

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Revision date: 05/19/2015

Version: 1.1

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

: 2413

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 H315 Skin Irrit. 2 Eye Irrit. 2A H319 H361 Repr. 2 STOT SE 1 H370 STOT SE 3 H336 STOT RE 2 H373

Full text of H-phrases: see section 16

2.2. Label elements

GHS-US labeling

Hazard pictograms (GHS-US)



 \Diamond

GHS04







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

09/07/2015 EN (English US) 1/14

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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 it 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)
Methanol	(CAS No) 67-56-1	20-40	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
Acetone	(CAS No) 67-64-1	10 - 30	Flam. Liq. 2, H225 Eye Irrit. 2A, H319 STOT SE 3, H336
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	17.4528 - 18.18	Flam. Liq. 1, H224 Skin Irrit. 2, H315 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 3, H412
n-Heptane	(CAS No) 142-82-5	4.545 - 8.181	Flam. Liq. 2, H225 Skin Irrit. 2, H315 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Carbon Dioxide, Liquefied, Under Pressure	(CAS No) 124-38-9	5 - 10	Compressed gas, H280

The exact percentage is a trade secret.

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 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

: 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.

09/07/2015

EN (English US)

2/14

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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 Symptoms/injuries after skin contact : May cause respiratory irritation. Shortness of breath. May cause drowsiness or dizziness.

: 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 open flames. 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

: Safety glasses. Gloves.

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,furne,gas,mist,vapor spray. Use only outdoors or in a well-ventilated area. Do not breathe dust,furnes,gas,mist,vapor spray.

Hygiene measures

: Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Wash affected areas thoroughly after handling. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Always wash hands after handling the product. Remove contaminated clothes. Separate working clothes from town clothes. Launder separately.

3/14

09/07/2015 EN (English US)

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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: Ex	posure controls/	personal	protection
---------------	------------------	----------	------------

	TRUSTED TO THE PARTY OF	NEWSCHOOL STREET	The second second
8.1.	Control	naramo	tore
0.1.	COILLIOI	parame	ICIO

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	

n-Heptane (142-82-5)

USA ACGIH	ACGIH TWA (ppm)	400 ppm (Heptane, all isomers; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)
USA ACGIH	ACGIH STEL (ppm)	500 ppm (Heptane, all isomers; USA; Short time value; TLV - Adopted Value)

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)

OSHA PEL (TWA) (ppm)

USA ACGIH	ACGIH TWA (mg/m³)	9000 mg/m³
USA ACGIH	ACGIH TWA (ppm)	5000 ppm (Carbon dioxide; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)
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

USA ACGIH	ACGIH TWA (mg/m³)	262 mg/m³
USA ACGIH	ACGIH TWA (ppm)	200 ppm (Methanol; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)
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

Acetone (67.64.1)

USA OSHA

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	

200 ppm

09/07/2015 EN (Fnolish US)

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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

Personal protective equipment

: Local exhaust venilation, vent hoods . Ensure good ventilation of the work station.

: Gloves. Safety glasses. Avoid all unnecessary exposure.





Hand protection

Wear protective gloves.

Eye protection

Chemical goggles or safety glasses.Wear suitable protective clothing.

Skin and body protection 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 : Solvent-like odour.
Odor threshold : No data available
pH : No data available
Relative evaporation rate (butyl acetate=1) : No data available

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

Melting point : -95 °C (Lowest Component-Acetone)

Freezing point : No data available

Boiling point : 56 °C (Lowest Component-Acetone)
Flash point : -18 °C (Lowest Component-Acetone)
Auto-ignition temperature : 465 °C (Lowest Component-Acetone)

Decomposition temperature : No data available Flammability (solid, gas) : No data available Vapor pressure : No data available

Vapor pressure : No data available Relative vapor density at 20 °C : No data available

Relative density : 0.78

Solubility : Moderately 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 Explosion limits : No data available

9.2. Other information

VOC content : 69.3 %
Gas group : Liquefied gas

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.

9/07/2015 EN (English US) 5/14

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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.

Toluene (108-88-3)
IARC group
Reproductive toxicity

09/07/2015

10.6. Hazardous decomposition products

Toxic fume. . Carbon monoxide. Carbon dioxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity	: Oral: Toxic if swallowed Dermal: Toxic in contact with skin

Acute toxicity	: Oral: Toxic if swallowed. Dermal: 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)
n-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	i-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)
kin corrosion/irritation	: Causes skin irritation.
erious eye damage/irritation	: Causes serious eye irritation.
espiratory or skin sensitization	: Not classified
erm cell mutagenicity	: Not classified
arcinogenicity	: Not classified
Benzene (71-43-2)	
IARC group	1 .

: Suspected of damaging fertility or the unborn child.

FN (English US)

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Specific target organ toxicity (single exposure)

: Causes damage to organs. May cause drowsiness or dizziness.

Specific target organ toxicity (repeated exposure)

: May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard

Potential Adverse human health effects and symptoms

: Not classified : Based on available data, the classification criteria are not met. Toxic if swallowed. Toxic in contact with skin.

Symptoms/injuries after inhalation

: May cause respiratory irritation. Shortness of breath. May cause drowsiness or dizziness. : Repeated exposure to this material can result in absorption through skin causing significant

Symptoms/injuries after skin contact

health hazard. Toxic in contact with skin. Causes skin irritation.

