

Brake-Kleen

Safety Data Sheet

according to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012.

Issue date: 2/15/2024 Revision date: 2/15/2024 Version: 1.0

SECTION 1: Identification

1.1. Identification

Product form : Mixture
Product number : 8177, 9452, 9924, 8410

1.2. Recommended use and restrictions on use

Use of the substance/mixture : Break Cleaner

1.3. Supplier

TIFCO Industries, Inc. - PO Box 40277 Houston, TX 77240 - 281-571-6000

1.4. Emergency telephone number

Emergency number : 800-255-3924

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

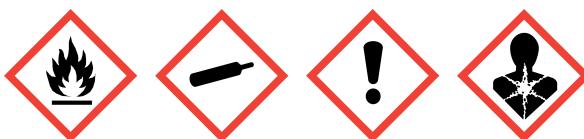
GHS US classification

Flam. Aerosol 1	Extremely flammable aerosol
Press. Gas (Comp.)	Contains gas under pressure; may explode if heated
Skin Irrit. 2	Causes skin irritation
Eye Irrit. 2A	Causes serious eye irritation
Repr. 2	Suspected of damaging fertility or the unborn child
STOT SE 3	May cause drowsiness or dizziness
STOT RE 1	Causes damage to organs through prolonged or repeated exposure
Asp. Tox. 1	May be fatal if swallowed and enters airways

2.2. GHS Label elements, including precautionary statements

GHS US labeling

Hazard pictograms (GHS US) :



Signal word (GHS US)

: Danger

Hazard statements (GHS US)

: Extremely flammable aerosol

Contains gas under pressure; may explode if heated

May be fatal if swallowed and enters airways

Causes skin irritation

Causes serious eye irritation

May cause drowsiness or dizziness

Suspected of damaging fertility or the unborn child

Causes damage to organs through prolonged or repeated exposure

Precautionary statements (GHS US)

: If medical advice is needed, have product container or label at hand.

Keep out of reach of children.

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

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Do not spray on an open flame or other ignition source.
Do not pierce or burn, even after use.
Avoid breathing dust/fume/gas/mist/vapors/spray.
Wash hands, forearms and face thoroughly after handling.
Do not eat, drink or smoke when using this product.
Use only outdoors or in a well-ventilated area.
Wear protective gloves/protective clothing/eye protection/face protection.
If swallowed: Immediately call a poison center or doctor.
If on skin: Wash with plenty of water.
If inhaled: Remove person to fresh air and keep comfortable for breathing.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If exposed or concerned: Get medical advice/attention.
Do NOT induce vomiting.
If skin irritation occurs: Get medical advice/attention.
If eye irritation persists: Get medical advice/attention.
Store locked up.
Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.
Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

2.3. Other hazards which do not result in classification

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%
Acetone	CAS-No.: 67-64-1	40 – 50
Heptane, branched, cyclic and linear	CAS-No.: 426260-76-6	< 45
Naphtha (petroleum), hydrotreated light	CAS-No.: 64742-49-0	< 45
Solvent naphtha, petroleum, light aliphatic	CAS-No.: 64742-89-8	< 45
n-Heptane	CAS-No.: 142-82-5	10 – 30
Carbon dioxide	CAS-No.: 124-38-9	5
Toluene	CAS-No.: 108-88-3	<2
Ethylbenzene	CAS-No.: 100-41-4	< 1
Benzene	CAS-No.: 71-43-2	< 1
Naphthalene	CAS-No.: 91-20-3	< 1

*Chemical name, CAS number and/or exact concentration have been withheld as a trade secret

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SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures general	: IF exposed or concerned: Get medical advice/attention.
First-aid measures after inhalation	: If inhaled and if breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
First-aid measures after skin contact	: IF ON SKIN: Wash with plenty of water. Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse. If skin irritation occurs: Get medical advice/attention.
First-aid measures after eye contact	: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
First-aid measures after ingestion	: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Never give anything by mouth to an unconscious person. Do not induce vomiting without medical advice. Get medical advice/attention if you feel unwell.

4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects after inhalation	: May cause irritation to the respiratory tract. May cause drowsiness or dizziness.
Symptoms/effects after skin contact	: Causes skin irritation. Symptoms may include redness, drying, defatting and cracking of the skin.
Symptoms/effects after eye contact	: Causes serious eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.
Symptoms/effects after ingestion	: May be fatal if swallowed and enters airways. May cause gastrointestinal irritation, nausea, vomiting and diarrhea. May result in aspiration into the lungs, causing chemical pneumonia.
Chronic symptoms	: Suspected of damaging fertility or the unborn child. Causes damage to organs through prolonged or repeated exposure.

