

MaxR300 Diesel Fuel Treatment

Safety Data Sheet

Trans Bio Energy Company

201 N. CLEVELAND-MASSILLION ROAD

AKRON, OHIO 44333

330-665-3839

1. PRODUCT IDENTIFICATION

Name heavy aromatic solvent naphtha

Synonyms various brand names: "Cyclosol", "Solvesso", Shell sol

CAS# 64742-94-5 (heavy aromatic naphtha), 91-20-3 (naphthalene),
95-63-6 (trimethylbenzene), 98-82-8 (cumene)

Europe EC# 265-198-5 (heavy aromatic naphtha), 202-049-5 (naphthalene),
202-436-9 (trimethylbenzene), 202-704-5

(cumene)

Product Uses high flash point aromatic solvent

2. INGREDIENTS % TWAELV / TLV mg/m³ LD50 ORAL (mg/kg) SKIN LC50 ppm INHALATION

Heavy Aromatic Solvent Naphtha 100% 400 / 1600 7050 >2000 5100

Naphthalene 0-5% 10 / 50 (skin) 1870 >2500 106 - 142

Cumene 0-2% 50 / 245 1400 10,630 2000

Trimethylbenzene (pseudocumene) 0-2% 25 / 125 5000 not known 3670

* These are possible constituents of the product depending on source –
not added to it.

3. (a) **HAZARDS SUMMARY**

Hazards, Quick Guide: combustible liquid, heavy vapor may travel, distant ignition and flashback are possible, mildly

irritating to skin and eyes; one component may be a human carcinogen

Canada – WHMIS B 3, D 2B (one component is a “possible human carcinogen”)

Key: B 2 – Flash Point <38 oC, B 3 – Flash Point >38 oC & <93 oC

D 1 – Immediately Toxic, D 2 – Chronic Toxicity

C – Oxidizing Substance, E - Corrosive U.S.A. – HMIS Health – 1, Fire – 2, Reactivity – 0

Key: 0=minimal, 1=slight, 2=moderate, 3=serious, 4=severe

3. (b) **HAZARDS – TOXICITY**

Effects, Acute Exposure Skin Contact may irritate, drying

Skin Absorption slight; no toxic effects likely by this route

Eye Contact liquid mildly irritating; vapor irritating above 100ppm; will not damage

Inhalation irritating above 100ppm, however vapor pressure is low; prolonged exposure to high

concentrations may cause headache, dizziness drowsiness

Ingestion headache, dizziness, drowsiness are possible; not a typical route of industrial exposure

Effects, Chronic Exposure General prolonged exposure may remove natural skin oils and cause dermatitis

Sensitizing not a sensitizer in humans or animals

Carcinogen/Tumorigen naphthalene is classified as a “possible human carcinogen” Reproductive Effect no known effect in humans or in animals without also causing maternal toxicity

Mutagen no known effect on humans or in animals without also causing maternal toxicity

Synergistic With not known

LD50 (oral) 7050, 8400mg/kg (rat), above 5000mg/kg (rat),

LD50 (skin) >2000 & >3160mg/kg (rabbit) – no mortality recorded in these tests

LC50 (inhalation) 5100 & 11,400mg/m

3 (rat), above 590mg/m

3 (rat) Please ensure that this MSDS is given to, and explained to people using this product.

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4. FIRST AID

SKIN: Wash with soap and plenty of water. Remove contaminated clothing and do not reuse until thoroughly cleaned or laundered.

EYES: Wash eyes with plenty of water, holding eyelids open. Seek medical assistance promptly if there is irritation.

INHALATION: Remove from contaminated area promptly. **CAUTION:** Rescuer must not endanger himself! If breathing stops, administer artificial respiration and seek medical aid promptly.

INGESTION: Give plenty of water to dilute product. Do not induce vomiting (NOTE below). Keep victim quiet. If vomiting occurs, lower victim's head below hips to prevent inhalation of vomited material. Seek medical help promptly.

Inadvertent inhalation of vomited material may seriously damage the lungs. The danger of this is greater than the risk of poisoning through

absorption of this relatively low-toxicity substance. The stomach should only be emptied under medical supervision, and after the installation of an airway to protect the lungs.

5. PHYSICAL PROPERTIES

Odor & Appearance clear, colorless liquid with slight aromatic hydrocarbon odor

Odor Threshold not known

Vapor Pressure 3mmHg / 0.4kPa (20 oC / 68 oF)

Evaporation Rate (Butyl Acetate = 1) 0.06

Vapor Density (air = 1) 4.6

Boiling Range 160-215 oC / 320-420 oF

Freezing Point -43 oC / -45 oF

Specific Gravity 0.895 (20/20 oC)

Water Solubility 100mil grams per litre

Also soluble in most organic solvents

Viscosity 0.9centipoise (25 oC / 77 oF)

pH none – (does not liberate hydrogen ions when dissolved)

Conversion Factor 1ppm = 4g/m

3 – approximate value – Solvent 150 is a mixture of hydrocarbons

Molecular Weight not known – Aromatic 150 is a mixture of hydrocarbons

6. FLAMMABILITY & FIRE FIGHTING

Flash Point above 62 oC / 144 oF (closed cup)

Auto ignition Temperature above 443 oC / 830 oF – other (higher) values are also given

Flammable Limits 0.6% – 7%

Combustion Products carbon monoxide, nitrogen oxides, smoke, part oxidized hydrocarbon fragments

Fire Fighting Precautions foam, dry chemical, water fog, water spray only to cool & dilute, product floats on water – water jet spreads flames; fire fighters must wear SCBA

Static Charge Accumulation readily accumulates a static charge on agitation or pumping; high flash point limits hazard

7. STABILITY / REACTIVITY

Dangerously Reactive With strong oxidizing agents; chlorine, fluorine, strong nitric or sulphuric acids

Also Reactive With none known

Stability stable; will not polymerize

Decomposes in Presence of not known

Decomposition Products none apart from Hazardous Combustion Products

Sensitive to Mechanical Impact no

Please ensure that this MSDS is given to, and explained to people using this product.

