

PRODUCT NAME: ABRO Diesel System Cleaner
PRODUCT NUMBER/SIZE: DS-900

Rev Date: 04/16/2015

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

MANUFACTURER'S NAME: ABRO INDUSTRIES, INC.

ADDRESS: 3580 Blackthorn Court
South Bend, IN 46628
USA

PRODUCT DESCRIPTION: Fuel Additive

COMPANY PHONE: 574-232-8289

EMERGENCY 24-HR TELEPHONE: Chemtrec: US/Canada 1-800-424-9300
International +1-703-527-3887

SECTION 2 Hazards Identification

Classification:

Flammable Liquids - Category 4 (Combustible)
Acute Toxicity, Inhalation - Category 4
Skin Irritation – Category 2
Eye Irritation – Category 2B
Carcinogenicity - Category 2
Specific Target Organ Toxicity (Single Exposure) – Category 3
Aspiration Hazard – Category 1
Chronic Aquatic Toxicity – Category 2

Label Pictogram(s):



Signal Word:

Danger

Hazard Phrases:

Flammable liquid and vapor. Harmful if inhaled. Causes skin irritation. Causes eye irritation. Suspected of causing cancer. Suspected of causing genetic defects. May cause respiratory irritation. May cause drowsiness or dizziness. May be fatal if swallowed and enters airways. Harmful to aquatic life.

Precautionary Phrases:

Keep away from heat/sparks/open flames/hot surfaces. No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting/equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Wear protective gloves/protective clothing/eye protection/face protection. Avoid breathing fume/mist/vapors/spray. Use only outdoors or in a well-ventilated area. Wash

hands and forearms thoroughly after handling. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid release to the environment.

Response: In case of fire: Use water spray, fog or foam. If on skin (or hair): Wash with plenty of soap and water. Take off immediately all contaminated clothing and wash it before reuse. If skin irritation occurs, get medical advice/attention. If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison center or doctor if you feel unwell. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. If exposed or concerned: Get medical advice/attention. If swallowed: Immediately call a poison center or doctor/physician if you feel unwell. Do NOT induce vomiting.

Storage / Disposal: Store in a well-ventilated place. Keep cool. Store locked up. Keep container tightly closed. Dispose of contents/container in accordance with local/regional/national/international regulations.

Other: Keep out of reach of children. Read label before use. If medical advice is needed, have product container or label at hand.

SECTION 3 Composition/Information on Ingredients

COMPONENTS	CAS Number	Percent by weight
Fuel oil, no. 2	68476-30-2	<97.0 %
Solvent naphtha (petroleum), Heavy arom.	64742-94-5	0.5 -1.2 %
Solvent Naphtha (Petroleum), Light Aromatic	64742-95-6	0.4 -0.8 %
Ethanol, 2-Butoxy-	111-76-2	0.75 %
Naphthalene	91-20-3	0.09 -0.7 %
1,2,4-Trimethylbenzene	95-63-6	0.08 -0.4 %
Non-Hazardous Additives	NA	0.3 %
1-Hexanol, 2-Ethyl-	104-76-7	0.03 -0.13 %
Xylene (mixed isomers)	1330-20-7	< 0.03 %
Cumene	98-82-8	< 0.013 %
1,3,5-Trimethylbenzene	108-67-8	< 0.01 %

SECTION 4 First Aid Measures

In Case of Inhalation

Remove to fresh air. If not breathing, institute rescue breathing. If breathing is difficult, ensure airway is clear and give oxygen. If heart has stopped, immediately begin cardiopulmonary resuscitation (CPR). Keep affected person warm and at rest. GET IMMEDIATE MEDICAL ATTENTION.

In Case of Skin Contact

Immediately wash exposed skin with plenty of soap and water while removing contaminated clothing and shoes. Get medical attention if irritation persists. Place contaminated clothing in closed container until cleaned or discarded. If clothing is to be laundered, inform the person performing the operation of contaminant's hazardous properties.

