

PRODUCT NAME: ABRO Brake and Brake Parts Cleaner  
PRODUCT NUMBER/SIZE: BC-400-AM-RE, BC-810, BC-840-AM-RE

Revision Date: 5/23/2015

## SECTION 1 Identification of the Substance and of the Company/Undertaking

MANUFACTURER'S NAME: ABRO INDUSTRIES, INC.  
ADDRESS: 3580 Blackthorn Drive  
South Bend, IN 46628  
PRODUCT DESCRIPTION: Brake Cleaner  
COMPANY PHONE: 574-232-8289  
EMERGENCY 24-HR TELEPHONE: Chemtrec 800-424-9300/703-527-3887

## SECTION 2 Hazards Identification

**Classification:**

Flammable Aerosol Category 1  
Skin Irritation Category 2  
Specific target organ toxicity - single exposure Category 3 - Central nervous system  
Aspiration hazard Category 1  
Hazardous to the Aquatic Environment – Long Term Hazard Category 2

**Label Pictogram(s):**



**Signal Word:** DANGER

**Hazard Phrases:** Extremely flammable aerosol. Causes skin irritation. May be fatal if swallowed and enters airways. May cause drowsiness or dizziness. Toxic to aquatic life with long lasting effects.

**Precautionary Phrases:** Keep away from heat, sparks and open flames. No smoking. Do not spray on open flames or other ignition source. Pressurized container. Do not pierce or burn, even after use. Avoid breathing spray. Use only outdoors or in a well-ventilated area. Wash skin thoroughly after handling. Wear protective gloves. Avoid release to the environment.

**Response:** IF SWALLOWED: Immediately call a POISON CENTER or doctor. Do not induce vomiting. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If you feel unwell, call a doctor or POISON CENTER. IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs, get medical attention. Take off all contaminated clothing and wash before reuse. Collect spillage.

**Storage / Disposal:**

Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F. Store locked up. Dispose of contents/ container in accordance with local, state, federal and international regulations.

**Other:**

POISONS SCHEDULE: None RISK: Extremely flammable.  
Irritating to eyes, respiratory system and skin. Risk of explosion if heated under confinement. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Vapors may cause drowsiness and dizziness.

SAFETY: Keep container in a well-ventilated place. Avoid exposure - obtain special instructions before use. To clean the floor and all objects contaminated by this material, use water and detergent. Keep container tightly closed. Take off immediately all contaminated clothing. In case of contact with eyes, rinse with plenty of water and contact Doctor or Poisons Information Centre. If swallowed, IMMEDIATELY contact Doctor or Poisons Information Centre. (show this container or label). If you feel unwell contact Doctor or Poisons Information Centre. (Show the label if possible).

**SECTION 3**  
**Composition/Information on Ingredients**

<b>COMPONENTS</b>	<b>FORMULA</b>	<b>CAS Number</b>	<b>Percent by weight</b>
Isohexanes	C <sub>6</sub> H <sub>14</sub>	107-83-5	60-70 %
Ethanol	C <sub>2</sub> H <sub>5</sub> OH	100-37-8	10-20 %
Propane	C <sub>3</sub> H <sub>8</sub>	74-98-6	5-10 %
Butane	C <sub>4</sub> H <sub>10</sub>	106-97-8	8-15 %
Carbon Dioxide	CO <sub>2</sub>	124-38-9	1-2 %

**SECTION 4**  
**First Aid Measures**

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**Immediate Medical Attention:**

Treat symptomatically.

**Eyes**

Immediately hold eyelids apart and flush the eye continuously with running water. Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids. Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes. Transport to hospital or doctor without delay. Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

**Skin**

Flush skin and hair with running water (and soap if available). Remove any adhering solids with industrial skin cleansing cream. DO NOT use solvents. Seek medical attention in the event of irritation.

**Ingestion**

If swallowed do NOT induce vomiting. If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration. Observe the patient carefully. Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious. Give water to rinse out mouth, then provide liquid

slowly and as much as casualty can comfortably drink. Seek medical advice.

<b>Inhalation</b>	Lay patient down. Keep warm and rested. Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures. Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary. Transport to hospital, or doctor.
<b>Signs &amp; Symptoms Of Over Exposure:</b>	No information available.
<b>Special Treatment:</b>	No information available.

## SECTION 5 Fire Fighting Measures

<b>Extinguishing media</b>	Water spray or fog. Foam, Dry chemical powder, BCF (where regulations permit), Carbon dioxide.
<b>Hazardous Combustion:</b>	No information available.
<b>Protective Equipment and Precautions for firefighters:</b>	No information available.
<b>Flammability per Flame Projection Test</b>	No information available.