Symptoms/injuries after eye contact Symptoms/injuries after ingestion

: Irritation of the eye tissue. Inflammation/damage of the eye tissue. Redness of the eye tissue.

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 (LC50; 96 h; Salmo gairdneri)
EC50 Daphnia 2	10 mg/l (EC50; OECD 202: Daphnia sp. Acute Immobilisation Test; 48 h; Daphnia magna)
Thréshold limit algae 1	100 mg/l (ErC50; OECD 201: Alga, Growth Inhibition Test; 72 h; Pseudokirchneriella subcapitata; Static system; Fresh water; Experimental value)

Acetone (67-64-1)

EC50 Daphnia 2	12600 mg/l (LC50; Other; 48 h; Daphnia magna; Static system; Fresh water; Experimental
	value)

n-Heptane (142-82-5)

EC50 Daphnia 1	0.2 mg/l (LC50; Other; 96 h; Chaetogammarus marinus; Semi-static system; Salt water;
The Barton Control of the Control of	Experimental value)

Carbon Dioxide, Liquefied, Under Pressure (124-38-9)		
LC50 fish 1	35 mg/l (LC50; 96 h; Salmo gairdneri)	

Not established.

Net established

Methanol (67-56-1)

LC50 fish 1	.15400 mg/l (LC50; EPA 660/3 - 75/009; 96 h; Lepomis macrochirus; Flow-through system; Fresh water; Experimental value)
EC50 Daphnia 1	> 10000 mg/l (EC50; DIN 38412-11; 48 h; Daphnia magna; Static system; Fresh water; Experimental value)
LC50 fish 2	10800 mg/l (LC50; 96 h; Salmo gairdneri)

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.)	

Persistence and degradability

Persistence and degradability

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

Benzene (71-43-2)	
Persistence and degradability	Readily biodegradable in water. Ozonation in water. Forming sediments in water. Biodegradable in the soil. Low potential for adsorption in 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

Acetone (67-64-1)

Persistence and degradability	Not established.	

Toluene (108-88-3)

1014616 (100-00-0)	
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

00/07/2015 FN (Fnalish US)

Safety Data Sheet according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

cording to Federal Register / Vol. //, No. 58 / Mor	iday, March 26, 2012 / Rules and Regulations
Toluene (108-88-3)	
Chemical oxygen demand (COD)	2.52 g O ₂ /g substance
ThOD	3.13 g O ₂ /g substance
BOD (% of ThOD)	0.69
n-Heptane (142-82-5)	
Persistence and degradability	Readily biodegradable in water. Forming sediments in water. Biodegradable in the soil. Low potential for adsorption in soil. Photolysis in the air.
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)	> 0.5 (5 days; Literature study)
Heptane, Branched Cyclic (426260-76-6)	
Persistence and degradability	May cause long-term adverse effects in the environment.
Carbon Dioxide, Liquefied, Under Press	ure (124-38-9)
Persistence and degradability	Biodegradability: not applicable. Not applicable (gas).
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
Methanol (67-56-1)	
Persistence and degradability	Readily biodegradable in water. Biodegradable in the soil. Highly mobile in 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 (Literature study)
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 O₂ /g substance
ThOD	2.20 g O ₂ /g substance
BOD (% of ThOD)	(20 day(s)) 0.872
2.3. Bioaccumulative potential	
JOHNSEN'S NON-CHLORINATED BRAKI	E PARTS CLEANER 14 OZ.
Bioaccumulative potential	Not established.
Benzene (71-43-2)	
BCF fish 1	19 (BCF)
BCF fish 2	< 10 (BCF; OECD 305: Bioconcentration: Flow-Through Fish Test; 3 days; Leuciscus idus; Flow-through system; Fresh water; Experimental value)
BCF other aquatic organisms 1	30 (BCF; 24 h; Chlorella sp.)
Log Pow	2.13 (Experimental value)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
Acetone (67-64-1)	
Bioaccumulative potential	Not established.
Toluene (108-88-3)	
BCF fish 2	90 (BCF; 72 h; Leuciscus idus; Static system; Fresh water)
Log Pow	2.73 (Experimental value; Other; 20 °C)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
n-Heptane (142-82-5)	,
BCF other aquatic organisms 1	552 (BCF; BCFBAF v3.00)
og Pow	4.66 (Experimental value; 4.5; Literature study)
Bioaccumulative potential	Potential for bioaccumulation (4 ≥ Log Kow ≤ 5).
	, Sometime blocked market (4 & Log Now 2 5).
Heptane, Branched Cyclic (426260-76-6) Bioaccumulative potential	Not gatablished
	Not established.
Carbon Dioxide, Liquefied, Under Pressu	
Log Pow	0.83 (Experimental value)
Bioaccumulative potential	Bioaccumulation: not applicable.
Methanol (67-56-1)	
BCF fish 1	< 10 (BCF; 72 h; Leuciscus idus)
2/07/2015	EN (English UC)

