Established in 1981 megaloid laboratories limited

2221 Ninth Line | Oakville, ON L6H 7G7
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Safety Data Sheet

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**

Company **Megaloid Laboratories Limited**
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EMERGENCY INFORMATION
Canada **Call CANUTEC (collect)** **(613) 996-6666**
U.S.A. **Call CHEMTREC** **(800) 424-9300**

2. HAZARDS

GHS Class	***combustible***	***aspiration***	***skin irritant***	***STOT***	***aquatic acute***
(Category)	***(4)***	***(1)***	***(2)***	***(3)***	***(2)***
Signal Words	***WARNING no pictogram***	***DANGER***	***WARNING***	***WARNING***	***no Signal Word no Pictogram***
Hazard Statements	*combustible liquid (H227)*	*may be fatal if swallowed & enters airways (H304*	*causes skin irritation (H315)*	*inhalation may cause drowsiness or dizzyness (H336)*	*toxic to aquatic life (H401)*

GHS Precautionary Statements for Labelling

P210	**Keep away from heat, sparks, open flames and hot surfaces. No smoking.**
P260, P262, P264	**Do not breathe vapours. Do not get on skin or on clothing. Wash thoroughly after handling.**
P280	**Wear eye protection and protective gloves of "Viton".**
P370, P378	**In case of fire use alcohol-resistant foam to extinguish.**
P304, P340	**If inhaled remove person to fresh air and keep comfortable for breathing.**
P313 & P333	**If skin irritation or rash occurs, get medical advice/attention.**
P301 & P310, P331	**If swallowed, immediately call a doctor. Do not induce vomiting.**
P273, P391	**Avoid release to the environment. Collect spillage.**

3. COMPOSITION

	%	TWAEV / TLV mg/m^3	LD_{50} (mg/kg) ORAL	LD_{50} (mg/kg) SKIN	LC_{50} mg/m^3 INHALATION
Light Hydrotreated Petroleum Distillate	100%	200	>2835	>>2000	>5500

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 if there is any 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. FIRE FIGHTING & FLAMMABILITY

Combustion Products	carbon monoxide, nitrogen oxides, smoke, part oxidised hydrocarbon fragments
Firefighting Precautions	foam, dry chemical, water fog or spray; firefighters must wear SCBA
Static Charge Accumulation	accumulates a static charge on agitation or pumping; high flash point makes ignition unlikely

6. ACCIDENTAL RELEASE MEASURES

Leak Precaution	dyke to control spillage and prevent environmental contamination
Handling Spill	ventilate contaminated area; recover free liquid with explosion-proof pumps; absorb residue on an inert sorbent, sweep & pick up using plastic or aluminium shovel; store in closed containers for recycling or disposal

7. HANDLING & STORAGE

Store in a cool, dry environment, away from sources of ignition, heat & oxidising agents. This product accumulates a static charge on agitation or transfer from one container to another. Its flash point is high & ignition cannot occur unless the product is heated. Nevertheless, it is prudent to ground or electrically the source container, receiving container & pump before transferring contents. (*Required if ambient temperature exceeds 50°C / 120°F.*) Avoid splashing; ensure the product nozzle is below the surface in the receiving container. Empty containers may contain a flammable / explosive vapour. Always keep containers, empty or full, 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 & wash work clothes frequently. An eye bath & safety shower must be available near the workplace.

