

Chain Lube #780-5332

RS Components

Chemwatch: 4876-20

Version No: 2.1.1.1

Material Safety Data Sheet according to NOHSC and ADG requirements

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SECTION 1 Identification of the substance / mixture and of the company / undertaking

Product Identifier

Product name:	Chain Lube #780-5332
Chemical Name:	Not Applicable
Synonyms:	Not Available
Proper shipping name:	AEROSOLS
Chemical formula:	Not Applicable
Other means of identification:	Not Available
CAS number:	Not Applicable

Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses:	Application is by spray atomisation from a hand held aerosol pack
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Details of the supplier of the safety data sheet

Registered company name:	RS Components	RS Components
Address:	25 Pavési Street Smithfield 2164 NSW Australia	Units 30 & 31, 761 Great South Road Penrose 1006 Auckland New Zealand
Telephone:	+1 300 656 636	+64 9 526 1600
Fax:	+1 300 656 696	+64 9 579 1700
Website:	Not Available	www.rsnewzealand.com
Email:	Not Available	Not Available

Emergency telephone number

Association / Organisation:	Not Available	Not Available
Emergency telephone numbers:	1800 039 008 (24 hours),+61 3 9573 3112	Not Available
Other emergency telephone numbers:	1800 039 008 (24 hours),+61 3 9573 3112	Not Available

SECTION 2 Hazards identification

Classification of the substance or mixture

DANGEROUS GOODS. NON-HAZARDOUS SUBSTANCE. According to NOHSC Criteria, and ADG Code.

Poisons Schedule:

Risk Phrases ^[1]

R44	Risk of explosion if heated under confinement.
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Legend: 1. Classified by Chemwatch; 2. Classification drawn from HSIS ; 3. Classification drawn from EC Directive 1272/2008 - Annex VI

Label elements

Not Applicable

Relevant risk statements are found in section 2

Indication(s) of danger:	Not Applicable
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Safety advice:

S15	Keep away from heat.
S23	Do not breathe gas/fumes/vapour/spray.
S38	In case of insufficient ventilation, wear suitable respiratory equipment.
S51	Use only in well ventilated areas.
S56	Dispose of this material and its container at hazardous or special waste collection point.

Other hazards

May produce discomfort of the respiratory system and skin*.

Inhalation may produce health damage*.

Cumulative effects may result following exposure*.

May affect fertility*.

May be harmful to the foetus/ embryo*.

SECTION 3 Composition / information on ingredients

Substances

See section below for composition of Mixtures

Mixtures

CAS No	%[weight]	Name
811-97-2	5-10	tetrafluoroethane
128-37-0	0-1	2,6-di-tert-butyl-4-methylphenol
80939-62-4	0-1	alkylamines, C11-14-branched , mono- & dihexyl phosphates

SECTION 4 First aid measures

Description of first aid measures

Eye Contact:

If aerosols come in contact with the eyes:

- Immediately hold the eyelids apart and flush the eye with fresh running water.
- Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.
- Seek medical attention without delay; if pain persists or recurs seek medical attention.
- Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

Skin Contact:

If solids or aerosol mists are deposited upon the skin:

- Flush skin and hair with running water (and soap if available).
- Remove any adhering solids with industrial skin cleansing cream.
- **DO NOT use solvents.**
- Seek medical attention in the event of irritation.

Inhalation:

If aerosols, fumes or combustion products are inhaled:

- Remove to fresh air.
- Lay patient down. Keep warm and rested.
- Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.
- If breathing is shallow or has stopped, ensure clear airway and apply resuscitation, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary.
- Transport to hospital, or doctor.

Ingestion:

- Not considered a normal route of entry.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5 Firefighting measures

Extinguishing media

SMALL FIRE:

- Water spray, dry chemical or CO₂

LARGE FIRE:

- Water spray or fog.

