



MATERIAL SAFETY DATA SHEET

PRODUCT NAME: ABRO MOTOR FLUSH

PRODUCT CODE: MF-390 / MF-391

SECTION I – PRODUCT AND COMPANY IDENTIFICATION

Manufacturer's Name: ABRO INDUSTRIES, INC.

CHEMTREC TOLL-FREE 24 HOURS EMERGENCY PHONE: 800-424-9300
 IN THE EVENT OF A CHEMICAL EMERGENCY INVOLVING A SPILL, LEAK, FIRE, EXPOSURE OR
 ACCIDENT CONTACT: CHEMTREC INTERNATIONAL - 703-527-3887

MSDS PREPERATION / REVISION: 10/11/2007

PRODUCT USE: AUTOMOBILE FUEL ADDITIVE – Consumer Product

SECTION II – COMPOSTION / INFORMATION ON INGREDIENTS

Component	CAS No.	Amount
Petroleum Distillates	64741-42-0	80-100
1,2,4 Trimethylbenzene	95-63-6	1-5
Naphthalene	91-20-3	<0.3

--See Section 8 for Exposure Limits

SECTION III – HAZARDS INDENTIFICATION

Clear colorless liquid with a hydrocarbon odor.

EMERGENCY OVERVIEW

May cause eye, skin and respiratory irritation. Inhalation of vapors may cause central nervous system effects including headache, dizziness, drowsiness, unconsciousness and death. Small amounts aspirated into the lungs during swallowing or vomiting may cause lung damage. May have chronic health effects. Combustible liquid and vapor. Possible cancer hazard. This product contains naphthalene, which may cause cancer based on animal data. The risk of cancer is depended on the duration and level of exposure.

SECTION IV- FIRST AID MEASURES

INHALATION: If symptoms of exposure develop, remove to fresh air. If breathing becomes difficult, administer oxygen. Administer artificial respiration if breathing has stopped. Seek immediate medical attention.

SKIN CONTACT: Remove contaminated clothing immediately. Wash all affected and exposed areas with soap and water. If skin irritation or redness develops and persists, seek medical attention.

EYE CONTACT: Exposed eyes should be immediately flushed with copious amounts of water using a steady stream for a minimum of 15 minutes. If irritation, pain, swelling or tearing persist, seek medical attention.

INGESTION: Get medical assistance by calling an emergency room or poison control center. Do not make the person vomit. If medical advice cannot be obtained, take the person and product to the nearest medical emergency treatment center or hospital. If vomiting occurs spontaneously, keep head below hips to prevent aspiration into the lungs.

NOTES TO PHYSICIAN: There is no specific antidote. Treatment of overexposure should be directed at the control of symptoms and clinical conditions. A serious potential problem is aspiration pneumonitis, which may lead to non-cardiogenic pulmonary edema. The patient should be observed for signs of lung injury if aspiration is suspected.

SECTION V – FIREFIGHTING MEASURES

FLASH POINT: 110°F (43°C) Setaflash

AUTOIGNITION TEMPERATURE: Not determined

FLAMMABILITY LIMITS: LEL: 1% UEL: 7%

NFPA Classification: II

EXTINGUISHING MEDIA: Use water fog, carbon dioxide, foam or dry chemical. Cool fire exposed containers with water. Do not use water spray since product may float on the surface of the water and spread fire.

SPECIAL FIRE FIGHTING PROCEDURES: Firefighters should wear positive pressure self-contained breathing apparatus and full protective clothing for fires in areas where chemicals are used or stored.

UNUSUAL FIRE HAZARDS: Combustible liquid. Product may form flammable mixtures at temperatures at or below the flashpoint. Runoff to sewer may cause fire or explosion hazard. Vapors are heavier than air and may travel along the ground or be moved by ventilation and be ignited by heat, flame or spark at locations distant from the material handling point.

HAZARDOUS COMBUSTION PRODUCTS: Burning may produce carbon monoxide, carbon dioxide, nitrogen oxides and asphyxiants.

SECTION VI – ACCIDENTAL RELEASE MEASURES

Eliminate all ignition sources. Wear appropriate protective clothing and equipment (See Section 8). Collect material using noncombustible absorbents and dispose in a container suitable for flammable waste.

SECTION VII – HANDLING AND STORAGE

DANGER: Harmful or Fatal if Swallowed. Contains petroleum distillates

Avoid eye contact.