## SECTION 6 Accidental Release Measures

<b>Personal precautions, protective equipment and emergency procedures:</b>	No information available.
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<b>Methods/materials for containment and cleanup:</b>	<b>MINOR SPILLS</b> Clean up all spills immediately. Avoid breathing vapours and contact with skin and eyes. Wear protective clothing, impervious gloves and safety glasses. Shut off all possible sources of ignition and increase ventilation. Wipe up. If safe, damaged cans should be placed in a container outdoors, away from all ignition sources, until pressure has dissipated. Undamaged cans should be gathered and stowed safely.
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	<b>MAJOR SPILLS</b> Clear area of personnel and move upwind. Alert Fire Brigade and tell them location and nature of hazard. May be violently or explosively reactive. Wear breathing apparatus plus protective gloves. Prevent, by any means available, spillage from entering drains or water courses No smoking, naked lights or ignition sources. Increase ventilation. Stop leak if safe to do so. Water spray or fog may be used to disperse / absorb vapour. Absorb or cover spill with sand, earth, inert materials or vermiculite. If safe, damaged cans should be placed in a container outdoors, away from ignition sources, until pressure has dissipated.
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Undamaged cans should be gathered and stowed safely.  
Collect residues and seal in labeled drums for disposal.

**Environmental precautions:** No information available.

## SECTION 7 Handling and Storage

**Precautions for Safe Handling** No smoking, naked lights, heat or ignition sources.

**Conditions for Safe Storage** Store in original containers in approved flame-proof area. DO NOT store in pits, depressions, basements or areas where vapours may be trapped. No smoking, naked lights, heat or ignition sources. Keep containers securely sealed. Contents under pressure. Store away from incompatible materials. Store in a cool, dry, well-ventilated area in an upright position. Avoid storage at temperatures higher than 40 deg C. Protect containers against physical damage and check regularly for leaks. Observe manufacturer's storing and handling recommendations.

## SECTION 8 Exposure Controls/Personal Protection

**Engineering Controls:** None assigned. Refer to individual constituents.

**Personal Protection:** No information available.

**Respiratory protection:** No information available.

**Hand protection:** No information available.

**Eye protection:** No information available.

**Skin protection:** No information available.

**Work/Hygienic/Maintenance Practices:** No information available.

**Other Information:**

ODOUR SAFETY FACTOR (OSF) OSF=0.068 (CARBON DIOXIDE)

Exposed individuals are NOT reasonably expected to be warned, by smell, that the Exposure Standard is being exceeded. Odour Safety Factor (OSF) is determined to fall into either Class C, D or E. The Odour Safety Factor (OSF) is defined as: OSF= Exposure Standard (TWA) ppm/ Odour Threshold Value (OTV) ppm.

Classification into classes follows:

Class OSF Description  
A 550 Over 90% of exposed individuals are aware by smell that the Exposure Standard (TLV-TWA for example) is being reached, even when distracted by working activities  
B 26-550 As "A" for 50-90% of persons being distracted  
C 1-26 As "A" for less than 50% of persons being distracted  
D 0.18-1 10-50% of persons aware of being tested perceive by smell that the Exposure Standard is being reached  
E <0.18 As "D" for less than 10% of persons aware of being tested

**EXPOSURE STANDARDS FOR MIXTURE**

Composite Exposure Standard for Mixture (TWA) (mg/m3): mg/m3

**INGREDIENT DATA****ISOHEXANES:**

Hexane, isomers (excluding n-hexane) ES TWA: 500 ppm, 1760 mg/m<sup>3</sup>; STEL: 1000 ppm, 3500 mg/m<sup>3</sup>  
TLV TWA: 500 ppm, 1760 mg/m<sup>3</sup>; STEL: 1000 ppm, 3500 mg/m<sup>3</sup> MAK value: 200 ppm, 700 mg/m<sup>3</sup>

MAK Category II Peak Limitation: For substances with systemic effects and with a half-life in humans of less than two hours. Allows excursions of 2 times the MAK value, for 30 minutes (on average), four times per shift. MAK Group IIc: Substances with MAK Values but no pregnancy risk group classification. These are substances which have been investigated but for which no information regarding possible damage to the foetus/embryo was found. Mention calls attention to the absence of adequate data. MAK values, and categories and groups are those recommended within the Federal Republic of Germany. IDLH Level : 5000 ppm. The TLV-TWA is thought to be protective against nausea, headache, upper respiratory tract irritation and CNS depression. The STEL is added to prevent objective depression of the CNS. The lower value ascribed to n-hexane is due to the neurotoxicity of its metabolites, principally 5-hydroxy-2-hexanone and 2,5-hexanedione. It is considered unlikely that other hexanes follow the same metabolic route. It should be noted however that the n-hexane TLV-TWA (50 ppm, 176 mg/m<sup>3</sup>) also applies to commercial hexane having a concentration of greater than 5% n-hexane.

