

Safety Data Sheet



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

Revision Date: 04/24/2021
Print Date: 11/27/2021

1.1 Production identifiers

Product name : 2-BUTANON PEROXIDE (MEK)
Brand : CJ Chemicals LLC
CAS-No. : 79-14-1

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

Identified uses : Laboratory chemicals, synthesis of substances

1.3 Details of the supplier of the safety data sheet

Company : CJ Chemicals LLC
3469 E Grand River Rd #112
Howell, MI 48843
United States

Telephone : +1 (888) 274-1044

1.4 Emergency Telephone

Emergency Phone # : 1-800-424-9300 CHEMTREC (USA)
1-703-527-3887 CHEMTREC (international) 24 hours/day; 7 days/week

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Flammable liquids (Category 3), H226
Organic peroxides (Type D), H242
Acute toxicity, Oral (Category 4), H302
Skin corrosion (Category 1B), H314
Serious eye damage (Category 1), H318
Short-term (acute) aquatic hazard (Category 2), H401

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 GHS Label elements, including precautionary statements

Pictogram



Signal word

Danger

Hazard statement(s)	
H226	Flammable liquid and vapor.
H242	Heating may cause a fire.
H302 + H332	Harmful if swallowed or if inhaled.
H314	Causes severe skin burns and eye damage.
Precautionary statement(s)	
P210	Keep away from heat/ sparks/ open flames/ hot surfaces. No smoking.
P220	Keep/Store away from clothing/ combustible materials.
P233	Keep container tightly closed.
P234	Keep only in original container.
P240	Ground/bond container and receiving equipment.
P241	Use explosion-proof electrical/ ventilating/ lighting/ equipment.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P261	Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.
P264	Wash skin thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P301 + P312	IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell.
P301 + P330 + P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353	IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P304 + P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER/ doctor.
P321	Specific treatment (see supplemental first aid instructions on this label).
P363	Wash contaminated clothing before reuse.
P370 + P378	In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.
P405	Store locked up.
P410	Protect from sunlight.
P411 + P235	Store at temperatures not exceeding 30°C/ 86 °F. Keep cool.
P420	Store away from other materials.
P501	Dispose of contents/ container to an approved waste disposal plant.

Pictogram



Signal word

Danger

Hazard statement(s)

H226	Flammable liquid and vapor.
H242	Heating may cause a fire.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H401	Toxic to aquatic life.

Precautionary statement(s)	
P210	Keep away from heat/ sparks/ open flames/ hot surfaces. No smoking.
P220	Keep/Store away from clothing/ combustible materials.
P233	Keep container tightly closed.
P234	Keep only in original container.
P240	Ground/bond container and receiving equipment.
P241	Use explosion-proof electrical/ ventilating/ lighting/ equipment.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P264	Wash skin thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P273	Avoid release to the environment.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P301 + P312 + P330	IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. Rinse mouth.
P301 + P330 + P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P304 + P340 + P310	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.
P305 + P351 + P338 + P310	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/ doctor.
P363	Wash contaminated clothing before reuse.
P370 + P378	In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.
P405	Store locked up.
P410	Protect from sunlight.
P411 + P235	Store at temperatures not exceeding .? °C/ .? °F. Keep cool.
P420	Store away from other materials.
P501	Dispose of contents/ container to an approved waste disposal plant.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Synonyms : Ethyl methyl ketone peroxide
Methyl ethyl ketone peroxide

Formula : C₈H₁₈O₆

Molecular weight : 210.22 g/mol

Component	Classification	Concentration
2-Butanone peroxide		
CAS-No. 1338-23-4	Flam. Liq. 4; Org. Perox. B; Acute Tox. 4; Skin Corr. 1B; Eye Dam. 1; Aquatic Acute 2; H227, H241, H302, H314, H318, H401	>= 30 - < 50 %
EC-No. 215-661-2		