Avoid contact with skin and clothing.
 Avoid breathing vapors.
 Use with adequate ventilation.
 Wash exposed skin thoroughly with soap and water after use.
 Combustible liquid.
 Keep container away from heat, sparks, flames and other sources of ignition.
 Keep containers closed when not in use.
 Store in a cool, dry area away from heat, oxidizers and all sources of ignition.

Empty containers retain product residue and may be hazardous. Do not cut, weld, drill, etc. containers, even empty.
 Do not reuse empty containers unless properly cleaned.

SECTION VIII – EXPOSURE CONTROLS

CHEMICAL	EXPOSURE LIMIT
Petroleum Distillates	500 ppm TWA OSHA PEL 100 ppm TWA ACGIH TLV
1,2, Trimethylbenzene	None Established OSHA PEL 25 ppm TWA ACGIH TLV
Naphthalene	10 ppm TWA OSHA PEL 10 ppm TWA ACGIH TLV 15 ppm STEL ACGIH TLV

VENTILATION: General ventilation should be adequate for all normal use. For operations where the TLV may be exceeded, forced ventilation such as local exhaust may be need to maintain exposures below applicable limits.

RESPIRATORY PROTECTION: None under normal use conditions. For operations where the TLV may be exceeded, a NIOSH approved respirator with an organic vapor cartridge and a dust/mist prefilter or supplied air respirator is recommended. Equipment selection depends on contaminant type and concentration. Select in accordance with 29 CFR 1910.134 and good industrial hygiene practice. For firefighting, use self-contained breathing apparatus.

GLOVES: Impervious gloves such as neoprene gloves recommended for operations which may result in prolonged or repeated skin contact.

EYE PROTECTION: Safety glasses or splash-proof goggles recommended.

OTHER PROTECTIVE EQUIPMENT/CLOTHING: Appropriate protective clothing as needed to minimize skin contact. Suitable washing and eye flushing facilities should be available in the work area. Contaminated clothing should be immediately removed and laundered before re-use.

SECTION IX – Physical and Chemical Properties

APPEARANCE AND ODOR: Clear, colorless liquid with a hydrocarbon odor.

pH: Not applicable

SPECIFIC GRAVITY: 0.77

BOILING POINT (F): 310¹F (154°C)

VAPOR PRESSURE: 0.6 mmHg @ 20°C

FREEZING POINT (F): Not determined
VAPOR DENSITY: 4.85
SOLUBILITY IN WATER: Insoluble
PERCENT VOLATILE: 100%
VISCOSITY: <100 SUS at 100°F
EVAPORATION RATE: Less than 1
COEFFICIENT OF WATER/OIL DISTRIBUTION: Not determined

SECTION X – Stability and Reactivity

STABILITY: Stable CONDITIONS TO AVOID: Heat, sparks, flames and all other sources of ignition.
INCOMPATIBILITY: Strong oxidizing agents.
HAZARDOUS DECOMPOSITION PRODUCTS: Combustion will produce carbon monoxide, carbon dioxide, nitrogen oxides and asphyxiants.
HAZARDOUS POLYMERIZATION: Will not occur.

SECTION XI – Toxicological Information

POTENTIAL HEALTH EFFECTS:

ACUTE HAZARDS:

INHALATION: Excessive inhalation of vapor or mist may cause irritation of the nose, throat and respiratory tract. May cause harmful central nervous system effects including euphoria, headache, dizziness, drowsiness, blurred vision, fatigue, tremors, convulsions, loss of consciousness, coma, respiratory arrest and death.

SKIN CONTACT: May cause irritation, seen as localized reddening and swelling. Prolonged or repeated exposure to this material may cause redness, burning, drying and cracking of the skin.

DERMAL TOXICITY: Absorption as from prolonged or massive skin contact may result in toxicity.

EYE CONTACT: May cause eye irritation with discomfort, tearing and blurred vision.

INGESTION: Swallowing may cause gastrointestinal disturbances including irritation, abdominal pain, belching, nausea, vomiting, frequent loose stools and diarrhea. Ingestion of large quantities may cause harmful central nervous system effects similar those listed under "Inhalation". This material is an aspiration hazard; product can enter the lungs during swallowing or vomiting and cause lung inflammation and damage.

CHRONIC HAZARDS: Reports have associated repeated and prolonged overexposure to petroleum distillates with adverse liver, kidney and bone marrow effects and with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the product may be harmful or fatal. (See Section 11) for additional information).

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Because of its irritation and defatting properties, this product may aggravate an existing dermatitis. Respiratory symptoms associated with pre-existing lung disorders such as asthma may be aggravated by exposure to this material.