Special hazards arising from the substrate or mixture

Fire Incompatibility:

- Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result

Advice for firefighters

Fire Fighting:

- Alert Fire Brigade and tell them location and nature of hazard.
- May be violently or explosively reactive.
- Wear breathing apparatus plus protective gloves.
- Prevent, by any means available, spillage from entering drains or water course.
- If safe, switch off electrical equipment until vapour fire hazard removed.
- Use water delivered as a fine spray to control fire and cool adjacent area.
- **DO NOT** approach containers suspected to be hot.
- Cool fire exposed containers with water spray from a protected location.
- If safe to do so, remove containers from path of fire.
- Equipment should be thoroughly decontaminated after use.

Fire/Explosion Hazard:

- Non combustible.
- Not considered to be a significant fire risk.
- Heating may cause expansion or decomposition leading to violent rupture of containers.
- Aerosol cans may explode on exposure to naked flames.
- Rupturing containers may rocket and scatter burning materials.
- Hazards may not be restricted to pressure effects.
- May emit acrid, poisonous or corrosive fumes.
- Decomposes on heating and may emit toxic fumes of carbon monoxide (CO).

SECTION 6 Accidental release measures

Personal precautions, protective equipment and emergency procedures

Minor Spills:

- Clean up all spills immediately.
- Avoid breathing vapours and contact with skin and eyes.
- Wear protective clothing, impervious gloves and safety glasses.
- Shut off all possible sources of ignition and increase ventilation.
- Wipe up.
- If safe, damaged cans should be placed in a container outdoors, away from all ignition sources, until pressure has dissipated.
- Undamaged cans should be gathered and stowed safely.

Major Spills:

- Clear area of personnel and move upwind.
- Alert Fire Brigade and tell them location and nature of hazard.
- May be violently or explosively reactive.
- Wear breathing apparatus plus protective gloves.
- Prevent, by any means available, spillage from entering drains or water courses
- No smoking, naked lights or ignition sources.
- Increase ventilation.

- Stop leak if safe to do so.
- Water spray or fog may be used to disperse / absorb vapour.
- Absorb or cover spill with sand, earth, inert materials or vermiculite.
- If safe, damaged cans should be placed in a container outdoors, away from ignition sources, until pressure has dissipated.
- Undamaged cans should be gathered and stowed safely.
- Collect residues and seal in labelled drums for disposal.

Personal Protective Equipment advice is contained in Section 8 of the MSDS.

SECTION 7 Handling and storage

Precautions for safe handling

Safe handling

- Avoid all personal contact, including inhalation.
- Wear protective clothing when risk of exposure occurs.
- Use in a well-ventilated area.
- Prevent concentration in hollows and sumps.
- **DO NOT enter confined spaces until atmosphere has been checked.**
- Avoid smoking, naked lights or ignition sources.
- Avoid contact with incompatible materials.
- **When handling, DO NOT eat, drink or smoke.**
- **DO NOT incinerate or puncture aerosol cans.**
- **DO NOT spray directly on humans, exposed food or food utensils.**
- Avoid physical damage to containers.
- Always wash hands with soap and water after handling.
- Work clothes should be laundered separately.
- Use good occupational work practice.
- Observe manufacturer's storage and handling recommendations contained within this MSDS.
- Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions are maintained.

Other information

- Keep dry to avoid corrosion of cans. Corrosion may result in container perforation and internal pressure may eject contents of can

Conditions for safe storage, including any incompatibilities

Suitable container:

- Aerosol dispenser.
- Check that containers are clearly labelled.