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Methanol (67-56-1)			
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)	
Log Koc	Koc,134.1; QSAR	
Toluene (108-88-3)		
Surface tension	0.03 N/m (20 °C)	
n-Heptane (142-82-5)		
Surface tension	0.019 N/m (25 °C; 0.020 N/m; 20 °C)	
Log Koc	log Koc,SRC PCKOCWIN v2.0; 2.38; Calculated value	
Methanol (67-56-1)		2 5
Surface tension	0.023 N/m (20 °C)	
Log Koc	Koc,PCKOCWIN v1.66; 1; Calculated value	
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)

Transport hazard class(es) (DOT)

: 2.1 - Class 2.1 - Flammable gas 49 CFR 173.115

Hazard labels (DOT) : 2.1 - Flammable gas

<u>*</u>

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 : None

DOT Packaging Non Bulk (49 CFR 173.xxx)
DOT Packaging Bulk (49 CFR 173.xxx)

: None

14.3. Additional information

Other information

: No supplementary information available.

09/07/2015 FN (English US) 9/14

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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 14,126 - Segregation same as for Class 9, miscellaneous hazardous materials

Air transport

DOT Quantity Limitations Passenger aircraft/rail : 75 kg

(49 CFR 173.27)

DOT Quantity Limitations Cargo aircraft only (49 : 150 kg

CFR 175.75)

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

Benzene (71-43-2)

Listed on the United States TSCA (Toxic Substances Control Act) inventory Subject to reporting requirements of United States SARA Section 313

Toluene (108-88-3)

Subject to reporting requirements of United States SARA Section 313

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Listed on the United States SARA Section 302

SARA Section 311/312 Hazard Classes

Delayed (chronic) health hazard

Fire hazard

Immediate (acute) health hazard

Heptane, Branched Cyclic (426260-76-6)

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

Carbon Dioxide, Liquefied, Under Pressure (124-38-9)

SARA Section 311/312 Hazard Classes

Sudden release of pressure hazard Immediate (acute) health hazard

Methanol (67-56-1)

Subject to reporting requirements of United States SARA Section 313

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Listed on the United States SARA Section 302 Listed on the United States SARA Section 355

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

Subject to reporting requirements of United States SARA Section 313

SARA Section 311/312 Hazard Classes

Immediate (acute) health hazard Fire hazard

Delayed (chronic) health hazard

15.2. International regulations

CANADA

WHMIS Classification

Class B Division 5 - Flammable Aerosol

Benzene (71-43-2)

Listed on the Canadian DSL (Domestic Sustances List)

Toluene (108-88-3)

Listed on the Canadian DSL (Domestic Sustances List)

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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 Class D Division 2 Subdivision B - 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)	
Listed on the Canadian DSL (Domes	tic Sustances List)
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 (Domes	tic 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)

Heptane, Branched Cyclic (426260-76-6)

Methanol (67-56-1)

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; R23/24/25

T; R39/23/24/25

Xn; R48/20

Xi; R36/38

Full text of R-phrases: see section 16

15.2.2. National regulations

Benzene (71-43-2)

Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)

Listed on KECI (Korean Existing Chemicals Inventory)

Listed on NZIoC (New Zealand Inventory of Chemicals)

Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)

Listed on the AICS (Australian Inventory of Chemical Substances)

Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory

Toluene (108-88-3)

Heptane, Branched Cyclic (426260-76-6)

All components are either listed on the US TSCA Inventory, or are not regulated under TSCA under 40 CFR 720.30.

Methanol (67-56-1)

Listed on the Canadian IDL (Ingredient Disclosure List)

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 the AICS (Australian Inventory of Chemical Substances)

Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory

Listed on the Korean ECL (Existing Chemicals List)

07/0045 FN (Fndlish US) 11/14

Safety Data Sheet according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Toxicity U.S California - Proposition	65 - Carcinogens List	EANER 14 OZ.					
U.S California - Proposition Toxicity U.S California - Proposition		No					
Toxicity U.S California - Proposition	0						
U.S California - Proposition			No -				
U.S California - Proposition 65 - Reproductive Toxicity - Female		No					
U.S California - Proposition (Toxicity - Male	65 - Reproductive	No	2				
State or local regulations		U.S California - Proposition	65 - Maximum Allowable Dose	Levels (MADL)			
Benzene (71-43-2)							
	U.S California -	U.S California -	U.S California -	No significant risk level			
Carcinogens List	Proposition 65 - Developmental Toxicity	Proposition 65 - Reproductive Toxicity - Female	Proposition 65 - Reproductive Toxicity - Male	(NSRL)			
Yes	Yes	No	Yes				
Acetone (67-64-1)							
	U.S California -	U.S California -	U.S California -	No significant risk level			
Carcinogens List	Proposition 65 - Developmental Toxicity	Proposition 65 - Reproductive Toxicity - Female	Proposition 65 - Reproductive Toxicity - Male	(NSRĽ)			
No	No	No	No				
Toluene (108-88-3)				HIVE DEMENDED AND REAL PROPERTY.			
	U.S California -	U.S California -	U.S California -	No significant risk level			
	Proposition 65 - Developmental Toxicity	Proposition 65 - Reproductive Toxicity - Female	Proposition 65 - Reproductive Toxicity - Male	(NSRL)			
No	Yes	Yes	No				
n-Heptane (142-82-5)							
	U.S California -	U.S California -	U.S California -	No significant risk level			
Proposition 65 -	Proposition 65 - Developmental Toxicity	Proposition 65 - Reproductive Toxicity - Female	Proposition 65 - Reproductive Toxicity - Male	(NSRL)			
No I	No	No	No				
Heptane, Branched Cyclic (42	26260-76-6)						
U.S California -	U.S California -	U.S California -	U.S California -	No significant risk level			
	Proposition 65 - Developmental Toxicity	Proposition 65 - Reproductive Toxicity - Female	Proposition 65 - Reproductive Toxicity - Male	(NSRL)			
No	No ·	No	No				
Carbon Dioxide, Liquefied, U							
Proposition 65 - F	J.S California - Proposition 65 - Developmental Toxicity	U.S California - Proposition 65 - Reproductive Toxicity - Female	U.S California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)			
No N	No	No	No	-			
Methanol (67-56-1)							
U.S California -	J.S California -	U.S California -	U.S California -	No significant risk level			
Proposition 65 -	Proposition 65 - Developmental Toxicity	Proposition 65 - Reproductive Toxicity - Female	Proposition 65 - Reproductive Toxicity - Male	(NSRL)			
No Y	es .	No	No				
Acetone (67-64-1)							
	J.S California -	U.S California -	U.S California -	No significant risk level			
Proposition 65 -	Proposition 65 - Developmental Toxicity	Proposition 65 - Reproductive Toxicity - Female	Proposition 65 - Reproductive Toxicity - Male	(NSRL)			
Yes	lo	No	No				

