

1. IDENTIFICATION

Product Name	Solvent D60
Other Names	Distillates (petroleum), hydrotreated light
Uses	Solvent. NOTE: This material should not be used for any other purpose than the intended use above without expert advice. Health studies have shown that chemical exposure may cause potential human health risks which may vary from person to person.
Chemical Family	No Data Available
Chemical Formula	Unspecified
Chemical Name	Redsol D60
Product Description	A complex combination of hydrocarbons obtained by treating a petroleum fraction with hydrogen in the presence of a catalyst. It consists of hydrocarbons having carbon numbers predominantly in the range of C9 through C16 and boiling in the range of approximately 150°C to 290°C (302°F to 554°F).

Contact Details of the Supplier of this Safety Data Sheet

Organisation	Location	Telephone
Redox Pty Ltd	2 Swettenham Road Minto NSW 2566 Australia	+61-2-97333000
Redox Pty Ltd	11 Mayo Road Wiri Auckland 2104 New Zealand	+64-9-2506222
Redox Inc.	2132A E. Dominguez Street Carson CA 90810 USA	+1-424-675-3200
Redox Chemicals Sdn Bhd	No. 8, Block G, Ground Floor, Taipan 2 Jalan PJU 1A/3 Ara Damansara 47301, Petaling Jaya, Selangor, Malaysia	+60-3-7843-6833

Emergency Contact Details

For emergencies only; DO NOT contact these companies for general product advice.

Organisation	Location	Telephone
Poisons Information Centre	Westmead NSW	1800-251525 131126
Chemcall	Australia	1800-127406 +64-4-9179888

2. HAZARD IDENTIFICATION

Poisons Schedule (Aust) 5

Globally Harmonised System

Hazard Classification Hazardous according to the criteria of the Globally Harmonised System of Classification and Labelling of Chemicals (GHS)



Hazard Categories

Aspiration Hazard - Category 1
 Skin Corrosion/Irritation - Category 2

Pictograms



Signal Word

Danger

Hazard Statements

H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.

Precautionary Statements

Prevention	P201	Obtain special instructions before use.
	P202	Do not handle until all safety precautions have been read and understood.
	P281	Use personal protective equipment as required.
Response	P308 + P313	IF exposed or concerned: Get medical advice/ attention.
	P301 + P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
	P331	Do NOT induce vomiting.
	P302 + P350	IF ON SKIN: Gently wash with plenty of soap and water.
	P332 + P313	If skin irritation occurs: Get medical advice/attention.
	P362	Take off contaminated clothing and wash before reuse.
Storage	P301 + P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
	P405	Store locked up.
Disposal	P501	Dispose of contents/container in accordance with local / regional / national / international regulations.

National Transport Commission (Australia)

Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

Dangerous Goods Classification

NOT Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients

Chemical Entity	Formula	CAS Number	Proportion
Distillates (petroleum), hydrotreated light	No Data Available	64742-47-8	100.0 %

4. FIRST AID MEASURES

Description of necessary measures according to routes of exposure

Swallowed Do not ingest. If swallowed then seek immediate medical assistance. Risk of product entering the lungs on vomiting after ingestion. In this case, the casualty should be sent immediately to hospital.

Eye Rinse thoroughly with plenty of water, also under the eyelids. Keep eye wide open while rinsing.

Skin Remove contaminated clothing. Wash affected area with plenty of soap and water for at least 15 minutes. If irritation occurs, seek medical advice. Wash clothing before reuse.

Inhaled In case of exposure to intense concentrations of vapours, fumes or spray, transport the person away from the contaminated zone, keep warm and allow to rest.

Advice to Doctor Treat symptomatically based on judgement of doctor and individual reactions of patient. If ingested, product may be



aspirated into the lungs and cause chemical pneumonitis.

Medical Conditions Aggravated by Exposure

May be fatal if swallowed and enters airways. If swallowed accidentally, the product may enter the lungs due to its low viscosity and lead to the rapid development of very serious pulmonary lesions (medical survey during 48 hours). Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea. Abdominal pain. May cause central nervous system depression.

The inhalation of vapours or aerosols may be irritating for the respiratory tract and for mucous membranes. Vapours inhaled in strong concentration have a narcotic effect on the central nervous system.

