

RALI ISOPROPYL ALCOHOL

RESENE AUTOMOTIVE & LIGHT INDUSTRIAL

Chemwatch Hazard Alert Code: 3

Version No: 1.1

Safety Data Sheet according to HSNO Regulations

Issue Date: 06/10/2014

Print Date: 06/10/2014

Initial Date: 06/10/2014

S.GHS.NZL.EN

SECTION 1 IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

Product Identifier

Product name	RALI ISOPROPYL ALCOHOL
Chemical Name	ISOPROPANOL
Synonyms	Not Available
Proper shipping name	Not Applicable
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	Use according to manufacturer's directions.
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Details of the manufacturer/importer

Registered company name	RESENE AUTOMOTIVE & LIGHT INDUSTRIAL
Address	32-50 Vogel Street Naenae Wellington New Zealand
Telephone	+64 4 5770500
Fax	+64 4 5773327
Website	www.resene.co.nz
Email	advice@resene.co.nz

Emergency telephone number

Association / Organisation	NZ POISONS (24hr 7 days)
Emergency telephone numbers	0800 764766
Other emergency telephone numbers	0800 737636

CHEMWATCH EMERGENCY RESPONSE

Primary Number	Alternative Number 1	Alternative Number 2
+800 2436 2255	+612 9186 1132	Not Available

Once connected and if the message is not in your preferred language then please dial 01



SECTION 2 HAZARDS IDENTIFICATION

Classification of the substance or mixture

Considered a Hazardous Substance according to the criteria of the New Zealand Hazardous Substances New Organisms legislation. Classified as Dangerous Goods for transport purposes.

GHS Classification [2]	Flammable Liquid Category 2, Acute Toxicity (Oral) Category 5, Skin Corrosion/Irritation Category 3, Eye Irritation Category 2A
Legend:	1. Classified by Chemwatch; 2. Classification drawn from CCID EPA NZ; 3. Classification drawn from EC Directive 1272/2008 - Annex VI
Gazetted by EPA New Zealand	3.1B, 6.1E (oral), 6.3B, 6.4A

Label elements

GHS label elements	 
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SIGNAL WORD **DANGER**

Hazard statement(s)

Continued...

RALI ISOPROPYL ALCOHOL

H225	Highly flammable liquid and vapour
H303	May be harmful if swallowed
H316	Causes mild skin irritation
H319	Causes serious eye irritation

Precautionary statement(s): Prevention

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
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Precautionary statement(s): Response

P312	Call a POISON CENTER/doctor/physician/first aider/if you feel unwell.
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Precautionary statement(s): Storage

P403+P235	Store in a well-ventilated place. Keep cool.
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Precautionary statement(s): Disposal

P501	Dispose of contents/container to authorised chemical landfill or if organic to high temperature incineration
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SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

Substances

See section below for composition of Mixtures

Mixtures

CAS No	%[weight]	Name
67-63-0	100	isopropanol

SECTION 4 FIRST AID MEASURES

NZ Poisons Centre 0800 764 766 | NZ Emergency Services: 111 - THIS IS A SUMMARY ONLY - FULL REPORT AVAILABLE

Description of first aid measures

Eye Contact	<p>If this product comes in contact with the eyes:</p> <ul style="list-style-type: none"> ▶ Wash out immediately 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	<p>If skin or hair contact occurs:</p> <ul style="list-style-type: none"> ▶ Flush skin and hair with running water (and soap if available). ▶ Seek medical attention in event of irritation.
Inhalation	<ul style="list-style-type: none"> ▶ If fumes, aerosols or combustion products are inhaled remove from contaminated area. ▶ Other measures are usually unnecessary.
Ingestion	<ul style="list-style-type: none"> ▶ Immediately give a glass of water. ▶ First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor. ▶ If spontaneous vomiting appears imminent or occurs, hold patient's head down, lower than their hips to help avoid possible aspiration of vomitus.

Indication of any immediate medical attention and special treatment needed

For acute or short term repeated exposures to isopropanol:

- ▶ Rapid onset respiratory depression and hypotension indicates serious ingestions that require careful cardiac and respiratory monitoring together with immediate intravenous access.
- ▶ Rapid absorption precludes the usefulness of emesis or lavage 2 hours post-ingestion. Activated charcoal and cathartics are not clinically useful. Ipecac is most useful when given 30 mins post-ingestion.
- ▶ There are no antidotes.
- ▶ Management is supportive. Treat hypotension with fluids followed by vasopressors.
- ▶ Watch closely, within the first few hours for respiratory depression; follow arterial blood gases and tidal volumes.
- ▶ Ice water lavage and serial haemoglobin levels are indicated for those patients with evidence of gastrointestinal bleeding.