Storage incompatibility:

- Avoid reaction with oxidising agents
- Compressed gases may contain a large amount of kinetic energy over and above that potentially available from the energy of reaction produced by the gas in chemical reaction with other substances

Package Material Incompatibilities:

SECTION 8 Exposure controls / personal protection

Control parameters

Occupational Exposure Limits (OEL)

INGREDIENT DATA

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
Australia Exposure Standards	tetrafluoroethane	1,1,1,2-Tetrafluoroethane	4240 (mgm3) / 1000 (ppm)	Not Available	Not Available	Not Available
Australia Exposure Standards	2,6-di-tert-butyl-4-methylphenol	2,6-Di-tert-butyl-p-cresol	10 (mgm3)	Not Available	Not Available	Not Available
Australia Exposure Standards	carbon dioxide	Carbon dioxide in coal mines / Carbon dioxide	9000 (mgm3) / 22500 (mgm3) / 5000 (ppm) / 12500 (ppm)	54000 (mgm3) / 30000 (ppm)	Not Available	Not Available

Emergency Limits

Ingredient	TEEL-0	TEEL-1	TEEL-2	TEEL-3
tetrafluoroethane	1000(ppm)	8000(ppm)	13000(ppm)	27000(ppm)
2,6-di-tert-butyl-4-methylphenol	2(ppm)	6(ppm)	40(ppm)	400(ppm)
carbon dioxide	5000(ppm)	30000(ppm)	40000(ppm)	40000(ppm)

Ingredient	Original IDLH	Revised IDLH
carbon dioxide	50,000(ppm)	40,000(ppm)

Exposure controls

Appropriate engineering controls

Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection.

The basic types of engineering controls are:

Process controls which involve changing the way a job activity or process is done to reduce the risk.

Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment.

Ventilation can remove or dilute an air contaminant if designed properly. The design of a ventilation system must match the particular process and chemical or contaminant in use.

Employers may need to use multiple types of controls to prevent employee overexposure.

General exhaust is adequate under normal conditions. If risk of overexposure exists, wear SAA approved respirator. Correct fit is essential to obtain adequate protection.

Provide adequate ventilation in warehouse or closed storage areas.

Air contaminants generated in the workplace possess varying "escape" velocities which, in turn, determine the "capture velocities" of fresh circulating air required to effectively remove the contaminant.

Type of Contaminant:	Speed:
aerosols, (released at low velocity into zone of active generation)	0.5-1 m/s
direct spray, spray painting in shallow booths, gas discharge (active generation into zone of rapid air motion)	1-2.5 m/s (200-500 f/min.)

Within each range the appropriate value depends on:

Lower end of the range	Upper end of the range
1: Room air currents minimal or favourable to capture	1: Disturbing room air currents
2: Contaminants of low toxicity or of nuisance value only.	2: Contaminants of high toxicity
3: Intermittent, low production.	3: High production, heavy use
4: Large hood or large air mass in motion	4: Small hood-local control only

Simple theory shows that air velocity falls rapidly with distance away from the opening of a simple extraction pipe. Velocity generally decreases with the square of distance from the extraction point (in simple cases). Therefore the air speed at the extraction point should be adjusted, accordingly, after reference to distance from the contaminating source. The air velocity at the extraction fan, for example, should be a minimum of 1-2 m/s (200-400 f/min,) for extraction of solvents generated in a tank 2 meters distant from the extraction point. Other mechanical considerations, producing performance deficits within the extraction apparatus, make it essential that theoretical air velocities are multiplied by factors of 10 or more when extraction systems are installed or used.

Personal protection



Eye and face protection:

No special equipment for minor exposure i.e. when handling small quantities. **OTHERWISE:** For potentially moderate or heavy exposures:

- Safety glasses with side shields.
- **NOTE:** Contact lenses pose a special hazard; soft lenses may absorb irritants and **ALL** lenses concentrate them.

Skin protection:

See Hand protection below

Hand protection:

- No special equipment needed when handling small quantities.
- **OTHERWISE:**
- For potentially moderate exposures:
- Wear general protective gloves, eg. light weight rubber gloves.
- For potentially heavy exposures:
- Wear chemical protective gloves, eg. PVC. and safety footwear.

