Safety Data Sheet

1. PRODUCT IDENTIFICATION

Name: Aromatic 150
Synonyms: heavy aromatic solvent naphtha; various brand names: “Cyclosol”, “Solvesso”, Shellsol
CAS#: 64742-94-5
Europe EC#: 265-198-5
Product Uses: high flash point aromatic solvent

EMERGENCY INFORMATION

Canada – Call CANUTEC (collect) (613) 996-6666
U.S.A. – Call CHEMTREC (800) 424-9300

2. HAZARDS

GHS Class (Category)
flammable (4)
aspiration (2)
chronic aquatic toxic (2)

Signal Words
WARNING
no symbol

Hazard Statements
combustible liquid (H227)
may be harmful if swallowed & enters airways (H305)
toxic to aquatic life with long-lasting effects (H411)

Canada – WHMIS B 3, D 2B

Key:
B 2 – Flash Point <38°C, B 3 – Flash Point >38°C & <93°C
D 1 – Immediately Toxic, D 2 – Chronic Toxicity
C – Oxidising Substance, E – Corrosive, F – Reactive Substance

3. COMPOSITION

<table>
<thead>
<tr>
<th>CAS#</th>
<th>%</th>
<th>TWAEV / TLV mg/m³</th>
<th>LD₅₀ (mg/kg) ORAL</th>
<th>LD₅₀ (mg/kg) SKIN</th>
<th>LC₅₀ ppm INHALATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heavy Aromatic Solvent Naphtha</td>
<td>64742-94-5</td>
<td>100%</td>
<td>400 / 1600</td>
<td>7050</td>
<td>&gt;2000</td>
</tr>
<tr>
<td>Naphthalene</td>
<td>91-20-3</td>
<td>0-5%</td>
<td>10 / 50 (skin)</td>
<td>1870</td>
<td>&gt;2500</td>
</tr>
<tr>
<td>Cumene</td>
<td>95-63-6</td>
<td>0-2%</td>
<td>50 / 245</td>
<td>1400</td>
<td>10,630</td>
</tr>
<tr>
<td>Trimethylbenzene (Pseudocumene)</td>
<td>98-82-8</td>
<td>0-2%</td>
<td>25 / 125</td>
<td>5000</td>
<td>not known</td>
</tr>
</tbody>
</table>

4. FIRST AID

SKIN: Wash with soap & plenty of water. Remove contaminated clothing & do not reuse until thoroughly 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.

Please ensure that this MSDS is given to, and explained to people using this product.
5. **FIRE FIGHTING & FLAMMABILITY**

Flash Point
- above 62°C / 144°F (closed cup)

Autoignition Temperature
- above 443°C / 830°F – other (higher) values are also given

Flammable Limits
- 0.6% – 7%

Combustion Products
- carbon monoxide, nitrogen oxides, smoke, part oxidised hydrocarbon fragments

Firefighting Precautions
- foam, dry chemical, water fog, water spray only to cool & dilute, product floats on water – water jet spreads flames; firefighters must wear SCBA

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

6. **ACCIDENTAL RELEASE MEASURES**

Leak Precaution
- dyke to control spillage and prevent environmental contamination

Handling Spill
- ventilate contaminated area; recover free liquid with suitable pumps; absorb residue on an inert sorbent, sweep,
  - shovel & store in closed containers for recycling or disposal

7. **HANDLING & STORAGE**

Store away from sources of ignition, heat oxidising agents. Although the flash point is high, consider using non-sparking bronze or aluminium hand tools, explosion-proof electrical & mechanical equipment.

It is prudent to ground or electrically bond the source container, receiving container, & transfer pump before transferring contents. Avoid splashing; ensure the product nozzle is below the surface in the receiving container. Empty containers may contain a flammable or explosive vapour. Always ensure that containers, whether empty or full, are tightly sealed unless in use.

Avoid breathing product vapour. Use with adequate ventilation. If dealing with a sizeable spill, and ventilation is impossible or impractical, wear a suitable respirator with organic vapour 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.

8. **EXPOSURE CONTROL & PERSONAL PROTECTION**

*CAS# 64742-94-5 – Solvent Naphtha, Heavy Aromatic:*

<table>
<thead>
<tr>
<th></th>
<th>Ontario TWAEV</th>
<th>Ontario STEV</th>
<th>ACGIH TLV</th>
<th>ACGIH STEL</th>
<th>OSHA PEL</th>
<th>OSHA STEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Naphthalene:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ontario TWAEV</td>
<td>10ppm / 52mg/m³</td>
<td>15ppm / 78mg/m³</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ACGIH TLV</td>
<td>10ppm / 52mg/m³</td>
<td>15ppm / 79mg/m³</td>
<td></td>
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</tr>
<tr>
<td>OSHA PEL</td>
<td>10ppm / 50mg/m³</td>
<td>OSHA STEL</td>
<td>15ppm / 75mg/m³ (California)</td>
<td></td>
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<tr>
<td>Cumene:</td>
<td></td>
<td></td>
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<tr>
<td>Ontario TWAEV</td>
<td>50ppm / 245mg/m³</td>
<td>Ontario STEV</td>
<td></td>
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<tr>
<td>ACGIH TLV</td>
<td>50ppm / 246mg/m³</td>
<td>ACGIH STEL</td>
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<td>50ppm / 245mg/m³</td>
<td>OSHA STEL</td>
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<td></td>
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<tr>
<td>Trimethylbenzene:</td>
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<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ontario TWAEV</td>
<td>25ppm / 123mg/m³</td>
<td>Ontario STEV</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ACGIH TLV</td>
<td>25ppm / 125mg/m³</td>
<td>ACGIH STEL</td>
<td>not listed</td>
<td>ppm / mg/m³</td>
<td></td>
<td></td>
</tr>
<tr>
<td>OSHA PEL</td>
<td>25ppm / 123mg/m³</td>
<td>OSHA STEL</td>
<td>not listed</td>
<td>ppm / mg/m³</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Ventilation
- mechanical ventilation probably not required due to low vapour pressure