EM (English HS)

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Benzene (71-43-2)

State or local regulations

U.S. - California - Proposition 65 - Maximum Allowable Dose Levels (MADL)

U.S. - Pennsylvania - RTK (Right to Know) List

New Jersey Right-to-Know

Toluene (108-88-3)

State or local regulations

U.S. - California - Proposition 65 - Maximum Allowable Dose Levels (MADL)

U.S. - New Jersey - Special Health Hazards Substances List

New Jersey Right-to-Know

U.S. - Massachusetts - Right To Know List

Rhode Island Right to Know

U.S. - Michigan - Critical Materials List

U.S. - New Jersey - Environmental Hazardous Substances List

U.S. - Illinois - Toxic Air Contaminants

U.S. - New York - Reporting of Releases Part 597 - List of Hazardous Substances

U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List

Methanol (67-56-1)

State or local regulations

U.S. - California - Proposition 65 - Maximum Allowable Dose Levels (MADL)

New Jersey Right-to-Know

Florida Right to Know

U.S. - Massachusetts - Right To Know List

U.S. - Pennsylvania - RTK (Right to Know) List

Acetone (67-64-1)

State or local regulations

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:

of H-phrases:	Acute toxicity (dermal) Category 3		
Acute Tox. 3 (Dermal)	Acute toxicity (definal) Category 3 Acute toxicity (inhalation:dust,mist) Category 3		
Acute Tox. 3 (Inhalation:dust,mist)	Acute toxicity (oral) Category 3		
Acute Tox. 3 (Oral)	Hazardous to the aquatic environment - Acute Hazard Category 1		
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		

07/004F EN (English US) 13/14

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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

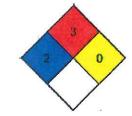
medical attention is given.

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

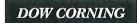
SDS US (GHS HazCom 2012) - TCC

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

Disclaimer: The information and recommendations contained herein are based upon tests believed to be reliable. However, the manufacturer/distributor of this product does not guarantee their accuracy or completeness NOR SHALL ANY OF THIS INFORMATION CONSTITUTE A WARRANTY, WHETHER EXPRESSED OR IMPLIED, AS TO THE SAFETY OF THE GOODS, THE MERCHANTABILITY OF THE GOODS, OR THE FITNESS OF THE GOODS FOR A PARTICULAR PURPOSE. Adjustment to conform to actual conditions of usage may be required. The manufacturer/distributor assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied.

0/07/2015

N /E--U-- UO



DOW CORNING(R) M GEAR OIL ADDITIVE

Version 2.0

Revision Date:

SDS Number: 03/19/2016 1587878-00004 Date of last issue: 10/07/2015 Date of first issue: 03/18/2015

SECTION 1. IDENTIFICATION

Product name

DOW CORNING(R) M GEAR OIL ADDITIVE

Product code

0000000001005855, 00000000001005855

Manufacturer or supplier's details

Company name of supplier

Dow Corning Corporation

Address

South Saginaw Road Midland Michigan 48686

Telephone

(989) 496-6000

Emergency telephone

24 Hour Emergency Telephone: (989) 496-5900

CHEMTREC: (800) 424-9300

Recommended use of the chemical and restrictions on use

Recommended use

: Lubricants and lubricant additives

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Not a hazardous substance or mixture.

GHS label elements

Not a hazardous substance or mixture.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture

Mixture

Chemical nature

Inorganic compounds in mineral oil

Hazardous ingredients

Chemical name	CAS-No.	Concentration (% w/w)
Distillates (petroleum), solvent refined heavy paraffinic	64741-88-4	>=.70 -< 90
Mineral Oil Mixture	Not Assigned	>= 5 - < 10
Molybdenum sulfide	1317-33-5	>= 1 - < 5

SECTION 4. FIRST AID MEASURES

If inhaled

If inhaled, remove to fresh air.

