trimethylpentane	ACGIH TLV (United States, 3/2017). TWA: 300 ppm 8 hours.
GC/MS Checkout Sample, 10 ng/ul 2,2,4-trimethylpentane	ACGIH TLV (United States, 3/2017). TWA: 300 ppm 8 hours.

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.

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.

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

9.1 Information on basic physical and chemical properties

Appearance

- Physical state** : Benzophenone in isooctane, 100 pg/μl Liquid.
OFN in Isooctane, 1 pg/μl Liquid.
GC/MS Checkout Sample, 10 ng/ul Liquid.
- Color** : Benzophenone in isooctane, 100 pg/μl Light
OFN in Isooctane, 1 pg/μl Colorless.
GC/MS Checkout Sample, 10 ng/ul Clear. / Colorless.
- Odor** : Benzophenone in isooctane, 100 pg/μl Gasoline-like [Strong]
OFN in Isooctane, 1 pg/μl Gasoline-like [Strong]
GC/MS Checkout Sample, 10 ng/ul Gasoline-like
- Odor threshold** : Benzophenone in isooctane, 100 pg/μl Not available.
OFN in Isooctane, 1 pg/μl Not available.
GC/MS Checkout Sample, 10 ng/ul Not available.
- pH** : Benzophenone in isooctane, 100 pg/μl Not available.
OFN in Isooctane, 1 pg/μl Not available.
GC/MS Checkout Sample, 10 ng/ul Not available.
- Melting point** : Benzophenone in isooctane, 100 pg/μl -107°C (-160.6°F)
OFN in Isooctane, 1 pg/μl -107°C (-160.6°F)
GC/MS Checkout Sample, 10 ng/ul -107°C (-160.6°F)
- Boiling point** : Benzophenone in isooctane, 100 pg/μl 99.2°C (210.6°F)
OFN in Isooctane, 1 pg/μl 99.2°C (210.6°F)
GC/MS Checkout Sample, 10 ng/ul 99.2°C (210.6°F)
- Flash point** : Benzophenone in isooctane, 100 pg/μl Closed cup: -18 to 23°C (-0.4 to 73.4°F)
Open cup: 4.5°C (40.1°F)
OFN in Isooctane, 1 pg/μl Closed cup: -18 to 23°C (-0.4 to 73.4°F)
Open cup: 4.5°C (40.1°F)
GC/MS Checkout Sample, 10 ng/ul Closed cup: -18 to 23°C (-0.4 to 73.4°F)
Open cup: 4.5°C (40.1°F)
- Evaporation rate** : Benzophenone in isooctane, 100 pg/μl 3.6 (butyl acetate = 1)
OFN in Isooctane, 1 pg/μl Not available.
GC/MS Checkout Sample, 10 ng/ul Not available.
- Flammability (solid, gas)** : Benzophenone in isooctane, 100 pg/μl Not applicable.
OFN in Isooctane, 1 pg/μl Not applicable.
GC/MS Checkout Sample, 10 ng/ul Not applicable.

Section 9. Physical and chemical properties

Lower and upper explosive (flammable) limits	: Benzophenone in isooctane, 100 pg/μl	Lower: 1.1%
		Upper: <=13%
	: OFN in Isooctane, 1 pg/μl	Lower: 1.1%
		Upper: 6%
	: GC/MS Checkout Sample, 10 ng/ul	Lower: 1.1%
		Upper: 6%
Vapor pressure	: Benzophenone in isooctane, 100 pg/μl	5.5 kPa (41 mm Hg) [room temperature]
	: OFN in Isooctane, 1 pg/μl	5.5 kPa (41 mm Hg) [room temperature]
	: GC/MS Checkout Sample, 10 ng/ul	5.5 kPa (41 mm Hg) [room temperature]
Vapor density	: Benzophenone in isooctane, 100 pg/μl	>1 [Air = 1]
	: OFN in Isooctane, 1 pg/μl	3.93 [Air = 1]
	: GC/MS Checkout Sample, 10 ng/ul	3.93 [Air = 1]
Relative density	: Benzophenone in isooctane, 100 pg/μl	Not available.
	: OFN in Isooctane, 1 pg/μl	0.692
	: GC/MS Checkout Sample, 10 ng/ul	Not available.
Solubility	: Benzophenone in isooctane, 100 pg/μl	Insoluble in the following materials: cold water and hot water.
	: OFN in Isooctane, 1 pg/μl	Insoluble in the following materials: cold water and hot water.
	: GC/MS Checkout Sample, 10 ng/ul	Insoluble in the following materials: cold water and hot water.
Partition coefficient: n-octanol/water	: Benzophenone in isooctane, 100 pg/μl	4.5
	: OFN in Isooctane, 1 pg/μl	Not available.
	: GC/MS Checkout Sample, 10 ng/ul	Not available.
Auto-ignition temperature	: Benzophenone in isooctane, 100 pg/μl	418°C (784.4°F)
	: OFN in Isooctane, 1 pg/μl	418°C (784.4°F)
	: GC/MS Checkout Sample, 10 ng/ul	418°C (784.4°F)
Decomposition temperature	: Benzophenone in isooctane, 100 pg/μl	Not available.
	: OFN in Isooctane, 1 pg/μl	Not available.
	: GC/MS Checkout Sample, 10 ng/ul	Not available.
Viscosity	: Benzophenone in isooctane, 100 pg/μl	Not available.
	: OFN in Isooctane, 1 pg/μl	Not available.
	: GC/MS Checkout Sample, 10 ng/ul	Not available.

