established in 1981 megaloid laboratories
5515 North Service Rd. #306
Burlington, Ontario L7L 6G4
Phone: 905-337-7411
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megaloid.ca

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RDC Responsible Distribution Canada Leaders in Chemicals and Ingredients

## 1. PRODUCT IDENTIFICATION

**Name:** ***Mineral Spirits***

**Synonyms:** *hydrotreated light petroleum distillate; white spirits; stoddart solvent; vanishing oil; aliphatic naphtha*

**CAS#** *64742-47-8; alternates: 64742-88-7, 8052-41-3, 64475-85-0*

**Product Uses:** *solvent, diluent, fuel*

**Supplier Identifier:**
*Megaloid Laboratories Limited*
*5515 North Service Road, Suite 306*
*Burlington, Ontario, Canada*
*L7L 6G4*
*Phone: 905-337-7411 / Fax: 905-337-1686*

**EMERGENCY INFORMATION** ***Call CHEMTREC - (800) 424-9300 (CCN# 693764)***

## 2. HAZARDS

| ***GHS Class*** *(category)* | ***Flammable*** *(3)* | ***Eye irritant*** *(2B)* | ***Skin irritation*** *(2)* | ***Aspiration hazard*** *(1)* | ***STOT*** *(3)* | ***Aquatic hazard*** *(2)* |
|---|---|---|---|---|---|---|
| ***Signal Word*** | ***DANGER*** | | | | | |
| ***Hazard Statements*** | *flammable liquid & vapour (H226)* | *Causes eye irritation (H320)* | *Causes eye irritation (H315)* | *May be fatal if swallowed and enters airways (H304)* | *May cause dizziness or drowsiness (H336)* | *Toxic to aquatic live (H401* |

***Label Pictograms***

### GHS Precautionary Statements for Labelling

***Prevention***

| | |
|---|---|
| **P210** | Keep away from heat, sparks, open flames and hot surfaces. No smoking. |
| **P240** | Ground or bond container and receiving equipment. |
| **P241** | Use explosion-proof electrical, ventilating and lighting equipment. |

| | |
|---|---|
| **P242** | Use only non-sparking tools. |
| **P243** | Take precautionary measures against static discharge. |
| **P261** | Avoid breathing vapours. |
| **P271** | Use only outdoors or in a well-ventilated area. |
| **P273** | Avoid release to the environment. |
| **P280** | Wear eye protection, protective gloves and clothing of butyl rubber |
| ***Response*** | |
| **P301, P310** | IF SWALLOWED: immediately call a Poison Center / doctor. |
| **P303, P361, P353** | IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. |
| **P304, P340** | IF INHALED: remove person to fresh air and keep comfortable for breathing. |
| **P308, P313** | IF exposed or concerned: get medical advice / attention. |
| **P312** | Call a Poison Center / doctor if you fell unwell. |
| **P331** | Do not induce vomiting. |
| **P370, P378** | In care of fire: use water fog, foam, dry chemical or carbon dioxideto extinguish. |
| **P391** | Collect spillage. |
| ***Storage*** | |
| **P403 + P235** | Store in a well-ventilated place. Keep cool. |
| **P405** | Store locked up. |
| ***Disposal*** | |
| **P501** | Dispose of contents and container in accordance with local, regional, national and international regulations. |

## 3. COMPOSITION

| Chemical Name: | CAS No. | % | Other Identifiers |
|---|---|---|---|
| *Mineral Spirits* | *64742-47-8* | *>99* | *EC # 265-149-8* |

## 4. FIRST AID

**Inhalation**

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

**Skin Contact**

*Wash with plenty of water. Remove contaminated clothing and do not reuse until thoroughly laundered.*

**Eye Contact**

*Wash eyes with plenty of water, holding eyelids open. Seek medical assistance if there is any irritation.*

**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.*

| First-aid Comments |
| --- |
| *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. FIRE FIGHTING & FLAMMABILITY

**Extinguishing Media**

***Suitable Extinguishing Media***

*Foam, dry chemical, water fog, water spray only to cool & dilute, product floats on water - water jet spreads flames*

**Combustion Products**

*Carbon monoxide, nitrogen oxides, smoke, part oxidized hydrocarbon fragments*

**Static Charge Accumulation**

*Readily accumulates a static charge on agitation or pumping; however, the flash point is high enough that this presents little risk except in very hot weather.*

**Special Protective Equipment and Precautions for Fire-fighters**

*Firefighters must wear SCBA. Fire-fighters may enter the area if positive pressure SCBA and full Bunker Gear is worn.*

