



MATERIAL SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

CUSTOMER: ABRO INDUSTRIES, INC.
PRODUCT NUMBER: IC-509, IC-509R, IC-509S
PRODUCT NAME: ABRO Fuel Injector Cleaner
ISSUED: January 1, 2008
PREPARED BY: SKS
MANUFACTURER: ABRO INDUSTRIES, INC.

EMERGENCY TELEPHONE NUMBER:

800-424-9300(24 Hours)*
*for medical, spill, leak, fire or transport accident emergencies

2. COMPONENT INFORMATION

COMPONENT NAME /	HAZARDOUS	PERCENTAGE RANGE	EXPOSURE LIMIT	UNITS
KEROSENE CAS#: 8008-20-6	YES	95 TO 99	OSHA PEL ACGIH TLV OHS TWA	NO LIMIT NO LIMIT 200 MG/M3 (P)
DETERGENT/FUEL ADDITIVE TRADE SECRET CAS # NOT AVAILABLE	YES	1 TO 5	OSHA PEL ACGIH TLV OHS TWA	NO LIMIT NO LIMIT NOT AVAILABLE

THIS DOCUMENT IS PREPARED PURSUANT TO THE OSHA HAZARD COMMUNICATION STANDARD (29 CFR 1910.1200)
THIS PRODUCT IS HAZARDOUS ACCORDING TO OSHA 29 CFR 1910.1200.

HAZARDS:

FLAMMABLE/COMBUSTIBLE ACUTE TOXIN CHRONIC TOXIN CARCINOGEN
PRESSURE REACTIVE EXPOSURE LIMIT TARGET ORGAN OTHER

OTHER: THIS PRODUCT CONTAINS PETROLEUM NAPHTHAS AND/OR SOLVENTS WHICH ARE A COMPLEX BLEND OF LIGHT PETROLEUM DISTILLATES.

3. HAZARDS IDENTIFICATION

EMERGENCY AND HAZARDS OVERVIEW: DANGER: HARMFUL OR FATAL IF SWALLOWED. COMBUSTIBLE

NFPA HAZARD IDENTIFICATION:

FIRE - 2 HEALTH - 1 REACTIVITY - 0

PRIMARY ROUTE OF EXPOSURE: SKIN INHALATION EYE

EYES : AVOID EYE CONTACT. MAY BE SLIGHTLY IRRITATING UPON DIRECT CONTACT. EXPOSURE TO HIGH CONCENTRATIONS OF VAPORS MAY BE IRRITATING TO THE EYES.

SKIN CONTACT : AVOID SKIN CONTACT. MAY CAUSE SLIGHT SKIN IRRITATION UPON DIRECT CONTACT. PROLONGED OR REPEATED CONTACT MAY RESULT IN CONTACT DERMATITIS WHICH IS CHARACTERIZED BY DRYNESS, CHAPPING, AND REDDENING. THIS CONDITION MAY MAKE THE SKIN MORE SUSCEPTIBLE TO OTHER IRRITANTS, SENSITIZERS, AND DISEASE.



INHALATION : AVOID PROLONGED INHALATION OF MIST OR VAPORS. ACUTE AND CHRONIC OVEREXPOSURES MAY BE IRRITATING TO THE RESPIRATORY TRACT. SEVERE INTOXICATION MAY LEAD TO DROWSINESS, NUMBNESS AND HEADACHE FOLLOWED BY DIZZINESS, WEAKNESS AND NAUSEA. CAUTION SHOULD BE TAKEN TO PREVENT MISTING.

INGESTION : DO NOT INGEST. INGESTION OF SMALL QUANTITIES IS USUALLY NONFATAL UNLESS ASPIRATION OCCURS. ASPIRATION MAY LEAD TO CHEMICAL PNEUMONITIS WHICH IS CHARACTERIZED BY PULMONARY EDEMA AND HEMMORAGE AND MAY BE FATAL. SIGNS OF LUNG INVOLVEMENT INCLUDE INCREASED RESPIRATORY RATE, INCREASED HEART RATE AND A BLUIISH DISCOLORATION OF THE SKIN. COUGHING, CHOKING AND GAGGING ARE OFTEN NOTED AT THE TIME OF ASPIRATION. GASTROINTESTINAL DISCOMFORT MAY DEVELOP, FOLLOWED BY VOMITTING. INGESTION OF LARGE CONCENTRATIONS MAY RESULT IN CONVULSIONS, LOSS OF CONSCIOUSNESS AND POSSIBLE DEATH.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: DRYING AND CHAPPING MAY MAKE THE SKIN MORE SUSCEPTIBLE TO OTHER IRRITANTS, SENSITIZERS AND DISEASE.

OTHER: NO INFORMATION AVAILABLE.