Section 10. Stability and reactivity

10.1 Reactivity	: Benzophenone in isooctane, 100 pg/μl	No specific test data related to reactivity available for this product or its ingredients.
	: OFN in Isooctane, 1 pg/μl	No specific test data related to reactivity available for this product or its ingredients.
	: GC/MS Checkout Sample, 10 ng/ul	No specific test data related to reactivity available for this product or its ingredients.
10.2 Chemical stability	: Benzophenone in isooctane, 100 pg/μl	The product is stable.
	: OFN in Isooctane, 1 pg/μl	The product is stable.
	: GC/MS Checkout Sample, 10 ng/ul	The product is stable.

Section 10. Stability and reactivity

10.3 Possibility of hazardous reactions	: Benzophenone in isooctane, 100 pg/µl	Under normal conditions of storage and use, hazardous reactions will not occur.
	OFN in Isooctane, 1 pg/µl	Under normal conditions of storage and use, hazardous reactions will not occur.
	GC/MS Checkout Sample, 10 ng/ul	Under normal conditions of storage and use, hazardous reactions will not occur.
10.4 Conditions to avoid	: Benzophenone in isooctane, 100 pg/µl	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.
	OFN in Isooctane, 1 pg/µl	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, 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.
10.5 Incompatible materials	: Benzophenone in isooctane, 100 pg/µl	Reactive or incompatible with the following materials: oxidizing materials
	OFN in Isooctane, 1 pg/µl	Reactive or incompatible with the following materials: oxidizing materials
	GC/MS Checkout Sample, 10 ng/ul	Reactive or incompatible with the following materials: oxidizing materials
10.6 Hazardous decomposition products	: Benzophenone in isooctane, 100 pg/µl	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	OFN in Isooctane, 1 pg/µl	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	GC/MS Checkout Sample, 10 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
Benzophenone in isooctane, 100 pg/µl 2,2,4-trimethylpentane	LC50 Inhalation Vapor	Rat - Male, Female	>33.52 mg/l	4 hours
	LD50 Oral	Rat - Male, Female	>5000 mg/kg	-
OFN in Isooctane, 1 pg/µl				

Section 11. Toxicological information

2,2,4-trimethylpentane GC/MS Checkout Sample, 10 ng/ul	LC50 Inhalation Vapor	Rat - Male, Female	>33.52 mg/l	4 hours
	LD50 Oral	Rat - Male, Female	>5000 mg/kg	-
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.

Conclusion/Summary

Skin : Prolonged or repeated contact may dry skin and cause irritation.

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)

Name	Category	Route of exposure	Target organs
Benzophenone in isooctane, 100 pg/μl 2,2,4-trimethylpentane	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
OFN in Isooctane, 1 pg/μl 2,2,4-trimethylpentane	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
GC/MS Checkout Sample, 10 ng/ul 2,2,4-trimethylpentane	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Section 11. Toxicological information

Name	Result
Benzophenone in isooctane, 100 pg/μl Benzophenone in isooctane, 100 pg/μl 2,2,4-trimethylpentane	ASPIRATION HAZARD - Category 1 ASPIRATION HAZARD - Category 1
OFN in Isooctane, 1 pg/μl OFN in Isooctane, 1 pg/μl 2,2,4-trimethylpentane	ASPIRATION HAZARD - Category 1 ASPIRATION HAZARD - Category 1
GC/MS Checkout Sample, 10 ng/ul GC/MS Checkout Sample, 10 ng/ul 2,2,4-trimethylpentane	ASPIRATION HAZARD - Category 1 ASPIRATION HAZARD - Category 1

Information on the likely routes of exposure

- Benzophenone in isooctane, 100 pg/μl
OFN in Isooctane, 1 pg/μl
GC/MS Checkout Sample, 10 ng/ul

Routes of entry anticipated: Oral, Dermal, Inhalation.
Routes of entry anticipated: Oral, Dermal, Inhalation.
Routes of entry anticipated: Oral, Dermal, Inhalation.