## 6. ACCIDENTAL RELEASE MEASURES

**Personal Precautions, Protective Equipment, and Emergency Procedures**

*Evacuate the area immediately. Isolate the hazard area. Keep out unnecessary and unprotected personnel. Eliminate all ignition sources. Use grounded, explosion-proof equipment. Increase ventilation to area or move leaking container to a well-ventilated and secure area.*

**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). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.*

**Methods and Materials for Containment and Cleaning Up**

*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 & pick up using plastic or aluminium shovel, & store in closed containers for recycling or disposal.*

**Other Information**

*Report spills to local health, safety and environmental authorities, as required.*

## 7. HANDLING & STORAGE

### Precautions for Safe Handling

*Take care to avoid sparks – Non-sparking bronze or aluminum hand tools are recommended – required if ambient temperature is above (38oC / 100oF). Electrical & mechanical equipment (lighting, switchgear & forklift trucks) used with or around this product should be explosion-proof. Mineral spirits creates & retains a static charge on agitation or transfer from one container to another. It is prudent to electrically bond the source container, receiving container & pump before transferring contents (applies to transfers of 10 litres or over). Avoid splashing. Keep product nozzle below the surface in the receiving container. Empty containers may contain a flammable vapour. Ensure that containers, empty or full, are tightly sealed unless in use. Never cut, drill, weld or grind*

*on or near this container. Avoid generating or breathing product vapour. If vapour forms, install adequate ventilation. If dealing with a spill & ventilation is impossible or impractical, wear a respirator with an organic vapour cartridge. Avoid prolonged skin contact & wash work clothes frequently. An eye bath & safety shower must be available near the workplace.*

*NOTE: Absorbent materials soaked in mineral spirits & discarded in a corner may undergo spontaneous combustion. Always allow absorbent materials (rags, sweeping compound, and mops) to dry thoroughly before discarding!*

### Conditions for Safe Storage

*Store & use in a cool, dry environment, away from sources of ignition & oxidizing agents.*

## 8. EXPOSURE CONTROL & PERSONAL PROTECTION

| | | | |
|---|---|---|---|
| **Ontario TWAEV** | *525mg/m$^3$* | **Ontario STEV** | *not listed* |
| **ACGIH TLV** | *525mg/m$^3$* | **ACGIH STEL** | *not listed* |
| **OSHA PEL** | *1900mg/m$^3$* | **OSHA STEL** | *not listed* |

| | |
|---|---|
| **Ventilation** | *mechanical ventilation is probably not required, unless product is handled hot* |
| **Hands** | *nitrile or "Viton" gloves recommended – other types may also protect; consult supplier to confirm suitability* |
| **Eyes** | *Safety glasses with side shields – always protect the eyes* |
| **Clothing** | *wear impermeable (above) apron, boots, & long sleeves if there is any danger of splashing* |

**Appropriate Engineering Controls**

*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, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.*

## 9. PHYSICAL PROPERTIES

| | |
|---|---|
| **Appearance** | *Clear colourless liquid.* |
| **Odour** | *kerosene odour* |
| **Odour threshold** | *~1ppm* |
| **pH** | *none – (does not liberate hydrogen ions when dissolved)* |
| **Melting Point/Freezing Point** | *-70$^o$C / -94$^o$F* |
| **Initial Boiling Point/Range** | *155-205$^o$C / 310-400$^o$F* |
| **Flash Point** | *above 38$^o$C / 100$^o$F (closed cup) – mineral spirits is specifically formulated to exceed this* |
| **Evaporation Rate** | *0.1 (Butyl Acetate =1)* |
| **Flammability ( Solid, Gas)** | *Not Available* |
| **Upper/Lower Flammability or Explosive Limit** | *0.9% – 6%* |

| | |
|---|---|
| **Vapour Pressure** | *2.3mmHg / 0.3kPa (20$^{o}$C / 68$^{o}$F)* |
| **Vapour Density (air = 1)** | *5* |
| **Specific Gravity** | *0.78 (20/20$^{o}$C)* |
| **Water Solubility** | *Nil, also soluble in hydrocarbons and other non-polar solvents; nearly insoluble in methanol* |
| **Partition Coefficient, n-Octanol/Water (Log Kow)** | *not known* |
| **Auto-ignition Temperature** | *229$^{o}$C / 444$^{o}$F* |
| **Conversion Factor** | *1ppm = 6mg/m$^{3}$ (estimated from average molecular weight)* |
| **Viscosity** | *1.5centistokes (25$^{o}$C / 77$^{o}$F)* |
| **Physical State** | *Liquid* |
| **Molecular Weight** | *150grams per mole (average mol. wt.) – The physical properties of this petroleum distillate may vary.* |