8. EXPOSURE CONTROL & PERSONAL PROTECTION

Ontario TWAEV	200mg/m^3 (*kerosene, total hydrocarbon vapour*)	Ontario STEV	not listed
ACGIH TLV	200mg/m^3 (*kerosene, total hydrocarbon vapour*)	ACGIH STEL	not listed
OSHA PEL	not listed	OSHA STEL	not listed
Ventilation	mechanical ventilation may be required to control airborne titre to regulated limits		
Hands	wear nitrile or "Viton" gloves – *other types may also protect; confirm suitability with supplier*		
Eyes	safety glasses with side shields – *always protect the eyes*		
Clothing	wear impermeable (above) apron, boots, & long sleeves, as appropriate to prevent skin contact		

9. PHYSICAL PROPERTIES

Odour & Appearance	clear, colourless liquid with mild kerosene odour
Odour Threshold	not known
Vapour Pressure	below 3.4mmHg / 0.45kPa (20°C / 68°F)
Flash Point	above 61°C / 142°F (closed cup)
Autoignition Temperature	above 220°C / 428°F
Flammable Limits	1.5% – 428%
Evaporation Rate (*Butyl Acetate = 1*)	~0.05
Vapour Density (air = 1)	5

9. PHYSICAL PROPERTIES, cont'd.

Decomposition Temperature	not known – *no decomposition below autoignition temperature (>220°C / >428°F)*
Boiling Range	185-215°C / 365-420°F
Freezing Point	below -30°C / -22°F
Specific Gravity	0.78 (20/20°C)
Water Solubility	15mg/litre (20°C / 68°F) – *virtually nil*
Also soluble in	most organic solvents, limited solubility in glycols, methanol, ethanol
Log $P_{O/W}$ (Octanol/H_2O partition)	3.4 – 8.7 – *wide range of reported values*
Viscosity	~2centistrokes (40°C / 104°F) – *thin mobile liquid*
pH	none – (*does not liberate hydrogen ions when dissolved*)
Molecular Weight	approximately 160-210 grams/mole – *a mixture of molecular species*

10. REACTIVITY

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

11. TOXICITY

Effects, Acute Exposure

Skin Contact	may irritate – *of 14 reports, 6 graded CAS# 64742-47-8 "irritating", 7 "not irritating" & 1 inconclusive*[1]
Skin Absorption	slight; no toxic effects likely by this route
Eye Contact	not irritating – *out of 11 reports, none graded CAS# 64742-47-8 as "irritating"*[1]; *also* "not irritating"[2]
Inhalation	may irritate; high vapour concentration may cause headache, dizziness, drowsiness, nausea; *low vapour pressure makes neither symptom likely*
Ingestion	may cause stomach discomfort and transient diarrhoea – *not a route of industrial exposure*
LD_{50} (oral)	>5000-34,000mg/kg (rat), 20,000mg/kg (guinea pig), 2835mg/kg (rabbit), >5000mg/kg (rat) – *no mortality reported (2 studies)*[1]
LD_{50} (skin)	>3000-15,400mg/kg (rabbit), >2000mg/kg (rabbit – *10 studies, no mortality*)[1], >5000mg/kg (rabbit – *no mortality*)[1]
LC_{50} (inhalation)	>5500mg/m^3 (rat) – *various studies exposed rodents to 1400–14,000ppm of related substances with no mortality*

Effects, Chronic Exposure

General	prolonged exposure may cause dermatitis due to removal of protective skin oils[2]
Sensitising	not a sensitiser in humans or animals[1,2]
Carcinogen/Tumorigen	not considered a tumorigen or a carcinogen in humans; an ACGIH animal carcinogen (A3); NTP equivocal carcinogen in mice & rats on inhalation[2], tumorigen at application site in mice & rats (continuous exposure for 2 years[1] – *not relevant to human industrial exposure due to duration & severity of exposure (all studies)*
Reproductive Effect	no known effect in humans or animals[2]
Mutagen	no known effect on humans or animals[2]
Synergistic With	not known
NOAEC (any symptoms)	6000mg/m^3 for 90 days (rat, inhalation)[2]
NOAEL (any symptoms)	1000mg/kg/day/90 days (rat, oral)[2]

NOTE: *This product originates from various refineries using different feedstocks & applying different refining processes. Accordingly, a wide range of toxicity/irritancy values exist for hydrotreated aliphatic hydrocarbons in this boiling range.*