Potential acute health effects

Eye contact

- Benzophenone in isooctane, 100 pg/μl
OFN in Isooctane, 1 pg/μl
GC/MS Checkout Sample, 10 ng/ul

Causes serious eye irritation.
Causes serious eye irritation.
Causes serious eye irritation.

Inhalation

- Benzophenone in isooctane, 100 pg/μl
OFN in Isooctane, 1 pg/μl
GC/MS Checkout Sample, 10 ng/ul

Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.
Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.
Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.

Skin contact

- Benzophenone in isooctane, 100 pg/μl
OFN in Isooctane, 1 pg/μl
GC/MS Checkout Sample, 10 ng/ul

Causes skin irritation.
Causes skin irritation.
Causes skin irritation.

Ingestion

- Benzophenone in isooctane, 100 pg/μl
OFN in Isooctane, 1 pg/μl
GC/MS Checkout Sample, 10 ng/ul

Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.
Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.
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

- Benzophenone in isooctane, 100 pg/μl
OFN in Isooctane, 1 pg/μl

Adverse symptoms may include the following:
pain or irritation
watering
redness
Adverse symptoms may include the following:
pain or irritation

Section 11. Toxicological information

		watering redness
	GC/MS Checkout Sample, 10 ng/ul	Adverse symptoms may include the following: pain or irritation watering redness
Inhalation	: Benzophenone in isooctane, 100 pg/μl	Adverse symptoms may include the following: respiratory tract irritation coughing nausea or vomiting headache drowsiness/fatigue dizziness/vertigo unconsciousness
	OFN in Isooctane, 1 pg/μl	Adverse symptoms may include the following: respiratory tract irritation coughing nausea or vomiting headache drowsiness/fatigue dizziness/vertigo unconsciousness
	GC/MS Checkout Sample, 10 ng/ul	Adverse symptoms may include the following: respiratory tract irritation coughing nausea or vomiting headache drowsiness/fatigue dizziness/vertigo unconsciousness
Skin contact	: Benzophenone in isooctane, 100 pg/μl	Adverse symptoms may include the following: irritation redness
	OFN in Isooctane, 1 pg/μl	Adverse symptoms may include the following: irritation redness
	GC/MS Checkout Sample, 10 ng/ul	Adverse symptoms may include the following: irritation redness
Ingestion	: Benzophenone in isooctane, 100 pg/μl	Adverse symptoms may include the following: nausea or vomiting
	OFN in Isooctane, 1 pg/μl	Adverse symptoms may include the following: nausea or vomiting
	GC/MS Checkout Sample, 10 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

Section 11. Toxicological information

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

General	: Benzophenone in isooctane, 100 pg/µl	No known significant effects or critical hazards.
	: OFN in Isooctane, 1 pg/µl	No known significant effects or critical hazards.
	: GC/MS Checkout Sample, 10 ng/ul	No known significant effects or critical hazards.
Carcinogenicity	: Benzophenone in isooctane, 100 pg/µl	No known significant effects or critical hazards.
	: OFN in Isooctane, 1 pg/µl	No known significant effects or critical hazards.
	: GC/MS Checkout Sample, 10 ng/ul	No known significant effects or critical hazards.
Mutagenicity	: Benzophenone in isooctane, 100 pg/µl	No known significant effects or critical hazards.
	: OFN in Isooctane, 1 pg/µl	No known significant effects or critical hazards.
	: GC/MS Checkout Sample, 10 ng/ul	No known significant effects or critical hazards.
Teratogenicity	: Benzophenone in isooctane, 100 pg/µl	No known significant effects or critical hazards.
	: OFN in Isooctane, 1 pg/µl	No known significant effects or critical hazards.
	: GC/MS Checkout Sample, 10 ng/ul	No known significant effects or critical hazards.
Developmental effects	: Benzophenone in isooctane, 100 pg/µl	No known significant effects or critical hazards.
	: OFN in Isooctane, 1 pg/µl	No known significant effects or critical hazards.
	: GC/MS Checkout Sample, 10 ng/ul	No known significant effects or critical hazards.
Fertility effects	: Benzophenone in isooctane, 100 pg/µl	No known significant effects or critical hazards.
	: OFN in Isooctane, 1 pg/µl	No known significant effects or critical hazards.
	: GC/MS Checkout Sample, 10 ng/ul	No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Not available.

Other information	: Benzophenone in isooctane, 100 pg/µl	Adverse symptoms may include the following: Repeated exposure may cause skin dryness or cracking.
	: OFN in Isooctane, 1 pg/µl	Adverse symptoms may include the following: Repeated exposure may cause skin dryness or cracking.
	: GC/MS Checkout Sample, 10 ng/ul	Adverse symptoms may include the following: Repeated exposure may cause skin dryness or cracking.

