JOHNSEN'S NON-CHLORINATED BRAKE PARTS CLEANER 14 OZ.

Safety Data Sheet

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J & B PART NUMBER

V9152

Version:

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

1.1. Product Identifier

Product form : Mixture

Trade name : JOHNSEN'S NON-CHLORINATED BRAKE PARTS CLEANER 14 OZ.

Product code : 2417

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

Use of the substance/mixture : Brake Parts Cleaner

1.3. Details of the supplier of the safety data sheet

Technical Chemical Company
P.O. BOX 139
Cleburne, Texas 76033
T 817-645-6088

1.4. Emergency telephone number

Emergency number : CHEMTREC 24 Hour 1-800-424-9300, 1-703-527-3887 (International)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (GHS-US)

Flam. Aerosol 2	H223
Compressed gas	H280
Acute Tox. 3 (Oral)	H301
Acute Tox. 3 (Dermal)	H311
Skin Irrit. 2	H315
Eye Irrit. 2A	H319
Repr. 2	H361
STOT SE 3	H336
STOT SE 1	H370
STOT RE 2	H373

Full text of H-phrases: see section 16

2.2. Label elements

GHS-US labeling

Hazard pictograms (GHS-US) :

GHS02 GHS04 GHS06 GHS07 GHS08

Signal word (GHS-US) : Danger

Hazard statements (GHS-US) :
H223 - Flammable aerosol
H280 - Contains gas under pressure; may explode if heated
H301+H311 - Toxic if swallowed or in contact with skin
H315 - Causes skin irritation
H319 - Causes serious eye irritation
H336 - May cause drowsiness or dizziness
H361 - Suspected of damaging fertility or the unborn child
H370 - Causes damage to organs
H373 - May cause damage to organs through prolonged or repeated exposure

Precautionary statements (GHS-US) :
P201 - Obtain special instructions
P202 - Do not handle until all safety precautions have been read and understood
P210 - Keep away from heat,sparks,open flames,hot surfaces. - No smoking
P211 - Do not spray on an open flame or other ignition source
P251 - Pressurized container: Do not pierce or burn, even after use
P260 - Do not breathe dust,fumes,gas,mist,vapor spray
P261 - Avoid breathing dust,fume,gas,mist,vapor spray
P264 - Wash affected areas 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+P310 - If swallowed: Immediately call a poison control center, doctor,physician,
P302+P352 - If on skin: Wash with plenty of soap and water
P304+P340 - If inhaled: Remove person to fresh air and keep 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
P307+P311 - If exposed: Call a poison center/doctor
P308+P313 - If exposed or concerned: Get medical advice/attention
P312 - Call a POISON CONTROL CENTER, doctor, if you feel unwell.
P314 - Get medical advice/attention if you feel unwell
P321 - Specific treatment: See section 4.1 on SDS
P330 - Rinse mouth
P332+P313 - If skin irritation occurs: Get medical advice/attention
P337+P313 - If eye irritation persists: Get medical advice/attention
P361 - Take off immediately all contaminated clothing
P362 - Take off contaminated clothing and wash before reuse
P363 - Wash contaminated clothing before reuse
P403+P233 - Store in a well-ventilated place. Keep container tightly closed
P405 - Store locked up
P410+P403 - Protect from sunlight. Store in a well-ventilated place
P410+P412 - Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F
P501 - Dispose of contents/container to appropriate waste disposal facility, in accordance with local, regional, national, international regulations.

2.3. Other hazards

Other hazards not contributing to the classification : Contains gas under pressure; may explode if heated.

2.4. Unknown acute toxicity (GHS-US)

No data available

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Name	Product Identifier	%	Classification (GHS-US)
Acetone	(CAS No) 67-64-1	30 - 50	Flam. Liq. 2, H225 Eye Irrit. 2A, H319 STOT SE 3, H336
Methanol	(CAS No) 67-56-1	10 - 30	Flam. Liq. 2, H225 Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311 Acute Tox. 3 (Inhalation:dust,mist), H331 STOT SE 1, H370
Toluene	(CAS No) 108-88-3	10 - 30	Flam. Liq. 2, H225 Skin Irrit. 2, H315 Repr. 2, H361 STOT SE 3, H336 STOT RE 2, H373 Asp. Tox. 1, H304
Heptane, Branched Cyclic	(CAS No) 426260-76-6	12.24 - 12.75	Flam. Liq. 1, H224 Skin Irrit. 2, H315 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 3, H412
Carbon Dioxide, Liquefied, Under Pressure	(CAS No) 124-38-9	5 - 10	Compressed gas, H280
Heptane	(CAS No) 142-82-5	3.1875 - 5.7375	Flam. Liq. 2, H225 Skin Irrit. 2, H315 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Never give anything by mouth to an unconscious person. IF exposed or concerned: Get medical advice/attention. Call a POISON CENTER or doctor/physician.

