

Material Safety Data for: 142 Solvent

1. PRODUCT IDENTIFICATION

Name	142 solvent
Synonyms	light hydrotreated petroleum distillate, hydrotreated kerosene, high flash mineral spirits, stoddart solvent, medium aliphatic solvent naphtha
CAS#	64742-47-8 – alternates: 64742-88-7 & 8052-41-3
Europe EC#	265-149-8 – alternates: 265-191-7 & 232-489-3
Product Uses	solvent, coatings

2. INGREDIENTS

	%	TWAEV / TLV ppm / mg/m ³	LD ₅₀ ORAL	(mg/kg) SKIN	LC ₅₀ mg/m ³ INHALATION
light hydrotreated petroleum distillate	100%*	100-200 / 17-33	>5000	>3000	>5500

* NOTE: Benzene content is below 1ppm

3. (a) HAZARDS SUMMARY

Hazards, Quick Guide: combustible liquid, slightly irritating to skin and eyes; inhalation may cause central nervous depression

Canada – WHMIS
Key:

B 3
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

U.S.A. – HMIS
Key:

Health – 1, Fire – 1, Reactivity – 0
0=minimal, 1=slight, 2=moderate, 3=serious, 4=severe

3. (b) HAZARDS – TOXICITY

Effects, Acute Exposure

Skin Contact	slightly irritating
Skin Absorption	slight; no toxic effects likely by this route
Eye Contact	slightly irritating
Inhalation	may irritate but low vapour pressure makes this unlikely; high concentration may cause headache, dizziness, drowsiness, nausea
Ingestion	may cause stomach discomfort and transient diarrhoea – not a route of industrial exposure

Effects, Chronic Exposure

General	prolonged exposure may cause dermatitis & skin cracking
Sensitising	not a sensitiser in humans or animals
Carcinogen/Tumorigen	not considered a tumorigen or a carcinogen in humans; an ACGIH animal carcinogen (A3) – <i>probably not relevant to human industrial exposure</i>
Reproductive Effect	no known effect in humans or animals
Mutagen	no known effect on humans or animals
Synergistic With	not known
LD ₅₀ (oral)	>5000-34,000mg/kg (rat), 20,000mg/kg (guinea pig), 2835mg/kg (rabbit)
LD ₅₀ (skin)	>3000-15,400mg/kg (rabbit)
LC ₅₀ (inhalation)	>5500mg/m ³ (rat) – <i>various studies also observed rodents exposed to 1400ppm – of related substances with no mortality recorded</i>

NOTE: This product may be sourced from various refineries using different feed stocks & applying somewhat different refining processes. Accordingly, a wide range of toxicity values can be found for hydrotreated aliphatic hydrocarbons in this boiling range.

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

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

Odour & Appearance	clear, colourless liquid with mild kerosene odour
Odour Threshold	not known
Vapour Pressure	3mmHg / 0.4kPa (20°C / 68°F)
Evaporation Rate (<i>Butyl Acetate = 1</i>)	~0.05
Vapour Density (air = 1)	5
Boiling Range	185-215°C / 365-420°F
Freezing Point	below -30°C / -22°F
Specific Gravity	0.78 (20/20°C)
Water Solubility	virtually nil
Also soluble in	most organic solvents, limited solubility in glycols, methanol, ethanol
Viscosity	~150centipoise (25°C / 77°F)
pH	none – (<i>does not liberate hydrogen ions when dissolved</i>)
Conversion Factor	1ppm = 6mg/m ³ (approximate value)
Molecular Weight	approximately 150 grams per mole – <i>this product is a mixture of molecular species</i>

NOTE: This product may be sourced from various refineries using different feedstocks and applying somewhat different refining processes. Accordingly, the physical properties may vary.

6. FLAMMABILITY & FIRE FIGHTING

Flash Point	above 61°C / 142°F (closed cup)
Autoignition Temperature	above 220°C / 428°F
Flammable Limits	1.5% – 428%
Combustion Products	carbon monoxide, nitrogen oxides, smoke, part oxidised 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	accumulates a static charge on agitation or pumping; high flash point makes ignition unlikely

7. STABILITY / REACTIVITY

Dangerously Reactive With	strong oxidising agents, halogens (iodine, chlorine, etc)
Also Reactive With	strong mineral acids; strong alkalies
Stability	stable; will not polymerize
Decomposes in Presence of	not known
Decomposition Products	none apart from Hazardous Combustion Products
Sensitive to Mechanical Impact	no

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8. PROTECTIVE EQUIPMENT / EXPOSURE CONTROL

TWAEV / TLV	100-500ppm / 550-2900mg/m ³ – <i>range of values for hydrotreated aliphatic hydrocarbon solvents in this boiling range</i>
STEL	not listed
Ventilation	mechanical ventilation may be required to control airborne titre to regulated limits
Hands	nitrile or “Viton” gloves recommended – <i>other types may also protect; consult supplier to confirm suitability</i>
Eyes	safety glasses with side shields – <i>always protect the eyes</i>
Clothing	no special protective clothing required

9. HANDLING & STORAGE

Store in a cool, dry environment, away from sources of ignition, heat and oxidising agents. Although this product may accumulate a static charge on agitation or transfer from one container to another, its flash point is high and ignition cannot occur unless the product is heated. Nevertheless, it is prudent to ground or electrically bond both the source container and the receiving container, and transfer pump before transferring contents. *This is required if ambient temperature exceeds 50°C / 120°F.* Avoid splashing by ensuring that the product nozzle is below the surface in the receiving container. Empty containers may contain a flammable / explosive vapour. Always ensure that containers, whether empty or full, or part full, are tightly sealed unless in use.