12. ECOLOGICAL INFORMATION

Bioaccumulation	may bioaccumulate to a limited extent – *maximum of 1-10ppm in certain fish*
Biodegradation	biodegrades readily in the presence of oxygen with a ½-life of 10-20days; 51-70% in 28 days (*average 60%, 2 reports*)[1] *biodegradation depends on degree of emulsification (solubilisation) of this insoluble product; light product floats, allowing evaporation to volatilise much of the material*
Abiotic Degradation	reacts with atmospheric hydroxyl radicals; its estimated ½-life in air is <17hr; also 11-26hr[2]
Mobility in soil, water	water insoluble; moves slowly in soil and water

Aquatic Toxicity *(mg/litre)*

LC_{50} (Fish, 96hr)	5.5-18.5, 45 & >10,000 (Pimephelas promelas), 1740 (Lepomis macrochirus), 800 (Salmo gairdneri), >8000 (Tilapia mossambica), 2-5, 10-100, 18, 20 & 25mg/litre (Oncorhynchus mykiss – *5 studies*)[1]
EC_{50} (Crustacea, 48hr)	11280 (Namalycastis indica), 1.4, 1.9, 3-10, 21& 40-89mg/litre (Daphnia magna – *5 studies*)[1], >100 (Daphnia magna), 4720 (Dendronerides heteropoda),
EC_{50} (Algae)	6 (Anabena doliolum), 1-3, 4.2, 6.2, 8.3 7 10-30 (Pseudokirchnerella subcapitata – *5 studies*)[1], 450 (Selenastrum capricornutum)
EC_{50} (Bacteria)	678mg/litre (Tetrahymena pyriformis – *QSAR calculation*)[1]

NOTE: *The difficulty of testing the toxicity of this water-insoluble substance on aquatic life forms may account for the wide range or results seen.*

13. DISPOSAL

Waste Disposal	**do not flush to sewer**, recycle solvent if possible, may be incinerated in approved facility with flue gas monitoring & scrubbing
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**	**UN-not regulated for transport**
	Shipping Name	**not regulated for transport**
	Class	**not regulated for transport**
	Packing Group	**not regulated for transport**
U.S. DOT	**PIN**	**NA1993-not regulated for transport**
	Shipping Name	**Combustible Liquid, n.o.s. (Distillates, petroleum, hydrotreated light, liquid)**
	Class	**Combustible Liquid**
	Packing Group	**III**

NOTE: This product in non-bulk packages (less than or equal to 119 gals.) of combustible liquids are not regulated as hazardous materials when transported by land.

Marine Pollutant	not a marine pollutant
ERAP Required	**NO**
Reportable Quantity (RQ – USA)	**none**

15. REGULATIONS

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

U.S.A. Regulations for Distillates, petroleum, hydrotreated light (CAS# 64742-47-8):

SARA 302 Title III:	**No**
SARA 311/312:	**"Fire hazard", "Immediate (acute) health hazard"**
SARA 313:	**No**
USA CERCLA:	**no reportable quantity**
California Prop. 65	**no**

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: ***February 2005*** *Revision Date:* ***March 2008, March 2011, March 2014, March 2017***

(1) European Chemicals Agency (EChA) dossier for distillates (petroleum), hydrotreated, light:
https://echa.europa.eu/registration-dossier/-/registered-dossier/15375

(2) OECD SIDA Initial Assessment Profile, $C_9 - C_{14}$ Aliphatic Hydrocarbon Solvents Category, October 2012:
http://webnet.oecd.org/HPV/UI/handler.axd?id=51027239-af98-4b96-b936-aabea00b3fea

from Reference #2:
Typical Composition Data: ***Aromatics - <0.1%, Ethylbenzene - <10mg/kg, Naphthalene - <10mg/kg, Benzene - <1mg/kg***
Typical HC Chain Length: ***C_8 – 3%, C_9 – 26%, C_{10} – 36%, C_{11} – 31%, C_{12} – 2%***