First-aid measures after inhalation : Cough. Remove to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER/doctor/physician if you feel unwell.

First-aid measures after skin contact : Rinse skin with water/shower. Immediately call a POISON CENTER or doctor/physician. Remove/Take off immediately all contaminated clothing. Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation occurs: Get medical advice/attention.

First-aid measures after eye contact : Remove contact lenses, if present and easy to do. Continue rinsing. Rinse cautiously with water for several minutes. Immediately call a POISON CENTER or doctor/physician. Obtain medical attention if pain, blinking or redness persist. Direct contact with the eyes is likely to be irritating.

First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention. Immediately call a POISON CENTER or doctor/physician.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries : Suspected of damaging fertility or the unborn child. Causes damage to organs.

Symptoms/injuries after inhalation : Shortness of breath. May cause drowsiness or dizziness.

Symptoms/injuries after skin contact : Repeated exposure to this material can result in absorption through skin causing significant health hazard. Toxic in contact with skin. Causes skin irritation.

Symptoms/injuries after eye contact : Irritation of the eye tissue. Inflammation/damage of the eye tissue. Redness of the eye tissue.

Symptoms/injuries after ingestion : Toxic if swallowed. Swallowing a small quantity of this material will result in serious health hazard.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray. Sand.

Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Flammable aerosol.

Explosion hazard : Heat may build pressure, rupturing closed containers, spreading fire and increasing risk of burns and injuries.

5.3. Advice for firefighters

Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment. DO NOT fight fire when fire reaches explosives. Evacuate area.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

Other information : Aerosol Level 2.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : No naked lights. No smoking. Isolate from fire, if possible, without unnecessary risk. Remove ignition sources. Use special care to avoid static electric charges.

6.1.1. For non-emergency personnel

Protective equipment : Gloves. Safety glasses.

Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection. Avoid breathing dust,fume,gas,mist,vapor spray.

Emergency procedures : Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

For containment : Dam up the liquid spill. Plug the leak, cut off the supply. Contain released substance, pump into suitable containers.

Methods for cleaning up : Store away from other materials.

6.4. Reference to other sections

See Heading 8. Exposure controls and 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. Pressurized container: Do not pierce or burn, even after use.

Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor. Do not spray on an open flame or other ignition source. Obtain special instructions . Do not handle until all safety precautions have been read and understood. Avoid breathing dust,fume,gas,mist,vapor spray. Use only outdoors or in a well-ventilated area. Do not breathe dust,fumes,gas,mist,vapor spray.

Hygiene measures : Do not eat, drink or smoke when using this product. Wash affected areas thoroughly after handling. Wash contaminated clothing before reuse. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures	: Proper grounding procedures to avoid static electricity should be followed.
Storage conditions	: Keep only in the original container in a cool, well ventilated place away from : Do not expose to temperatures exceeding 50 °C/ 122 °F. Keep in fireproof place. Keep container tightly closed.
Incompatible products	: Strong bases. Strong acids.
Incompatible materials	: Sources of ignition. Direct sunlight. Heat sources.
Storage area	: Store in a well-ventilated place.

7.3. Specific end use(s)

Follow Label Directions.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Benzene (71-43-2)		
USA ACGIH	ACGIH TWA (ppm)	1 ppm
USA ACGIH	ACGIH STEL (ppm)	5 ppm
USA ACGIH	ACGIH Ceiling (ppm)	25 ppm
USA OSHA	OSHA PEL (TWA) (ppm)	1 ppm
USA OSHA	OSHA PEL (Ceiling) (ppm)	5 ppm

Toluene (108-88-3)		
USA ACGIH	ACGIH TWA (mg/m³)	75 mg/m³
USA ACGIH	ACGIH TWA (ppm)	20 ppm
USA OSHA	OSHA PEL (TWA) (ppm)	200 ppm
USA OSHA	OSHA PEL (Ceiling) (ppm)	300 ppm