## 10. REACTIVITY

**Dangerously Reactive** *with strong oxidising agents.*
**Also Reactive** *with: not known*

**Chemical Stability**
*Stable; will not polymerize*

**Possibility of Hazardous Reactions**
*Under normal conditions of storage and use, hazardous reactions will not occur.*

**Conditions to Avoid**
*Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow vapour to accumulate in low or confined areas. Do not store with strong oxidizing agents.*

**Mechanical Impact**
*Not sensitive*

## 11. TOXICITY

| **Acute Toxicity** | |
|---|---|
| **$LD_{50}$ (oral)** | *>5000mg/kg (rat) – in 11 reports with kerosene or jet fuel no mortality reported* |
| **LD50 (skin)** | *2000-15,400mg/kg (rabbit); >2000mg/kg (rabbit) in 11 reports with kerosene or jet fuel no mortality reported* |
| **LC50 (inhalation)** | *3400-8000ppm (rat); >4300– >7500mg/m$^{3}$ (rat, 9 reports), >6400mg/m$^{3}$ (cat) – no mortality in these studies* |

**Skin Corrosion/Irritation**
*"not irritating" in three 4-hour & three 24-hour tests; "irritating" in seven 24-hour tests*
**Serious Eye Damage/Irritation**
11 rabbit tests rated this type of hydrocarbon as "not irritating", but two of these suggested a slight *effect,* some reports suggest that vapour above 150ppm maybe irritating.

**STOT (Specific Target Organ Toxicity) - Single Exposure**

**Inhalation**
*vapour above 400ppm may cause burning sensation in nose & throat, intoxication dizziness, fatigue.*
**Skin Absorption**
*slight; no toxic effects by this route.*
**Ingestion**
*may cause diarrhoea & stomach discomfort – not a route of industrial exposure.*

**STOT (Specific Target Organ Toxicity) - Repeated Exposure**
*Prolonged or repeated contact may cause dermatitis & skin cracking; chronic exposure to vapour may cause tingling, numbness, memory loss.*

**Respiratory and/or Skin Sensitization**
*Not known to be a respiratory sensitizer.*
**Carcinogenicity**
*Some jet fuel or kerosene hydrocarbons were weakly carcinogenic in mice applied 3-6 times a week for 1-2 years; hydrotreated kerosene-type hydrocarbons (many solvents) tend not to be carcinogenic.*

**Reproductive Toxicity**

**Sexual Function and Fertility**
*No known effect on humans.*
**Germ Cell Mutagenicity**
*Not known to be a mutagen.*
**NOAEL (reproduction):** *1500mg/kg/day (rat, oral)*
**NOAEC (reproduction):** *1000mg/m$^3$ (male rat, inhalation)*
**NOAEL (teratogen)**: *1500mg/kg/day (rat, oral) – maternal NOAEL in this test was 1000mg/kg/day*[1]

## 12. ECOLOGICAL INFORMATION

| | |
|---|---|
| **Bioaccumulation** | *Not a bioaccumulator.* |
| **Persistence and Degradability** | ***Biodegradation -*** *biodegrades slowly in the presence of oxygen (rate unknown); much faster in acclimated (polluted) water than pristine water (should be much faster than 30 days in sewage treatment facility)*<br><br>***Abiotic Degradation -*** *reacts with atmospheric hydroxyl radicals; estimated ½-life in air less than one day* |
| **Mobility in soil, water** | *water insoluble; low soil mobility; adsorbs to soil helping it remain stationary* |
| **Aquatic Toxicity** | |
| **LC50 (Fish, 96hr)** | *45mg/litre (1), 18-20mg/litre (2) (Pimephelas promelas), 2-5, 18, 20 & 25mg/litre (2) (Oncorhynchus mykiss)* |
| **EC50 (Crustacea, 48hr)** | *1.4, 1.9, 3-10, 21 & 40-89mg/litre (2) (Daphnia magna)* |
| **EC50 (Algae, 72hrs)** | *1-3, 3.7, 4.3, 5.0, 6.7, 8.3 & 10-30mg/litre (2) (Pseudokirchnerella subcapitata)* |
| **EC50 (Bacteria)** | *678mg/litre (2) (Tetrahymena pyriformis – calculated value)* |
| ***NOTE:*** | *Mineral spirits is essentially water insoluble. The above tests recognize this. (1) emulsified in water; (2) equilibrated with water, then tested.* |

## 13. DISPOSAL

**Water Disposal**

**Do not flush to sewer,** recycle solvent if possible, local regulations may permit disposal in sanitary landfill, may be incinerated in approved facility after mixing with a suitable flammable waste