5. FIRE FIGHTING MEASURES

General Measures	If safe to do so, remove containers from the path of fire.
Flammability Conditions	Product is a combustible liquid.
Extinguishing Media	Suitable Extinguishing Media Small fires : Dry chemical, Carbon dioxide (CO ₂), Alcohol-resistant foam. Extinguishing media - large fires: Dry chemical, CO ₂ , water spray or alcohol-resistant foam. Unsuitable Extinguishing Media Do not use a solid water stream as it may scatter and spread fire.
Fire and Explosion Hazard	Combustible liquid
Hazardous Products of Combustion	Incomplete combustion and thermolysis may produce gases of varying toxicity such as carbon monoxide, carbon dioxide various hydrocarbons, aldehyde's and soot. These may be highly dangerous if inhaled in confined spaces or at high concentration.
Special Fire Fighting Instructions	Clear fire area of all non-emergency personnel. Stay upwind. Keep out of low areas. Eliminate ignition sources. Move fire exposed containers from fire area if it can be done without risk. Do NOT allow fire fighting water to reach waterways, drains or sewers. Store fire fighting water for treatment.
Personal Protective Equipment	Fire fighters should wear a positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots and gloves) or chemical splash suit.
Flash Point	>=61 °C ASTM D-93
Lower Explosion Limit	0.6 %
Upper Explosion Limit	5.5 %
Auto Ignition Temperature	238 °C
Hazchem Code	No Data Available

6. ACCIDENTAL RELEASE MEASURES

General Response Procedure	Avoid accidents, clean up immediately. Slippery when spilt. Eliminate all sources of ignition. Increase ventilation. Avoid generating dust. Isolate the danger area. Do NOT let product reach drains or waterways. If product does enter a waterway, advise the Environmental Protection Authority or your local Waste Management. Use clean, non-sparking tools and equipment. In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.
Clean Up Procedures	Use non-sparking handtools and explosionproof electrical equipment. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Following product recovery, flush area with water.
Containment	Stop leak if safe to do so. Remove all sources of ignition. Stop all work that requires a naked flame, stop all vehicles, stop all machines and equipment that may cause sparks or flames.
Environmental Precautionary Measures	Do not allow product to reach drains, sewers or waterways. If product does enter a waterway, advise the Environmental Protection Authority or your local Waste Authority.
Evacuation Criteria	Evacuate all unnecessary personnel.
Personal Precautionary Measures	Avoid contact with spilled material. Warn or evacuate occupants in surrounding and downwind areas if required, due to toxicity or flammability of the material. See Section 5 for fire fighting information. See the Hazard Identification Section for Significant Hazards. See Section 4 for First Aid Advice. See Section 8 for advice on the minimum requirements for personal protective equipment. Additional protective measures may be necessary, depending on the specific circumstances and/or the expert judgment of the emergency responders. For emergency responders: Respiratory protection: half-face or full-face respirator with filter(s) for organic vapour and, when applicable, H ₂ S, or Self Contained Breathing Apparatus (SCBA) can be used depending on the size of spill and potential level of exposure. If the exposure cannot be completely characterized or an oxygen deficient atmosphere is possible or anticipated, SCBA is recommended. Work gloves that are resistant to aromatic hydrocarbons are recommended. Note: gloves made of polyvinyl acetate (PVA) are not water-resistant and are not suitable for emergency use. Chemical goggles are recommended if splashes or contact with eyes is possible. Small spills: normal antistatic work clothes are usually adequate. Large spills: full body suit of chemical resistant, antistatic material is recommended.