Heptane (142-82-5)		
USA ACGIH	ACGIH TWA (ppm)	400 ppm
USA ACGIH	ACGIH STEL (ppm)	400 ppm

Heptane, Branched Cyclic (426260-76-6)		
USA ACGIH	ACGIH TWA (ppm)	400 ppm
USA ACGIH	ACGIH STEL (ppm)	500 ppm
USA OSHA	OSHA PEL (TWA) (ppm)	500 ppm

Carbon Dioxide, Liquefied, Under Pressure (124-38-9)		
USA ACGIH	ACGIH TWA (mg/m³)	9000 mg/m³
USA ACGIH	ACGIH TWA (ppm)	5000 ppm
USA ACGIH	ACGIH STEL (mg/m³)	54000
USA ACGIH	ACGIH STEL (ppm)	30000 ppm
USA OSHA	OSHA PEL (TWA) (mg/m³)	9000 mg/m³
USA OSHA	OSHA PEL (TWA) (ppm)	5000 ppm

Methanol (67-56-1)		
USA ACGIH	ACGIH TWA (mg/m³)	262 mg/m³
USA ACGIH	ACGIH TWA (ppm)	200 ppm
USA ACGIH	ACGIH STEL (mg/m³)	328 mg/m³
USA ACGIH	ACGIH STEL (ppm)	250 ppm
USA OSHA	OSHA PEL (TWA) (mg/m³)	260 mg/m³
USA OSHA	OSHA PEL (TWA) (ppm)	200 ppm

Acetone (67-64-1)		
USA ACGIH	ACGIH TWA (mg/m³)	1188 mg/m³
USA ACGIH	ACGIH TWA (ppm)	500 ppm
USA ACGIH	ACGIH STEL (mg/m³)	1782 mg/m³

Acetone (67-64-1)		
USA ACGIH	ACGIH STEL (ppm)	750 ppm
USA OSHA	OSHA PEL (TWA) (mg/m³)	2400 mg/m³
USA OSHA	OSHA PEL (TWA) (ppm)	1000 ppm

8.2. Exposure controls

Appropriate engineering controls : Local exhaust venilation, vent hoods.

Personal protective equipment : Gloves. Safety glasses. Avoid all unnecessary exposure.

Hand protection : Wear protective gloves.

Eye protection : Chemical goggles or safety glasses.

Skin and body protection : Wear suitable protective clothing.

Respiratory protection : Where exposure through inhalation may occur from use, respiratory protection equipment is recommended.

Other information : Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Gas

Appearance : Liquid.

Color : Colourless to light yellow.

Odor : Characteristic. Solvent-like odour.

Odor threshold : No data available

pH : No data available

Relative evaporation rate (butyl acetate=1) : No data available

Melting point : No data available

Freezing point : < -78 °C

Boiling point : 56.1 °C (Lowest Component)

Flash point : -20 °C (Lowest Component)

Auto-ignition temperature : 385 °C (Lowest Component)

Decomposition temperature : No data available

Flammability (solid, gas) : No data available

Vapor pressure : No data available

Relative vapor density at 20 °C : No data available

Relative density : 0.82

Solubility : Poorly soluble in water.

Log Pow : No data available

Log Kow : No data available

Viscosity, kinematic : No data available

Viscosity, dynamic : No data available

Explosive properties : Heating may cause a fire or explosion.

Oxidizing properties : No data available

Explosive limits : No data available

9.2. Other Information

VOC content : 45 %

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Flammable aerosol. Contains gas under pressure; may explode if heated. Extreme risk of explosion by shock, friction, fire or other sources of ignition.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures. Heat. Sparks. Open flame. Overheating.

10.5. Incompatible materials

Strong acids. Strong bases.

10.6. Hazardous decomposition products

Toxic fume. . Carbon monoxide. Carbon dioxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Toxic if swallowed. Toxic in contact with skin.