In Case of Eye Contact

Flush immediately with large amounts of water for at least 15 minutes. Eyelids should be held away from the eyeball to ensure thorough rinsing. GET IMMEDIATE MEDICAL ATTENTION.

In Case of Ingestion

Do not induce vomiting. If spontaneous vomiting is about to occur, place victim's head below knees. If victim is drowsy or unconscious, place on the left side with head down. Never give anything by mouth to an unconscious person. Keep affected person warm and at rest. GET IMMEDIATE MEDICAL ATTENTION.

Note to Physician

If ingested this material represents a significant aspiration and chemical pneumonitis hazard. Induction of emesis is not recommended.

Signs and Symptoms of Exposure

No data available.

SECTION 5 Fire Fighting Measures

Flammability Classification: Combustible liquid.

Flash Pt: > 140.00 F (60.0 C) Method Used: Pinsky-Marten Closed Cup

Explosive Limits: LEL: 0.3 % UEL: 10 %

Autoignition Pt: No data available.

Fire Fighting Instructions

Avoid using straight water streams. Water spray and foam (AFFF/ATC) must be applied carefully to avoid frothing and from as far a distance as possible. Avoid excessive water spray application. Keep surrounding area cool with water spray from a distance and prevent further ignition of combustible material. Keep run-off water out of sewers and water sources.

Flammable Properties and Hazards

No data available.

Hazardous Combustion Products

Combustion produces carbon monoxide, aldehydes, aromatic and other hydrocarbons.

Suitable Extinguishing Media

For small fires, Class B fire extinguishing media such as CO₂, dry chemical, foam (AFFF/ATC) or water spray can be used. For large fires, water spray, fog or foam (AFFF/ATC) can be used. Firefighting should be attempted only by those who are adequately trained and equipped with proper protective equipment.

Unsuitable Extinguishing Media

No data available.

SECTION 6 Accidental Release Measures

Steps To Be Taken In Case Material Is Released or Spilled

Large Spill:

Stop leak if without risk. Eliminate all ignition sources. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the

same hazard as the spilled product. Note: see section 1 for emergency contact information and section 13 for waste disposal.

Small Spill:

Stop leak if without risk. Eliminate all ignition sources. Move containers from spill area. Absorb with an inert material and place in an appropriate waste disposal container. Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor.

Protective Precautions, Protective Equipment and Emergency Procedures

Chemical splash goggles. Chemical-resistant protective suit. Boots. Chemical-resistant gloves. Self-contained breathing apparatus (SCBA) should be used to avoid inhalation of the product. Suggested protective clothing might not be adequate. Consult a specialist before handling this product. **CAUTION:** The protection provided by air-purifying respirators is limited. Use a positive pressure air-supplied respirator if there is any potential for an uncontrolled release, if exposure levels are not known, or if concentrations exceed the protection limits of air-purifying respirator.

Environmental Precautions

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

SECTION 7
Handling and Storage

Precautions to Be Taken in Handling

Isolate from sources of heat, sparks, and open flame. Open container in a well ventilated area. Avoid breathing vapors and thermal decomposition products. Keep containers closed when not in use. Vapors are heavier than air and will tend to accumulate in low areas. Avoid use in confined areas without adequate ventilation. Areas of inadequate ventilation could contain concentrations high enough to cause eye irritation, headaches, respiratory discomfort or nausea. Carefully evaluate processes using this product at elevated temperatures to ensure safe operating conditions. Electrostatic buildup may occur when pouring or transferring this product from its container.

