Malik

MASTER BRAKE CLEANER 16 OZ.

Safety Data Sheet

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

Revision date: 08/19/2014 : Version:

9/18

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

1.1. Product identifier

Product form : Mixture

Trade name : MASTER BRAKE CLEANER 16 OZ.

Product code : BC20

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

Master Chemical
4635 Willow Drive
Medina, MN 55340 - USA
T: 612-478-2360

1.4. Emergency telephone number

Emergency number : 1-800-424-9300

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (GHS-US)

Compressed gas	H280
Acute Tox. 4 (Inhalation)	H332
Acute Tox. 4 (Inhalation:gas)	H332
Eye Irrit. 2B	H320
Carc. 1B	H350

Full text of H-phrases: see section 16

2.2. Label elements

GHS-US labeling

Hazard pictograms (GHS-US) :

GHS04 GHS07 GHS08

Signal word (GHS-US) : Danger

Hazard statements (GHS-US) : H280 - Contains gas under pressure; may explode if heated
H320 - Causes eye irritation
H332 - Harmful if inhaled
H350 - May cause cancer

Precautionary statements (GHS-US) : P201 - Obtain special instructions
P202 - Do not handle until all safety precautions have been read and understood
P261 - Avoid breathing dust,fume,gas,mist,vapor spray
P264 - Wash affected areas thoroughly after handling
P271 - Use only outdoors or in a well-ventilated area
P280 - Wear protective gloves,protective clothing,eye protection,face protection
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
P308+P313 - If exposed or concerned: Get medical advice/attention
P312 - Call a POISON CONTROL CENTER, doctor, if you feel unwell.
P337+P313 - If eye irritation persists: Get medical advice/attention
P405 - Store locked up
P410+P403 - Protect from sunlight. Store in a well-ventilated place
P501 - Dispose of contents/container to appropriate waste disposal facility, in accordance with local, regional, national, international regulations.
P251 - Pressurized container: Do not pierce or burn, even after use
P410+P412 - Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F

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)
tetrachloroethylene	(CAS No) 127-18-4	>= 95	Carc. 1B, H350 Aquatic Chronic 2, H411
carbon dioxide, liquefied, under pressure	(CAS No) 124-38-9	1 - 5	Compressed gas, H280

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 you feel unwell, seek medical advice (show the label where possible).

First-aid measures after inhalation : Assure fresh air breathing. Allow the victim to rest. 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 : Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.

First-aid measures after eye contact : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

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

Symptoms/injuries : May cause cancer.

Symptoms/injuries after inhalation : Danger of serious damage to health by prolonged exposure through inhalation. Harmful if inhaled.

Symptoms/injuries after eye contact : Causes eye irritation.

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 : Not flammable.

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.

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

Other information : NFPA Aerosol Level 1.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Remove ignition sources.

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.

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.

Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. 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

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. Use only outdoors or in a well-ventilated area. Avoid breathing dust,fume,gas,mist,vapor spray. Obtain special instructions . Do not handle until all safety precautions have been read and understood.

Hygiene measures : 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

Storage conditions : Keep only in the original container in a cool, well ventilated place away from : Keep container closed when not in use.

Incompatible products : Strong bases. Strong acids.

Incompatible materials : Sources of ignition. Direct sunlight.

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

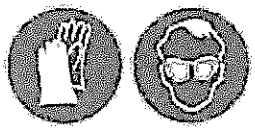
tetrachloroethylene (127-18-4)		
USA ACGIH	ACGIH TWA (mg/m³)	170 mg/m³
USA ACGIH	ACGIH TWA (ppm)	25 ppm
USA ACGIH	ACGIH STEL (mg/m³)	685 mg/m³
USA ACGIH	ACGIH STEL (ppm)	100 ppm
USA OSHA	OSHA PEL (TWA) (ppm)	100 ppm
USA OSHA	OSHA PEL (Ceiling) (ppm)	200 ppm

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

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 : Wear appropriate mask.

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.

Molecular mass : 165.83 g/mol

Color : Colourless.

Odor : Sweet odour. Ether-like odour.

Odor threshold : 2.0 - 71 ppm

pH	:	6.8 - 8.4
Relative evaporation rate (butyl acetate=1)	:	2
Relative evaporation rate (ether=1)	:	8
Melting point	:	-22 °C
Freezing point	:	No data available
Boiling point	:	121 °C
Flash point	:	No data available
Critical temperature	:	347 °C
Auto-ignition temperature	:	No data available
Decomposition temperature	:	> 150 °C
Flammability (solid, gas)	:	No data available
Vapor pressure	:	19 hPa
Vapor pressure at 50 °C	:	82 hPa
Relative vapor density at 20 °C	:	5.8
Relative density	:	1.62
Relative density of saturated gas/air mixture	:	1.1
Density	:	1623 kg/m³
Solubility	:	Insoluble in water. Substance sinks in water. Soluble in ethanol. Soluble in ether. Soluble in acetone. Soluble in chloroform. Soluble in tetrachloromethane. Soluble in hexane. Soluble in oils/fats. Water: 0.015 g/100ml Ethanol: soluble Ether: soluble Acetone: > 10 g/100ml
Log Pow	:	3.40 (Experimental value; 2.53; Experimental value; Equivalent or similar to OECD 107; 23 °C)
Log Kow	:	No data available
Viscosity, kinematic	:	0.555 mm²/s (20 °C)
Viscosity, dynamic	:	No data available
Explosive properties	:	No data available
Oxidizing properties	:	No data available
Explosive limits	:	No data available

9.2. Other information

Saturation concentration	:	127 g/m³
VOC content	:	0 %

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Not established.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

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 : Harmful if inhaled. Harmful if inhaled.