Get medical attention if symptoms occur.

In case of skin contact

Wash with water and soap as a precaution.

DOW CORNING(R) M GEAR OIL ADDITIVE



Version 2.0

Revision Date: 03/19/2016

SDS Number: 1587878-00004

Date of last issue: 10/07/2015 Date of first issue: 03/18/2015

Get medical attention if symptoms occur.

In case of eye contact

: Flush eyes with water as a precaution.

Get medical attention if irritation develops and persists.

If swallowed

If swallowed, DO NOT induce vomiting. Get medical attention if symptoms occur. Rinse mouth thoroughly with water.

Most important symptoms and effects, both acute and delayed

None known.

Protection of first-aiders

No special precautions are necessary for first aid responders.

Notes to physician

Treat symptomatically and supportively.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

Water spray

Alcohol-resistant foam Carbon dioxide (CO2)

Dry chemical

Unsuitable extinguishing

media

None known.

Specific hazards during fire

fighting

Exposure to combustion products may be a hazard to health.

Hazardous combustion prod-

ucts

Carbon oxides Formaldehyde

Metal oxides
Sulfur oxides

Specific extinguishing meth-

ods

Use extinguishing measures that are appropriate to local cir-

cumstances and the surrounding environment. Use water spray to cool unopened containers.

Remove undamaged containers from fire area if it is safe to do

SO.

Evacuate area.

Special protective equipment

for fire-fighters

Wear self-contained breathing apparatus for firefighting if nec-

essarv

Use personal protective equipment.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protec- : tive equipment and emer-

gency procedures

Follow safe handling advice and personal protective

equipment recommendations.

Environmental precautions

Discharge into the environment must be avoided.



DOW CORNING(R) M GEAR OIL ADDITIVE

Version 2.0

Revision Date: 03/19/2016

SDS Number: 1587878-00004

Date of last issue: 10/07/2015 Date of first issue: 03/18/2015

Prevent further leakage or spillage if safe to do so.

Prevent spreading over a wide area (e.g. by containment or oil

barriers).

Retain and dispose of contaminated wash water.

Local authorities should be advised if significant spillages

cannot be contained.

Methods and materials for containment and cleaning up

Soak up with inert absorbent material.

For large spills, provide diking or other appropriate

containment to keep material from spreading. If diked material can be pumped, store recovered material in appropriate

container

Clean up remaining materials from spill with suitable

absorbent.

Local or national regulations may apply to releases and disposal of this material, as well as those materials and items

employed in the cleanup of releases. You will need to

determine which regulations are applicable.

Sections 13 and 15 of this SDS provide information regarding

certain local or national requirements.

SECTION 7. HANDLING AND STORAGE

Technical measures

: See Engineering measures under EXPOSURE

CONTROLS/PERSONAL PROTECTION section.

Local/Total ventilation

Use only with adequate ventilation.

Advice on safe handling

: Handle in accordance with good industrial hygiene and safety

practice.

Take care to prevent spills, waste and minimize release to the

environment.

Conditions for safe storage

Keep in properly labeled containers.

Store in accordance with the particular national regulations.

Materials to avoid

Do not store with the following product types:

Strong oxidizing agents

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Ingredients	CAS-No.	Value type (Form of exposure)	Control parame- ters / Permissible concentration	Basis
Distillates (petroleum), solvent refined heavy paraffinic	64741-88-4	TWA (Mist)	5 mg/m³	OSHA Z-1
		TWA (Inhal- able fraction)	5 mg/m³	ACGIH
		TWA (Mist)	5 mg/m³	NIOSH REL
		ST (Mist)	10 mg/m³	NIOSH REL
Mineral Oil Mixture	Not Assigned	TWA (Mist)	5 mg/m³	NIOSH REL

DOW CORNING(R) M GEAR OIL ADDITIVE

Version 2.0

Revision Date: 03/19/2016

SDS Number: 1587878-00004 Date of last issue: 10/07/2015 Date of first issue: 03/18/2015

		ST (Mist)	10 mg/m³	NIOSH REL
	,	TWA (Mist)	5 mg/m³	OSHA Z-1
		TWA (Inhal- able fraction)	5 mg/m³	ACGIH
Molybdenum sulfide	1317-33-5	TWA (total dust)	15 mg/m³ (Molybdenum)	OSHA Z-1
		TWA (Inhal- able fraction)	10 mg/m³ (Molybdenum)	ACGIH
	2	TWA (Res- pirable frac- tion)	3 mg/m³ (Molybdenum)	ACGIH

Engineering measures

Processing may form hazardous compounds (see section

Ensure adequate ventilation, especially in confined areas.

Minimize workplace exposure concentrations.

Personal protective equipment

Respiratory protection

General and local exhaust ventilation is recommended to maintain vapor exposures below recommended limits. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstance where air purifying respirators may not provide

adequate protection.

Hand protection

Remarks

Wash hands before breaks and at the end of workday.

Eye protection

Wear the following personal protective equipment:

Safety glasses

Skin and body protection

Skin should be washed after contact.

Hygiene measures

Ensure that eye flushing systems and safety showers are

located close to the working place. When using do not eat, drink or smoke. Wash contaminated clothing before re-use.