2-Methyl-2-pentanol-4-one			
CAS-No.	123-42-2	Flam. Liq. 3; Eye Irrit. 2A;	≥ 10 - < 20 %
EC-No.	204-626-7	Repr. 2; STOT SE 3; H226,	
Index-No.	603-016-00-1	H319, H361, H335 Concentration limits: ≥ 10 %: Eye Irrit. 2, H319;	
Hydrogen Peroxide			
CAS-No.	7722-84-1	Ox. Liq. 1; Acute Tox. 4;	≥ 1 - < 5 %
EC-No.	231-765-0	Skin Corr. 1A; Eye Dam. 1;	
Index-No.	008-003-00-9	STOT SE 3; Aquatic Acute 2; Aquatic Chronic 3; H271, H302, H332, H314, H318, H335, H401, H412 Concentration limits: ≥ 70 %: Ox. Liq. 1, H271; 50 - < 70 %: Ox. Liq. 2, H272; ≥ 70 %: Skin Corr. 1A, H314; 50 - < 70 %: Skin Corr. 1B, H314; 35 - < 50 %: Skin Irrit. 2, H315; 8 - < 50 %: Eye Dam. 1, H318; 5 - < 8 %: Eye Irrit. 2, H319; ≥ 35 %: STOT SE 3, H335;	
Ethyl Methyl Ketone			
CAS-No.	78-93-3	Flam. Liq. 2; Eye Irrit. 2A;	≥ 1 - < 5 %
EC-No.	201-159-0	STOT SE 3; H225, H319,	
Index-No.	606-002-00-3	H336	
Registration number	01-2119457290-43-XXXX	Concentration limits: 20 %: STOT SE 3, H336;	

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice

Consult a physician. Show this material safety data sheet to the doctor in attendance. Move out of dangerous area.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Continue rinsing eyes during transport to hospital.

If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed

No data available

SECTION 5: Firefighting measures**5.1 Extinguishing media****Suitable extinguishing media**

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture

Carbon oxides

5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information

Use water spray to cool unopened containers.

SECTION 6: Accidental release measures**6.1 Personal precautions, protective equipment and emergency procedures**

Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.

For personal protection see section 8.

6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

6.3 Methods and materials for containment and cleaning up

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13).

6.4 Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage**7.1 Precautions for safe handling****Advice on safe handling**

Avoid contact with skin and eyes. Avoid inhalation of vapor or mist.

Advice on protection against fire and explosion

Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge. Keep away from heat and sources of ignition.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Store in original container. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Storage stability

Recommended storage temperature

2 - 8 °C

Avoid heating above: 30°C

Storage class (TRGS 510): 5.2: Organic peroxides and self-reacting hazardous materials

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Ingredients with workplace control parameters

Component	CAS-No.	Value	Control parameters	Basis
2-Butanone peroxide	1338-23-4	C	0.2 ppm	USA. ACGIH Threshold Limit Values (TLV)
		C	0.7 ppm 5 mg/m3	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
		C	0.2 ppm 1.5 mg/m3	USA. NIOSH Recommended Exposure Limits
		C	0.2 ppm 1.5 mg/m3	California permissible exposure limits for chemical contaminants (Title 8, Article 107)
2-Methyl-2-pentanol-4-one	123-42-2	TWA	50 ppm 240 mg/m3	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
		TWA	50 ppm	USA. ACGIH Threshold Limit Values (TLV)
		TWA	50 ppm 240 mg/m3	USA. NIOSH Recommended Exposure Limits
		TWA	50 ppm 240 mg/m3	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
		PEL	50 ppm 240 mg/m3	California permissible exposure limits for chemical contaminants (Title 8, Article 107)
Hydrogen Peroxide	7722-84-1	TWA	1 ppm	USA. ACGIH Threshold Limit Values (TLV)
	Remarks	Confirmed animal carcinogen with unknown relevance to humans		

		TWA	1 ppm 1.4 mg/m ³	USA. NIOSH Recommended Exposure Limits
		TWA	1 ppm 1.4 mg/m ³	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
		PEL	1 ppm 1.4 mg/m ³	California permissible exposure limits for chemical contaminants (Title 8, Article 107)
Ethyl Methyl Ketone	78-93-3	TWA	200 ppm	USA. ACGIH Threshold Limit Values (TLV)
		STEL	300 ppm	USA. ACGIH Threshold Limit Values (TLV)
		TWA	200 ppm 590 mg/m ³	USA. NIOSH Recommended Exposure Limits
		ST	300 ppm 885 mg/m ³	USA. NIOSH Recommended Exposure Limits
		TWA	200 ppm 590 mg/m ³	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
		TWA	200 ppm 590 mg/m ³	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
		STEL	300 ppm 885 mg/m ³	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
		PEL	200 ppm 590 mg/m ³	California permissible exposure limits for chemical contaminants (Title 8, Article 107)
		STEL	300 ppm 885 mg/m ³	California permissible exposure limits for chemical contaminants (Title 8, Article 107)