Precautions to Be Taken in Storing

Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

SECTION 8 Exposure Controls/Personal Protection

Hazardous Components	CAS#	OSHA PEL	ACGIH TWA	Other Limits
Fuel oil, no. 2	68476-30-2	No data.	TLV: 100 mg/m ³	No data.
Solvent naphtha (petroleum), Heavy arom.	64742-94-5	No data.	No data.	No data.
Solvent Naphtha (Petroleum), Light Aromatic	64742-95-6	No data.	No data.	No data.
Ethanol, 2-Butoxy-	111-76-2	PEL: 50 ppm	TLV: 20 ppm	No data.
Naphthalene	91-20-3	PEL: 10 ppm	TLV: 10 ppm STEL: 15 ppm	No data.
1,2,4-Trimethylbenzene	95-63-6	No data.	No data.	No data.
Non-Hazardous Additives	NA	No data.	No data.	No data.
1-Hexanol, 2-Ethyl-	104-76-7	No data.	No data.	No data.
Xylene (mixed isomers)	1330-20-7	PEL: 100 ppm	TLV: 100 ppm STEL: 150 ppm	No data.
Cumene	98-82-8	PEL: 50 ppm	TLV: 50 ppm	No data.
1,3,5-Trimethylbenzene	108-67-8	No data.	No data.	No data.

Respiratory Equipment (Specify Type)

Use approved organic vapor chemical cartridge or supplied air respirators when material produces vapors that exceed permissible limits or excessive vapors are generated. Observe respirator assigned protection factors (APFs) criteria cited in federal OSHA 1910.134. Self-contained breathing apparatus should be used for firefighting.

Eye Protection

No special eye protection is normally required. Where splashing is possible, wear safety glasses with side shields.

Protective Gloves

Neoprene, nitrile, polyvinyl alcohol (PVA), polyvinyl chloride and polyurethane gloves to prevent skin contact.

Other Protective Clothing

No special protective clothing is normally required. Select protective clothing depending on industrial operations.

Engineering Controls (Ventilation etc.)

Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas or vapor concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Work/Hygienic/Maintenance Practices

Wash hands, forearms, and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Environmental Exposure Controls

Local or general exhaust required when using at elevated temperatures that generate vapors or mists.

SECTION 9 Physical and Chemical Properties

Physical States:	<input type="checkbox"/> Gas <input checked="" type="checkbox"/> Liquid <input type="checkbox"/> Solid
Melting Point:	No data.
Boiling Point:	No data.
Autoignition Pt:	No data.
Flash Pt:	> 140.00 F (60.0 C) Method Used: Pensky-Marten Closed Cup
Explosive Limits:	LEL: 0.3 % UEL: 10 %
Specific Gravity (Water = 1):	0.810 - 0.880 at 70.0 F (21.1 C)
Density:	6.76 - 7.34 LBS/GAL at 70.0 F (21.1 C)
Vapor Pressure (vs. Air or mm Hg):	No data.
Vapor Density (vs. Air = 1):	No data.
Evaporation Rate:	No data.
Solubility in Water:	Insoluble
Solubility Notes:	Insoluble in water
Percent Volatile:	No data.
Appearance and Odor:	Clear red liquid with a petroleum odor.

SECTION 10 Stability and Reactivity

Stability: Unstable Stable

Reactivity

Forms peroxides of unknown stability.

Conditions to Avoid - Instability

Excessive heat, sources of ignition and open flames.

Incompatibility - Materials to Avoid

Strong oxidizers such as nitrates, perchlorates, chlorine, fluorine.

Hazardous Decomposition or Byproducts

Combustion produces carbon monoxide, aldehydes, aromatic and other hydrocarbons.

Possibility of Hazardous Reactions: Will occur Will not occur

Conditions to Avoid - Hazardous Reactions

Hazardous polymerization is not expected to occur.

SECTION 11 Toxicological Information

MIDDLE DISTILLATES, PETROLEUM: Long-term repeated (lifetime) skin exposure to similar materials has been reported to result in an increase in skin tumors in laboratory rodents. The relevance of these findings to humans is not clear at this time.

MIDDLE DISTILLATES WITH CRACKED STOCKS: Light cracked distillates have been shown to be carcinogenic in animal tests and have tested positive with in vitro genotoxicity tests. Repeated dermal

exposures to high concentrations in test animals resulted in reduced litter size and litter weight, and increased fetal resorptions at maternally toxic doses. Dermal exposure to high concentrations resulted in severe skin irritation with weight loss and some mortality. Inhalation exposure to high concentrations resulted in respiratory tract irritation, lung changes/infiltration/accumulation, and reduction in lung function.