Body protection:

See Other protection below

Other protection:

No special equipment needed when handling small quantities. **OTHERWISE:**

- Overalls.
- Skin cleansing cream.
- Eyewash unit.
- Do not spray on hot surfaces.

Thermal hazards:

Recommended material(s):

When handling larger quantities:

Respiratory protection:

Type EAX Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

SECTION 9 Physical and chemical properties

Information on basic physical and chemical properties

Appearance

Off-white liquid aerosol with a characteristic odour; insoluble in water.

Physical state	Compressed Gas	Relative density (Water = 1)	0.93 @ 20 deg.C
Odour	Not Available	Partition coefficient n-octanol / water	Not Available
Odour threshold	Not Available	Auto-ignition temperature (°C)	>200
pH (as supplied)	Not Available	Decomposition temperature	Not Available
Melting point / freezing point (°C)	Not Available	Viscosity (cSt)	425 @ 25 deg.C
Initial boiling point and boiling range (°C)	Not Available	Molecular weight (g/mol)	Not Applicable
Flash point (°C)	>260 (CC)	Taste	Not Available
Evaporation rate	Not Available	Explosive properties	Not Available
Flammability	Not Available	Oxidising properties	Not Available
Upper Explosive Limit (%)	Not Available	Surface Tension (dyn/cm or mN/m)	Not Available
Lower Explosive Limit (%)	Not Available	Volatile Component (%vol)	70 g/l (VOC)
Vapour pressure (kPa)	Not Available	Gas group	Not Available
Solubility in water (g/L)	Immiscible	pH as a solution(1%)	Not Available
Vapour density (Air = 1)	Not Available		

SECTION 10 Stability and reactivity

Reactivity:

See section 7

Chemical stability:

- Elevated temperatures.
- Presence of open flame.
- Product is considered stable.
- Hazardous polymerisation will not occur.

Possibility of hazardous reactions:

See section 7

Conditions to avoid:

See section 7

Incompatible materials:

See section 7

Hazardous decomposition products:

See section 5

SECTION 11 Toxicological information**Information on toxicological effects****Inhaled:**

Inhalation of aerosols (mists, fumes), generated by the material during the course of normal handling, may be damaging to the health of the individual.

Limited evidence or practical experience suggests that the material may produce irritation of the respiratory system, in a significant number of individuals, following inhalation. In contrast to most organs, the lung is able to respond to a chemical insult by first removing or neutralising the irritant and then repairing the damage. The repair process, which initially evolved to protect mammalian lungs from foreign matter and antigens, may however, produce further lung damage resulting in the impairment of gas exchange, the primary function of the lungs. Respiratory tract irritation often results in an inflammatory response involving the recruitment and activation of many cell types, mainly derived from the vascular system.

WARNING: Intentional misuse by concentrating/inhaling contents may be lethal. Spray mist may produce discomfort

Ingestion:

Not normally a hazard due to physical form of product. Considered an unlikely route of entry in commercial/industrial environments

Skin Contact:

Skin contact is not thought to have harmful health effects (as classified under EC Directives); the material may still produce health damage following entry through wounds, lesions or abrasions. Limited evidence exists, or practical experience predicts, that the material either produces inflammation of the skin in a substantial number of individuals following direct contact, and/or produces significant inflammation when applied to the healthy intact skin of animals, for up to four hours, such inflammation being present twenty-four hours or more after the end of the exposure period. Skin irritation may also be present after prolonged or repeated exposure; this may result in a form of contact dermatitis (nonallergic). The dermatitis is often characterised by skin redness (erythema) and swelling (oedema) which may progress to blistering (vesiculation), scaling and thickening of the epidermis. At the microscopic level there may be intercellular oedema of the spongy layer of the skin (spongiosis) and intracellular oedema of the epidermis.

Spray mist may produce discomfort. Open cuts, abraded or irritated skin should not be exposed to this material.

Entry into the blood-stream through, for example, cuts, abrasions, puncture wounds or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.