**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

| | | | |
|---|---|---|---|
| **Canada TDG** | **PIN** | UN1268 |   |
| **AND** | **Shipping Name** | Petroleum Distillates, n.o.s. (naphtha) | |
| **U.S.A. 49 CFR** | **Class & Packing Group** | 3, PG III | |

| | | |
|---|---|---|
| **Marine Pollutant** | yes | Marine Pollutant designation is applicable only if shipped over water. |
| **ERAP Required** | NO | |
| **Reportable Quantity** | NO | |
| **E R G No.** | 128 | |

## 15. REGULATIONS

| | |
|---|---|
| **Canada DSL** | On Inventory |
| **U.S.A. TSCA** | On Inventory |
| **Europe EINECS** | On Inventory |

### Canadian Regulations

**CEPA - National Pollutant Release Inventory (NPRI)**
Part 5.

### U.S.A. Regulations

**OSHA HAZARD COMMUNICATION STANDARD:** This material is considered hazardous in accordance with OSHA HazCom 2012, 29 CFR 1910.1200.
**Listed or exempt from listing/notification on the following chemical inventories:** AICS, DSL, IECSC, KECI, PICCS, TSCA
**EPCRA SECTION 302:** This material contains no extremely hazardous substances.
CERCLA: This material is not subject to any special reporting under the requirements of the

Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). Contact local authorities to determine if other reporting requirements apply.
**CWA / OPA:** This product is classified as an oil under Section 311 of the Clean Water Act (40 CFR 110) and the Oil Pollution Act of 1990. Discharge or spills which produce a visible sheen on either surface water, or in waterways/sewers which lead to surface water, must be reported to the National Response Center at 800-424-8802.
**SARA (311/312) REPORTABLE HAZARD CATEGORIES:** Fire, Immediate Health, Delayed Health.

### U.S. State regulations

**Massachusetts : The following components are listed:** Mineral Spirits
**New York : The following components are listed:** Mineral Spirits
**New Jersey : The following components are listed:** Mineral Spirits
**Pennsylvania : The following components are listed:** Mineral Spirits
**California Prop. 65 Clear and Reasonable Warnings (2018): WARNING:** This product can expose you to Benzene, which is known to the State of California to cause cancer and birth defects or other reproductive harm. This product can expose you to chemicals including Cumene, Ethylbenzene, Naphthalene, which are known to the State of California to cause cancer, and Toluene, which is known to the State of California to cause birth defects or other reproductive harm.

### Global Inventory list

**Australia:** All components are listed or exempted.
**China:** All components are listed or exempted.
**Japan: Japan inventory (ENCS)**: Not determined.
**Japan inventory (ISHL)**: Not determined.
**Republic of Korea:** All components are listed or exempted.
**Malaysia:** All components are listed or exempted.
**New Zealand:** All components are listed or exempted.
**Philippines:** All components are listed or exempted.
**Taiwan:** Not determined.
**Turkey:** Not determined.
**Thailand:** Not determined.
**Viet Nam:** Not determined

## 16. OTHER INFORMATION

| NFPA RATING | Health 1 | Flammability 2 | Instability 0 |
|---|---|---|---|

**Prepared for** *Megaloid Laboratories Limited* **by** *Richard Koscher*
**Preparation Date:** June 2001
**Revision Dates:** July 2002, Jul 2005, Jun 2008, Jun 2011, Jun 2014, Jun 2017, Feb 2019

| | |
|---|---|
| **Key to Abbreviations** | ACGIH® = American Conference of Governmental Industrial Hygienists<br>AIHA® = AIHA® Guideline Foundation<br>HSDB® = Hazardous Substances Data Bank<br>IARC = International Agency for Research on Cancer<br>NFPA = National Fire Protection Association<br>NIOSH = National Institute for Occupational Safety and Health<br>NTP = National Toxicology Program<br>OSHA = US Occupational Safety and Health Administration<br>RTECS® = Registry of Toxic Effects of Chemical Substances |
| **References** | CHEMINFO database. Canadian Centre for Occupational Health and Safety (CCOHS). HSDB® database. US National Library of Medicine. Available from Canadian Centre for Occupational Health and Safety (CCOHS). NIOSH Pocket Guide database. National Institute for Occupational Safety and Health. Available from Canadian Centre for Occupational Health and Safety (CCOHS). Registry of |

| | |
|---|---|
| | Toxic Effects of Chemical Substances (RTECS®) database. Dassault Systèmes/BIOVIA (“BIOVIA”). Available from Canadian Centre for Occupational Health and Safety (CCOHS). |
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