ISOPARAFFINS: Studies in laboratory animals have shown that long-term exposure to similar materials (isoparaffins) can cause kidney damage and kidney cancer in male laboratory rats. However, in-depth research indicates that these findings are unique to the male rat, and that these effects are not relevant to humans.

NAPHTHALENE: Severe jaundice, neurotoxicity (kernicterus) and fatalities have been reported in young children and infants as a result of hemolytic anemia from overexposure to naphthalene. Persons with Glucose 6-phosphate dehydrogenase (G6PD) deficiency are more prone to the hemolytic effects of naphthalene. Adverse effects on the kidney have been reported in persons overexposed to naphthalene but these effects are believed to be a consequence of hemolytic anemia, and not a direct effect. Hemolytic anemia has been observed in laboratory animals exposed to naphthalene. Laboratory rodents exposed to naphthalene vapor for 2 years (lifetime studies) developed non-neoplastic and neoplastic tumors and inflammatory lesions of the nasal and respiratory tract. Cataracts and other adverse effects on the eye have been observed in laboratory animals exposed to high levels of naphthalene. Findings from a large number of bacterial and mammalian cell mutation assays have been negative. A few studies have shown chromosomal effects (elevated levels of Sister Chromatid Exchange or chromosomal aberrations) in vitro. Naphthalene has been classified as Possibly Carcinogenic to Humans (2B) by IARC, based on findings from studies in laboratory animals.

DIESEL EXHAUST: Chronic inhalation studies of whole diesel engine exhaust in mice and rats produced a significant increase in lung tumors. Combustion of kerosene and/or diesel fuels produces gases and particulates which include carbon monoxide, carbon dioxide, oxides of nitrogen and/or sulfur and hydrocarbons. Significant exposure to carbon monoxide vapors decreases the oxygen carrying capacity of the blood and may cause tissue hypoxia via formation of carboxyhemoglobin.

TRIMETHYLBENZENES: This product contains Trimethylbenzenes. Literature data indicate that long-term inhalation exposure causes blood effects in laboratory animals.

XYLENE: Dermal absorption of Xylene in animals causes narcosis. Toxic effects described in animals by inhalation include upper respiratory irritation; central nervous system effects; behavioral effects; decreased weight gain; hearing loss; and effects on the blood, liver, kidneys, heart, spleen, lungs and bone marrow. By ingestion, xylene caused central nervous system effects; decreased body weight and liver effects. Tests of xylene in animals demonstrate no carcinogenic activity.

Xylene does not produce heritable genetic damage in animals or genetic damage in bacterial or mammalian cell cultures. Although abnormal sperm were observed after an interperitoneal injection in rats, xylene did not produce reproductive effects. Developmental toxicity was observed in animals exposed to xylene but only at concentrations that were maternally toxic.

CAS# 68476-30-2:

Acute toxicity, LD50, Oral, Rat, 12.00 GM/KG.

Results:

Behavioral: Ataxia.

Gastrointestinal: Hypermotility, diarrhea.

Nutritional and Gross Metabolic: Weight loss or decreased weight gain.

- Advances in Modern Environmental Toxicology., Senate Press, Inc., P.O. Box 252, Princeton Junction, NJ 08550, Vol/p/yr: 6,1, 1984

CAS# 64742-94-5:

Acute toxicity, LC50, Inhalation, Rat, 590.0 MG/M3, 4 H.

Results:

Effects on Newborn: Growth statistics (e.g., reduced weight gain).

- National Technical Information Service, Vol/p/yr: OTS0534724,

CAS# 111-76-2:

Acute toxicity, LD50, Oral, Rat, 470.0 MG/KG.

Results:

Behavioral: Irritability.

Skin and Appendages: Skin: After topical exposure: Primary irritation.