4.3. Immediate medical attention and special treatment, if necessary

Symptoms may be delayed. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media	: Use extinguishing media appropriate for surrounding fire.
Unsuitable extinguishing media	: Do not use water jet.

5.2. Specific hazards arising from the chemical

Fire hazard	: Extremely flammable aerosol. Products of combustion may include, and are not limited to: oxides of carbon. Irritating vapors. Vapors are heavier than air and may travel considerable distance to an ignition source and flash back to source of vapors.
Explosion hazard	: Heat may build pressure, rupturing closed containers, spreading fire and increasing risk of burns and injuries. Ruptured cylinders may rocket.

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions	: In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion. DO NOT fight fire when fire reaches explosives. Move containers away from the fire area if this can be done without risk. Cool closed containers exposed to fire with water spray.
Protection during firefighting	: Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA).

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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures

- : Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Eliminate every possible source of ignition. Use only non-sparking tools. Use special care to avoid static electric charges. Isolate from fire, if possible, without unnecessary risk.

6.1.1. For non-emergency personnel

No additional information available

6.1.2. For emergency responders

No additional information available

6.2. Environmental precautions

Prevent entry to sewers and public waters.

6.3. Methods and material for containment and cleaning up

For containment

- : Stop leak if safe to do so. Absorb and/or contain spill with inert material (sand, vermiculite or other appropriate material), then place in suitable container. Do not flush into surface water or sewer system. Wear recommended personal protective equipment. Eliminate every possible source of ignition.

Methods for cleaning up

- : Sweep or shovel spills into appropriate container for disposal. Provide ventilation.

6.4. Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection".

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed

- : Hazardous waste due to potential risk of explosion.

Precautions for safe handling

- : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe dust/fume/gas/mist/vapors/ spray. Avoid contact with skin and eyes. Do not swallow. Handle and open container with care. When using do not eat, drink or smoke. Do not spray on an open flame or other ignition source. Do not pierce or burn, even after use. Use only outdoors or in a well-ventilated area.

Hygiene measures

- : Wash contaminated clothing before reuse. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures

- : Proper grounding procedures to avoid static electricity should be followed. Subject to 29 CFR § 1910.101.

Storage conditions

- : Keep out of the reach of children. Keep container tightly closed. Store in a dry, cool and well-ventilated place. Do not expose to temperatures exceeding 50 °C/ 122 °F. Keep in fireproof place. Store away from direct sunlight or other heat sources. Protect containers from physical damage. Store locked up.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

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45% VOC Brake Cleaner

No additional information available

Acetone (67-64-1)

USA - ACGIH - Occupational Exposure Limits

ACGIH OEL TWA	250 ppm
ACGIH OEL STEL	500 ppm
ACGIH chemical category	Not Classifiable as a Human Carcinogen

USA - ACGIH - Biological Exposure Indices

BEI (BLV)	25 mg/l Parameter: Acetone - Medium: urine - Sampling time: end of shift (nonspecific)
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USA - OSHA - Occupational Exposure Limits

OSHA PEL TWA	2400 mg/m ³
	1000 ppm

USA - IDLH - Occupational Exposure Limits

IDLH	2500 ppm (10% LEL)
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USA - NIOSH - Occupational Exposure Limits

NIOSH REL (TWA)	590 mg/m ³
	250 ppm

Heptane, branched, cyclic and linear (426260-76-6)

No additional information available

n-Heptane (142-82-5)

USA - ACGIH - Occupational Exposure Limits

ACGIH OEL TWA	400 ppm (Heptane, all isomers)
ACGIH OEL STEL	500 ppm (Heptane, all isomers)

USA - OSHA - Occupational Exposure Limits

OSHA PEL TWA	2000 mg/m ³
	500 ppm

USA - IDLH - Occupational Exposure Limits

IDLH	750 ppm
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USA - NIOSH - Occupational Exposure Limits

NIOSH REL (TWA)	350 mg/m ³
	85 ppm
NIOSH REL (Ceiling)	1800 mg/m ³
	440 ppm

Toluene (108-88-3)