MASTER BRAKE CLEANER 16 OZ.	
LD50 oral rat	3835 mg/kg body weight
LD50 dermal rabbit	> 3000 mg/kg (Rabbit; Literature study; >10000 mg/kg bodyweight; Rabbit; Experimental value)
LC50 inhalation rat (mg/l)	27.58 mg/l/4h (Rat; Literature study)

MASTER BRAKE CLEANER 16 OZ.	
LC50 inhalation rat (ppm)	5200 ppm/4h (Rat; Experimental value)

tetrachloroethylene (127-18-4)	
LD50 oral rat	> 2000 mg/kg (Rat; Equivalent or similar to OECD 401; Literature study; 3835 mg/kg bodyweight; Rat; Equivalent or similar to OECD 401; Experimental value; 3005 mg/kg bodyweight; Rat; Experimental value)
LD50 dermal rabbit	> 3000 mg/kg (Rabbit; Literature study; >10000 mg/kg bodyweight; Rabbit; Experimental value)
LC50 inhalation rat (mg/l)	27.58 mg/l/4h (Rat; Literature study)
LC50 inhalation rat (ppm)	3786 ppm/4h (Rat; Experimental value)

Skin corrosion/irritation : Not classified

pH: 6.8 - 8.4

Serious eye damage/irritation : Causes eye irritation.

pH: 6.8 - 8.4

Respiratory or skin sensitization : Not classified

Germ cell mutagenicity : Not classifiedBased on available data, the classification criteria are not met

Carcinogenicity : May cause cancer.

MASTER BRAKE CLEANER 16 OZ.	
IARC group	2A

tetrachloroethylene (127-18-4)	
IARC group	2A

Reproductive toxicity : Not classifiedBased on available data, the classification criteria are not met

Specific target organ toxicity (single exposure) : Not classified

Specific target organ toxicity (repeated exposure) : Not classifiedBased on available data, the classification criteria are not met

Aspiration hazard : Not classifiedBased on available data, the classification criteria are not met

Potential Adverse human health effects and symptoms : Based on available data, the classification criteria are not met. Harmful if inhaled.

Symptoms/injuries after inhalation : Danger of serious damage to health by prolonged exposure through inhalation. Harmful if inhaled.

Symptoms/injuries after eye contact : Causes eye irritation.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Dangerous for the environment.

Ecology - air : Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009). Not included in the list of substances which may contribute to the greenhouse effect (Regulation (EC) No 842/2006). TA-Luft Klasse 5.2.5/I.

MASTER BRAKE CLEANER 16 OZ.	
LC50 fish 1	4.99 mg/l (96 h; Salmo gairdneri (Oncorhynchus mykiss); Locomotor effect)
EC50 Daphnia 1	8.5 mg/l (48 h; Daphnia magna; Locomotor effect)
LC50 fish 2	13 mg/l (96 h; Lepomis macrochirus)

tetrachloroethylene (127-18-4)	
LC50 fish 1	4.99 mg/l (96 h; Salmo gairdneri (Oncorhynchus mykiss); Locomotor effect)
EC50 Daphnia 1	8.5 mg/l (48 h; Daphnia magna; Locomotor effect)
LC50 fish 2	13 mg/l (96 h; Lepomis macrochirus)
Threshold limit algae 1	816 mg/l (96 h; Selenastrum capricornutum; Cell numbers)
Threshold limit algae 2	3.64 mg/l (72 h; Chlamydomonas angulosa; Growth rate)

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)

12.2. Persistence and degradability

MASTER BRAKE CLEANER 16 OZ.	
Persistence and degradability	Not readily biodegradable in water. Low potential for adsorption in soil.
Biochemical oxygen demand (BOD)	0.06 g O_2 /g substance
ThOD	0.39 g O_2 /g substance
BOD (% of ThOD)	0.15 % ThOD

tetrachloroethylene (127-18-4)	
Persistence and degradability	Not readily biodegradable in water. Low potential for adsorption in soil.
Biochemical oxygen demand (BOD)	0.06 g O_2 /g substance
ThOD	0.39 g O_2 /g substance
BOD (% of ThOD)	0.15 % ThOD