- Dow Chemical Company Reports, Dow Chemical USA, Health and Environment Research, Toxicology Research Lab, Midland, MI 48640, Vol/p/yr: MSD-46,

Acute toxicity, LD50, Oral, Mouse, 1230. MG/KG.

Results:

Behavioral: Altered sleep time (including change in righting reflex).

Behavioral: Somnolence (general depressed activity).

Skin and Appendages: Other: Hair.

- AMA Archives of Industrial Health., for publisher information, see AEHLAU, Chicago, IL, Vol/p/yr: 14,114, 1956

CAS# 91-20-3:

Acute toxicity, LD50, Oral, Rat, 490.0 MG/KG.

Results:

Tumorigenic: Equivocal tumorigenic agent by RTECS criteria.

Blood: Lymphomas including Hodgkin's disease.

Tumorigenic Effects: Uterine tumors.

- Toxicometric Parameters of Industrial Toxic Chemicals Under Single Exposure, Izmerov, N.F., et al., Centre of International Projects, GKNT, Moscow Russia, Vol/p/yr: -,89, 1982

CAS# 95-63-6:

Acute toxicity, LD50, Oral, Rat, 5.000 GM/KG.

Results:

Maternal Effects: Other effects.

Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus).

- Prehled Prumyslove Toxikologie, Marhold, J., Organicke Latky, Prague Czechoslovakia, Vol/p/yr: -,34, 1986

CAS# 104-76-7:

Acute toxicity, LD50, Oral, Rat, 3730. MG/KG.

Results:

Brain and Coverings: Recordings from specific areas of CNS.

Behavioral: Somnolence (general depressed activity).

Lungs, Thorax, or Respiration: Dyspnea.

- American Industrial Hygiene Association Journal, AIHA, 475 Wolf Ledges Pkwy., Akron, OH 44311, Vol/p/yr: 34,493, 1973

CAS# 1330-20-7:

Acute toxicity, LD50, Oral, Rat, 4300. MG/KG.

Results:

Liver: Other changes.

Kidney, Ureter, Bladder: Other changes.

- AMA Archives of Industrial Health., for publisher information, see AEHLAU, Chicago, IL, Vol/p/yr: 14,387, 1956

CAS# 108-67-8:

Acute toxicity, LC50, Inhalation, Rat, 24.00 GM/M3, 4 H.

Results:

Behavioral: Change in motor activity (specific assay).

Behavioral: Analgesia.

Behavioral: Alteration of operant conditioning.

- Gigiena i Sanitariya, Mezhdunarodnaya Kniga, ul. B. Yakimanka, 39, 113095, Moscow 113095 Russia, Vol/p/yr: 44(5),15, 1979

Chronic Toxicological Effects

Repeated overexposure to petroleum naphtha can cause nervous system damage. Repeated overexposure to naphthalene may cause destruction of red blood cells with anemia, fever, jaundice and kidney and liver damage. Repeated ingestion of 2-ethylhexanol may cause injury to the liver and kidneys.

Irritation or Corrosion

Contains a small percentage of a severe eye irritant. Risk of irreversible damage to eyes. Based on data from similar materials. Repeated overexposure to naphthalene may cause cataracts.

Prolonged or repeated skin contact as from clothing wet with material may cause dermatitis. Symptoms may include redness, edema, drying, and cracking of the skin.

Contains a small percentage of a severe nose, throat and lung irritant. Based on data from similar materials. Exposure to a high concentration of vapor or mist may cause severe irritation to the nose and upper respiratory tract. Breathing of vapor or mist may aggravate asthma and inflammatory or fibrotic pulmonary disease.

Carcinogenicity/Other Information

The International Agency for Research on Cancer (IARC) has determined that there is inadequate evidence for the carcinogenicity of diesel fuel/fuel oil in humans. IARC determined that there was limited evidence for the carcinogenicity of marine diesel fuel in animals. Distillate (light) diesel fuels were not classifiable as to their carcinogenicity to humans (Group 3A).