4. FIRST AID INFORMATION

EYES : FLUSH WITH LARGE AMOUNTS OF WATER FOR AT LEAST 15 MINUTES OR UNTIL IRRITATION SUBSIDES. CONSULT PHYSICIAN IF IRRITATION OR PAIN PERSISTS.

SKIN : REMOVE CONTAMINATED CLOTHING AND FLUSH WITH WATER AND MILD SOAP. IF REDNESS OR IRRITATION PERSISTS, SEEK MEDICAL ATTENTION.

INHALATION : NOT CONSIDERED TO BE AN INHALATION HAZARD. IF BREATHING BECOMES DIFFICULT, REMOVE TO FRESH AIR IMMEDIATELY. SEEK MEDICAL ATTENTION.

INGESTION : DO NOT INDUCE VOMITING. SEEK MEDICAL ATTENTION.

OTHER: NO INFORMATION AVAILABLE

5. FIRE AND EXPLOSION INFORMATION

FLASH POINT : > 100 F / 37.8 C **FLAMMABLE LIMITS IN AIR BY % VOL :** LOWER: 0.7 UPPER: 5.0
METHOD USED: TCC **AUTO IGNITION TEMP. :** 401 F

NFPA CLASSIFICATION: CLASS II COMBUSTIBLE LIQUID

EXTINGUISHING MEDIA: FOAM, DRY CHEMICAL OR CARBON DIOXIDE

SPECIAL FIRE FIGHTING PROCEDURES: WATER MAY BE INEFFECTIVE BUT CAN BE USED TO COOL CONTAINERS EXPOSED TO HEAT OR FLAME. CAUTION SHOULD BE EXERCISED WHEN USING WATER OR FOAM AS FROTHING MAY OCCUR, ESPECIALLY IF SPRAYED INTO CONTAINERS OF HOT, BURNING LIQUID.

UNUSUAL FIRE AND EXPLOSION HAZARDS: DENSE SMOKE MAY BE GENERATED WHILE BURNING. CARBON MONOXIDE, CARBON DIOXIDE AND OTHER OXIDES MAY BE GENERATED AS PRODUCTS OF COMBUSTION.

HAZARDOUS COMBUSTION BY-PRODUCTS: NONE



6. ACCIDENTAL RELEASE MEASURES

PERSONNEL SAFEGUARDS: REMOVE ALL SOURCES OF IGNITION. CONSULT HEALTH EFFECT INFORMATION IN SECTION 3, PERSONAL PROTECTION INFORMATION IN SECTION 8, FIRE AND EXPLOSION INFORMATION SECTION 5, AND STABILITY AND REACTIVITY INFORMATION IN SECTION 10. PROVIDE ADEQUATE VENTILATION DURING CLEAN-UP.

REGULATORY NOTIFICATIONS: NOTIFY APPROPRIATE AUTHORITIES OF SPILL.

CONTAINMENT AND CLEANUP: CONTAIN SPILL IMMEDIATELY. DO NOT ALLOW SPILL TO ENTER SEWERS OR WATERCOURSES. ABSORB WITH APPROPRIATE INERT MATERIAL SUCH AS SAND, CLAY ETC. LARGE SPILLS MAY BE PICKED UP USING VACUUM PUMPS, SHOVELS, BUCKETS OR OTHER MEANS AND PLACED IN DRUMS OR OTHER SUITABLE CONTAINERS.

OTHER: NO INFORMATION AVAILABLE

7. HANDLING AND STORAGE INFORMATION

HANDLING: FIRE EXTINGUISHERS SHOULD BE KEPT READILY AVAILABLE. SEE NFPA30 AND OSHA 1910.106 FLAMMABLE AND COMBUSTIBLE LIQUIDS.

STORAGE: STORE IN CLOSED CONTAINERS AWAY FROM HEAT, SPARKS, FLAME OR OXIDIZING MATERIALS. DO NOT TRANSFER TO UNMARKED CONTAINERS. USE IN WELL VENTILATED AREAS.

EMPTY CONTAINER WARNINGS: PLASTIC: DO NOT REUSE THIS CONTAINER. EMPTY CONTAINER MAY RETAIN PRODUCT RESIDUE.

OTHER: NO INFORMATION AVAILABLE.

8. EXPOSURE CONTROLS/ PERSONAL PROTECTION INFORMATION

EXPOSURE LIMITS AND GUIDELINES: THIS PRODUCT DOES NOT CONTAIN ANY COMPONENTS WITH OSHA OR ACGIH EXPOSURE LIMITS.

PERSONAL PROTECTIVE EQUIPMENT:

RESPIRATION PROTECTION: RESPIRATORY PROTECTION IS NOT REQUIRED UNDER CONDITIONS OF NORMAL USE. IF VAPOR OR MIST IS GENERATED WHEN MATERIAL IS HEATED OR HANDLED, USE A NIOSH APPROVED ORGANIC VAPOR RESPIRATOR WITH A DUST AND MIST FILTER.

