



MATERIAL SAFETY DATA SHEET

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Material name	A-151 (Aerosol)
Recommended use	A spray degreaser designed for removing heavy residues from metal and other hard surfaces where reduced flammability, toxicity and environmental impact are concerns.
Version #	01
CAS #	Mixture
Part Number	04320, M04320
Supplier Name	MRO Chem Pty Ltd
Address	Level 19, 644 Chapel Street, South Yarra, Vic 3141, Australia. Tel: +61 (3)9823 6273 Website: http://www.mrochem.com.au
In Case of Emergency	(Australia) +61 (4)3448 1129 (US) +1 703-527-3887
Manufacturer	
Company name	LPS Laboratories, a division of Illinois Tool Works, Inc.
Address	4647 Hugh Howell Rd., Tucker, GA 30084 (U.S.A.)
Website	http://www.lpslabs.com
E-mail	sds@lpslabs.com

2. HAZARDS IDENTIFICATION

This material is considered to be hazardous according to regulatory guidelines (see Section 15 of the MSDS).

Classification	F+;R12, Xn;R20/22, Xi;R36/37/38
Risk phrase(s)	R12 Extremely flammable. R20/22 Harmful by inhalation and if swallowed. R36/37/38 Irritating to eyes, respiratory system and skin.
Safety phrase(s)	S2 Keep out of the reach of children. S9 Keep container in a well-ventilated place. S13 Keep away from food, drink and animal feedingstuffs. S16 Keep away from sources of ignition - No smoking. S20 When using do not eat or drink. S23 Do not breathe gas/fumes/vapor/spray. S24/25 Avoid contact with skin and eyes. S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S36/37/39 Wear suitable protective clothing, gloves and eye/face protection. S38 In case of insufficient ventilation, wear suitable respiratory equipment. S47 Keep at temperature not exceeding 50 °C. S60 This material and its container must be disposed of as hazardous waste.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS #	Percent
Distillates Petroleum, Hydrotreated Light	64742-47-8	> 60
Carbon Dioxide	124-38-9	< 10
Other components below reportable levels		30 - 60

4. FIRST AID MEASURES

Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, give artificial respiration. Call a physician if symptoms develop or persist.
Skin contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get medical attention if irritation develops and persists.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Call a physician or Poison Control Center immediately.
Ingestion	In the unlikely event of swallowing contact a physician or poison control center. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Aspiration may cause pulmonary edema and pneumonitis.

General advice	In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. In case of shortness of breath, give oxygen. Keep victim under observation.
Notes to physician	Provide general supportive measures and treat symptomatically. In case of shortness of breath, give oxygen. Keep victim under observation. Symptoms may be delayed.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	Dry chemical powder. Foam, water spray or fog.
Extinguishing media which must not be used for safety reasons	Do not use water jet as an extinguisher, as this will spread the fire.
Unusual fire & explosion hazards	NFPA Rating Fire = 2. Materials that must be moderately heated or exposed to relative high ambient temperatures before ignition can occur. Pressurized container may explode when exposed to heat or flame.
Specific hazards	Contents under pressure. Pressurized container may explode when exposed to heat or flame.
Special protective equipment for fire-fighters	Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.
Specific methods	In the event of fire and/or explosion do not breathe fumes. Self-contained breathing apparatus and full protective clothing must be worn in case of fire. Use standard firefighting procedures and consider the hazards of other involved materials. Use water spray to cool unopened containers. Move container from fire area if it can be done without risk.
HAZCHEM code	None
Hazardous combustion products	None known.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions	Local authorities should be advised if significant spillages cannot be contained. Consider initial downwind evacuation for at least 500 meters (1/3 mile). ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Immediately evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Keep out of low areas. Wear appropriate personal protective equipment. Ensure adequate ventilation. Avoid inhalation of vapors and spray mists. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.
Environmental precautions	Contact local authorities in case of spillage to drain/aquatic environment. Prevent further leakage or spillage if safe to do so. Avoid release to the environment.
Containment procedures	In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations. Stop the flow of material, if this is without risk. Move the cylinder to a safe and open area if the leak is irreparable. Absorb spillage to prevent material damage. Scoop up used absorbent into drums or other appropriate container. Prevent entry into waterways, sewer, basements or confined areas.
Methods for cleaning up	Ventilate the contaminated area. Extinguish all flames in the vicinity. Wear appropriate protective equipment and clothing during clean-up. The product is immiscible with water and will spread on the water surface. Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Prevent product from entering drains. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water. Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. Never return spills in original containers for re-use. Clean up in accordance with all applicable regulations. This material and its container must be disposed of as hazardous waste.

7. HANDLING AND STORAGE

Handling	DO NOT handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Pressurized container: Do not pierce or burn, even after use. When using do not smoke. Use non-sparking tools and explosion-proof equipment. All equipment used when handling the product must be grounded. Avoid contact with eyes. Do not breathe vapors, aerosols. Avoid prolonged or repeated contact with skin. Use only in well-ventilated areas. Wear personal protective equipment. Wash thoroughly after handling. Avoid release to the environment.
Storage	Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 50°C/122 °F. Keep away from heat, sparks and open flame. Ground/bond container and equipment. Keep out of the reach of children.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational exposure limits

US. ACGIH Threshold Limit Values

Components	Type	Value
Carbon Dioxide (CAS 124-38-9)	STEL	30000 ppm
	TWA	5000 ppm

Australia. OELs. (Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment)

Components	Type	Value
Carbon Dioxide (CAS 124-38-9)	STEL	54000 mg/m ³
	TWA	30000 ppm
		22500 mg/m ³
		12500 ppm

Recommended monitoring procedures

Additional exposure data This material does not have established exposure limits.