**CARBON DIOXIDE:**

TLV TWA: 5000 ppm [ACGIH]

TLV STEL: 30000 ppm [ACGIH]

PEL TWA: 5000 ppm, 9000 mg/m<sup>3</sup> [OSHA Z1]

carbon dioxide gas:

ES TWA: 5000 ppm, 9000 mg/m<sup>3</sup>; STEL: 30000 ppm, 54000 mg/m<sup>3</sup>

TLV TWA: 5000 ppm, 9000 mg/m<sup>3</sup>; STEL: 30000 ppm, 54000 mg/m<sup>3</sup>

OES TWA: 5000 ppm, 9150 mg/m<sup>3</sup>; STEL: 15000 ppm, 27400 mg/m<sup>3</sup>

MAK value: 5000 ppm, 9100 mg/m<sup>3</sup>

MAK Category IV Peak Limitation: For substances with very weak effects (ie.)

those with MAK value >500 ml/m<sup>3</sup> (ppm): Allows excursions of twice the MAK value for 60 minutes at a time, 3 times per shift.

MAK values, and categories and groups are those recommended within the Federal Republic of Germany

**SECTION 9****Physical and Chemical Properties**

<b>Appearance and Physical State:</b>	Colorless liquid
<b>Odor:</b>	Less solvent
<b>Odor Threshold:</b>	Not Available
<b>pH:</b>	5.0 – 6.0
<b>Melting Point/Freezing Point:</b>	Not Available
<b>Initial boiling point &amp; boiling range:</b>	Not Available
<b>Flash Point:</b>	N/A
<b>Evaporation rate:</b>	Not Available
<b>Flammability (solid, gas):</b>	Not Available
<b>Upper/lower flammability or explosive limits:</b>	Lower: N/A Upper N/A
<b>Vapor pressure at 20:</b>	N/A
<b>Vapor density:</b>	Not Available
<b>Relative density:</b>	Not Available
<b>Specific gravity:</b>	~0.671
<b>Solubility:</b>	Not Available
<b>Partition Coefficient n-Octanol/Water:</b>	Not Available
<b>Auto-ignition Temperature:</b>	Not Available

<b>Decomposition Temperature:</b>	Not Available
<b>Viscosity:</b>	< 30 cst
<b>VOC Content:</b>	Not Available
<b>CARB VOC Category/Standard (%):</b>	Not Available
<b>OTC Model Rule Category/Standard (%):</b>	Not Available
<b>US EPA Cons Prod Category/Standard (%):</b>	Not Available
<b>Weight per gallon:</b>	Not Available
<b>Solids in weight %:</b>	Not Available
<b>Non-volatile:</b>	0 wt. %

## SECTION 10 Stability and Reactivity

<b>Reactivity</b>	No information available.
<b>Chemical Stability:</b>	Product is considered stable.
<b>Possibility of hazardous reactions:</b>	No information available.
<b>Conditions to avoid (e.g. static discharge, shock or vibration):</b>	Elevated temperatures. Presence of open flame.
<b>Incompatibilities:</b>	No information available.
<b>Hazardous decomposition products:</b>	No information available.
<b>Hazardous polymerization:</b>	Will not occur.

## SECTION 11 Toxicological Information

<b>Likely Routes of Exposure:</b>	No information available.
<b>Symptoms:</b>	No information available.
<b>Delayed and Immediate Effects:</b>	No information available.
<b>Acute Health Effects:</b>	<p><b>SWALLOWED</b> Not normally a hazard due to physical form of product. Ingestion may result in nausea, pain, vomiting. Vomit entering the lungs by aspiration may cause potentially lethal chemical pneumonitis. Considered an unlikely route of entry in commercial/industrial environments.</p> <p><b>EYE</b> The material may produce severe irritation to the eye causing pronounced inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.</p> <p><b>SKIN</b> Spray mist may produce discomfort. Toxic effects may result from skin absorption. The material may accentuate any pre-existing skin condition. The material may cause skin irritation after</p>

prolonged or repeated exposure and may produce a contact dermatitis (non-allergic). This form of dermatitis is often characterized by skin redness (erythema) and swelling the epidermis. Histologically there may be intercellular oedema of the spongy layer (spongiosis) and intracellular oedema of the epidermis.