Benzene (71-43-2)	
LD50 oral rat	> 930 mg/kg (Rat; Equivalent or similar to OECD 401; Literature study; > 2000 mg/kg bodyweight; Rat; Experimental value)
LD50 dermal rabbit	> 8240 mg/kg (Rabbit; Experimental value; 21 CFR 191.10; > 9.4; Rabbit)
LC50 inhalation rat (mg/l)	43.767 mg/l/4h (Rat; Experimental value)
LC50 inhalation rat (ppm)	13700 ppm/4h (Rat; Experimental value)

Toluene (108-88-3)	
LD50 oral rat	5580 mg/kg body weight (Rat; Equivalent or similar to OECD 401; Literature study; 5580 mg/kg bodyweight; Rat; Experimental value)
LD50 dermal rabbit	> 5000 mg/kg body weight LD50 quoted as 14.1 mL/kg (12267 mg/kg using density of 0.87)
LC50 inhalation rat (mg/l)	> 28.1 mg/l/4h (Rat; Air, Literature study)

Heptane (142-82-5)	
LD50 oral rat	> 15000 mg/kg (Rat; Equivalent or similar to OECD 401; Literature study; >5000 mg/kg bodyweight; Rat; Read-across)
LD50 dermal rabbit	> 3160 mg/kg (Rabbit; Literature study; Equivalent or similar to OECD 402; >2000 mg/kg bodyweight; Rabbit; Read-across)
LC50 inhalation rat (mg/l)	103 mg/l/4h (Rat; Literature study)
LC50 inhalation rat (ppm)	25000 ppm/4h (Rat; Literature study)

Heptane, Branched Cyclic (426260-76-6)	
LD50 oral rat	> 15000 mg/kg (Rat; Equivalent or similar to OECD 401; Literature study; >5000 mg/kg bodyweight; Rat; Read-across)
LD50 dermal rabbit	> 3160 mg/kg (Rabbit; Literature study; Equivalent or similar to OECD 402; >2000 mg/kg bodyweight; Rabbit; Read-across)
LC50 inhalation rat (mg/l)	103 mg/l/4h (Rat; Literature study)
LC50 inhalation rat (ppm)	25000 ppm/4h (Rat; Literature study)

Methanol (67-56-1)	
LD50 oral rat	>= 2528 mg/kg body weight application as 50% aqueous solution
LD50 dermal rabbit	17100 mg/kg corresponding to 20 ml/kg bw according to the authors
LC50 inhalation rat (mg/l)	128.2 mg/l/4h Air

Acetone (67-64-1)	
LD50 oral rat	5800 mg/kg (Rat; Equivalent or similar to OECD 401; Experimental value)
LD50 dermal rabbit	20000 mg/kg (Rabbit; Experimental value; Equivalent or similar to OECD 402)
LC50 inhalation rat (mg/l)	71 mg/l/4h (Rat; Experimental value; 76 mg/l/4h; Rat; Experimental value)
LC50 inhalation rat (ppm)	30000 ppm/4h (Rat; Experimental value)

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

Benzene (71-43-2)	
IARC group	1

Toluene (108-88-3)	
IARC group	3

Reproductive toxicity : Suspected of damaging fertility or the unborn child.

Specific target organ toxicity (single exposure) : May cause drowsiness or dizziness. Causes damage to organs.

Specific target organ toxicity (repeated exposure)	: May cause damage to organs through prolonged or repeated exposure
Aspiration hazard	: Not classified
Potential Adverse human health effects and symptoms	: Based on available data, the classification criteria are not met. Toxic if swallowed. Toxic in contact with skin.
Symptoms/injuries after inhalation	: Shortness of breath. May cause drowsiness or dizziness.
Symptoms/injuries after skin contact	: Repeated exposure to this material can result in absorption through skin causing significant health hazard. Toxic in contact with skin. Causes skin irritation.
Symptoms/injuries after eye contact	: Irritation of the eye tissue. Inflammation/damage of the eye tissue. Redness of the eye tissue.
Symptoms/injuries after ingestion	: Toxic if swallowed. Swallowing a small quantity of this material will result in serious health hazard.