Eye:

Although the material is not thought to be an irritant (as classified by EC Directives), direct contact with the eye may produce transient discomfort characterised by tearing or conjunctival redness (as with windburn).

Direct contact with the eye may not cause irritation because of the extreme volatility of the gas; however concentrated atmospheres may produce irritation after brief exposures..

Chronic:

Limited evidence suggests that repeated or long-term occupational exposure may produce cumulative health effects involving organs or biochemical systems.

Principal route of occupational exposure to the gas is by inhalation.

TOXICITY	IRRITATION
Chain Lube #780-5332	
Not Available	Not Available
tetrafluoroethane	
Inhalation (Mouse) LC50: 1700000 mg/m ³ /2h	
Inhalation (Rat) LC50: >60% vol 4 h *	
Inhalation (Rat) LC50: >80% vol 15 mins *	
Inhalation (Rat) LC50: 1500000 mg/m ³ /4h	
Not Available	Not Available
2,6-di-tert-butyl-4-methylphenol	
Dermal (Rabbit) LD50: >2000 mg/kg *	Eye (rabbit): 100 mg/24h-moderate
Oral (Rat) LD50: >2000 mg/kg *	Skin (human): 500 mg/48h - mild
Oral (rat) LD50: 890 mg/kg	Skin (rabbit): 500 mg/48h-moderate
Not Available	Not Available
alkylamines, C11-14-branched, mono- & dihexyl phosphates	
Not Available	Not Available
carbon dioxide	
Not Available	Not Available

* Value obtained from manufacturer's msds

unless otherwise specified data extracted from RTECS - Register of Toxic Effects of Chemical Substances

2,6-DI-TERT-BUTYL-4-METHYLPHENOL

Asthma-like symptoms may continue for months or even years after exposure to the material ceases. This may be due to a non-allergenic condition known as reactive airways dysfunction syndrome (RADS) which can occur following exposure to high levels of highly irritating compound. Key criteria for the diagnosis of RADS include the absence of preceding respiratory disease, in a non-atopic individual, with abrupt onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant. A reversible airflow pattern, on spirometry, with the presence of moderate to severe bronchial hyperreactivity on methacholine challenge testing and the lack of minimal lymphocytic inflammation, without eosinophilia, have also been included in the criteria for diagnosis of RADS. RADS (or asthma) following an irritating inhalation is an infrequent disorder with rates related to the concentration of and duration of exposure to the irritating substance. Industrial bronchitis, on the other hand, is a disorder that occurs as result of exposure due to high concentrations of irritating substance (often particulate in nature) and is completely reversible after exposure ceases. The disorder is characterised by dyspnea, cough and mucus production.

for bridged alkyl phenols:

Acute toxicity: Acute oral and dermal toxicity data are available for all but two of the substances in the group. The data show that acute toxicity of these substances is low. The testing for acute toxicity spans five decades

Repeat dose toxicity: Repeat dose studies on the members of this category include both subchronic and chronic exposures. The liver is identified as the target organ in rats for all of the substances tested. NOAEL's or NOEL's in rats for 13- week studies ranged from 100 ppm (approximately 5 mg/kg/day) to 500 ppm (approximately 25 mg/kg/day) while NOAEL's or NOEL's in rats for chronic studies were the same, 25 mg/kg/day (500 ppm).

Reproductive toxicity: Evaluation of effects on reproduction for the bridged alkyl phenols is supplemented by histopathological data on male and female reproductive organs in repeated dose studies. The data on the effects of bridged alkyl phenols on reproduction and reproductive organs span the range of structures and molecular weights. While not all of the data for reproductive effects are from reproduction studies, microscopic evaluations of reproductive organs along with other short-term tests for reproductive effects provide adequate data to evaluate the effects of these bridged alkyl phenols on reproduction. It can be concluded that reproductive toxicity is low.