Section 12. Ecological information

12.1 Toxicity

Section 12. Ecological information

Product/ingredient name	Result	Species	Exposure
Benzophenone in isooctane, 100 pg/µl 2,2,4-trimethylpentane	Acute LC50 0.11 mg/l Fresh water	Fish	96 hours
OFN in Isooctane, 1 pg/µl 2,2,4-trimethylpentane	Acute LC50 0.11 mg/l Fresh water	Fish	96 hours
GC/MS Checkout Sample, 10 ng/ul 2,2,4-trimethylpentane	Acute LC50 0.11 mg/l Fresh water	Fish	96 hours

12.2 Persistence and degradability

Not available.

12.3 Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
Benzophenone in isooctane, 100 pg/µl Benzophenone in isooctane, 100 pg/µl	4.5	-	high
2,2,4-trimethylpentane	4.08	231	low
OFN in Isooctane, 1 pg/µl 2,2,4-trimethylpentane	4.08	231	low
GC/MS Checkout Sample, 10 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. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 13. Disposal considerations

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.

IATA

[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

[15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture](#)

U.S. Federal regulations : TSCA 4(a) final test rules: Benzophenone
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.

Section 15. Regulatory information

SARA 304 RQ : Not applicable.

SARA 311/312

Classification

: Benzophenone in isooctane, 100 pg/μl
 FLAMMABLE LIQUIDS - Category 2
 SKIN IRRITATION - Category 2
 EYE IRRITATION - Category 2A
 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
 ASPIRATION HAZARD - Category 1
 FLAMMABLE LIQUIDS - Category 2

OFN in Isooctane, 1 pg/μl
 SKIN IRRITATION - Category 2
 EYE IRRITATION - Category 2A
 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
 ASPIRATION HAZARD - Category 1
 FLAMMABLE LIQUIDS - Category 2

GC/MS Checkout Sample, 10 ng/ul
 SKIN IRRITATION - Category 2
 EYE IRRITATION - Category 2A
 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
 ASPIRATION HAZARD - Category 1

Composition/information on ingredients

Name	%	Classification
Benzophenone in isooctane, 100 pg/μl 2,2,4-trimethylpentane	≥90	FLAMMABLE LIQUIDS - Category 2 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 ASPIRATION HAZARD - Category 1 HNOC - Defatting irritant
OFN in Isooctane, 1 pg/μl 2,2,4-trimethylpentane	≥90	FLAMMABLE LIQUIDS - Category 2 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 ASPIRATION HAZARD - Category 1 HNOC - Defatting irritant
GC/MS Checkout Sample, 10 ng/ul 2,2,4-trimethylpentane	≥90	FLAMMABLE LIQUIDS - Category 2 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 ASPIRATION HAZARD - Category 1 HNOC - Defatting irritant

SARA 313

Section 15. Regulatory information

	Product name	CAS number	%
Form R - Reporting requirements	GC/MS Checkout Sample, 10 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.

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; 2,2,4-TRIMETHYLPENTANE
- 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. This product can expose you to Benzophenone, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

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

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

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

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

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

Section 15. Regulatory information

Taiwan	: All components are listed or exempted.
Thailand	: Not determined.
Turkey	: Not determined.
United States	: Not determined.
Viet Nam	: Not determined.

Section 16. Other information

History

Date of issue	: 08/21/2018
Date of previous issue	: 05/31/2017
Version	: 6

Procedure used to derive the classification

Classification	Justification
Benzophenone in isooctane, 100 pg/μl FLAMMABLE LIQUIDS - Category 2 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 ASPIRATION HAZARD - Category 1 AQUATIC HAZARD (ACUTE) - Category 1 AQUATIC HAZARD (LONG-TERM) - Category 1	On basis of test data Calculation method Calculation method Calculation method Calculation method Expert judgment Calculation method Calculation method
OFN in Isooctane, 1 pg/μl FLAMMABLE LIQUIDS - Category 2 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 ASPIRATION HAZARD - Category 1 AQUATIC HAZARD (ACUTE) - Category 1 AQUATIC HAZARD (LONG-TERM) - Category 1	On basis of test data Calculation method Calculation method Calculation method Calculation method Expert judgment Calculation method Calculation method
GC/MS Checkout Sample, 10 ng/ul FLAMMABLE LIQUIDS - Category 2 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 ASPIRATION HAZARD - Category 1 AQUATIC HAZARD (ACUTE) - Category 1 AQUATIC HAZARD (LONG-TERM) - Category 1	On basis of test data Calculation method Calculation method Calculation method Calculation method Expert judgment Calculation method Calculation method

Indicates information that has changed from previously issued version.

Notice to reader

Section 16. Other information

Disclaimer: The information contained in this document is based on Agilent's state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.