Biological occupational exposure limits

Component	CAS-No.	Parameters	Value	Biological specimen	Basis
Ethyl Methyl Ketone	78-93-3	methyl ethyl ketone	2 mg/l	Urine	ACGIH - Biological Exposure Indices (BEI)
	Remarks	End of shift (As soon as possible after exposure ceases)			

8.2 Exposure controls

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection

Tightly fitting safety goggles. Faceshield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Body Protection

Complete suit protecting against chemicals, Flame retardant antistatic protective clothing., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

a) Appearance	Form: liquid Color: colorless
b) Odor	No data available
c) Odor Threshold	No data available
d) pH	No data available
e) Melting point/freezing point	No data available
f) Initial boiling point and boiling range	No data available
g) Flash point	56 °C (133 °F) - closed cup
h) Evaporation rate	No data available
i) Flammability (solid, gas)	No data available
j) Upper/lower flammability or explosive limits	No data available
k) Vapor pressure	0.002 hPa at 25 °C (77 °F)
l) Vapor density	No data available

- | | |
|--|-----------------------------|
| m) Relative density | No data available |
| n) Water solubility | ca.6.5 g/l at 20 °C (68 °F) |
| o) Partition coefficient:
n-octanol/water | No data available |
| p) Autoignition
temperature | No data available |
| q) Decomposition
temperature | ca.60 °C (ca.140 °F) - |
| r) Viscosity | No data available |
| s) Explosive properties | No data available |
| t) Oxidizing properties | No data available |

9.2 Other safety information

No data available

SECTION 10: Stability and reactivity

10.1 Reactivity

No data available

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

No data available

10.4 Conditions to avoid

Heat, flames and sparks. Avoid heating above: 30°C
Heat, flames and sparks.

10.5 Incompatible materials

acids, Bases, Organic materials, Metal oxides, Heavy metal salts, Amines

10.6 Hazardous decomposition products

In the event of fire: see section 5

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Mixture

Acute toxicity

No data available

Acute toxicity estimate Oral - 1,917 mg/kg
(Calculation method)

Inhalation: No data available

Acute toxicity estimate Inhalation - 4 h - > 200 mg/l
(Calculation method)

Dermal: No data available

Acute toxicity estimate Dermal - > 5,000 mg/kg
(Calculation method)
No data available

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

No data available

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

IARC: No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

NTP: No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure
No data available

Aspiration hazard

No data available

11.2 Additional Information

Not available

burning sensation, Cough, wheezing, laryngitis, Shortness of breath, Headache, Nausea, Vomiting

Stomach - Irregularities - Based on Human Evidence

Liver - Irregularities - Based on Human Evidence

Components

2-Butanone peroxide

Acute toxicity

LD50 Oral - Rat - male - 1,017 mg/kg

(OECD Test Guideline 401)

LC50 Inhalation - Rat - male and female - 4 h - 17 mg/l

(OECD Test Guideline 403)

LD50 Dermal - Rabbit - male and female - 4,000 mg/kg

(OECD Test Guideline 402)

No data available

Skin corrosion/irritation

Skin - Rabbit

Result: Corrosive - 24 h

(Directive 67/548/EEC, Annex V, B.4.)

Serious eye damage/eye irritation

Eyes - Rabbit

Result: Corrosive

(Directive 67/548/EEC, Annex V, B.5.)

Respiratory or skin sensitization

in vivo assay - Guinea pig

Result: Does not cause skin sensitization.

(OECD Test Guideline 406)

Germ cell mutagenicity

Ames test

S. typhimurium

Result: negative

Carcinogenicity

Reproductive toxicity

No data available

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

2-Methyl-2-pentanol-4-one

Acute toxicity

LD50 Oral - Rat - male and female - 3,002 mg/kg

(OECD Test Guideline 401)

Symptoms: Risk of aspiration upon vomiting., Aspiration may cause pulmonary edema and pneumonitis.

Inhalation: No data available

Symptoms: mucosal irritations

LD50 Dermal - Rabbit - 13,630 mg/kg

Remarks:

(IUCLID)

No data available

Skin corrosion/irritation

Skin - Rabbit

Result: No skin irritation - 24 h

(OECD Test Guideline 404)

Remarks:

(IUCLID)

Drying-out effect resulting in rough and chapped skin.