7. HANDLING AND STORAGE

Handling	Ensure adequate ventilation. Do not spray at high pressure (> 3 bar) . WHILE MOVING THE PRODUCT: To avoid ignition of vapours by static electricity discharge, all metal parts of the equipment must be grounded. Do not allow splash loading and ensure that the product is poured slowly, particularly at the beginning of the operation. OPERATE ONLY ON COLD AND DEGASSED TANKS IN VENTILATED PREMISES (TO AVOID RISK OF EXPLOSION). Handle away from any source of ignition (open flame and sparks) and heat (hot manifolds or casings). Do not smoke. Use explosion proof electrical equipment. Take precautionary measures against static discharges. Do not use compressed air for filling, discharging or handling. Design installations (machinery and equipment) to prevent burning product from spreading (tanks, retention systems, interceptors (traps) in drainage systems).
Storage	Store in a cool, dry, well-ventilated area. Keep containers tightly closed when not in use. Inspect regularly for deficiencies such as damage or leaks. Protect against physical damage. Store away from incompatible materials as listed in section 10. The container choice, for example storage vessel, may effect static accumulation and dissipation. Keep container closed. Handle containers with care. Open slowly in order to control possible pressure release. Storage containers should be earthed and bonded. Fixed storage containers, transfer containers and associated equipment should be earthed and bonded to prevent accumulation of static charge. Storage Temperature: Ambient. Storage Pressure: Ambient. This product is classified as a 'C1' Combustible Liquid for the purpose of storage and handling in accordance with the requirements of AS1940.
Container	Keep only in the original container or in a suitable container for this kind of product.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General	Mineral oil mist: USA: OSHA (PEL) TWA 5 mg/m3, NIOSH (REL) TWA 5 mg/m3, STEL 10 mg/m3, ACGIH (TLV) TWA 5 mg/m3 (highly refined).
Exposure Limits	No Data Available
Biological Limits	Advisory OEL CEFIC-HSPA : 1200 mg/m3
Engineering Measures	The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Control measures to consider: Adequate ventilation should be provided so that exposure limits are not exceeded. Use explosion-proof ventilation equipment. A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area.
Personal Protection Equipment	RESPIRATOR: If engineering controls do not maintain airborne contaminant concentrations at a level which is adequate to protect worker health, an approved respirator may be appropriate. Respirator selection, use, and maintenance must be in accordance with regulatory requirements, if applicable. Types of respirators to be considered for this material include: Half-face filter respirator Type A filter material. For high airborne concentrations, use an approved supplied-air respirator, operated in positive pressure mode. Supplied air respirators with an escape bottle may be appropriate when oxygen levels are inadequate, gas/vapour warning properties are poor, or if air purifying filter capacity/rating may be exceeded (AS1715/1716). EYES: If contact is likely, safety glasses with side shields are recommended (AS1336/1337). HANDS: Any specific glove information provided is based on published literature and glove manufacturer data. Glove suitability and breakthrough time will differ depending on the specific use conditions. Contact the glove manufacturer for specific advice on glove selection and breakthrough times for your use conditions. Inspect and replace worn or damaged gloves. The types of gloves to be considered for this material include: Chemical resistant gloves are recommended. Nitrile (AS2161). CLOTHING: Any specific clothing information provided is based on published literature or manufacturer data. The types of clothing to be considered for this material include: Chemical/oil resistant clothing is recommended (AS3765/2210).
Special Hazards Precautions	PERSONAL PROTECTION: Personal protective equipment selections vary based on potential exposure conditions such as applications, handling practices, concentration and ventilation. Information on the selection of protective equipment for use with this material, as provided below, is based upon intended, normal usage.
Work Hygienic Practices	Ensure the application of strict rules of hygiene by the personnel exposed to the risk of contact with the product. When using, do not eat, drink or smoke. Regular cleaning of equipment, work area and clothing is recommended. Do not dry hands with rags that have been contaminated with product. Do not use abrasives, solvents or fuels. Wash hands before breaks and at the end of workday.



9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid
Appearance	Liquid
Odour	Hydrocarbon-like
Colour	Clear/Colourless
pH	No Data Available
Vapour Pressure	<=0.3 hPA (@ 20 °C)
Relative Vapour Density	4.5 Air = 1
Boiling Point	186 - 210 °C ASTM D 86
Melting Point	No Data Available
Freezing Point	<-20 °C
Solubility	15 mg/l 20°C
Specific Gravity	No Data Available
Flash Point	>=61 °C ASTM D-93
Auto Ignition Temp	238 °C
Evaporation Rate	<1 EtEt=1
Bulk Density	No Data Available
Corrosion Rate	No Data Available
Decomposition Temperature	No Data Available
Density	809 - 890 kg/m ³
Specific Heat	No Data Available
Molecular Weight	158 g/mol
Net Propellant Weight	No Data Available
Octanol Water Coefficient	No Data Available
Particle Size	No Data Available
Partition Coefficient	log Pow 3.3
Saturated Vapour Concentration	No Data Available
Vapour Temperature	No Data Available
Viscosity	1.27 mm ² /s (@ 40 °C)
Volatile Percent	No Data Available
VOC Volume	No Data Available
Additional Characteristics	No Data Available
Potential for Dust Explosion	Product is a liquid.
Fast or Intensely Burning Characteristics	No Data Available
Flame Propagation or Burning Rate of Solid Materials	No Data Available
Non-Flammables That Could Contribute Unusual Hazards to a Fire	No Data Available
Properties That May Initiate or Contribute to Fire Intensity	No Data Available
Reactions That Release Gases or Vapours	Material can release vapours that readily form flammable mixtures.
Release of Invisible Flammable Vapours and Gases	No Data Available