Typically a two-year chronic feeding study provides data for 4,4'-thiobis-6-(t-butyl-m-cresol) (96-69-5). No adverse effects were noted on reproductive organs

Genotoxicity: Data from bacterial reverse mutation assays and *in vitro* and *in vivo* chromosome aberration studies were reviewed. Adequate bacterial gene mutation assays have been conducted with all of the category chemicals except two. Chromosome aberration studies, *in vitro* and/or *in vivo*, are available for all but two substances. The mutagenicity data span the range of structures and molecular weights and data can be bridged from other members of the group to meet any outstanding requirements. The weight of evidence for mutagenic potential for this category indicates these substances are not mutagenic.

Carcinogenicity: The mutagenicity data combined with the animal data plus the long historical use of BHT (128-37-0) indicate that the chemicals in this class are not expected to exhibit any significant potential to cause cancer. The weight of the evidence indicates that these chemicals are not genotoxic.

The material may cause skin irritation after prolonged or repeated exposure and may produce a contact dermatitis (nonallergic). This form of dermatitis is often characterised by skin redness (erythema) and swelling the epidermis. Histologically there may be intercellular oedema of the spongy layer (spongiosis) and intracellular oedema of the epidermis.

For hindered phenols:

Available data shows that acute toxicity of these substances is low.

Mutagenicity. Data from bacterial reverse mutation assays and *in vitro* and *in vivo* chromosome aberration studies were reviewed. All assays, with and without metabolic activation, were negative.

The weight of evidence for mutagenic potential for this category indicates these substances are not mutagenic.

In Vitro Chromosome Aberration Studies. In vitro chromosome aberration studies are available for several members. All except 2,6-di-tert-butyl-p-cresol were negative.

In Vivo Chromosome Aberration Studies. In vivo studies evaluating chromosome damage are available for six of the hindered phenols. All in vivo evaluations were negative.

Repeated Dose Toxicity. Repeated dose toxicity data of approximately three months (90-day, 12- and 13-week) are available for some of the substances in this group. The liver was the target organ in rats for almost all of the substances with subchronic toxicity data in that species. Other target organs included thyroid and kidney and mesenteric lymph nodes. NOAELs in rats ranged from 100 ppm (approximately 5 mg/kg/day) to 10,000 ppm (500 mg/kg/day)

Carcinogenicity: Data is available for 2,6-di-tert-butyl-p-cresol (128-37-0); and 4,4'-thiobis-6-(t-butyl-m-cresol) (96-69-5). Liver adenomas were reported for 2,6-di-tert-butyl-p-cresol (128-37-0) and a NOAEL was established for the study at 25 mg/kg/day. 4,4'-Thiobis-6-(t-butyl-m-cresol) (96-69-5) was not carcinogenic in rats or mice, but the kidney was identified as a target organ in female rats

The substance is classified by IARC as Group 3:

NOT classifiable as to its carcinogenicity to humans.

Evidence of carcinogenicity may be inadequate or limited in animal testing.

NOTE: Substance has been shown to be mutagenic in at least one assay, or belongs to a family of chemicals producing damage or change to cellular DNA.

Chain Lube #780-5332, ALKYLAMINES, C11-14-BRANCHED, MONO- & DIHEXYL PHOSPHATES

No significant acute toxicological data identified in literature search.

Acute Toxicity:	Not Applicable	Carcinogenicity:	Not Applicable
Skin Irritation/Corrosion:	Not Applicable	Reproductivity:	Not Applicable
Serious Eye Damage/Irritation:	Not Applicable	STOT - Single Exposure:	Not Applicable
Respiratory or Skin sensitisation:	Not Applicable	STOT - Repeated Exposure:	Not Applicable
Mutagenicity:	Not Applicable	Aspiration Hazard:	Not Applicable

CMR STATUS

SECTION 12 Ecological information

Toxicity

DO NOT discharge into sewer or waterways.

Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
Not Available	Not Available	Not Available

Bioaccumulative potential

Ingredient	Bioaccumulation
Not Available	Not Available

Mobility in soil

Ingredient	Mobility
Not Available	Not Available

SECTION 13 Disposal considerations

Waste treatment methods

Product / Packaging disposal:

- Consult State Land Waste Management Authority for disposal.
- Discharge contents of damaged aerosol cans at an approved site.
- Allow small quantities to evaporate.
- **DO NOT incinerate or puncture aerosol cans.**
- Bury residues and emptied aerosol cans at an approved site.

SECTION 14 Transport information

Labels Required:



Marine Pollutant: NO

HAZCHEM: 2YE

Land transport (ADG)



UN number	1950	Packing group	Not Available
UN proper shipping name	AEROSOLS	Environmental hazard	No relevant data
Transport hazard class(es)	Class: 2	Special precautions for user	Special provisions 63 190 277 327
	Subrisk:		limited quantity See SP 277

Air transport (ICAO-IATA / DGR)



UN number	1950	Packing group	Not Available
UN proper shipping name	Aerosols, non-flammable	Environmental hazard	No relevant data
Transport hazard class(es)	ICAO/IATA Class:	Special precautions for user	Special provisions:
	ICAO / IATA Subrisk:		A98A145A167A802
	ERG Code:		Cargo Only Packing Instructions:
			203
			Cargo Only Maximum Qty / Pack:
			150 kg
			Passenger and Cargo Packing Instructions:
			203
			Passenger and Cargo Maximum Qty / Pack:
			75 kg
			Passenger and Cargo Limited Quantity Packing Instructions:
			Y203
			Passenger and Cargo Maximum Qty / Pack:
			30 kg G

Sea transport (IMDG-Code / GGVSee)



UN number	1950	Packing group	Not Available
UN proper shipping name	AEROSOLS, NON-FLAMMABLE	Environmental hazard	No relevant data
Transport hazard class(es)	IMDG Class:	Special precautions for user	EMS Number:
	IMDG Subrisk:		F-D,S-U
			Special provisions:
			63 190 277 327
			344 959
			Limited Quantities:
			SP277

SECTION 15 Regulatory information

Safety, health and environmental regulations / legislation specific for the substance or mixture

tetrafluoroethane(811-97-2) is found on the following regulatory lists

"Australia Inventory of Chemical Substances (AICS)", "OECD List of High Production Volume (HPV) Chemicals", "Australia High Volume Industrial Chemical List (HVICL)", "Australia Exposure Standards", "Australia Customs (Prohibited Exports) Regulations 1958 - Schedule 15 Ozone depleting substances - Part 9 HFCs", "Australia Hazardous Substances Information System - Consolidated Lists", "Sigma-Aldrich Transport Information", "Regulations concerning the International Carriage of Dangerous Goods by Rail - Table A: Dangerous Goods List - RID 2013 (English)", "International Maritime Dangerous Goods Requirements (IMDG Code) - Substance Index", "Australia Dangerous Goods Code (ADG Code) - Dangerous Goods List", "International Maritime Dangerous Goods Requirements (IMDG Code)", "Australia Dangerous Goods Code (ADG Code) - List of Emergency Action Codes", "International Air Transport Association (IATA) Dangerous Goods Regulations", "Australia Dangerous Goods Code (ADG Code) - Packing Instruction - Liquefied and Dissolved Gases", "Australia - Australian Capital Territory - Environment Protection Regulation: Ambient environmental standards (AQUA/1 to 6 - non-pesticide anthropogenic organics)", "Australia - Australian Capital Territory - Environment Protection Regulation: Pollutants entering waterways taken to cause environmental harm (Aquatic habitat)"

2,6-di-tert-butyl-4-methylphenol(128-37-0) is found on the following regulatory lists

