

**MSDS - Material Safety Data Sheet****Product Name: BRAKE CLEANER**

MSDS No.: AM720

**I. Basic Information:****Manufacturer:** RADIATOR SPECIALTY COMPANY**Address:** 600 RADIATOR ROAD**City, ST Zip:** INDIAN TRAIL, NC 28079**Country:****Contact:** Robert Geer**Information Telephone Number:** 704-684--181 1**Emergency Contact:** Rocky Mountain Poison Control Center**Emergency Telephone Number:** 303-623-5716**Emergency Restrictions:****Product Name:** BRAKE CLEANER**MSDS No.:** AM720**Issue Date:** 03/30/2009**Supersedes Date:** 06/15/2005**II. Hazards Identification:****EMERGENCY OVERVIEW**

Danger: Harmful or Fatal if Swallowed. Vapor harmful. Eye and Skin Irritant. Contents Under Pressure.

Level 1 Aerosol

**OSHA Regulatory Status**

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

**Potential Health Effects****Route(s) of Entry:**

Absorption, inhalation, and ingestion

**Health Hazards (Acute and Chronic):**

Affects of overexposure are:

Acute: Liquid splashed on eyes and skin can result in discomfort, pain and irritation. Inhalation can cause irritation of the respiratory tract, dizziness, nausea, headache, loss of coordination and equilibrium, unconsciousness and even death in confined or poorly ventilated areas. Ingestion may result in irritation of the mouth and GI tract.

Prolonged exposure above the OSHA permissible exposure limit may complicate existing liver and kidney diseases.

**Signs and Symptoms:**

Eye Contact: Irritant. Prolonged contact may cause conjunctivitis.

Skin Contact: Irritant. Defatting of tissue, dermatitis may occur.

Inhalation: Irritant to mucous membranes. Repeated exposure may cause narcosis..

Ingestion: HARMFUL OR FATAL IF SWALLOWED. May cause burns to mouth, throat &amp; stomach.

**Medical Conditions Generally Aggravated by Exposure:**

May complicate existing liver and kidney diseases.

**Other Health Warnings:**

Vomiting and subsequent aspiration into the lungs may lead to chemical pneumonia and pulmonary edema which is a potentially fatal condition.

**Potential Environmental Effects**

Not Available

**III. Composition/Information on Ingredients:**

Chemical Name	CAS No.	% Range	Trade Secret
Carbon dioxide	124-38-9	1-3	
Tetrachloroethylene	127-18-4	90-100	

**IV. First Aid Measures:****Emergency and First Aid Procedures:**

# MSDS - Material Safety Data Sheet

## Product Name: BRAKE CLEANER

MSDS No.: AM720

Eye Contact: Flush eyes with clean water for 15 minutes while lifting eyelids. Get prompt medical attention.

Skin Contact: Wash with soap and water thoroughly. If adverse effects persist, get prompt medical attention. Launder contaminated clothing before reuse.

Inhalation: Remove to fresh air. If breathing becomes difficult, get prompt medical attention.

Ingestion: DO NOT INDUCE VOMITING! Call Poison Control Center, physician, or hospital emergency room immediately.

**Note to Physicians:**

N/E

### V. Fire Fighting Measures:

**Suitable Extinguishing Media:**

Water Fog, Foam, Carbon Dioxide, Dry Chemical

**Unsuitable Extinguishing Media:**

Do not use forced water stream as this could cause the fire to spread.

**Products of Combustion:**

Normal products of combustion: Carbon monoxide, carbon dioxide. In the presence of water: hydrochloric acid is liberated. Ignition sources and hot metals surfaces may generate: phosgene and chlorine gases. Flames, welding, and high temperatures will induce decomposition.

**Protection of Firefighters:**

Wear self-contained positive pressure breathing apparatus and protective clothes. Use shield to protect from rupturing and venting containers. At elevated temperatures containers may vent, rupture or burst, even violently. Vapors of this product may present a future health hazard in poorly ventilated areas. May liberate corrosive hydrochloric acid or toxic phosgene fumes.

### VI. Accidental Release Measures:

**Personal Precautions:**

Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.

**Environmental Precautions:**

Prevent run-off to sewers, streams, or other bodies of water. If run-off occurs, notify proper authorities as required that a spill has occurred. Run off to sewer may create fire or explosion hazard.

**Methods for Containment:**

Dike or contain spill and absorb with inert materials (sand, sawdust, absorbent sweeping compounds, rags, etc).

**Methods for Cleanup:**

Using a non-metallic scoop, place contaminated material into an approved chemical waste container. Where possible, vacuum spilled liquid using an explosion proof vacuum to recover material.

**Other Information:**

If run-off occurs, notify proper authorities as required that a spill has occurred.

### VII. Handling and Storage:

**Handling Precautions:**

Handling: Use with adequate ventilation and proper protective equipment.

Do not use or store near fire, sparks, or flame. Do not puncture or incinerate container. Exposure to temperatures above 120° may cause container to vent, rupture, or burst.

**Storage Precautions:**

Vapors are heavier than air and will collect in low areas. This material or its vapors when in contact with flames, hot glowing surfaces or electric arcs can decompose to form hydrogen chloride gas and possible traces of phosgene. Avoid contamination with water supplies. Keep away from food.