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

10. SPILL PROCEDURES

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

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. <i>Never cut, drill, weld or grind on or near this container, even if empty</i>

12. ENVIRONMENTAL INFORMATION

Bioaccumulation	this product may bioaccumulate to a limited extent – to a max. of 1-10ppm in certain fish
Biodegradation	this product degrades readily and rapidly in the presence of oxygen with a ½-life of 10-20days
Abiotic Degradation	this product reacts with atmospheric hydroxyl radicals; its estimated ½-life in air is <17hr
Mobility in soil, water	this product is water insoluble and moves slowly in soil and water
Aquatic Toxicity	<i>The difficulty of applying this water-insoluble substance to test plants & animals accounts for the wide range seen below.</i>
LC ₅₀ (Fish, 96hr)	5.5-18.5, 45 & >10,000mg/litre (Pimephelas promelas), 1740mg/litre (Lepomis macrochirus), >8000mg/litre (Tilapia mossambica), 800mg/litre (Salmo gairdneri)
EC ₅₀ (Crustacea, 48hr)	4720mg/litre (Dendronerides heteropoda), 11280mg/litre (Namalycastis indica), >100mg/litre (Daphnia magna)
EC ₅₀ (Algae)	6mg/litre (Anabena doliolum), 450mg/litre (Selenastrum capricornutum)
EC ₅₀ (Bacteria)	no data available

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13. TRANSPORT REGULATIONS

<i>Canada TDG</i>	PIN	UN-not regulated for transport
	Shipping Name	not regulated for transport
	Class	not regulated for transport
	Packing Group	not regulated for transport
<i>U.S.A. 49 CFR</i>	PIN	NA-1993
	Shipping Name	COMBUSTIBLE LIQUIDS N.O.S. (naphtha)
	Class	3
	Packing Group	III
Marine Pollutant		not a marine pollutant

14. EMERGENCY INFORMATION

<i>Canada</i>	Call CANUTEC (collect)	(613) 966-6666
<i>U.S.A.</i>	Call CHEMTREC	(800) 424-9300

15. REGULATIONS

Canada DSL	on inventory
U.S.A. TSCA	on inventory
Europe EINECS	on inventory

TSCA Inventory This product and/or its components are listed on the TSCA inventory

SARA 302/304 The Superfund Amendments and Reauthorisation Act of 1986 (SARA Title III) requires facilities subject to subparts 302 & 304 to submit emergency planning and notification information based on Threshold Planning Quantities and Reportable Quantities for "Extremely Hazardous Substances" listed in 40CFR302.4 & 40CFR355.

SARA 311/312 The Superfund Amendments and Reauthorisation Act of 1986 (SARA Title III) requires facilities subject to this subpart to submit aggregate information in chemicals by "Hazard Category" as defined in 40CFR370.2, pursuant to the requirements of section 313 of SARA.

SARA 313 This product does not contain any components in concentrations at or above the minimum levels that are listed as toxic chemicals in 40CFR372 pursuant to the requirements of Section 313 of SARA.

CERCLA The comprehensive Environmental Response, Compensation, and Liability Act of 1980 requires notification of the National Response Centre concerning release of quantities of "hazardous substances" equal to or greater than the reportable quantities listed in 40CFR302.4. As defined by CERCLA, the term "hazardous substance" does not include petroleum, including crude oil or any fraction thereof, which is not specifically designated in 40CFR302.4. There are no substances in this product subject to this statute.

CWA This material is classified as an oil under Section 311 of the Clean Water Act and the Oil Pollution Act of 1980. Discharges of spills which produce as visible sheen on waters of the U.S.A., their adjoining shorelines, or into conduits leading to surface waters must be reported to the EPA National Response Center (800) 424-8802.

California Proposition 65 This material is not known to contain any chemical substances which are known to the State of California to cause cancer, birth defects, or other reproductive harm, and therefore, it is not subject to the requirements of California Health & Safety Code Section 25249.5.

New Jersey Right to Know

Contains :	Nonanes	4-8%
	C ₁₀ alkanes, cycloalkanes & paraffins	20-30%
	C ₁₁ alkanes, cycloalkanes & paraffins	30-45%
	C ₁₂ alkanes, cycloalkanes & paraffins	25-35%
	Benzene	<1ppm

16. PREPARATION INFORMATION

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

Data from RTECS, Haz. Substance Data Base, Cheminfo, manufacturer data, and other source, as available

Preparation Date: February 2005 Revision Date: March 2008, March 2011

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