Dermatitis

Serious eye damage/eye irritation

Eyes - Rabbit

Result: Irritating to eyes.

(OECD Test Guideline 405)

Remarks:

(IUCLID)

Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Respiratory or skin sensitization

Maximization Test - Guinea pig

Result: negative

(OECD Test Guideline 406)

Germ cell mutagenicity

Ames test

Escherichia coli/Salmonella typhimurium

Result: negative

In vitro mammalian cell gene mutation test
mouse lymphoma cells

Result: negative

Chromosome aberration test in vitro

Chinese hamster lung cells

Result: negative

Carcinogenicity

Reproductive toxicity

Suspected of damaging the unborn child.

Suspected of damaging fertility.

Specific target organ toxicity - single exposure

May cause respiratory irritation. - Respiratory Tract

Acute oral toxicity - Risk of aspiration upon vomiting., Aspiration may cause
pulmonary edema and pneumonitis.

Acute inhalation toxicity - mucosal irritations

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

Hydrogen Peroxide

Acute toxicity

Acute toxicity estimate Oral - 500.1 mg/kg
(Expert judgment)
No data available

Inhalation: Corrosive to respiratory system.

LD50 Dermal - Rabbit - male and female - > 2,000 mg/kg
(US-EPA)

Skin corrosion/irritation

Serious eye damage/eye irritation

Causes serious eye damage.

Respiratory or skin sensitization

Germ cell mutagenicity

OECD Test Guideline 474
Mouse - male and female - Bone marrow
Result: negative

Carcinogenicity

Reproductive toxicity

Specific target organ toxicity - single exposure

Inhalation - May cause respiratory irritation. - Respiratory Tract

Specific target organ toxicity - repeated exposure

Aspiration hazard

Ethyl Methyl Ketone

Acute toxicity

LD50 Oral - Rat - male and female - 2,193 mg/kg
(OECD Test Guideline 423)
LC50 Inhalation - Mouse - 4 h - 32,000 mg/m³
Remarks:
(RTECS)
LD50 Dermal - Rabbit - 6,480 mg/kg
Remarks:
(RTECS)
No data available

Skin corrosion/irritation

Skin - Rabbit
Result: No skin irritation - 4 h
(OECD Test Guideline 404)

Serious eye damage/eye irritation

Eyes - Rabbit
Result: Severe irritations
(OECD Test Guideline 405)
Remarks:
(Regulation (EC) No 1272/2008, Annex VI)

Respiratory or skin sensitization

Buehler Test - Guinea pig
Result: negative
(OECD Test Guideline 406)

Germ cell mutagenicity

Ames test
S. typhimurium
Result: negative
Mutagenicity (mammal cell test): chromosome aberration.
rat hepatocytes
Result: negative
In vitro mammalian cell gene mutation test
mouse lymphoma cells
Result: negative
OECD Test Guideline 474
Mouse - male and female - Bone marrow
Result: negative

Carcinogenicity**Reproductive toxicity**

No data available

Specific target organ toxicity - single exposure

May cause drowsiness or dizziness.

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

SECTION 12: Ecological information**12.1 Toxicity****Mixture**

No data available

12.2 Persistence and degradability

No data available

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Other adverse effects

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Toxic to aquatic life.

Components

2-Butanone peroxide

Toxicity to fish	semi-static test LC50 - <i>Poecilia reticulata</i> (guppy) - 44.2 mg/l - 96 h (OECD Test Guideline 203)
Toxicity to daphnia and other aquatic invertebrates	static test EC50 - <i>Daphnia magna</i> (Water flea) - 39 mg/l - 48 h (OECD Test Guideline 202)
Toxicity to algae	static test EC50 - <i>Pseudokirchneriella subcapitata</i> - 5.6 mg/l - 72 h (OECD Test Guideline 201)
Toxicity to bacteria	Respiration inhibition EC50 - Sludge Treatment - 48 mg/l - 30 min (OECD Test Guideline 209)