### VIII. Exposure Controls/Personal Protection:

Chemical Name	OSHA PEL	ACGIH TLV	Other Limits
Tetrachloroethylene	25 ppm	25 ppm	Not Available
Carbon dioxide	N/AV	5000 ppm	Not Available

**Engineering Controls:**

See above Section for applicable exposure limits. Maintain adequate ventilation.

Avoid breathing vapors. In restricted areas, use respirator with approved chemical filters designed to remove vapor. In confined areas, use approved air line type respirator or hood. A self-contained breathing apparatus is required for vapor concentrations above TLV limit

# MSDS - Material Safety Data Sheet

## Product Name: BRAKE CLEANER

MSDS No.: AM720

### Personal Protective Equipment:

Maintain adequate ventilation. Avoid breathing vapors. For prolonged exposure wear protective safety glasses, gloves, and apron.

### **IX. Physical and Chemical Properties:**

**Boiling Point:** 250°F

**Boiling Range:** Not Available

**Solubility In Water:** 0.015% @ 25°C

**Flash Point:** None

**Odor Threshold:** Not Available

**Vapor Density (AIR = 1):** 5.7

**pH Range:** N/A

**Decomposition Temp:** N/D

**Lower Explosive Limit:** N/A

**Specific Gravity (H2O = 1):** 1.60

**Other Information:** VOC Content: 0 %

**Melting Point:** N/A

**Freezing Point:** N/D

**Evaporation Rate (Butyl Acetate = 1):** 0.09

**Flash Point Method:** N/A

**Appearance and Odor:** Colorless volatile liquid with ether-like odor

**Vapor Pressure (mm Hg.):** 14.2

**Partition Coefficient:** N/D

**Auto-Ignition Temp:** N/A

**Upper Explosive Limit:** N/A

### **X. Stability and Reactivity:**

#### Stability:

Stable

#### Conditions to Avoid:

Avoid heat, sparks, and flames. Avoid incompatible materials.

#### Incompatible Materials:

Open flames, hot glowing surfaces. Liquid oxygen or other strong oxidants can form explosive mixtures of perchloroethylene

#### Hazardous Decomposition Products:

Normal products of combustion: Carbon monoxide, carbon dioxide. In the presence of water: hydrochloric acid is liberated. Ignition sources and hot metals surfaces may generate: phosgene and chlorine gases. Flames, welding, and high temperatures will induce decomposition.

#### Possibility of Hazardous Reactions:

Will not occur.

### **XI. Toxicological Information:**

ACUTE INHALATION LC50: (rats) 5040 ppm for 8 hours. Moderately toxic.

ACUTE DERMAL LD50: (rabbit) > 3228 mg/kg. Slight to very low toxicity

SKIN IRRITATION: Mildly irritating.

EYE IRRITATION: Mildly irritating.

ACUTE ORAL LD50: (rats) 2629 mg/kg. Moderately toxic.

This product is listed under IARC as a 2A

### **XII. Ecological Information:**

Toxic to aquatic life.

100 - 10 ppm (fish) 96-hours TLM LC50

### **XIII. Disposal Considerations:**

DISPOSAL: This container may be recycled in aerosol recycling centers when empty. Before offering for recycling, empty the can by using the product according to the label. DO NOT PUNCTURE! If recycling is not available, wrap the container and discard in the trash. Dispose of unused product in accordance with all local, state government and federal laws and regulations.

### **XIV. Transport Information:**

**Shipping Name:** Not Available

# MSDS - Material Safety Data Sheet

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MSDS No.: AM720

DOT Hazard Class: Not Available

DOT Subsidiary Hazard Class: Not Available

UN/NA#: Not Available

Packing Group: Not Available

**Transportation Information:**

DOT Hazard Class: ORM-D  
Shipping Name: Consumer Commodity

The DOT description is provided to assist in the proper shipping classification of this product and may not be suitable for international and air shipping purposes.

ICAO/IATA (US)  
Shipping Name: Aerosols  
Class: 2.2 (6.1)  
UN number: UN1950

International:

ICAO/IATA  
UN number: UN1950  
Shipping Name: Aerosols  
Class: 2.2 (6.1)

IMDG  
UN number: UN1950  
Shipping Name: Aerosols  
Class: 2.2 (6.1)  
EmS: F-D, S-U

**XV. Regulatory Information:**

SARA 313 REPORTABLE:  
Tetrachloroethylene - 127-18-4

USA TSCA: All chemicals used are listed on the TSCA Inventory.

CERCLA RQ: 1000 lbs  
SARA 302: Not listed as a Extremely Hazardous Substance  
SARA 311/312 HAZARD CLASS: Acute, Chronic

PROPOSITION 65 WARNING: This product contains a chemical known to the State of California to cause Cancer.

State RTK Chemicals:  
Tetrachloroethylene - 127-18-4

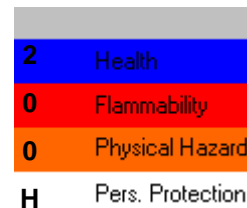
**XVI. Other Information:**

**Chemical State:**     Liquid     Gas     Solid  
**Chemical Type:**     Pure     Mixture  
**Hazard Category:**  
 Acute     Chronic     Fire  
 Pressure     Reactive



**Additional Manufacturer Warnings:**

Do not used in confined area without proper ventilation. Contact lenses may cause further damage in case of splash into eye. KEEP AWAY FROM CHILDREN AND ANIMALS!



**Additional Product Information:**

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***MSDS No.: AM720***

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