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 practised

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9. PHYSICAL PROPERTIES

Odour & Appearance clear, colourless liquid with slight aromatic hydrocarbon odour
Odour Threshold not known
Vapour Pressure 3mmHg / 0.4kPa (20°C / 68°F)
Evaporation Rate (Butyl Acetate = 1) 0.06
Vapour Density (air = 1) 4.6
Boiling Range 160-215°C / 320-420°F
Freezing Point -43°C / -45°F
Specific Gravity 0.895 (20/20°C)
Water Solubility 100milligrams per litre
Also soluble in most organic solvents
Log P (Octanol/H₂O partition) 3.66
Vapour Density (air = 1) 4.6
Evaporation Rate (Butyl Acetate = 1) 0.06

10. REACTIVITY

Dangerously Reactive With strong oxidising 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

11. TOXICITY

Effects, Acute Exposure

Skin Contact may irritate, drying
Skin Absorption slight; no toxic effects likely by this route
Eye Contact liquid mildly irritating; vapour irritating above 100ppm; will not damage
Inhalation irritating above 100ppm, however vapour 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
Sensitising not a sensitiser in humans or animals
Carcinogen/Tumorigen naphthalene, cumene, & trimethylbenzene are classified as “possible human carcinogens” (IARC 2B)
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/m³ (rat), above 590mg/m³ (rat)

Chronic Toxicity

NOAEL (oral) 300mg/kg/day (rats – various toxic symptoms – 90 days)
LOAEL (skin) 119mg/kg (applied twice weekly – 50 weeks) (mouse, lung symptoms)
NOAEC (inhalation) 2430mg/m³ (rats – reproduction)

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12. **ECOLOGICAL INFORMATION**

Bioaccumulation: probably not a bioaccumulator; did not accumulate in various fish nor in yeast, nor in guinea pigs.

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

Natural microbe populations may 2-3 weeks of acclimatisation before they can metabolise aromatic hydrocarbons efficiently. Aromatic 100 is not considered to be “readily biodegradable”, although biodegradation rates can be very high in soil & water “acclimatized” to aromatic hydrocarbons.

Abiotic Degradation: many aromatic hydrocarbons are susceptible to both direct and indirect photolysis; the rate of degradation is unknown.

Mobility in soil, water: water insoluble; cannot move readily in soil or water.

**Aquatic Toxicity**

- **LC₅₀ (Fish, 96hr):** 19, 41, 45 & >50mg/litre (Pimephelas promelas), 2.34 & 3.0¹⁰⁰mg/litre (Oncorhynchus mykiss)
- **EC₅₀ (Crustacea, 48hr):** 0.95 & 1.1¹⁰⁰¹⁰⁰⁰mg/litre (Daphnia magna), 140mg/litre (Diatomus forbesi)
- **EC₅₀ (Algae):** 2.5mg/litre (Skeletonema costatum), 4.2mg/litre (Selenastrum capricornutum), 4.1mg/litre (Anabena doliolum), 3.8 & 7.9mg/litre (Pseudokirchneriella subcapitata)
- **EC₅₀ (Bacteria):** no data – but biodegradability suggests bacterial toxicity cannot be high.

Higher values are also given. Low water solubility makes these less believable. Often, the product formed a floating layer in the test chamber.

13. **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.**

14. **TRANSPORT CLASSIFICATION**

- **U.S.A. 49 CFR**
  - PIN: NA - 1993
  - Shipping Name: COMBUSTIBLE LIQUIDS N.O.S. (aromatic naphtha OR petroleum distillates)
  - Class: 3, combustible – no packing group

- **Marine Pollutant:** P
- **ERAP Required:** NO
- **Canada TDG:** not regulated for transport in Canada U.S.A. Only

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. **OTHER INFORMATION**

Prepared for Megaloid Laboratories by Peter Bursztyn, (705) 734-1577

Data from RTECS, HSDB (Haz. Substance Data Base), Cheminfo (CCOHS), IUCLID Datasheets (ESIS – European Chem. Substance Info. System), & others.

Preparation Date: **May 2004** Revision Date: **May 2007, May 2010, May 2013**

(1) OECD SIDA Initial Assessment Profile, C₁₀⁻C₁₃ Aromatic Hydrocarbon Solvents:

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