IARC has determined that there is sufficient evidence for the carcinogenicity in experimental animals of diesel engine exhaust and extracts of diesel engine exhaust particles. IARC determined that there is only limited evidence for the carcinogenicity in humans of diesel engine exhaust. However, IARC's overall evaluation has resulted in the IARC designation of diesel engine exhaust as probably carcinogenic to humans (Group 2A) because of the presence of certain engine exhaust components.

The International Agency for Research on Cancer (IARC) has also determined that there is sufficient evidence for the carcinogenicity in experimental animals of light and heavy vacuum distillates, of light and heavy catalytically cracked distillates and of cracked residues (including heavy thermocracked distillates/residues) derived from the refining of crude oil.

The International Agency for Research on Cancer (IARC) and the Environmental Protection Agency (EPA) have determined that naphthalene is a possible human carcinogen.

Xylene has been classified by the Internal Agency for Research of Cancer (IARC) as not classifiable to its carcinogenicity to humans (Group 3) This IARC classification was based on inadequate evidence for the carcinogenicity of petroleum solvents in humans and in experimental animals.

Hazardous Components	CAS#	NTP	IARC	ACGIH	OSHA
Fuel oil, no. 2	68476-30-2	NA	2B	A3	NA
Solvent naphtha (petroleum), Heavy arom.	64742-94-5	NA	NA	NA	NA
Solvent Naphtha (Petroleum), Light Aromatic	64742-95-6	NA	NA	NA	NA
Ethanol, 2-Butoxy-	111-76-2	NA	3	A3	NA
Naphthalene	91-20-3	Possible	2B	A4	NA
1,2,4-Trimethylbenzene	95-63-6	NA	NA	NA	NA
Non-Hazardous Additives	NA	NA	NA	NA	NA
1-Hexanol, 2-Ethyl-	104-76-7	NA	NA	NA	NA
Xylene (mixed isomers)	1330-20-7	NA	3	A4	NA
Cumene	98-82-8	NA	2B	NA	NA
1,3,5-Trimethylbenzene	108-67-8	NA	NA	NA	NA

Carcinogenicity: NTP? Yes IARC Monographs? Yes OSHA Regulated? No

SECTION 12 Ecological Information

CAS# 111-76-2:

LC50, Water Flea (*Daphnia magna*), 1720. MG/L, 24 H, Intoxication,, Water temperature: 20.00 C (68.0 F) - 22.00 C (71.6 F) C, pH: 7.70, Hardness: 16.00 dH.

Results:

Affected fish stopped schooling behavior.

- Results of the Damaging Effect of Water Pollutants on *Daphnia magna* (Befunde der Schadwirkung Wassergefahrdender Stoffe Gegen *Daphnia magna*), Bringmann, G., and R. Kuhn, 1977

CAS# 91-20-3:

LC50, Water Flea (*Daphnia magna*), 17000. UG/L, 24 H, Mortality, Water temperature: 22.00 C (71.6 F) C, pH: 9.40, Hardness: 173.00 MG/L.

Results:

Abnormal development.

- Acute Toxicity of Priority Pollutants to Water Flea (*Daphnia magna*), LeBlanc, G.A., 1980

CAS# 95-63-6:

LC50, Brine Shrimp (*Artemia salina*), nauplii, 100.0 MMOL/M3, 24 H, Mortality, Water temperature: 20.00 C (68.0 F) C.

Results:

Affected fish stopped schooling behavior.

- Acute Lethal Toxicity of Hydrocarbons and Chlorinated Hydrocarbons to Two Planktonic Crustaceans: The Key Role of Organism-Water Partitioning, Abernethy, S., A.M. Bobra, W.Y. Shiu, P.G. Wells, and D. Mackay, 1986

CAS# 1330-20-7:

LC50, Water Flea (*Daphnia magna*), 100000. - 1000000. UG/L, 24 H, Mortality, Water temperature: 21.00 C (69.8 F) - 25.00 C (77.0 F) C.