8. PROTECTIVE EQUIPMENT / EXPOSURE CONTROL

ACGIH TLV 10ppm/52mg/m (naphthalene), 25ppm/123mg/m (trimethylbenzene), 50ppm/245mg/m (cumene)

OSHA PEL 400ppm/1600mg/m (heavy aro. naphtha); 10ppm/50mg/m (naphthalene), 25ppm/125mg/m (trimethylbenzene), 50ppm/245mg/m (cumene)

STEL 15ppm/75mg/m (naphthalene) – OSHA & ACGIH

Ventilation mechanical ventilation probably not required

Hands “Viton” gloves recommended – other types may also protect; consult supplier to confirm suitability

Eyes safety glasses with side shields – always protect the eyes

Clothing no special protective clothing required if normal industrial hygiene is practiced

9. HANDLING & STORAGE

Store away from sources of ignition, heat oxidizing agents. Despite the high flash point, no sparking bronze or aluminum hand tools, explosion proof electrical & mechanical equipment should be considered.

Despite the high flash point, it is prudent to ground or electrical y bonds both the source container and the receiving container, and transfer pump before transferring contents. Avoid splashing by ensuring that the product nozzle is below the surface in the receiving container. Empty containers may contain a flammable / explosive vapor. Always ensure that containers, whether empty or full , or part full , are tightly sealed unless in use.

Avoid breathing product vapor. Use with adequate ventilation. If dealing with a sizeable spill , and ventilation is impossible or impractical, wear a suitable respirator with organic vapor cartridge. Never cut, drill, weld or grind on or near this container. Avoid contact with skin and wash work clothes frequently. An

Eye bath and safety shower must be available near the workplace.

10. SPILL PROCEDURES

Leak Precaution dyke to control spill age and prevent environmental contamination Handling Spill ventilate contaminated area; Recover free liquid with suitable pumps; Absorb residue on an inert sorbent, sweep & pick up using plastic or aluminum shovel, & store in closed containers for recycling or disposal

11. DISPOSAL

Waste Disposal Do not flush to sewer, recycle solvent if possible, may be incinerated in approved facility

Containers Drums should be reused. Recondition and pressure test by a licensed reconditioner prior to re-use. Pails must be vented and thoroughly dried prior to crushing and recycling. IBCs (intermediate bulk containers): polyethylene bottle must be pressure tested & recertified at 30 months. Replace at 60 months (5yrs). Steel containers must be inspected; pressure tested & recertified every 5 years. Never cut, drill, weld or grind on or near this container, even if empty

12. ENVIRONMENTAL INFORMATION

Bioaccumulation This product is not a bio accumulator

Biodegradation Aromatic 150 biodegrades in the presence of oxygen; ~40% in 4wks in domestic sewage sludge

Natural microbe populations need several weeks of acclimatization before they can metabolize hydrocarbons effectively. Abiotic Degradation many aromatic hydrocarbons are susceptible to both direct and indirect photolysis; The rate of degradation is unknown

Mobility in soil, Water this product is water insoluble and cannot move readily in soil or water

Aquatic Toxicity

LC50 (Fish, 96hr) 41 & 45mg/liter (*Pimephelas promelas*), 2.34mg/litre (*Oncorhynchus mykiss*),

EC50 (Crustacean, 48hr) 0.95mg/litre (*Daphnia magna*)

EC50 (Algae) <1 & 2.5mg/litre (*Skeletonema costatum*) Higher values are also given. Low water solubility makes these

Less believable. Often, the product formed a floating layer in the test chamber. Please ensure that this MSDS is given to, and explained to people using this product.

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13. TRANSPORT REGULATIONS

U.S.A. 49 CFR PIN NA-1993

Shipping Name COMBUSTIBLE LIQUIDS N.O.S. (aromatic naphtha OR petroleum distillates) Class 3

Packing Group combustible

Marine Pollutant not a marine pollutant

Canada TDG Not regulated for transport in Canada

14. EMERGENCY INFORMATION

Canada Call: 613-724-3755

U.S.A. Call: 757-436-9266

15. REGULATIONS

Canada DSL on inventory

U.S.A. TSCA on inventory

Europe EINECS on inventory

This product is probably on the chemical inventory of most countries.

16. PREPARATION INFORMATION

Prepared for Advanced Blending Laboratories

With data from RTECS, Haz. Substance Data Base, Cheminfo (CCOHS),
IUCLID Datasheets (European Chem. Substance Info. System), &
others, as available

Preparation Date: May 2010 Revised May 2014