These precautions are for room temperature handling. Use at elevated temperature or aerosol/spray applications may

require added precautions.

For further information regarding the use of silicones / organic oils in consumer aerosol applications, please refer to the guidance document regarding the use of these type of materials in consumer aerosol applications that has been developed by the silicone industry (www.SEHSC.com) or contact the Dow Corning customer service group.



DOW CORNING(R) M GEAR OIL ADDITIVE

Version 2.0

Revision Date: 03/19/2016

SDS Number: 1587878-00004

Date of last issue: 10/07/2015 Date of first issue: 03/18/2015

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

liquid

Color

: dark gray

Odor

: slight

Odor Threshold

No data available

рН

No data available

Melting point/freezing point

No data available

Initial boiling point and boiling

> 35 °C

range

Flash point

200 °C

Method: closed cup

Evaporation rate

: No data available

Flammability (solid, gas)

: Not applicable

Upper explosion limit

No data available

Lower explosion limit

No data available

Vapor pressure

No data available

Relative vapor density

No data available

Relative density

0.91

Solubility(ies)

Water solubility

: No data available

Partition coefficient: n-

octanol/water

No data available

Autoignition temperature

No data available

Decomposition temperature

No data available

Viscosity

Viscosity, kinematic

: 90 cSt

Explosive properties

Not explosive

Oxidizing properties

: The substance or mixture is not classified as oxidizing.

Molecular weight

No data available



DOW CORNING(R) M GEAR OIL ADDITIVE

Version 2.0

Revision Date: 03/19/2016

SDS Number: 1587878-00004 Date of last issue: 10/07/2015 Date of first issue: 03/18/2015

SECTION 10. STABILITY AND REACTIVITY

Reactivity

: Not classified as a reactivity hazard.

Chemical stability

Stable under normal conditions.

Possibility of hazardous reac-

Use at elevated temperatures may form highly hazardous

compounds.

Can react with strong oxidizing agents.

Hazardous decomposition products will be formed at elevated

temperatures.

Conditions to avoid

None known.

Incompatible materials

Oxidizing agents

Hazardous decomposition products

Thermal decomposition

: Formaldehyde

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Inhalation

Skin contact

Ingestion

Eye contact

Acute toxicity

Not classified based on available information.

Ingredients:

Distillates (petroleum), solvent refined heavy paraffinic:

Acute oral toxicity

: LD50 (Rat): > 5,000 mg/kg

Method: OECD Test Guideline 401

Remarks: Based on data from similar materials

Acute inhalation toxicity

: LC50 (Rat): > 5.53 mg/l

Exposure time: 4 h Test atmosphere: dust/mist

Method: OECD Test Guideline 403

Assessment: The substance or mixture has no acute inhala-

tion toxicity

Remarks: Based on data from similar materials

Acute dermal toxicity

LD50 (Rabbit): > 5,000 mg/kg

Method: OECD Test Guideline 402

Remarks: Based on data from similar materials

Molybdenum sulfide:

Acute oral toxicity

LD50 (Rat): > 2,000 mg/kg

Method: OECD Test Guideline 401

Assessment: The substance or mixture has no acute oral tox-

DOW CORNING

DOW CORNING(R) M GEAR OIL ADDITIVE

Version 2.0

Revision Date: 03/19/2016

SDS Number: 1587878-00004

Date of last issue: 10/07/2015 Date of first issue: 03/18/2015

icity

Acute inhalation toxicity

LC50 (Rat): > 2.82 mg/l Exposure time: 4 h

Test atmosphere: dust/mist

Acute dermal toxicity

LD50 (Rat): > 2,000 mg/kg

Method: OECD Test Guideline 402

Assessment: The substance or mixture has no acute dermal

toxicity

Skin corrosion/irritation

Not classified based on available information.

Ingredients:

Distillates (petroleum), solvent refined heavy paraffinic:

Species: Rabbit

Result: No skin irritation

Remarks: Based on data from similar materials

Molybdenum sulfide:

Species: Rabbit

Method: OECD Test Guideline 404

Result: No skin irritation

Serious eye damage/eye irritation

Not classified based on available information.

Ingredients:

Distillates (petroleum), solvent refined heavy paraffinic:

Species: Rabbit

Result: No eye irritation

Method: OECD Test Guideline 405

Remarks: Based on data from similar materials

Molybdenum sulfide:

Species: Rabbit

Result: No eye irritation

Method: OECD Test Guideline 405

Respiratory or skin sensitization

Skin sensitization

Not classified based on available information.

Respiratory sensitization

Not classified based on available information.

DOW CORNING

DOW CORNING(R) M GEAR OIL ADDITIVE

Version 2.0

Revision Date: 03/19/2016

SDS Number:

1587878-00004

Date of last issue: 10/07/2015 Date of first issue: 03/18/2015

Ingredients:

Distillates (petroleum), solvent refined heavy paraffinic:

Test Type: Buehler Test

Routes of exposure: Skin contact

Species: Guinea pig

Method: OECD Test Guideline 406

Result: negative

Remarks: Based on data from similar materials

Molybdenum sulfide:

Test Type: Maximization Test Routes of exposure: Skin contact

Species: Guinea pig Result: negative

Germ cell mutagenicity

Not classified based on available information.