Results:

Abnormal development.

- Toxicity of Selected Chemicals to Certain Animals, Dowden, B.F., and H.J. Bennett, 1965

LC50, Brine Shrimp (*Artemia salina*), 1830. UMOL/L, 24 H, Mortality.

Results:

Age Effects.

- Comparative Acute Toxicity of the First 50 Multicentre Evaluation of In Vitro Cytotoxicity Chemicals to Aquatic Non-vertebrates, Calleja, M.C., G. Persoone, and P. Geladi, 1994

CAS# 108-67-8:

LC50, Brine Shrimp (*Artemia salina*), nauplii, 118.0 MMOL/M3, 24 H, Mortality, Water temperature: 20.00 C (68.0 F) C; Acute Lethal Toxicity of Hydrocarbons and Chlorinated Hydrocarbons to Two Planktonic Crustaceans: The Key Role of Organism-Water Partitioning, Abernethy, S., A.M. Bobra, W.Y. Shiu, P.G. Wells, and D. Mackay, 1986

Results of PBT and vPvB assessment

No data available.

Persistence and Degradability

No data available.

Bioaccumulative Potential

No data available.

Mobility in Soil

May partition into air, soil and water.

SECTION 13 Disposal Considerations

Waste Disposal Method

This product as produced is not specifically listed as an EPA RCRA hazardous waste according to federal regulations (40 CFR 261). However, when discarded or disposed of, it may meet the criteria of a "characteristic" hazardous waste. This material could become a hazardous waste if mixed or contaminated with a hazardous waste or other substance(s). It is the responsibility of the user to determine if disposal material is hazardous according to federal, state and 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.

U.S. DOT UN/ID Number: UN1993
Proper shipping name: Flammable liquid, n.o.s. (Petroleum distillates, Xylene, Napthalene)
Hazard class: 3
Packing Group: III
Exceptions: None.
Environmental Hazards: Marine Pollutant
Transport in Bulk: N/A.
Special Precautions: Regulated only in bulk packages and by vessel in quantities above 5 L per package.

IMO/IMDG UN/ID Number: UN1993
Proper shipping name: Flammable liquid, n.o.s. (Petroleum distillates, Xylene, Napthalene)
Hazard class: 3
Packing Group: III
Exceptions: None.
Environmental Hazards: Marine Pollutant
Transport in Bulk: N/A.
Special Precautions:

ICAO/IATA UN/ID Number: UN1993
Proper shipping name: Flammable liquid, n.o.s. (Petroleum distillates, Xylene, Napthalene)
Hazard class: 3
Packing Group: III
Exceptions: None.
Environmental Hazards: Marine Pollutant
Transport in Bulk: N/A.
Special Precautions:

Canada (TDG) UN/ID Number: UN1993
Proper shipping name: Flammable liquid, n.o.s. (Petroleum distillates, Xylene, Napthalene)
Hazard class: 3
Packing Group: III
Exceptions: None.
Environmental Hazards: Marine Pollutant
Transport in Bulk: N/A.
Special Precautions:

Europe (ADR/RID) UN/ID Number: UN1993
Proper shipping name: Flammable liquid, n.o.s. (Petroleum distillates, Xylene, Napthalene)
Hazard class: 3
Packing Group: III
Exceptions: None.
Environmental Hazards: Marine Pollutant
Special Precautions:

SECTION 15 Regulatory Information

US EPA SARA Title III

Hazardous Components	CAS#	Sec.302 (EHS)	Sec.304 RQ	Sec.313 (TRI)	Sec.110
Fuel oil, no. 2	68476-30-2	No	No	No	No
Solvent naphtha (petroleum), Heavy arom.	64742-94-5	No	No	No	No
Solvent Naphtha (Petroleum), Light Aromatic	64742-95-6	No	No	No	No
Ethanol, 2-Butoxy-	111-76-2	No	No	Yes-Cat. N230	No
Naphthalene	91-20-3	No	Yes 100 LB	Yes	Yes
1,2,4-Trimethylbenzene	95-63-6	No	No	Yes	No
Non-Hazardous Additives	NA	No	No	No	No
1-Hexanol, 2-Ethyl-	104-76-7	No	No	No	No
Xylene (mixed isomers)	1330-20-7	No	Yes 100 LB	Yes	Yes
Cumene	98-82-8	No	Yes 5000 LB	Yes	No
1,3,5-Trimethylbenzene	108-67-8	No	No	No	No