10. STABILITY AND REACTIVITY

Combustible liquid.



General Information

Chemical Stability	Product is stable under normal conditions of use, storage and temperature. Combustible liquid.
Conditions to Avoid	Heat, flames and sparks. Take precautionary measures against static discharges.
Materials to Avoid	Incompatible with strong oxidising agents.
Hazardous Decomposition Products	Incomplete combustion and thermolysis may produce gases of varying toxicity such as carbon monoxide, carbon dioxide, various hydrocarbons, aldehyde's and soot.
Hazardous Polymerisation	Hazardous reactions will not occur.

11. TOXICOLOGICAL INFORMATION

General Information	LD50 > 5000 mg/kg (Rat), Oral LD50 > 2000 mg/kg (Rat), Dermal LC50 (4h) > 3 mg/l (Rat), Inhalation Not classified as a sensitizer. No known effect based on information supplied. This product is not classified as mutagenic. No known effect based on information supplied. This product is not classified carcinogenic. No known effect based on information supplied.
EyeIrritant	May cause slight irritation.
Ingestion	May be fatal if swallowed and enters airways. If swallowed accidentally, the product may enter the lungs due to its low viscosity and lead to the rapid development of very serious pulmonary lesions (medical survey during 48 hours). Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea. Abdominal pain. May cause central nervous system depression. The fluid can enter the lungs and cause damage (chemical pneumonitis, potentially fatal).
Inhalation	The inhalation of vapours or aerosols may be irritating for the respiratory tract and for mucous membranes. Vapours inhaled in strong concentration have a narcotic effect on the central nervous system. The fluid can enter the lungs and cause damage (chemical pneumonitis, potentially fatal).
SkinIrritant	Causes mild skin irritation. Repeated exposure may cause skin dryness or cracking. Mildly irritating to skin.
Carcinogen Category	No Data Available

12. ECOLOGICAL INFORMATION

Ecotoxicity	Toxicity to fish : LC50 (96h) > 2.2 mg/l (Lepomis macrochirus)
Persistence/Degradability	Not readily biodegradable.
Mobility	No information available.
Environmental Fate	Other information : VOC: Yes
Bioaccumulation Potential	Bio-concentration factor (BCF): 130-159. logPow 3.3 logPow 6
Environmental Impact	No Data Available

13. DISPOSAL CONSIDERATIONS

General Information	Dispose of in accordance with all local, state and federal regulations. All empty packaging should be disposed of in accordance with Local, State, and Federal Regulations or recycled/reconditioned at an approved facility.
Special Precautions for Land Fill	Contact a specialist disposal company or the local waste regulator for advice. Product is suitable for burning in an enclosed controlled burner for fuel value or disposal by supervised incineration at very high temperatures to prevent formation of undesirable combustion products. Empty Container Warning (where applicable): Empty containers may contain residue and can be dangerous. Do NOT attempt to refill of clean containers without proper instructions. Empty drums should be completely drained and safely stored until appropriately reconditioned or disposed. Empty containers should be taken for recycling, recovery, or disposal through suitably qualified or licensed contractor and in accordance with governmental regulations. DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND OR EXPOSE SUCH CONTAINERS TO HEAT,



FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION. THEY MAY EXPLODE AND CAUSE INJURY OR DEATH.