CARCINOGEN: Naphthalene is listed as possibly carcinogenic to humans (Group 2B) by IARC and reasonably anticipated to be a carcinogen by NTP. None of the other components greater than 0.1% are listed as a carcinogen by IARC, NTP or OSHA. (See Section 11 for additional information).

Acute Toxicity Values:

Petroleum Distillate: No specific data available. Minimal toxicity 1,2,4-Trimethylbenzene: LD50 Oral Rat: 5 gm/kg
LC50 Inhalation Rat: 18 gm/m³/4 hr Naphthalene: LD50 Oral Rat: 490 mg/kg
LC50 Inhalation Rat: >340 mg/m³/1 hr
LD50 Skin Rabbit: >20 gm/kg

SECTION XII – Ecological Information

Naphthalene: 96 hour TLM 1-10 ppm

SECTION XIII – Disposal Considerations

Recycle, incinerate or landfill in accordance with all local, state/provincial and federal regulations.

SECTION XIV – Transport Information

DOT HAZARD CLASSIFICATION

DOT HAZARD CLASSIFICATION (For Ground Shipments Only) PROPER SHIPPING NAME: Excepted from HazMat (49 CFR 173.150(f)) TECHNICAL NAME: None UN NUMBER: None HAZARD CLASS/PACKING GROUP: Not Applicable LABELS REQUIRED: None

DOT MARINE POLLUTANTS: This product does not contain Marine Pollutants as defined in 49 CFR 171.8.

IMDG CODE SHIPPING CLASSIFICATION

DESCRIPTION: PETROLEUM DISTILLATES, n.o.s. CLASS 3, UN1268, PG III, FP 43°C, LTD QTY

ID NUMBER: UN1268

HAZARD CLASS: 3

PACKING GROUP: III

LABELS REQUIRED: NONE

PLACARDS REQUIRED: LIMITED QUANTITIES ON TRANSPORT CONTAINER

SECTION XV – Regulatory Information

EPA SARA 311/312 HAZARD CLASSIFICATION: Acute health, chronic health, fire hazard EPA SARA 313: This

Product Contains the Following Chemicals Subject to Annual Release Reporting Requirements Under

SARA Title III, Section 313 (40 CFR 372):

Pseudocumene (1,2,4-Trimethylbenzene)

Naphthalene

95-63-6 91-20-3

1-5% <0.3%

PROTECTION OF STRATOSPHERIC OZONE: This product is not known to contain or to have been manufactured with ozone depleting substances as defined in 40 CFR Part 82, Appendix A to Subpart A.

CERCLA SECTION 103: Spills of this product over the RQ (reportable quantity) must be reported to the National Response Center. The RQ for the product, based on the RQ for Naphthalene (0.3% maximum) of 100 lbs, is 33,333 lbs. Many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.

CALIFORNIA PROPOSITION 65: This product contains less than 0.3% naphthalene and less than 0.08% ethylbenzene which are known to the State of California cause cancer.

EPA TSCA INVENTORY: All of the components of this material are listed on the Toxic Substances Control Act (TSCA) Chemical Substances Inventory.

CANADIAN ENVIRONMENTAL PROTECTION ACT: All of the ingredients are listed on the Canadian Domestic Substances List.

CANADIAN WHMIS CLASSIFICATION: Class D - Division 2 - Subdivision B - (Toxic material causing other chronic effects) Class B - Division 3 (Combustible Liquid)



CANADIAN WHMIS HAZARD SYMBOLS:

This MSDS has been prepared according to the criteria of the

Controlled Products Regulation (CPR) and the MSDS contains all of the information required by the CPR. **EUROPEAN**

INVENTORY OF EXISTING COMMERCIAL CHEMICAL SUBSTANCES (EINECS): All of the ingredients are listed

on the EINECS inventory. **AUSTRALIA:** All of the ingredients of this product are listed on the Australian Inventory of

Chemical Substances. **KOREA:** All of the ingredients of this product are listed on the Korean Existing Chemical List

(KECL). **CHINA:** All of the ingredients of this product are listed on the Inventory of Existing Chemical Substance in

China (IECSC).

SECTION XVI – Other Information

NFPA Rating: Fire: 2 Health: 2 Reactivity: 0

REVISION SUMMARY: Section 14: Updated Transport Information

This MSDS is directed to professional users and bulk handlers of the product. Consumer products are labeled in accordance with Federal Hazardous Substances Act regulations

NOTICE

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