USA - ACGIH - Occupational Exposure Limits

Local name	Toluene
ACGIH OEL TWA	20 ppm

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Toluene (108-88-3)	
Remark (ACGIH)	TLV® Basis: Visual impair; female repro; pregnancy loss. Notations: A4 (Not classifiable as a Human Carcinogen); BEI
ACGIH chemical category	Not Classifiable as a Human Carcinogen
Regulatory reference	ACGIH 2020
USA - ACGIH - Biological Exposure Indices	
BEI (BLV)	0.02 mg/l Parameter: Toluene - Medium: blood - Sampling time: prior to last shift of workweek 0.03 mg/l Parameter: Toluene - Medium: urine - Sampling time: end of shift 0.3 mg/g Kreatinin Parameter: o-Cresol with hydrolysis - Medium: urine - Sampling time: end of shift (background)
USA - OSHA - Occupational Exposure Limits	
Local name	Toluene
OSHA PEL TWA	200 ppm
OSHA PEL (Ceiling)	300 ppm
Acceptable maximum peak above the acceptable ceiling concentration for an 8-hr shift	500 ppm Peak (10 minutes)
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-2
USA - IDLH - Occupational Exposure Limits	
IDLH	500 ppm
USA - NIOSH - Occupational Exposure Limits	
NIOSH REL (TWA)	375 mg/m ³
	100 ppm
NIOSH REL (STEL)	560 mg/m ³
	150 ppm
Carbon dioxide (124-38-9)	
USA - ACGIH - Occupational Exposure Limits	
Local name	Carbon dioxide
ACGIH OEL TWA	5000 ppm
ACGIH OEL STEL	30000 ppm
Remark (ACGIH)	TLV® Basis: Asphyxia
Regulatory reference	ACGIH 2022
USA - OSHA - Occupational Exposure Limits	
Local name	Carbon dioxide
OSHA PEL TWA	9000 mg/m ³
	5000 ppm
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1
USA - IDLH - Occupational Exposure Limits	
IDLH	40000 ppm
USA - NIOSH - Occupational Exposure Limits	
NIOSH REL (TWA)	9000 mg/m ³

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Carbon dioxide (124-38-9)	
	5000 ppm
NIOSH REL (STEL)	54000 mg/m ³
	30000 ppm
Naphtha (petroleum), hydrotreated light (64742-49-0)	
No additional information available	
Solvent naphtha, petroleum, light aliphatic (64742-89-8)	
No additional information available	
Ethylbenzene (100-41-4)	
USA - ACGIH - Occupational Exposure Limits	
ACGIH chemical category	Confirmed Animal Carcinogen with Unknown Relevance to Humans
USA - ACGIH - Biological Exposure Indices	
BEI (BLV)	0.15 g/g Kreatinin Parameter: Sum of mandelic acid and phenylglyoxylic acid - Medium: urine - Sampling time: end of shift (nonspecific)
USA - OSHA - Occupational Exposure Limits	
Local name	Ethyl benzene
OSHA PEL TWA	435 mg/m ³
	100 ppm
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1 OSHA Annotated Table Z-1
USA - IDLH - Occupational Exposure Limits	
IDLH	800 ppm (10% LEL)
USA - NIOSH - Occupational Exposure Limits	
NIOSH REL (TWA)	435 mg/m ³
	100 ppm
NIOSH REL (STEL)	545 mg/m ³
	125 ppm
Benzene (71-43-2)	
USA - ACGIH - Occupational Exposure Limits	
Local name	Benzene
ACGIH OEL TWA	0.5 ppm
ACGIH OEL STEL	2.5 ppm
Remark (ACGIH)	TLV® Basis: Leukemia. Notations: Skin; A1 (Confirmed Human Carcinogen); BEI
ACGIH chemical category	Confirmed Human Carcinogen, Skin - potential significant contribution to overall exposure by the cutaneous route
Regulatory reference	ACGIH 2020
USA - ACGIH - Biological Exposure Indices	
Local name	BENZENE