SECTION 12: Ecological information

12.1. Toxicity

Benzene (71-43-2)	
LC50 fish 1	5.3 mg/l 96 h; Salmo gairdneri (Oncorhynchus mykiss)
EC50 Daphnia 1	18 mg/l (24 h; Daphnia magna)
EC50 other aquatic organisms 1	29 mg/l (72 h, Selenastrum capricornutum)
LC50 fish 2	15.1 mg/l (96 h; Pimephales promelas)
EC50 Daphnia 2	10 mg/l (48 h; Daphnia magna)
TLM fish 1	22.5 mg/l (96 h; Lepomis macrochirus; Soft water)
TLM fish 2	32 mg/l (96 h; Pimephales promelas; Hard water)
TLM other aquatic organisms 1	10 - 100,96 h
Threshold limit algae 2	50 mg/l (24 h; Phaeodactylum; Photosynthesis)

Toluene (108-88-3)	
LC50 fish 1	24 mg/l 96 h; Salmo gairdneri (Oncorhynchus mykiss)
EC50 Daphnia 1	84 mg/l (24 h; Daphnia magna; Locomotor effect)
LC50 fish 2	13 mg/l (96 h; Lepomis macrochirus)
EC50 Daphnia 2	11.5 - 19.6 mg/l (48 h; Daphnia magna)
Threshold limit algae 1	> 400 mg/l (168 h; Scenedesmus quadricauda; Toxicity test)
Threshold limit algae 2	105 mg/l (192 h; Microcystis aeruginosa)

Heptane (142-82-5)	
LC50 fish 1	375 mg/l (96 h; Tilapia mosambica; Nominal concentration)
LC50 other aquatic organisms 1	> 1000 mg/l (96 h)
EC50 Daphnia 1	1.5 mg/l (48 h; Daphnia magna)
LC50 fish 2	> 100 mg/l (96 h; Oncorhynchus kisutch)
TLM fish 1	4924 mg/l (48 h; Gambusia affinis)
Threshold limit other aquatic organisms 1	> 1000 mg/l (96 h)
Threshold limit algae 1	> 200 mg/l (Scenedesmus quadricauda; Toxicity test)
Threshold limit algae 2	1.5 mg/l (8 h; Algae; Photosynthesis)

Carbon Dioxide, Liquefied, Under Pressure (124-38-9)	
LC50 fish 1	35 mg/l (96 h; Salmo gairdneri (Oncorhynchus mykiss); Lethal)
LC50 fish 2	60 - 240 mg/l (12 h; Salmo gairdneri (Oncorhynchus mykiss); Lethal)

Acetone (67-64-1)	
TLM fish 1	13000 ppm (96 h; Gambusia affinis; Turbulent water)
TLM fish 2	> 1000 ppm (96 h; Pisces)
Threshold limit other aquatic organisms 1	3000 mg/l (Plankton)
Threshold limit other aquatic organisms 2	28 mg/l (Protozoa)
Threshold limit algae 1	7500 mg/l (Scenedesmus quadricauda; pH = 7)
Threshold limit algae 2	3400 mg/l (48 h; Chlorella sp.)

Methanol (67-56-1)	
LC50 fish 1	15400 mg/l (96 h; Lepomis macrochirus; Lethal)
EC50 Daphnia 1	> 10000 mg/l (48 h; Daphnia magna; Lethal)
LC50 fish 2	10800 mg/l 96 h; Salmo gairdneri (Oncorhynchus mykiss)
EC50 Daphnia 2	24500 mg/l (48 h; Daphnia magna)
Threshold limit other aquatic organisms 1	6600 mg/l (16 h; Pseudomonas putida)
Threshold limit algae 1	530 mg/l (192 h; Microcystis aeruginosa)
Threshold limit algae 2	8000 mg/l (168 h; Scenedesmus quadricauda)

Acetone (67-64-1)	
LC50 fish 1	6210 mg/l (96 h; Pimephales promelas; Nominal concentration)
EC50 Daphnia 1	8800 mg/l (48 h; Daphnia pulex)
LC50 fish 2	5540 mg/l 96 h; Salmo gairdneri (Oncorhynchus mykiss)
TLM fish 1	13000 ppm (96 h; Gambusia affinis; Turbulent water)
TLM fish 2	> 1000 ppm (96 h; Pisces)
Threshold limit other aquatic organisms 1	3000 mg/l (Plankton)
Threshold limit other aquatic organisms 2	28 mg/l (Protozoa)
Threshold limit algae 1	7500 mg/l (Scenedesmus quadricauda; pH = 7)
Threshold limit algae 2	3400 mg/l (48 h; Chlorella sp.)