SECTION 5 FIREFIGHTING MEASURES

Extinguishing media

	▶ Alcohol stable foam.
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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
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Advice for firefighters

Fire Fighting	▶ Alert Fire Brigade and tell them location and nature of hazard.
Fire/Explosion Hazard	▶ Liquid and vapour are highly flammable.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Minor Spills	▶ Remove all ignition sources.
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RALI ISOPROPYL ALCOHOL

Major Spills ▶ Clear area of personnel and move upwind.

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

SECTION 7 HANDLING AND STORAGE

Precautions for safe handling

Safe handling ▶ Containers, even those that have been emptied, may contain explosive vapours.

Other information ▶ Store in original containers in approved flame-proof area.

Conditions for safe storage, including any incompatibilities

Suitable container ▶ **DO NOT use aluminium or galvanised containers**
▶ Packing as supplied by manufacturer.

Storage incompatibility

Isopropanol (syn: isopropyl alcohol, IPA):

- ▶ forms ketones and unstable peroxides on contact with air or oxygen; the presence of ketones especially methyl ethyl ketone (MEK, 2-butanone) will accelerate the rate of peroxidation
- ▶ reacts violently with strong oxidisers, powdered aluminium (exothermic), crotonaldehyde, diethyl aluminium bromide (ignition), dioxygenyl tetrafluoroborate (ignition/ ambient temperature), chromium trioxide (ignition), potassium-tert-butoxide (ignition), nitroform (possible explosion), oleum (pressure increased in closed container), cobalt chloride, aluminium triisopropoxide, hydrogen plus palladium dust (ignition), oxygen gas, phosgene, phosgene plus iron salts (possible explosion), sodium dichromate plus sulfuric acid (exothermic/ incandescence), triisobutyl aluminium
- ▶ reacts with phosphorus trichloride forming hydrogen chloride gas
- ▶ reacts, possibly violently, with alkaline earth and alkali metals, strong acids, strong caustics, acid anhydrides, halogens, aliphatic amines, aluminium isopropoxide, isocyanates, acetaldehyde, barium perchlorate (forms highly explosive perchloric ester compound), benzoyl peroxide, chromic acid, dialkylzincs, dichlorine oxide, ethylene oxide (possible explosion), hexamethylene diisocyanate (possible explosion), hydrogen peroxide (forms explosive compound), hypochlorous acid, isopropyl chlorocarbonate, lithium aluminium hydride, lithium tetrahydroaluminate, nitric acid, nitrogen dioxide, nitrogen tetroxide (possible explosion), pentafluoroguanidine, perchloric acid (especially hot), permonosulfuric acid, phosphorus pentasulfide, tangerine oil, triethylaluminium, triisobutylaluminium, trinitromethane
- ▶ attacks some plastics, rubber and coatings
- ▶ reacts with metallic aluminium at high temperature
- ▶ may generate electrostatic charges

Alcohols

- ▶ are incompatible with strong acids, acid chlorides, acid anhydrides, oxidising and reducing agents.

PACKAGE MATERIAL INCOMPATIBILITIES

Not Available

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters

OCCUPATIONAL EXPOSURE LIMITS (OEL)

INGREDIENT DATA


Source	Ingredient	Material name	TWA	STEL	Peak	Notes
New Zealand Workplace Exposure Standards (WES)	isopropanol	Isopropyl alcohol	983 mg/m ³ / 400 ppm	1230 mg/m ³ / 500 ppm	Not Available	Not Available

EMERGENCY LIMITS

Ingredient	TEEL-0	TEEL-1	TEEL-2	TEEL-3
RALI ISOPROPYL ALCOHOL	Not Available	Not Available	Not Available	Not Available

Ingredient	Original IDLH	Revised IDLH
isopropanol	12,000 ppm	2,000 [LEL] ppm

Exposure controls

Appropriate engineering controls	Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard.
Personal protection	
Eye and face protection	▶ Safety glasses with side shields.
Skin protection	See Hand protection below
Hands/feet protection	The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer.
Body protection	See Other protection below
Other protection	▶ Overalls.
Thermal hazards	Not Available

Recommended material(s)

GLOVE SELECTION INDEX

Glove selection is based on a modified presentation of the:

"Forsberg Clothing Performance Index".

The effect(s) of the following substance(s) are taken into account in the computer...

Respiratory protection

Type A Filter of sufficient capacity.

Where the concentration of gas/particulates in the breathing zone, approaches or exceeds the "Exposure Standard" (or ES), respiratory protection is required.