Ingredients:

Distillates (petroleum), solvent refined heavy paraffinic:

Genotoxicity in vitro

Test Type: Bacterial reverse mutation assay (AMES)

Method: OECD Test Guideline 471

Result: negative

Remarks: Based on data from similar materials

Genotoxicity in vivo

Test Type: Mammalian erythrocyte micronucleus test (in vivo

cytogenetic assay)

Species: Mouse

Application Route: Intraperitoneal injection

Method: OECD Test Guideline 474

Result: negative

Remarks: Based on data from similar materials

Molybdenum sulfide:

Genotoxicity in vitro

Test Type: Bacterial reverse mutation assay (AMES)

Method: OECD Test Guideline 471

Result: negative

Carcinogenicity

Not classified based on available information.

Ingredients:

Distillates (petroleum), solvent refined heavy paraffinic:

Species: Mouse

Application Route: Skin contact Exposure time: 78 weeks

Method: OECD Test Guideline 451

Result: negative

Remarks: Based on data from similar materials

DOW CORNING

DOW CORNING(R) M GEAR OIL ADDITIVE

Version 2.0

Revision Date: 03/19/2016

SDS Number: 1587878-00004

Date of last issue: 10/07/2015 Date of first issue: 03/18/2015

Molybdenum sulfide:

Species: Rat

Application Route: Ingestion Exposure time: 232 days

Result: negative

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.

OSHA

No ingredient of this product present at levels greater than or

equal to 0.1% is identified as a carcinogen or potential

carcinogen by OSHA.

NTP

Known to be human carcinogen

Mineral Oil Mixture

Reproductive toxicity

Not classified based on available information.

Ingredients:

Distillates (petroleum), solvent refined heavy paraffinic:

Effects on fertility

Test Type: Reproduction/Developmental toxicity screening

test

Species: Rat

Application Route: Ingestion

Result: negative

Remarks: Based on data from similar materials

Effects on fetal development

Test Type: Embryo-fetal development

Species: Rat

Application Route: Skin contact Method: OECD Test Guideline 414

Result: negative

Remarks: Based on data from similar materials

STOT-single exposure

Not classified based on available information.

STOT-repeated exposure

Not classified based on available information.

Repeated dose toxicity

Ingredients:

Distillates (petroleum), solvent refined heavy paraffinic:

Species: Rabbit

NOAEL: 1,000 mg/kg Application Route: Skin contact

Exposure time: 4 Weeks

Method: OECD Test Guideline 410

Remarks: Based on data from similar materials



DOW CORNING(R) M GEAR OIL ADDITIVE

Version 2.0

Revision Date: 03/19/2016

SDS Number: 1587878-00004

Date of last issue: 10/07/2015 Date of first issue: 03/18/2015

Species: Rat

NOAEL: > 980 mg/m³

Application Route: inhalation (dust/mist/fume)

Exposure time: 4 Weeks

Remarks: Based on data from similar materials

Aspiration toxicity

Not classified based on available information.

Ingredients:

Distillates (petroleum), solvent refined heavy paraffinic:

The substance or mixture is known to cause human aspiration toxicity hazards or has to be regarded as if it causes a human aspiration toxicity hazard.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Ingredients:

Distillates (petroleum), solvent refined heavy paraffinic:

Toxicity to fish

: LC50 (Pimephales promelas (fathead minnow)): > 100 mg/l

Exposure time: 96 h

Method: OECD Test Guideline 203

Remarks: Based on data from similar materials

Toxicity to daphnia and other :

aquatic invertebrates

EC50 (Daphnia magna (Water flea)): > 10,000 mg/l

Exposure time: 48 h

Method: OECD Test Guideline 202

Remarks: Based on data from similar materials

Toxicity to algae

: EC50 (Pseudokirchneriella subcapitata (green algae)): > 100

mg/l

Exposure time: 72 h

Method: OECD Test Guideline 201

Remarks: Based on data from similar materials

Toxicity to daphnia and other :

aquatic invertebrates (Chron-

ic toxicity)

NOEC (Daphnia magna (Water flea)): 10 mg/l

Exposure time: 21 d

Method: OECD Test Guideline 211

Remarks: Based on data from similar materials

Toxicity to bacteria

NOEC: > 1.93 mg/l Exposure time: 10 min

Method: DIN 38 412 Part 8

Remarks: Based on data from similar materials

Molybdenum sulfide:

Toxicity to fish

: LC50 (Pimephales promelas (fathead minnow)): 644.2 mg/l

Exposure time: 96 h

Remarks: Based on data from similar materials

DOW CORNING

DOW CORNING(R) M GEAR OIL ADDITIVE

Version 2.0

Revision Date: 03/19/2016

SDS Number: 1587878-00004 Date of last issue: 10/07/2015 Date of first issue: 03/18/2015

aquatic invertebrates

Toxicity to daphnia and other : EC50 (Daphnia magna (Water flea)): 130.9 mg/l

Exposure time: 48 h

Method: OECD Test Guideline 202

Remarks: Based on data from similar materials

Toxicity to algae

: EC50 (Pseudokirchneriella subcapitata (green algae)): 289.2

mg/l

Exposure time: 72 h

Method: OECD Test Guideline 201

Remarks: Based on data from similar materials

Toxicity to fish (Chronic tox-

icity)

NOEC (Oncorhynchus mykiss (rainbow trout)): > 17 mg/l

Exposure time: 12 Months

Remarks: Based on data from similar materials

Toxicity to daphnia and other : aguatic invertebrates (Chron-

ic toxicity)

NOEC (Ceriodaphnia dubia (water flea)): 156.5 mg/l

Exposure time: 21 d

Remarks: Based on data from similar materials

Toxicity to bacteria

NOEC: > 950 mg/l

Exposure time: 17 d

Remarks: Based on data from similar materials

Persistence and degradability

Ingredients:

Distillates (petroleum), solvent refined heavy paraffinic:

Biodegradability

Result: Not readily biodegradable.