12.2. Persistence and degradability

JOHNSEN'S NON-CHLORINATED BRAKE PARTS CLEANER 14 OZ.	
Persistence and degradability	Not established

Benzene (71-43-2)	
Persistence and degradability	Biodegradable in water. Ozonation in water. Forming sediments in water. Biodegradable in the soil. Photolysis in the air.
Biochemical oxygen demand (BOD)	2.18 g O_2 /g substance
Chemical oxygen demand (COD)	2.15 g O_2 /g substance
ThOD	3.10 g O_2 /g substance
BOD (% of ThOD)	0.70 % ThOD

Toluene (108-88-3)	
Persistence and degradability	Readily biodegradable in water. Biodegradable in the soil. Low potential for adsorption in soil.
Biochemical oxygen demand (BOD)	2.15 g O_2 /g substance
Chemical oxygen demand (COD)	2.52 g O_2 /g substance
ThOD	3.13 g O_2 /g substance
BOD (% of ThOD)	0.69 % ThOD

Heptane (142-82-5)	
Persistence and degradability	Readily biodegradable in water. Biodegradable in the soil. Adsorbs into the soil.
Biochemical oxygen demand (BOD)	1.92 g O_2 /g substance
Chemical oxygen demand (COD)	0.06 g O_2 /g substance
ThOD	3.52 g O_2 /g substance
BOD (% of ThOD)	> % ThOD (5 day(s)) > 0.5

Heptane, Branched Cyclic (426260-76-6)	
Persistence and degradability	May cause long-term adverse effects in the environment.

Carbon Dioxide, Liquefied, Under Pressure (124-38-9)	
Persistence and degradability	Biodegradability: not applicable. No (test)data on mobility of the substance available.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable

Acetone (67-64-1)	
Persistence and degradability	Not established.

Methanol (67-56-1)	
Persistence and degradability	Readily biodegradable in water. Biodegradable in the soil.
Biochemical oxygen demand (BOD)	0.6 - 1.12 g O_2 /g substance
Chemical oxygen demand (COD)	1.42 g O_2 /g substance
ThOD	1.5 g O_2 /g substance
BOD (% of ThOD)	0.8 % ThOD

Acetone (67-64-1)	
Persistence and degradability	Readily biodegradable in water. Biodegradable in the soil. Biodegradable in the soil under anaerobic conditions. No (test)data on mobility of the substance available. Not established.
Biochemical oxygen demand (BOD)	1.43 g O_2 /g substance
Chemical oxygen demand (COD)	1.92 g O_2 /g substance
ThOD	2.20 g O_2 /g substance
BOD (% of ThOD)	(20 day(s)) 0.872

12.3. Bioaccumulative potential

JOHNSEN'S NON-CHLORINATED BRAKE PARTS CLEANER 14 OZ.	
Bioaccumulative potential	Not established.

Benzene (71-43-2)	
BCF fish 1	19 Salmo gairdneri (Oncorhynchus mykiss)
BCF other aquatic organisms 1	30 (24 h; Chlorella sp.; Fresh weight)
Log Pow	2.13 (Experimental value)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

Toluene (108-88-3)	
BCF fish 1	13.2 (Anguilla japonica)
BCF fish 2	90 (72 h; Leuciscus idus)
BCF other aquatic organisms 1	380 (24 h; Chlorella sp.; Fresh weight)
BCF other aquatic organisms 2	4.2 (Mytilus edulis; Fresh weight)
Log Pow	2.73 (Experimental value; Other; 20 °C)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

Heptane (142-82-5)	
BCF other aquatic organisms 1	552
Log Pow	4.66 (Experimental value; 4.5; Literature)
Bioaccumulative potential	Potential for bioaccumulation (4 ≥ Log Kow ≤ 5).

Heptane, Branched Cyclic (426260-76-6)	
Bioaccumulative potential	Not established.

Carbon Dioxide, Liquefied, Under Pressure (124-38-9)	
Log Pow	0.83 (Experimental value)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

Acetone (67-64-1)	
Bioaccumulative potential	Not established.

Methanol (67-56-1)	
BCF fish 1	< 10 (Leuciscus idus)
Log Pow	-0.77 (Experimental value; Other)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

Acetone (67-64-1)	
BCF fish 1	0.69 (Pisces)
BCF other aquatic organisms 1	3
Log Pow	-0.24 (Test data)
Bioaccumulative potential	Not bioaccumulative. Not established.