US EPA CAA, CWA, TSCA

Hazardous Components	CAS#	EPA CAA	EPA CWA NPDES	EPA TSCA	CA PROP 65
Fuel oil, no. 2	68476-30-2	No	No	Inventory	No
Solvent naphtha (petroleum), Heavy arom.	64742-94-5	No	No	Inventory	No
Solvent Naphtha (Petroleum), Light Aromatic	64742-95-6	No	No	Inventory	No
Ethanol, 2-Butoxy-	111-76-2	HAP	No	Inventory	No
Naphthalene	91-20-3	HAP	Yes	Inventory, 4 Test, 8A PAIR	Yes
1,2,4-Trimethylbenzene	95-63-6	No	No	Inventory	No
Non-Hazardous Additives	NA	No	No	No	No
1-Hexanol, 2-Ethyl-	104-76-7	No	No	Inventory, 8D TERM	No
Xylene (mixed isomers)	1330-20-7	HAP	Yes	Inventory	No
Cumene	98-82-8	HAP	No	Inventory, 4 Test	Yes
1,3,5-Trimethylbenzene	108-67-8	No	No	Inventory, 4 Test	No

SARA (Superfund Amendments and Reauthorization Act of 1986) Lists:

Sec.302: EPA SARA Title III Section 302 Extremely Hazardous Chemical with TPQ. * indicates 10000 LB TPQ if not volatile.

Sec.304: EPA SARA Title III Section 304: CERCLA Reportable + Sec.302 with Reportable Quantity. ** indicates statutory RQ.

Sec.313: EPA SARA Title III Section 313 Toxic Release Inventory. Note: -Cat indicates a member of a chemical category.

Sec.110: EPA SARA 110 Superfund Site Priority Contaminant List

TSCA (Toxic Substances Control Act) Lists:

Inventory: Chemical Listed in the TSCA Inventory.

5A(2): Chemical Subject to Significant New Rules (SNURS)

6A: Commercial Chemical Control Rules

8A: Toxic Substances Subject To Information Rules on Production

8A CAIR: Comprehensive Assessment Information Rules - (CAIR)

8A PAIR: Preliminary Assessment Information Rules - (PAIR)

8C: Records of Allegations of Significant Adverse Reactions

8D: Health and Safety Data Reporting Rules

8D TERM: Health and Safety Data Reporting Rule Terminations

12(b): Notice of Export

Other Important Lists:

CWA NPDES: EPA Clean Water Act NPDES Permit Chemical

CAA HAP: EPA Clean Air Act Hazardous Air Pollutant

CAA ODC: EPA Clean Air Act Ozone Depleting Chemical (1=CFC, 2=HCFC)

CA PROP 65: California Proposition 65

International Regulatory Lists:

EPA Hazard Categories:

This material meets the EPA 'Hazard Categories' defined for SARA Title III Sections 311/312 as indicated:

Yes No Acute (immediate) Health Hazard

Yes No Chronic (delayed) Health Hazard

Yes No Fire Hazard

Yes No Sudden Release of Pressure Hazard

Yes No Reactive Hazard

Regulatory Information

CERCLA RQ: 434 gallons due to Xylene. Treat as an oil spill.

SECTION 16
Other Information

HMIS III Rating

Health: 2

Flammability: 2

Physical: 2

Personal Protection: B

NFPA Rating

Health: 2

Flammability: 2

Instability: 0

Special Hazard:

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