#### INHALED

Inhalation hazard is increased at higher temperatures. Acute effects from inhalation of high concentrations of vapor are pulmonary irritation, including coughing, with nausea; central nervous system depression characterized by headache and dizziness, increased reaction time, fatigue and loss of coordination. If exposure to highly concentrated solvent atmosphere is prolonged this may lead to narcosis, unconsciousness, even coma and possible death.

WARNING: Intentional misuse by concentrating/inhaling contents may be lethal.

**Toxicological Information:** **ISOHEXANES:** No significant acute toxicological data identified in literature search.

**CARBON DIOXIDE:** TOXICITY IRRITATION carbon dioxide gas:  
Inhalation (human) LCLo:10 pph/ 1 m (10%) Nil reported  
Inhalation (human) LCLo:9 pph/5 m (9%)  
Inhalation (rat) LCLo: 657190 ppm/15 m  
Inhalation (human) TCLo: 2000 ppm

**Carcinogen Information:** No information available.

## SECTION 12 Ecological Information

**Eco-toxicity:** Toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment. Water hazard class 1 (self-assessment): slightly hazardous to water.

**Persistence and Degradability:** No data available.

**Bioaccumulation Potential:** No data available.

**Mobility in Soil:** No data available.

**Other Adverse Effects:** No data available.

## SECTION 13 Disposal Considerations

**Storage and Disposal** Comply with local regulations.

**Waste Disposal Method:** Comply with local regulations.

## SECTION 14 Transport Information

Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (ocean, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport.

Additional Shipping Information: 32198

**U.S. DOT** UN/ID Number: UN1950  
 Proper shipping name: Aerosols  
 Hazard class: 2.1  
 Packing Group: Not applicable  
 Exceptions: May be shipped as consumer commodity or limited quantity  
 Environmental Hazards: None  
 Transport in Bulk: Not applicable  
 Special Precautions: ERG#126

**IMO/IMDG** UN/ID Number: UN1950  
 Proper shipping name: Aerosols  
 Hazard class: 2.1  
 Packing Group: Not applicable  
 Exceptions: May be shipped as a limited quantity  
 Environmental Hazards: None  
 Transport in Bulk: Not applicable  
 Special Precautions: EMS: F-D, S-U

**ICAO/IATA** UN/ID Number: UN1950  
 Proper shipping name: Aerosols, flammable  
 Hazard Class: 2.1  
 Packing Group: Not applicable  
 Exceptions: May be shipped as consumer commodity or limited quantity  
 Environmental Hazards: None  
 Transport in Bulk: Not applicable  
 Special Precautions: None

**Canada (TDG)** UN/ID Number: UN1950  
 Proper shipping name: Aerosols  
 Hazard class: 2.1  
 Packing Group: Not applicable  
 Exceptions: May be shipped as consumer commodity or limited quantity  
 Environmental Hazards: None  
 Transport in Bulk: Not applicable  
 Special Precautions: ERG#126

**Europe (ADR/RID)** UN/ID Number: UN1950  
 Proper shipping name: Aerosols, flammable  
 Hazard class: 2.1  
 Packing Group: Not applicable  
 Exceptions: May be shipped as limited quantity  
 Environmental Hazards: None

Transport in Bulk: Not applicable  
Special Precautions: None

## SECTION 15 Regulatory Information

Comply with local regulations.

## SECTION 16 Other Information

The supplier disclaims all expressed or implied warranties of merchantability or fitness for a specific use, with respect to the product or the information provided herein, except for conformation to contracted specifications. All information appearing herein is based upon data obtained from manufacturers and/or recognized technical sources. While the information is believed to be accurate, we make no representations as to its accuracy or sufficiency. Conditions of use are beyond our control, and therefore users are responsible for verifying the data under their own operating conditions to determine whether the product is suitable for their particular purposes and they assume all risks of their use, handling, and disposal of the product. Users also assume all risks in regards to the publication or use of, or reliance upon, information contained herein.

This information relates only to the product designated herein, and does not relate to its use in combination with any other material or process.

### **ABBREVIATIONS:**

NG="NOT GIVEN"

<="LESS THAN"

ND = Not Determined

BT="BETWEEN"

>="GREATER THAN"

NA = Not Applicable