"International Agency for Research on Cancer (IARC) - Agents Reviewed by the IARC Monographs", "International Council of Chemical Associations (ICCA) - High Production Volume List", "Australia Inventory of Chemical Substances (AICS)", "OECD List of High Production Volume (HPV) Chemicals", "Australia Exposure Standards", "Australia Hazardous Substances Information System - Consolidated Lists", "Fisher Transport Information", "Sigma-Aldrich Transport Information", "International Fragrance Association (IFRA) Survey: Transparency List", "Regulations concerning the International Carriage of Dangerous Goods by Rail - Table A: Dangerous Goods List - RID 2013 (English)", "International Maritime Dangerous Goods Requirements (IMDG Code) - Substance Index", "Australia Dangerous Goods Code (ADG Code) - Dangerous Goods List", "Australia - New South Wales Protection of the Environment Operations (Waste) Regulation 2005 - Characteristics of trackable wastes", "International Maritime Dangerous Goods Requirements (IMDG Code)", "Australia Dangerous Goods Code (ADG Code) - List of Emergency Action Codes", "International Air Transport Association (IATA) Dangerous Goods Regulations", "International Numbering System for Food Additives", "FEMA Generally Recognized as Safe (GRAS) Flavoring Substances 23 - Examples of FEMA GRAS Substances with Non-Flavor Functions", "OSPAR National List of Candidates for Substitution - United Kingdom"

alkylamines, C11-14-branched , mono- & dihexyl phosphates(80939-62-4) is found on the following regulatory lists

"Australia Inventory of Chemical Substances (AICS)", "Regulations concerning the International Carriage of Dangerous Goods by Rail - Table A: Dangerous Goods List - RID 2013 (English)", "International Maritime Dangerous Goods Requirements (IMDG Code) - Substance Index", "Australia Dangerous Goods Code (ADG Code) - Dangerous Goods List", "Australia - New South Wales Protection of the Environment Operations (Waste) Regulation 2005 - Characteristics of trackable wastes", "International Maritime Dangerous Goods Requirements (IMDG Code)", "Australia Dangerous Goods Code (ADG Code) - List of Emergency Action Codes", "International Air Transport Association (IATA) Dangerous Goods Regulations", "Australia National Pollutant Inventory", "Australia National Environment Protection (Ambient Air Quality) Measure - Schedule 2 Table 1: Standards and Goal for Pollutants other than Particles as PM2.5", "Australia National Environment Protection (Ambient Air Quality) Measure - Schedule 1: Pollutants"

carbon dioxide(124-38-9) is found on the following regulatory lists

"Australia Inventory of Chemical Substances (AICS)", "OECD List of High Production Volume (HPV) Chemicals", "Australia High Volume Industrial Chemical List (HVICL)", "Australia Exposure Standards", "Australia Hazardous Substances Information System - Consolidated Lists", "Sigma-Aldrich Transport Information", "Acros Transport Information", "CODEX General Standard for Food Additives (GSFA) - Additives Permitted for Use in Food in General, Unless Otherwise Specified, in Accordance with GMP", "Australia Australian Pesticides and Veterinary Medicines Authority (APVM) Record of approved active constituents", "International Numbering System for Food Additives", "Regulations concerning the International Carriage of Dangerous Goods by Rail - Table A: Dangerous Goods List - RID 2013 (English)", "International Maritime Dangerous Goods Requirements (IMDG Code) - Substance Index", "Australia Dangerous Goods Code (ADG Code) - Dangerous Goods List", "International Maritime Dangerous Goods Requirements (IMDG Code)", "Australia Dangerous Goods Code (ADG Code) - List of Emergency Action Codes", "International Air Transport Association (IATA) Dangerous Goods Regulations", "Australia Dangerous Goods Code (ADG Code) - Packing Instruction - Liquefied and Dissolved Gases"

SECTION 16 Other information

Other information

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

A list of reference resources used to assist the committee may be found at:

www.chemwatch.net/references

The (M)SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

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