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Benzene (71-43-2)	
BEI (BLV)	25 µg/g Kreatinin Parameter: S-Phenylmercapturic acid - Medium: urine - Sampling time: end of shift (background) 500 µg/g Kreatinin Parameter: t,t-Muconic acid - Medium: urine - Sampling time: end of shift (background)
Regulatory reference	ACGIH 2020
USA - OSHA - Occupational Exposure Limits	
Local name	Benzene
OSHA PEL TWA	10 ppm 1 ppm
OSHA PEL STEL	5 ppm (see 29 CFR 1910.1028)
OSHA PEL (Ceiling)	25 ppm
Acceptable maximum peak above the acceptable ceiling concentration for an 8-hr shift	50 ppm Peak (10 minutes)
Remark (OSHA)	Benzene is subject to the standard 29 CFR 1910.1028 which may contain specific requirements for handling including protective equipment, regulated areas, monitoring and medical surveillance. The employer should review the standard and assure compliance with applicable requirements.
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-2
USA - IDLH - Occupational Exposure Limits	
IDLH	500 ppm
USA - NIOSH - Occupational Exposure Limits	
NIOSH REL (TWA)	0.1 ppm
NIOSH REL (STEL)	1 ppm
Naphthalene (91-20-3)	
USA - ACGIH - Occupational Exposure Limits	
ACGIH OEL TWA	10 ppm
ACGIH chemical category	Confirmed Animal Carcinogen with Unknown Relevance to Humans, Skin - potential significant contribution to overall exposure by the cutaneous route
USA - ACGIH - Biological Exposure Indices	
BEI (BLV)	Parameter: 1-Naphthol with hydrolysis plus 2-Naphthol with hydrolysis - Sampling time: end of shift (nonquantitative, nonspecific)
USA - OSHA - Occupational Exposure Limits	
OSHA PEL TWA	50 mg/m ³ 10 ppm
USA - IDLH - Occupational Exposure Limits	
IDLH	250 ppm
USA - NIOSH - Occupational Exposure Limits	
NIOSH REL (TWA)	50 mg/m ³ 10 ppm
NIOSH REL (STEL)	75 mg/m ³

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Naphthalene (91-20-3)

15 ppm

8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station. Provide readily accessible eye wash stations and safety showers.

Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Hand protection:

Wear suitable gloves resistant to chemical penetration. Consult glove manufacturer's product information on material suitability and material thickness.

Eye protection:

Wear eye/face protection

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. SDSs cannot provide detailed and complete respiratory protection guidelines. Selection of respiratory protection must be done by a qualified person who has assessed the work environment.

Other information:

Handle in accordance with good industrial hygiene and safety procedures. Do not eat, drink or smoke when using this product.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Aerosol.
Color	: No data available
Odor	: No data available
Odor threshold	: No data available
pH	: Not determined
Melting point	: No data available
Freezing point	: No data available
Boiling point	: Not determined
Flash point	: Not determined
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: Extremely flammable aerosol.
Vapor pressure	: No data available
Relative vapor density at 20°C	: No data available
Relative density	: No data available
Solubility	: No data available
Partition coefficient n-octanol/water	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: Not determined
Viscosity, dynamic	: No data available
Explosion limits	: No data available
Explosive properties	: No data available

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Oxidizing properties : No data available

9.2. Other information

Gas group : Compressed gas
Flashback : Present
Flame projection : > 75 cm / 29.5 in

SECTION 10: Stability and reactivity

10.1. Reactivity

No dangerous reactions known under normal conditions of use.

10.2. Chemical stability

Stable under normal conditions. Extremely flammable aerosol. Contents under pressure. Container may explode if heated. Do not puncture. Do not burn. Extreme risk of explosion by shock, friction, fire or other sources of ignition.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Heat. Incompatible materials. Sparks. Open flame. Direct sunlight. Overheating.

10.5. Incompatible materials

Strong oxidizers.

10.6. Hazardous decomposition products

May include, and are not limited to: oxides of carbon.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

Acetone (67-64-1)

LD50 oral rat	5800 mg/kg
LD50 dermal rabbit	> 15700 mg/kg
LC50 inhalation rat	50100 mg/m ³ (Exposure time: 8 h)

n-Heptane (142-82-5)

LD50 oral rat	> 5000 mg/kg body weight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity), Guideline: EPA OPPTS 870.1100 (Acute Oral Toxicity)
LD50 dermal rabbit	> 2000 mg/kg body weight Animal: rabbit, Guideline: OECD Guideline 402 (Acute Dermal Toxicity), Guideline: EPA OPPTS 870.1200 (Acute Dermal Toxicity)
LC50 inhalation rat	> 73.5 mg/l/4h