SKIN PROTECTION: NONE REQUIRED IN NORMAL USE. FOR PROLONGED OR REPEATED CONTACT, USE IMPERVIOUS CLOTHING (GLOVES, APRONS ETC.) TO COVER EXPOSED BODY PARTS. LAUNDER SOILED CLOTHES.

EYE PROTECTION: NOT REQUIRED UNDER NORMAL USE. USE SPLASH-PROOF SAFETY GLASSES OR PLASTIC FACE SHIELDS IF SPLASHING MAY OCCUR.

PERSONAL HYGIENE: CONSUMPTION OF FOOD AND BEVERAGE SHOULD BE AVOIDED IN WORK AREAS WHERE HYDROCARBONS ARE PRESENT. ALWAYS WASH HANDS AND FACE WITH SOAP AND WATER BEFORE EATING, DRINKING OR SMOKING.



ENGINEERING CONTROLS / WORK PRACTICES:

VENTILATION: ADEQUATE VENTILATION MUST BE PROVIDED TO MAINTAIN CONCENTRATIONS BELOW THE SPECIFIED EXPOSURE OR FLAMMABLE LIMITS IF VAPOR OR MISTS ARE GENERATED. SEE FIRE AND EXPLOSION INFORMATION IN SECTION 5.

OTHER: AS A PRECAUTION, ALL EXPOSURE TO MISTS AND VAPORS OF PETROLEUM PRODUCTS SHOULD BE MINIMIZED. THE OSHA PERMISSIBLE EXPOSURE LIMIT (PEL) AND ACGIH THRESHOLD LIMIT VALUE (TLV) FOR OIL MIST IS 5 MG/M3. CHRONIC EXPOSURE BELOW 5 MG/M3 ARE WITHOUT SIGNIFICANT HEALTH RISKS. THE ACGIH SHORT-TERM EXPOSURE LIMIT (STEL) FOR OIL MIST IS 10 MG/M3. THE OSHA PEL FOR PETROLEUM DISTILLATES IS 2000 MG/M3. NIOSH RECOMMENDS A 10-HOUR TWA OF 100 MG/M3 FOR KEROSENE.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: REDDISH LIQUID

ODOR: AROMATIC ODOR

MOLECULAR WEIGHT: NO DATA

SPECIFIC GRAVITY (H₂O = 1): 0.82

SOLUBILITY IN WATER : NEGLIGIBLE

BOILING POINT: 304-574 F , 151.1-301.1 C

VAPOR PRESSURE MM HG @ 25C / 77F: < 2

MELTING POINT: POUR POINT -30F / -34.4C

% VOLATILES BY VOLUME: 99+

EVAPORATION RATE: NO DATA

VAPOR DENSITY (AIR = 1) : >1

pH: NO DATA

10. STABILITY AND REACTIVITY INFORMATION

STABILITY: STABLE

CONDITIONS TO AVOID: AVOID INTENSE HEAT, SPARKS OR FLAME.

INCOMPATIBILITIES: MAY REACT WITH STRONG OXIDIZING AGENTS

HAZARDOUS DECOMPOSITION: NONE UNDER NORMAL TEMPERATURES OR PRESSURE.

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR.

11. TOXICOLOGICAL INFORMATION

EYE IRRITATION: NO INFORMATION AVAILABLE

SKIN IRRITATION: NO INFORMATION AVAILABLE

ACUTE DERMAL TOXICITY: NO INFORMATION AVAILABLE

DERMAL SENSITIZATION: NO INFORMATION AVAILABLE

INHALATION TOXICITY: NO INFORMATION AVAILABLE

ORAL TOXICITY: NO INFORMATION AVAILABLE

MUTAGENICITY: NO INFORMATION AVAILABLE



CARCINOGENICITY: SIMILAR COMPOSITION MIDDLE DISTILLATES HAVE BEEN FOUND TO BE WEAKLY TO MODERATELY TUMORIGENIC IN MOUSE SKIN-PAINTING STUDIES. THERE IS SCIENTIFIC EVIDENCE TO INDICATE THESE TUMORS ARE DUE IN-PART TO CHRONIC SKIN IRRITATION RESULTING FROM CONTINUOUS CONTACT WITH MIDDLE DISTILLATES. THE INTERNATIONAL AGENCY FOR RESEARCH ON CANCER (IARC) HAS CONCLUDED THAT LIGHT AND INTERMEDIATE MIDDLE DISTILLATES ARE GROUP 3 SUBSTANCES, "NOT CLASSIFIABLE AS TO THEIR CARCINOGENICITY TO HUMANS," BASED ON INADEQUATE HUMAN AND INADEQUATE ANIMAL EVIDENCE.