12.4. Mobility in soil

Benzene (71-43-2)	
Surface tension	0.029 N/m (20 °C)

Toluene (108-88-3)	
Surface tension	0.03 N/m (20 °C)

Heptane (142-82-5)	
Surface tension	0.020 N/m (20 °C)

Methanol (67-56-1)	
Surface tension	0.023 N/m (20 °C)

Acetone (67-64-1)	
Surface tension	0.0237 N/m (20 °C)

12.5. Other adverse effects

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Container under pressure. Do not drill or burn even after use. Dispose of contents/container to appropriate waste disposal facility, in accordance with local, regional, national, international regulations.

Additional information : Flammable vapors may accumulate in the container.

Ecology - waste materials : Avoid release to the environment. Hazardous waste due to toxicity.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

US DOT (ground): UN1950, Aerosols, 2.1, Limited Quantity

ICAO/IATA (air): UN1950, Aerosols, 2.1 , Limited Quantity

IMO/IMDG (water): UN1950, Aerosols, 2.1 , Limited Quantity

Special Provisions: N82 - See 173.306 of this subchapter for classification criteria for flammable aerosols.

14.2. UN proper shipping name

Proper Shipping Name (DOT) : Aerosols
flammable, (each not exceeding 1 L capacity)

Department of Transportation (DOT) Hazard Classes : 2.1 - Class 2.1 - Flammable gas 49 CFR 173.115

Hazard labels (DOT) : 2.1 - Flammable gas

DOT Special Provisions (49 CFR 172.102) : N82 - See 173.306 of this subchapter for classification criteria for flammable aerosols.

DOT Packaging Exceptions (49 CFR 173.xxx) : 306

DOT Packaging Non Bulk (49 CFR 173.xxx) : None

DOT Packaging Bulk (49 CFR 173.xxx) : None

14.3. Additional information

Other information : No supplementary information available.

Overland transport

No additional information available

Transport by sea

DOT Vessel Stowage Location : A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.

DOT Vessel Stowage Other : 48 - Stow "away from" sources of heat,87 - Stow "separated from" Class 1 (explosives) except Division 1.4,126 - Segregation same as for Class 9, miscellaneous hazardous materials

Air transport

DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 75 kg

DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 150 kg

SECTION 15: Regulatory information

15.1. US Federal regulations

JOHNSEN'S NON-CHLORINATED BRAKE PARTS CLEANER 14 OZ.	
SARA Section 311/312 Hazard Classes	Delayed (chronic) health hazard Fire hazard Immediate (acute) health hazard Sudden release of pressure hazard

Toluene (108-88-3)	
Listed on United States SARA Section 313 Listed on the United States TSCA (Toxic Substances Control Act) inventory	
SARA Section 311/312 Hazard Classes	Delayed (chronic) health hazard Fire hazard Immediate (acute) health hazard

Heptane, Branched Cyclic (426260-76-6)	
Not listed on the United States TSCA (Toxic Substances Control Act) inventory	
SARA Section 311/312 Hazard Classes	Fire hazard Immediate (acute) health hazard Delayed (chronic) health hazard

Methanol (67-56-1)	
Listed on United States SARA Section 313 Listed on the United States TSCA (Toxic Substances Control Act) inventory	
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard Delayed (chronic) health hazard Fire hazard

Acetone (67-64-1)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard Fire hazard Delayed (chronic) health hazard

15.2. International regulations

CANADA

JOHNSEN'S NON-CHLORINATED BRAKE PARTS CLEANER 14 OZ.	
WHMIS Classification	Class B Division 5 - Flammable Aerosol Class B Division 2 - Flammable Liquid Class D Division 1 Subdivision B - Toxic material causing immediate and serious toxic effects Class D Division 2 Subdivision A - Very toxic material causing other toxic effects Class D Division 2 Subdivision B - Toxic material causing other toxic effects

Toluene (108-88-3)	
WHMIS Classification	Class B Division 2 - Flammable Liquid Class D Division 2 Subdivision A - Very toxic material causing other toxic effects

Heptane, Branched Cyclic (426260-76-6)	
WHMIS Classification	Class B Division 2 - Flammable Liquid Class D Division 2 Subdivision B - Toxic material causing other toxic effects

Methanol (67-56-1)	
WHMIS Classification	Class B Division 2 - Flammable Liquid Class D Division 1 Subdivision B - Toxic material causing immediate and serious toxic effects Class D Division 2 Subdivision A - Very toxic material causing other toxic effects Class D Division 2 Subdivision B - Toxic material causing other toxic effects