Toluene (108-88-3)

LD50 oral rat	2600 mg/kg
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Toluene (108-88-3)	
LD50 oral	5000 mg/kg
LD50 dermal rabbit	12000 mg/kg
LC50 inhalation rat	12.5 mg/l/4h
Naphtha (petroleum), hydrotreated light (64742-49-0)	
LD50 oral rat	> 5000 mg/kg
LD50 dermal rabbit	> 5000 mg/kg body weight Animal: rabbit, Animal sex: male, 95% CL: 9,63 - 20,77
LC50 inhalation rat	73680 ppm/4h
Solvent naphtha, petroleum, light aliphatic (64742-89-8)	
LD50 oral rat	> 5000 mg/kg body weight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity)
LD50 dermal rabbit	3000 mg/kg
Ethylbenzene (100-41-4)	
LD50 oral rat	3500 mg/kg
LD50 dermal rabbit	15400 mg/kg
LC50 inhalation rat	17.4 mg/l/4h
Benzene (71-43-2)	
LD50 oral rat	810 mg/kg
LD50 dermal rabbit	> 8200 mg/kg
LC50 inhalation rat	44.66 mg/l/4h
Naphthalene (91-20-3)	
LD50 oral rat	1110 mg/kg
LD50 dermal rabbit	1120 mg/kg
LC50 inhalation rat	> 0.4 mg/l/4h
Skin corrosion/irritation	: Causes skin irritation.
Serious eye damage/irritation	: Causes serious eye irritation.
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Toluene (108-88-3)	
IARC group	3 - Not classifiable
Ethylbenzene (100-41-4)	
IARC group	2B - Possibly carcinogenic to humans
National Toxicology Program (NTP) Status	Evidence of Carcinogenicity
In OSHA Hazard Communication Carcinogen list	Yes
Benzene (71-43-2)	
IARC group	1 - Carcinogenic to humans
National Toxicology Program (NTP) Status	Known Human Carcinogens, Evidence of Carcinogenicity
In OSHA Hazard Communication Carcinogen list	Yes

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Benzene (71-43-2)	
In OSHA Specifically Regulated Carcinogen list	Yes
Naphthalene (91-20-3)	
IARC group	2B - Possibly carcinogenic to humans
National Toxicology Program (NTP) Status	Reasonably anticipated to be Human Carcinogen, Evidence of Carcinogenicity
In OSHA Hazard Communication Carcinogen list	Yes
Reproductive toxicity	: Suspected of damaging fertility or the unborn child.
Acetone (67-64-1)	
LOAEL (animal/female, F0/P)	11298 mg/kg body weight Animal: mouse, Animal sex: female
NOAEL (animal/male, F0/P)	900 mg/kg body weight Animal: rat, Animal sex: male
Naphthalene (91-20-3)	
LOAEL (animal/female, F0/P)	50 mg/kg body weight Animal: rat, Animal sex: female, Guideline: other:OECD Guideline 414 (Prenatal Developmental Toxicity Study)
LOAEL (animal/female, F1)	450 mg/kg body weight Animal: rat, Animal sex: female, Guideline: other:OECD Guideline 414 (Prenatal Developmental Toxicity Study)
NOAEL (animal/female, F0/P)	120 mg/kg body weight Animal: rabbit, Animal sex: female, Guideline: other:OECD Guideline 414 (Prenatal Developmental Toxicity Study)
STOT-single exposure	: May cause drowsiness or dizziness.
Acetone (67-64-1)	
STOT-single exposure	May cause drowsiness or dizziness.
Heptane, branched, cyclic and linear (426260-76-6)	
STOT-single exposure	May cause drowsiness or dizziness.
n-Heptane (142-82-5)	
STOT-single exposure	May cause drowsiness or dizziness.
Toluene (108-88-3)	
STOT-single exposure	May cause drowsiness or dizziness.
Benzene (71-43-2)	
STOT-single exposure	May cause drowsiness or dizziness.
STOT-repeated exposure	: Causes damage to organs through prolonged or repeated exposure.
n-Heptane (142-82-5)	
LOAEC (inhalation, rat, vapor, 90 days)	16.6 mg/l air Animal: rat, Animal sex: male
NOAEC (inhalation, rat, vapor, 90 days)	3.3 mg/l air Animal: rat, Animal sex: male
Toluene (108-88-3)	
LOAEL (oral, rat, 90 days)	1250 mg/kg body weight Animal: rat, Guideline: EU Method B.26 (Sub-Chronic Oral Toxicity Test: Repeated Dose 90-Day Oral Toxicity Study in Rodents)
NOAEL (oral, rat, 90 days)	625 mg/kg body weight Animal: rat, Guideline: EU Method B.26 (Sub-Chronic Oral Toxicity Test: Repeated Dose 90-Day Oral Toxicity Study in Rodents)
NOAEC (inhalation, rat, vapor, 90 days)	2.355 mg/l air Animal: rat, Guideline: EU Method B.29 (Sub-Chronic Inhalation Toxicity:90-Day Study)
STOT-repeated exposure	Causes damage to organs through prolonged or repeated exposure.