2-Methyl-2-pentanol-4-one

Toxicity to fish	semi-static test LC50 - <i>Oryzias latipes</i> (Orange-red killifish) - > 100 mg/l - 96 h (OECD Test Guideline 203)
Toxicity to daphnia and other aquatic invertebrates	semi-static test EC50 - <i>Daphnia magna</i> (Water flea) - > 1,000 mg/l - 48 h (OECD Test Guideline 202)
	semi-static test NOEC - <i>Daphnia magna</i> (Water flea) - > 1,000 mg/l - 48 h (OECD Test Guideline 202)
Toxicity to algae	static test ErC50 - <i>Pseudokirchneriella subcapitata</i> (green algae) - > 1,000 mg/l - 72 h (OECD Test Guideline 201)
	static test NOEC - <i>Pseudokirchneriella subcapitata</i> (green algae) - >= 1,000 mg/l - 72 h (OECD Test Guideline 201)
Toxicity to bacteria	static test EC50 - activated sludge - > 1,000 mg/l - 3 h (OECD Test Guideline 209)

Hydrogen Peroxide

Toxicity to fish	semi-static test LC50 - <i>Pimephales promelas</i> (fathead minnow) - 16.4 mg/l - 96 h (US-EPA)
	semi-static test NOEC - <i>Pimephales promelas</i> (fathead minnow) - 5 mg/l - 96 h (US-EPA)
Toxicity to daphnia and other aquatic invertebrates	semi-static test LC50 - <i>Daphnia pulex</i> (Water flea) - 2.4 mg/l - 48 h (US-EPA)
	semi-static test NOEC - <i>Daphnia pulex</i> (Water flea) - 1 mg/l -

	48 h (US-EPA)
Toxicity to algae	IC50 - Pseudokirchneriella subcapitata (green algae) - 5.7 mg/l - 72 h Remarks: (ECOTOX Database)
	Growth rate NOEC - Skeletonema costatum (marine diatom) - 0.63 mg/l - 72 h Remarks: (External MSDS)
Toxicity to bacteria	static test EC50 - activated sludge - 466 mg/l - 30 min (OECD Test Guideline 209) static test EC50 - activated sludge - > 1,000 mg/l - 3 h (OECD Test Guideline 209)

Ethyl Methyl Ketone

Toxicity to fish	static test LC50 - Pimephales promelas (fathead minnow) - 2,993 mg/l - 96 h (OECD Test Guideline 203)
Toxicity to daphnia and other aquatic invertebrates	static test EC50 - Daphnia magna (Water flea) - 308 mg/l - 48 h (OECD Test Guideline 202)
Toxicity to algae	static test ErC50 - Pseudokirchneriella subcapitata - 1,972 mg/l - 72 h (OECD Test Guideline 201)

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging

Dispose of as unused product.

SECTION 14: Transport information

DOT (US)

UN number: 3105 Class: 5.2

Proper shipping name: Organic peroxide type D, liquid (Methyl ethyl ketone peroxide(s), ≤45%)

Reportable Quantity (RQ): 28 lbs

Reportable Quantity (RQ): 5000 lbs

Reportable Quantity (RQ): 100 lbs

Poison Inhalation Hazard: No

IMDG

UN number: 3105 Class: 5.2 EMS-No: F-J, S-R
Proper shipping name: ORGANIC PEROXIDE TYPE D, LIQUID (METHYL ETHYL KETONE PEROXIDE(S))

IATA

UN number: 3105 Class: 5.2 (HEAT)
Proper shipping name: Organic peroxide type D, liquid (Methyl ethyl ketone peroxide(s))
Special Provisions: "Keep away from heat" label required.

SECTION 15: Regulatory information

SARA 302 Components

The following components are subject to reporting levels established by SARA Title III, Section 302:

	CAS-No.	Revision Date
Hydrogen Peroxide	7722-84-1	2014-05-05

SARA 313 Components

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards

Fire Hazard, Reactivity Hazard, Acute Health Hazard, Chronic Health Hazard

Reportable Quantity :
D035 lbs
F005 lbs

Massachusetts Right To Know Components

	CAS-No.	Revision Date
2-Butanone peroxide	1338-23-4	2014-05-05
2-Methyl-2-pentanol-4-one	123-42-2	1993-02-16
Hydrogen Peroxide	7722-84-1	2014-05-05
Ethyl Methyl Ketone	78-93-3	1993-02-16

Pennsylvania Right To Know Components

	CAS-No.	Revision Date
2-Butanone peroxide	1338-23-4	2014-05-05
2-Methyl-2-pentanol-4-one	123-42-2	1993-02-16

Hydrogen Peroxide	7722-84-1	2014-05-05
Ethyl Methyl Ketone	78-93-3	1993-02-16

California Prop. 65 Components

This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

SECTION 16: Other information

Further information

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. CJ Chemicals LLC and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.cjchemicals.com and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

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