Acetone (67-64-1)	
Listed on the Canadian DSL (Domestic Sustances List)	
WHMIS Classification	Class B Division 2 - Flammable Liquid Class D Division 2 Subdivision B - Toxic material causing other toxic effects

EU-Regulations

Toluene (108-88-3)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

Acetone (67-64-1)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)- Directive 79/831/EEC, sixth Amendment of Directive 67/548/EEC (dangerous substances) Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

Repr.Cat.3; R63
F; R11
T; R39/23/24/25
Xn; R20/21/22
Xn; R48/20
Xi; R36/38

Full text of R-phrases: see section 16

15.2.2. National regulations

Acetone (67-64-1)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on KECI (Korean Existing Chemicals Inventory)
Listed on AICS (Australian Inventory of Chemical Substances)
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
Listed on the Korean ECL (Existing Chemicals List)

15.3. US State regulations

JOHNSEN'S NON-CHLORINATED BRAKE PARTS CLEANER 14 OZ.	
State or local regulations	U.S. - California - Proposition 65 - Maximum Allowable Dose Levels (MADL)

Acetone (67-64-1)				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significance risk level (NSRL)
Yes				

Toluene (108-88-3)
U.S. - California - Proposition 65 - Maximum Allowable Dose Levels (MADL)

Acetone (67-64-1)
U.S. - California - Proposition 65 - Maximum Allowable Dose Levels (MADL) Benzene 71-43-2 U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16: Other information

Other information : None.

Full text of H-phrases: see section 16:

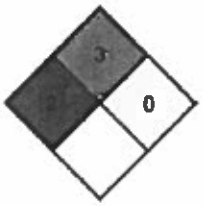
Acute Tox. 3 (Dermal)	Acute toxicity (dermal) Category 3
Acute Tox. 3 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 3
Acute Tox. 3 (Oral)	Acute toxicity (oral) Category 3
Aquatic Acute 1	Hazardous to the aquatic environment - Acute Hazard Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment - Chronic Hazard Category 1
Aquatic Chronic 3	Hazardous to the aquatic environment - Chronic Hazard Category 3
Asp. Tox. 1	Aspiration hazard Category 1
Compressed gas	Gases under pressure Compressed gas
Eye Irrit. 2A	Serious eye damage/eye irritation Category 2A
Flam. Aerosol 2	Flammable aerosol Category 2
Flam. Liq. 1	Flammable liquids Category 1
Flam. Liq. 2	Flammable liquids Category 2
Repr. 2	Reproductive toxicity Category 2
Skin Irrit. 2	Skin corrosion/irritation Category 2
STOT RE 2	Specific target organ toxicity (repeated exposure) Category 2
STOT SE 1	Specific target organ toxicity (single exposure) Category 1
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
H223	Flammable aerosol
H224	Extremely flammable liquid and vapor
H225	Highly flammable liquid and vapor
H280	Contains gas under pressure; may explode if heated
H301	Toxic if swallowed
H304	May be fatal if swallowed and enters airways
H311	Toxic in contact with skin
H315	Causes skin irritation
H319	Causes serious eye irritation
H331	Toxic if inhaled
H336	May cause drowsiness or dizziness
H361	Suspected of damaging fertility or the unborn child
H370	Causes damage to organs

H373	May cause damage to organs through prolonged or repeated exposure
H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects
H412	Harmful to aquatic life with long lasting effects

NFPA health hazard : 2 - Intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical attention is given.

NFPA fire hazard : 3 - Liquids and solids that can be ignited under almost all ambient conditions.

NFPA reactivity : 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.



HMIS III Rating

Health : 2 Moderate Hazard - Temporary or minor injury may occur

Flammability : 3 Serious Hazard

Physical : 1 Slight Hazard

Personal Protection : B

SDS US (GHS HazCom 2012) - TCC

The Supplier identified in Section 1 of this MSDS has evaluated this product and certifies it to be labeled and packaged in compliance with the applicable provisions of the Federal Hazardous Substance Act as stated in 16 CFR 1500 and enforced by the Consumer Product Safety Commission, and where applicable the products that require Child Resistant Closures are packaged in accordance with the Poison Prevention Packaging Act as stated in 16 CFR 1700 and enforced by the Consumer Product Safety Commission. All closures have been tested in accordance with the latest protocols. No other testing is required to certify compliance with the above. The date of manufacture is stamped on the product.

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