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Naphtha (petroleum), hydrotreated light (64742-49-0)	
LOAEC (inhalation, rat, vapor, 90 days)	4.71 mg/l air Animal: rat, Guideline: EU Method B.29 (Sub-Chronic Inhalation Toxicity:90-Day Study)
NOAEC (inhalation, rat, vapor, 90 days)	2.355 mg/l air Animal: rat, Guideline: EU Method B.29 (Sub-Chronic Inhalation Toxicity:90-Day Study)
Ethylbenzene (100-41-4)	
NOAEL (oral, rat, 90 days)	75 mg/kg body weight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)
Benzene (71-43-2)	
NOAEL (oral, rat, 90 days)	100 mg/kg body weight Animal: rat, Animal sex: male, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)
NOAEC (inhalation, rat, vapor, 90 days)	0.096 mg/l air Animal: rat, Guideline: OECD Guideline 412 (Subacute Inhalation Toxicity: 28-Day Study), Guideline: OECD Guideline 413 (Subchronic Inhalation Toxicity: 90-Day Study)
STOT-repeated exposure	Causes damage to organs through prolonged or repeated exposure.
Naphthalene (91-20-3)	
LOAEL (oral, rat, 90 days)	400 mg/kg body weight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)
LOAEC (inhalation, rat, vapor, 90 days)	0.011 mg/l air Animal: rat, Guideline: EPA OPP 82-4 (90-Day Inhalation Toxicity), Guideline: OECD Guideline 413 (Subchronic Inhalation Toxicity: 90-Day Study)
NOAEL (oral, rat, 90 days)	200 mg/kg body weight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents)
NOAEL (dermal, rat/rabbit, 90 days)	1000 mg/kg body weight Animal: rat, Guideline: OECD Guideline 411 (Subchronic Dermal Toxicity: 90-Day Study)
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.
Aspiration hazard	: May be fatal if swallowed and enters airways.
Viscosity, kinematic	: No data available
n-Heptane (142-82-5)	
Viscosity, kinematic	0.641 mm ² /s Temp.: '20°C' Parameter: 'kinematic viscosity (in mm ² /s)'
Toluene (108-88-3)	
Viscosity, kinematic	0.643 mm ² /s
Carbon dioxide (124-38-9)	
Vaporizer	Aerosol
Solvent naphtha, petroleum, light aliphatic (64742-89-8)	
Viscosity, kinematic	< 1 mm ² /s Temp.: 'other:37.8°C' Parameter: 'kinematic viscosity (in mm ² /s)'
Ethylbenzene (100-41-4)	
Viscosity, kinematic	0.6 mm ² /s Temp.: 'other:' Parameter: 'kinematic viscosity (in mm ² /s)' Remarks on result: 'other:'
Benzene (71-43-2)	
Viscosity, kinematic	0.689 mm ² /s
Symptoms/effects after inhalation	: May cause irritation to the respiratory tract. May cause drowsiness or dizziness.
Symptoms/effects after skin contact	: Causes skin irritation. Symptoms may include redness, drying, defatting and cracking of the skin.
Symptoms/effects after eye contact	: Causes serious eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.

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Symptoms/effects after ingestion	: May be fatal if swallowed and enters airways. May cause gastrointestinal irritation, nausea, vomiting and diarrhea. May result in aspiration into the lungs, causing chemical pneumonia.
Chronic symptoms	: Suspected of damaging fertility or the unborn child. Causes damage to organs through prolonged or repeated exposure.
Other information	: Likely routes of exposure: ingestion, inhalation, skin and eye.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : May cause long-term adverse effects in the aquatic environment.