Biodegradation: 2-4% Exposure time: 28 d

Method: OECD Test Guideline 301B

Bioaccumulative potential

No data available

Mobility in soil

No data available

Other adverse effects

No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Resource Conservation and Recovery Act (RCRA)

This product has been evaluated for RCRA characteristics and does not meet the criteria of hazardous waste if discarded

in its purchased form.

Waste from residues

Dispose of in accordance with local regulations.

Contaminated packaging

Empty containers should be taken to an approved waste

handling site for recycling or disposal.



DOW CORNING(R) M GEAR OIL ADDITIVE

Version 2.0

Revision Date:

SDS Number: 1587878-00004

Date of last issue: 10/07/2015

03/19/2016 15

Date of first issue: 03/18/2015

If not otherwise specified: Dispose of as unused product.

SECTION 14. TRANSPORT INFORMATION

International Regulation

UNRTDG

Not regulated as a dangerous good

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

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

Not applicable for product as supplied.

Domestic regulation

49 CFR

Not regulated as a dangerous good

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards

: No SARA Hazards

SARA 302

No chemicals in this material are subject to the reporting re-

quirements of SARA Title III, Section 302.

SARA 313

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.

US State Regulations

Pennsylvania Right To Know

Distillates (petroleum), solvent refined heavy 64741-88-4

paraffinic

Mineral Oil Mixture

Not Assigned

Molybdenum sulfide

1317-33-5

California Prop. 65

This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other repro-

ductive defects.

California List of Hazardous Substances

Distillates (petroleum), solvent refined heavy 64741-88-4

paraffinic



DOW CORNING(R) M GEAR OIL ADDITIVE

Version 2.0

Revision Date: 03/19/2016

SDS Number: 1587878-00004

Date of last issue: 10/07/2015 Date of first issue: 03/18/2015

Mineral Oil Mixture Molybdenum sulfide Not Assigned 1317-33-5

California Permissible Exposure Limits for Chemical Contaminants

Distillates (petroleum), solvent refined heavy 64741-88-4

paraffinic

Mineral Oil Mixture
Molybdenum sulfide

Not Assigned 1317-33-5

The ingredients of this product are reported in the following inventories:

TSCA

All chemical substances in this material are included on or exempted from listing on the TSCA Inventory of Chemical

Substances.

AICS

All ingredients listed or exempt.

ENCS/ISHL

All components are listed on ENCS/ISHL or exempted from

inventory listing.

PICCS

All ingredients listed or exempt.

DSL

All chemical substances in this product comply with the CEPA

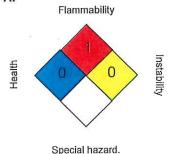
1999 and NSNR and are on or exempt from listing on the

Canadian Domestic Substances List (DSL).

SECTION 16. OTHER INFORMATION

Further information

NFPA:



HMIS III:

HEALTH	0
FLAMMABILITY	1
PHYSICAL HAZARD	0

0 = not significant, 1 = Slight,

2 = Moderate, 3 = High

4 = Extreme, * = Chronic

Full text of other abbreviations

ACGIH

USA. ACGIH Threshold Limit Values (TLV)

NIOSH REL OSHA Z-1 : USA. NIOSH Recommended Exposure Limits : USA. Occupational Exposure Limits (OSHA) - Table Z-1 Lim-

its for Air Contaminants

ACGIH / TWA

8-hour, time-weighted average

NIOSH REL / TWA

Time-weighted average concentration for up to a 10-hour

workday during a 40-hour workweek

NIOSH REL / ST

STEL - 15-minute TWA exposure that should not be exceeded

DOW CORNING(R) M GEAR OIL ADDITIVE



Version 2.0

Revision Date: 03/19/2016

SDS Number: 1587878-00004

Date of last issue: 10/07/2015 Date of first issue: 03/18/2015

OSHA Z-1 / TWA

at any time during a workday

: 8-hour time weighted average

AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR -No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ -Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB -Very Persistent and Very Bioaccumulative

Sources of key data used to compile the Material Safety Data Sheet

 Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agency, http://echa.europa.eu/

Revision Date

: 03/19/2016

Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, in-



DOW CORNING(R) M GEAR OIL ADDITIVE

Version 2.0

Revision Date: 03/19/2016

SDS Number: 1587878-00004

Date of last issue: 10/07/2015 Date of first issue: 03/18/2015

cluding an assessment of the appropriateness of the SDS material in the user's end product, if applicable.

US / Z8

e e