Engineering measures to reduce exposure Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Personal protective equipment

Respiratory protection No personal respiratory protective equipment normally required. In case of insufficient ventilation, wear suitable respiratory equipment.

Hand protection For prolonged or repeated skin contact use suitable protective gloves. Chemical resistant gloves are recommended.

Eye protection Do not get in eyes. Wear safety glasses with side shields (or goggles). Eye wash fountain is recommended.

Skin and body protection Avoid contact with clothing. Do not get this material in contact with skin. Wear suitable protective equipment. Chemical resistant gloves.

General Use personal protective equipment as required.

Environmental exposure controls Environmental manager must be informed of all major releases.

Hygiene measures When using, do not eat, drink or smoke. Do not get in eyes. Avoid contact with skin. Wash hands before breaks and immediately after handling the product. Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Aerosol.
Physical state	Liquid.
Form	Aerosol.
Color	Clear water-white
Odor	Characteristic.
Odor threshold	Not determined
pH	Not available.
Vapor pressure	< 0.1 mm Hg @ 20 °C
Vapor density	6.1 (air = 1)
Boiling point	383 °F (195 °C)
Melting point/Freezing point	Not available.
Solubility (water)	Not soluble in water
Specific gravity	0.84 - 0.86 @ 20 °C
Flash point	158.00 °F (70.00 °C) Tag Closed Cup
Flammability limits in air, upper, % by volume	20.4 % Estimated
Flammability limits in air, lower, % by volume	0.6 % Estimated
Auto-ignition temperature	> 381.2 °F (> 194 °C)
VOC	0 % per U.S. State and Federal Consumer Product Regulations
Evaporation rate	< 0.1 BuAc

Viscosity	< 3 mm ² /s @ 25 °C
Partition coefficient (n-octanol/water)	> 1
Other data	
Heat of combustion	> 30 kJ/g

10. STABILITY AND REACTIVITY

Chemical stability	Material is stable under normal conditions.
Conditions to avoid	Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point.
Materials to avoid	Strong oxidizing agents.
Hazardous decomposition products	At thermal decomposition temperatures, carbon monoxide and carbon dioxide.
Hazardous polymerization	Hazardous polymerization does not occur.

11. TOXICOLOGICAL INFORMATION

Acute toxicity	Harmful if swallowed. May be fatal if swallowed and enters airways.
Routes of exposure	Inhalation. Ingestion. Skin contact. Eye contact.
Toxicological information	Occupational exposure to the substance or mixture may cause adverse effects.
Chronic toxicity	Repeated absorption may cause disorder of central nervous system, liver, kidneys and blood. Prolonged inhalation may be harmful.
Sensitization	Based on available data, the classification criteria are not met.
Carcinogenicity	Not classifiable as to carcinogenicity to humans.
Mutagenicity	Based on available data, the classification criteria are not met.
Teratogenicity	No data available for this product.
Reproductivity	Based on available data, the classification criteria are not met.
Epidemiology	No epidemiological data is available for this product.
Neurotoxicity	No data available for this product.
Local effects	Harmful by inhalation and if swallowed. Irritating to eyes and skin.
Symptoms and target organs	Irritating to eyes, respiratory system and skin. Vapors have a narcotic effect and may cause headache, fatigue, dizziness and nausea. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. Behavioral changes. Decrease in motor functions. Shortness of breath. Coughing. Defatting of the skin.
Further information	Symptoms may be delayed.

12. ECOLOGICAL INFORMATION

Ecotoxicity	Ecological injuries are not known or expected under normal use.
Persistence and degradability	Not inherently biodegradable.
Mobility	The product is immiscible with water and will spread on the water surface.
Bioaccumulation	
Bioaccumulative potential	
Octanol/water partition coefficient log Kow	
A-151 (Aerosol)	> 1
Environmental effects	Ecological injuries are not known or expected under normal use.
Aquatic toxicity	Knowledge about aquatic hazard is incomplete.

13. DISPOSAL CONSIDERATIONS

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. This material and its container must be disposed of as hazardous waste. Must be incinerated in a suitable incineration plant holding a permit delivered by the competent authorities. Do not discharge into drains, water courses or onto the ground. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose in accordance with all applicable regulations.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions). Avoid discharge into water courses or onto the ground.
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied. Do not re-use empty containers.

14. TRANSPORT INFORMATION

ADG

UN number UN1950
Proper shipping name Aerosols, flammable
Hazard class 2

IATA

UN number UN1950
Proper shipping name Aerosols, flammable
Hazard class 2.1
ERG code 10L

IMDG

UN number UN1950
Proper shipping name AEROSOLS
Hazard class 2
EmS F-D, S-U

ADG; IATA; IMDG



HAZCHEM code None

15. REGULATORY INFORMATION

National regulations This Material Safety Data Sheet was prepared in accordance with the Australia National Code of Practice for the Preparation of Material Safety Data Sheets (NOHSC: 2011.)

Australia HVIC: Listed substance

Carbon Dioxide (CAS 124-38-9) Listed.
Distillates Petroleum, Hydroteated Light (CAS 64742-47-8) Listed.

Australia Medicines & Poisons Schedule 5: Use/Concentration/Exceptions

Distillates Petroleum, Hydroteated Light (CAS 64742-47-8) Exception may apply, see the regulation for relevance.

Inventory status

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	Yes
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

16. OTHER INFORMATION

Disclaimer The information in the sheet was written based on the best knowledge and experience currently available.

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