Acetone (67-64-1)

LC50 - Fish [1]	4.74 – 6.33 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss)
EC50 - Crustacea [1]	10294 – 17704 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])
LC50 - Fish [2]	6210 – 8120 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])
EC50 - Crustacea [2]	12600 – 12700 mg/l (Exposure time: 48 h - Species: Daphnia magna)
LOEC (chronic)	> 79 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC (chronic)	≥ 79 mg/l Test organisms (species): Daphnia magna Duration: '21 d'

n-Heptane (142-82-5)

LC50 - Fish [1]	375 mg/l (Exposure time: 96 h - Species: Cichlid fish)
EC50 - Crustacea [1]	1.5 mg/l Test organisms (species): Daphnia magna
LOEC (chronic)	0.32 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC (chronic)	0.17 mg/l Test organisms (species): Daphnia magna Duration: '21 d'

Toluene (108-88-3)

LC50 - Fish [1]	5.5 mg/l Test organisms (species): Oncorhynchus kisutch
EC50 - Crustacea [1]	5.46 – 9.83 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])
LC50 - Fish [2]	12.6 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])
EC50 - Crustacea [2]	11.5 mg/l (Exposure time: 48 h - Species: Daphnia magna)
EC50 72h - Algae [1]	12.5 mg/l (Species: Pseudokirchneriella subcapitata [static])
EC50 96h - Algae [1]	> 433 mg/l (Species: Pseudokirchneriella subcapitata)
LOEC (chronic)	2.76 mg/l Test organisms (species): Ceriodaphnia dubia Duration: '7 d'
NOEC (chronic)	0.74 mg/l Test organisms (species): Ceriodaphnia dubia Duration: '7 d'
NOEC chronic fish	1.39 mg/l Test organisms (species): Oncorhynchus kisutch Duration: '40 d'
NOEC chronic crustacea	0.74 mg/l

Naphtha (petroleum), hydrotreated light (64742-49-0)

LC50 - Fish [1]	8.41 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri)
EC50 - Crustacea [1]	4.7 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	12.4 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
EC50 72h - Algae [2]	18.9 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)

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Solvent naphtha, petroleum, light aliphatic (64742-89-8)	
EC50 72h - Algae [1]	4700 mg/l (Species: Pseudokirchneriella subcapitata)
Ethylbenzene (100-41-4)	
LC50 - Fish [1]	11 – 18 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [static])
EC50 - Crustacea [1]	1.8 – 2.4 mg/l (Exposure time: 48 h - Species: Daphnia magna)
LC50 - Fish [2]	4.2 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [semi-static])
EC50 72h - Algae [1]	4.6 mg/l (Species: Pseudokirchneriella subcapitata)
EC50 72h - Algae [2]	2.6 – 11.3 mg/l (Species: Pseudokirchneriella subcapitata [static])
EC50 96h - Algae [1]	> 438 mg/l (Species: Pseudokirchneriella subcapitata)
EC50 96h - Algae [2]	1.7 – 7.6 mg/l (Species: Pseudokirchneriella subcapitata [static])
LOEC (chronic)	1.7 mg/l Test organisms (species): Ceriodaphnia dubia Duration: '7 d'
NOEC (chronic)	0.96 mg/l Test organisms (species): Ceriodaphnia dubia Duration: '7 d'
NOEC chronic crustacea	0.956 mg/l
Benzene (71-43-2)	
LC50 - Fish [1]	10.7 – 14.7 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
EC50 - Crustacea [1]	8.76 – 15.6 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])
LC50 - Fish [2]	5.3 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [flow-through])
EC50 - Crustacea [2]	10 mg/l (Exposure time: 48 h - Species: Daphnia magna)
EC50 72h - Algae [1]	29 mg/l (Species: Pseudokirchneriella subcapitata)
EC50 72h - Algae [2]	100 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
Naphthalene (91-20-3)	
LC50 - Fish [1]	5.74 – 6.44 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
EC50 - Crustacea [1]	2.16 mg/l (Exposure time: 48 h - Species: Daphnia magna)
LC50 - Fish [2]	1.6 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [flow-through])
EC50 - Crustacea [2]	1.96 mg/l (Exposure time: 48 h - Species: Daphnia magna [Flow through])
NOEC (chronic)	0.59 mg/l Test organisms (species): Daphnia pulex Duration: '125 d'
NOEC chronic fish	≈ 0.37 mg/l Test organisms (species): Oncorhynchus kisutch Duration: '40 d'
12.2. Persistence and degradability	
45% VOC Brake Cleaner	
Persistence and degradability	Not established.
12.3. Bioaccumulative potential	
45% VOC Brake Cleaner	
Bioaccumulative potential	Not established.
Acetone (67-64-1)	
BCF - Fish [1]	(0.69 dimensionless)