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

12.3. Bioaccumulative potential

MASTER BRAKE CLEANER 16 OZ.	
BCF fish 1	40 - 115 Salmo gairdneri (Oncorhynchus mykiss)
BCF fish 2	25.8 - 77.1 (8 weeks; Cyprinus carpio)
BCF other aquatic organisms 1	63 (Modiolus modiolus; Mantle, dry weight)
BCF other aquatic organisms 2	39 (Buccinum undatum; Muscles, dry weight)
Log Pow	3.40 (Experimental value; 2.53; Experimental value; Equivalent or similar to OECD 107; 23 °C)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

tetrachloroethylene (127-18-4)	
BCF fish 1	40 - 115 Salmo gairdneri (Oncorhynchus mykiss)
BCF fish 2	25.8 - 77.1 (8 weeks; Cyprinus carpio)
BCF other aquatic organisms 1	63 (Modiolus modiolus; Mantle, dry weight)
BCF other aquatic organisms 2	39 (Buccinum undatum; Muscles, dry weight)
Log Pow	3.40 (Experimental value; 2.53; Experimental value; Equivalent or similar to OECD 107; 23 °C)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

carbon dioxide, liquefied, under pressure (124-38-9)	
Log Pow	0.83 (Experimental value)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

12.4. Mobility in soil

MASTER BRAKE CLEANER 16 OZ.	
Surface tension	0.0313 N/m (20 °C)

tetrachloroethylene (127-18-4)	
Surface tension	0.0313 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. Dispose of contents/container to appropriate waste disposal facility, in accordance with local, regional, national, international regulations.

Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

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

US DOT (ground): UN1950, Aerosols, 2.2, Limited Quantity

ICAO/IATA (air): UN1950, Aerosols, 2.2, Limited Quantity

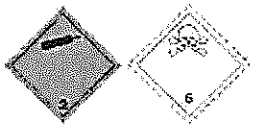
IMO/IMDG (water): UN1950, Aerosols, 2.2, Limited Quantity

14.2. UN proper shipping name

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

Department of Transportation (DOT) Hazard Classes : 2.2 - Class 2.2 - Non-flammable compressed gas 49 CFR 173.115

Hazard labels (DOT) : 2.2 - Non-flammable gas
6.1 - Poison inhalation hazard



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
Marine pollutant : Yes

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

Air transport

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

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

SECTION 15: Regulatory information

15.1. US Federal regulations

MASTER BRAKE CLEANER 16 OZ.	
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard Delayed (chronic) health hazard Sudden release of pressure hazard

tetrachloroethylene (127-18-4)	
Listed on the United States SARA Section 302 Listed on United States SARA Section 313	
RQ (Reportable quantity, section 304 of EPA's List of Lists) :	100 lb Tetrachloroethylene
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard Delayed (chronic) health hazard

15.2. International regulations

CANADA

MASTER BRAKE CLEANER 16 OZ.	
WHMIS Classification	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

tetrachloroethylene (127-18-4)	
Listed on the Canadian DSL (Domestic Sustances List)	
WHMIS Classification	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

EU-Regulations

No additional information available

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

Classification according to Directive 67/548/EEC or 1999/45/EC

Carc.Cat.3; R40
N; R51/53

Full text of R-phrases: see section 16

15.2.2. National regulations

tetrachloroethylene (127-18-4)
Listed on the Canadian IDL (Ingredient Disclosure List)

15.3. US State regulations

MASTER BRAKE CLEANER 16 OZ.()	
State or local regulations	Not for sale in California or New Jersey U.S. - Pennsylvania - RTK (Right to Know) List

tetrachloroethylene (127-18-4)
U.S. - California - Proposition 65 - Maximum Allowable Dose Levels (MADL) Not for sale in California or New Jersey U.S. - Pennsylvania - RTK (Right to Know) List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Massachusetts - Right To Know List U.S. - Rhode Island - Hazardous Substance List

SECTION 16: Other information

Indication of changes : Revision - See : *.

Training advice : Normal use of this product shall imply use in accordance with the instructions on the packaging.

Other information : None.

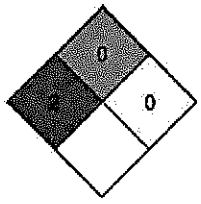
Full text of H-phrases: see section 16:

Acute Tox. 4 (Inhalation)	Acute toxicity (inhalation) Category 4
Acute Tox. 4 (Inhalation:gas)	Acute toxicity (inhalation:gas) Category 4
Aquatic Chronic 2	Hazardous to the aquatic environment - Chronic Hazard Category 2
Carc. 1B	Carcinogenicity Category 1B
Compressed gas	Gases under pressure Compressed gas
Eye Irrit. 2B	Serious eye damage/eye irritation Category 2B
H280	Contains gas under pressure; may explode if heated
H320	Causes eye irritation
H332	Harmful if inhaled
H350	May cause cancer
H411	Toxic 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 : 0 - Materials that will not burn.

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 : 0 Minimal Hazard

Physical : 1 Slight Hazard

Personal Protection : B

SDS US (GHS HazCom 2012)

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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