REPRODUCTIVE AND DEVELOPMENTAL TOXICITY: NO INFORMATION AVAILABLE.

TERATOGENICITY: NO INFORMATION AVAILABLE.

IMMUNOTOXICITY: NO INFORMATION AVAILABLE.

NEUROTOXICITY: NO INFORMATION AVAILABLE

OTHER: NO INFORMATION AVAILABLE.

12. ECOLOGICAL INFORMATION

AQUATIC TOXICITY: NO INFORMATION AVAILABLE

TERRESTRIAL TOXICITY: NO INFORMATION AVAILABLE

OTHER: NO INFORMATION AVAILABLE

13. DISPOSAL INFORMATION

REGULATORY INFORMATION: ALL DISPOSALS MUST COMPLY WITH FEDERAL, STATE AND LOCAL REGULATIONS. THE MATERIAL, IF SPILLED OR DISCARDED, MAY BE REGULATED WASTE. DOT REGULATIONS MAY APPLY FOR TRANSPORTING THIS MATERIAL WHEN SPILLED.

WASTE DISPOSAL METHOD: DISPOSE IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL REGULATIONS. WASTE MATERIAL MAY BE LANDFILLED OR INCINERATED AT AN APPROVED FACILITY.

14. TRANSPORTATION INFORMATION

DOT: HIGHWAY / RAIL (NON-BULK): NOT REGULATED (CONSUMER COMMODITY, ORM-D)

THE DOT DESCRIPTION IS PROVIDED TO ASSIST IN THE PROPER SHIPPING CLASSIFICATION OF THIS PRODUCT AND MAY NOT BE SUITABLE FOR ALL SHIPPING DESCRIPTIONS.

IMDG / IATA: PETROLEUM DISTILLATES, N.O.S., UN1268, III

15. REGULATORY INFORMATION

THIS PRODUCT IS NOT KNOWN TO CONTAIN ANY SARA TITLE III, SECTION 313 REPORTABLE CHEMICALS AT OR GREATER THAN 1.0% (0.1% FOR CARCINOGENS).

ALL INGREDIENTS OF THIS PRODUCT ARE LISTED ON THE TOXIC SUBSTANCES CONTROL ACT (TSCA) INVENTORY.

SARA 311 / 312 CATEGORIES

ACUTE: ~~X~~ CHRONIC: — FIRE: ~~X~~ PRESSURE: — REACTIVE: — NOT REGULATED: —



SARA 313: CONSUMER PRODUCTS ARE NOT REGULATED UNDER SARA, TITLE III, and SECTION 313.

CANADIAN WHMIS CLASSIFICATION: CLASS B – FLAMMABLE AND COMBUSTIBLE MATEIAL, DIVISION 3,

EUROPEAN/INTERNATIONAL REGULATIONS

HAZARD SYMBOLS:

- Xn Harmful
- N Dangerous for the environment

RISK PHRASES

- R36/38 Irritating to eyes and skin.
- R51/53 Toxic to aquatic organisms, may cause long term adverse effects in the aquatic environment.
- R65 Harmful: may cause lung damage if swallowed.

SAFETY PHRASES:

- S2 Keep out of the reach of children.
- S23 Do not inhale gas/fumes/vapour/spray.
- S24/25 Avoid contact with skin and eyes.
- S28 After contact with skin, wash immediately with plenty of soap and water.
- S61 Avoid release to the environment. Refer to special instructions/Safety data sheet.
- S62 If swallowed, do not induce vomiting; seek medical advice immediately and show this container or label.

OTHER: No information available

16. OTHER INFORMATION

HEALTH AND ENVIRONMENTAL LABEL LANGUAGE

FRONT LABEL: DANGER: HARMFUL OR FATAL IF SWALLOWED. COMBUSTIBLE.

BACK LABEL: DANGER: CONTAINS PETROLEUM MIDDLE DISTILLATES. PROLONGED AND REPEATED SKIN CONTACT MAY CAUSE DRYING OF SKIN.

PRECAUTIONARY MEASURES: KEEP AWAY FROM HEAT AND FLAMES. AVOID BREATHING OF MISTS AND VAPORS. USE ONLY IN WELL VENTILATED AREAS. AVOID REPEATED AND PROLONGED SKIN CONTACT. WASH THOROUGHLY AFTER HANDLING.

FIRST AID: IF SWALLOWED, DO NOT INDUCE VOMITING. CALL PHYSICIAN IMMEDIATELY. IF INHALED, BREATHE FRESH AIR. FOR SKIN OR EYE CONTACT, WASH THOROUGHLY WITH WATER.

KEEP OUT OF REACH OF CHILDREN.

- A. Original Issue Date: 3-27-98
Revised all sections, new 16 part MSDS format
- B. Prepared by : SKS

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