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Acetone (67-64-1)	
Partition coefficient n-octanol/water	-0.24
n-Heptane (142-82-5)	
Partition coefficient n-octanol/water	4.66
Toluene (108-88-3)	
Partition coefficient n-octanol/water	2.73 (at 20 °C (at pH 7))
Carbon dioxide (124-38-9)	
BCF - Fish [1]	(no bioaccumulation)
Ethylbenzene (100-41-4)	
BCF - Fish [1]	(15 dimensionless)
Partition coefficient n-octanol/water	3.6 (at 20 °C (at pH 7.84))
Benzene (71-43-2)	
BCF - Fish [1]	3.5 – 4.4
Partition coefficient n-octanol/water	2.13
Naphthalene (91-20-3)	
BCF - Fish [1]	36.5 – 168 (whole body w.w.)
Partition coefficient n-octanol/water	3.4 (at 25 °C (at pH 7-7.5))

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Other information : No other effects known.

SECTION 13: Disposal considerations

13.1. Disposal methods

Product/Packaging disposal recommendations : Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.
Additional information : Flammable vapors may accumulate in the container.

SECTION 14: Transport information

In accordance with DOT

14.1. UN number

DOT NA No : UN1950

14.2. UN proper shipping name

Proper Shipping Name (DOT) : Aerosols (Limited Quantity)

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14.3. Transport hazard class(es)

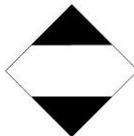
DOT

Transport hazard class(es) (DOT)

: Limited Quantity

Hazard labels (DOT)

: Limited Quantity



14.4. Packing group

Packing group (DOT)

: Not applicable

14.5. Environmental hazards

Other information

: No supplementary information available.

14.6. Special precautions for user

Special transport precautions

: Do not handle until all safety precautions have been read and understood.

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. US Federal regulations

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory.

15.2. International regulations

No additional information available

15.3. US State regulations



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

SECTION 16: Other information

according to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012.

Issue date

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Revision date

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Other information

: None.

Prepared by

: Nexreg Compliance Inc.

www.Nexreg.com



Full text of H-phrases

Asp. Tox. 1	Aspiration hazard Category 1
Eye Irrit. 2A	Serious eye damage/eye irritation Category 2A
Flam. Aerosol 1	Flammable aerosol Category 1

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according to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012.

Full text of H-phrases	
Press. Gas (Comp.)	Gases under pressure Compressed gas
Repr. 2	Reproductive toxicity Category 2
Skin Irrit. 2	Skin corrosion/irritation Category 2
STOT RE 1	Specific target organ toxicity (repeated exposure) Category 1
STOT SE 3	Specific target organ toxicity – Single exposure, Category 3, Narcosis

NFPA health hazard

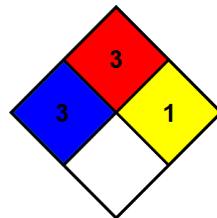
: 3 - Materials that, under emergency conditions, can cause serious or permanent injury.

NFPA fire hazard

: 3 - Liquids and solids (including finely divided suspended solids) that can be ignited under almost all ambient temperature conditions.

NFPA reactivity

: 1 - Materials that in themselves are normally stable but can become unstable at elevated temperatures and pressures.



Hazard Rating

Health

: 3 Serious Hazard - Major injury likely unless prompt action is taken and medical treatment is given

: * - Chronic (long-term) health effects may result from repeated overexposure

Flammability

: 4 Severe Hazard - Flammable gases, or very volatile flammable liquids with flash points below 73 F, and boiling points below 100 F. Materials may ignite spontaneously with air. (Class IA)

Physical

: 1 Slight Hazard - Materials that are normally stable but can become unstable (self-react) at high temperatures and pressures. Materials may react non-violently with water or undergo hazardous polymerization in the absence of inhibitors.

Safety Data Sheet (SDS), USA

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