14. TRANSPORT INFORMATION

Land Transport (Australia)

ADG Code

Proper Shipping Name	ALIPHATIC HYDROCARBON
Class	C1 Combustible Liquids - Flash point 61 - 150 °C
Subsidiary Risk(s)	No Data Available
	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available

Sea Transport

IMDG

Proper Shipping Name	ALIPHATIC HYDROCARBON
Class	C1 Combustible Liquids - Flash point 61 - 150 °C
Subsidiary Risk(s)	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available
EMS	No Data Available
Marine Pollutant	No

Air Transport

IATA

Proper Shipping Name	ALIPHATIC HYDROCARBON
Class	C1 Combustible Liquids - Flash point 61 - 150 °C
Subsidiary Risk(s)	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available

National Transport Commission (Australia)

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Dangerous Goods Classification	NOT Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)
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15. REGULATORY INFORMATION



General Information	No Data Available
Poisons Schedule (Aust)	5

National/Regional Inventories

Australia (AICS)	Listed
Canada (DSL)	Listed
Canada (NDSL)	Not Determined
China (IECSC)	Listed
Europe (EINECS)	265-149-8
Europe (REACH)	Not Determined
Japan (ENCS/METI)	Listed
Korea (KECI)	Listed
Malaysia (EHS Register)	Not Determined
New Zealand (NZIoC)	Listed
Philippines (PICCS)	Listed
Switzerland (Giftliste 1)	Not Determined
Switzerland (Inventory of Notified Substances)	Not Determined
Taiwan (NCSR)	Not Determined
USA (TSCA)	Listed

16. OTHER INFORMATION

Related Product Codes	ALHYDR3300, ALHYDR3301, ALHYDR3302, ALHYDR3303, ALHYDR3600, ALHYDR4200, ALHYDR4201, ALHYDR4300, ALHYDR4400, ALHYDR5900, ALHYDR6000, ALHYDR6001, ALHYDR6002, ALHYDR6100, ALHYDR6200, ALHYDR6201, ALHYDR6300, ALHYDR6301, ALHYDR6400, ALHYDR6700, DEMISP3250, DEMISP3420, DEMISP3430, DEMISP3460, DEMISP3461, DEMISP3431, DEMISP3435
Revision	3
Revision Date	28 Jul 2015
Reason for Issue	Updated SDS
Key/Legend	<p>< Less Than > Greater Than AICS Australian Inventory of Chemical Substances atm Atmosphere CAS Chemical Abstracts Service (Registry Number) cm² Square Centimetres CO₂ Carbon Dioxide COD Chemical Oxygen Demand deg C (°C) Degrees Celcius EPA (New Zealand) Environmental Protection Authority of New Zealand deg F (°F) Degrees Farenheit g Grams g/cm³ Grams per Cubic Centimetre g/l Grams per Litre HSNO Hazardous Substance and New Organism IDLH Immediately Dangerous to Life and Health</p>



immiscible Liquids are insoluble in each other.

inHg Inch of Mercury

inH₂O Inch of Water

K Kelvin

kg Kilogram

kg/m³ Kilograms per Cubic Metre

lb Pound

LC50 LC stands for lethal concentration. LC50 is the concentration of a material in air which causes the death of 50% (one half) of a group of test animals. The material is inhaled over a set period of time, usually 1 or 4 hours.

LD50 LD stands for Lethal Dose. LD50 is the amount of a material, given all at once, which causes the death of 50% (one half) of a group of test animals.

ltr or **L** Litre

m³ Cubic Metre

mbar Millibar

mg Milligram

mg/24H Milligrams per 24 Hours

mg/kg Milligrams per Kilogram

mg/m³ Milligrams per Cubic Metre

Misc or **Miscible** Liquids form one homogeneous liquid phase regardless of the amount of either component present.

mm Millimetre

mmH₂O Millimetres of Water

mPa.s Millipascals per Second

N/A Not Applicable

NIOSH National Institute for Occupational Safety and Health

NOHSC National Occupational Health and Safety Commission

OECD Organisation for Economic Co-operation and Development

Oz Ounce

PEL Permissible Exposure Limit

Pa Pascal

ppb Parts per Billion

ppm Parts per Million

ppm/2h Parts per Million per 2 Hours

ppm/6h Parts per Million per 6 Hours

psi Pounds per Square Inch

R Rankine

RCP Reciprocal Calculation Procedure

STEL Short Term Exposure Limit

TLV Threshold Limit Value

tne Tonne

TWA Time Weighted Average

ug/24H Micrograms per 24 Hours

UN United Nations

wt Weight



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