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RALI ISOPROPYL ALCOHOL

generated selection:
RALI ISOPROPYL ALCOHOL

Material	CPI
NEOPRENE	A
NITRILE	A
NITRILE+PVC	A
PE/EVAL/PE	A
PVC	B
NAT+NEOPR+NITRILE	C
NATURAL RUBBER	C
NATURAL+NEOPRENE	C

* CPI - Chemwatch Performance Index

A: Best Selection

B: Satisfactory; may degrade after 4 hours continuous immersion

C: Poor to Dangerous Choice for other than short term immersion

NOTE: As a series of factors will influence the actual performance of the glove, a final selection must be based on detailed observation. -

* Where the glove is to be used on a short term, casual or infrequent basis, factors such as "feel" or convenience (e.g. disposability), may dictate a choice of gloves which might otherwise be unsuitable following long-term or frequent use. A qualified practitioner should be consulted.

Degree of protection varies with both face-piece and Class of filter; the nature of protection varies with Type of filter.

Required Minimum Protection Factor	Half-Face Respirator	Full-Face Respirator	Powered Air Respirator
up to 10 x ES	Air-line*	A-2	A-PAPR-2 ^
up to 20 x ES	-	A-3	-
20+ x ES	-	Air-line**	-

* - Continuous-flow; ** - Continuous-flow or positive pressure demand

^ - Full-face

A(All classes) = Organic vapours, B AUS or B1 = Acid gasses, B2 = Acid gas or hydrogen cyanide(HCN), B3 = Acid gas or hydrogen cyanide(HCN), E = Sulfur dioxide(SO₂), G = Agricultural chemicals, K = Ammonia(NH₃), Hg = Mercury, NO = Oxides of nitrogen, MB = Methyl bromide, AX = Low boiling point organic compounds(below 65 degC)

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	Colourless liquid with characteristic alcoholic odour		
Physical state	Liquid	Relative density (Water = 1)	0.79
Odour	Not Available	Partition coefficient n-octanol / water	Not Available
Odour threshold	Not Available	Auto-ignition temperature (°C)	456
pH (as supplied)	Not Available	Decomposition temperature	Not Available
Melting point / freezing point (°C)	Not Available	Viscosity (cSt)	Not Available
Initial boiling point and boiling range (°C)	82.5	Molecular weight (g/mol)	Not Available
Flash point (°C)	11.7	Taste	Not Available
Evaporation rate	Not Available	Explosive properties	Not Available
Flammability	Flammable.	Oxidising properties	Not Available
Upper Explosive Limit (%)	12.0	Surface Tension (dyn/cm or mN/m)	Not Available
Lower Explosive Limit (%)	2.0	Volatile Component (%vol)	100
Vapour pressure (kPa)	4.4	Gas group	Not Available
Solubility in water (g/L)	Miscible	pH as a solution(1%)	Not Available
Vapour density (Air = 1)	2.1	VOC g/L	790

SECTION 10 STABILITY AND REACTIVITY

Reactivity	See section 7
Chemical stability	► Unstable in the presence of incompatible materials.
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	The material is not thought to produce adverse health effects or irritation of the respiratory tract (as classified by EC Directives using animal models).
Ingestion	Effects on the nervous system characterise over-exposure to higher aliphatic alcohols.
Skin Contact	The material is not thought to produce adverse health effects or skin irritation following contact (as classified by EC Directives using animal models).
Eye	Evidence exists, or practical experience predicts, that the material may cause eye irritation in a substantial number of individuals and/or may produce significant ocular lesions which are present twenty-four hours or more after instillation into the eye(s) of experimental animals.

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Chronic	Long-term exposure to the product is not thought to produce chronic effects adverse to health (as classified by EC Directives using animal models); nevertheless exposure by all routes should be minimised as a matter of course.	
RALI ISOPROPYL ALCOHOL	TOXICITY	IRRITATION
	Not Available	Not Available
isopropanol	TOXICITY	IRRITATION
	Dermal (rabbit) LD50: 12800 mg/kg	Eye (rabbit): 10 mg - moderate
	Inhalation (Mouse) LC50: 53000 mg/m3/4h	Eye (rabbit): 100 mg - SEVERE
	Inhalation (Rat) LC50: 72600 mg/m3/4h	Eye (rabbit): 100mg/24hr-moderate
	Intraperitoneal (Guinea pig) LD50: 2560 mg/kg	Skin (rabbit): 500 mg - mild
	Intraperitoneal (Mouse) LD50: 4477 mg/kg	
	Intraperitoneal (Rabbit) LD50: 667 mg/kg	
	Intraperitoneal (Rat) LD50: 2735 mg/kg	
	Intravenous (Mouse) LD50: 1509 mg/kg	
	Intravenous (Rabbit) LD50: 1184 mg/kg	
	Intravenous (Rat) LD50: 1088 mg/kg	
	Oral (Mouse) LD50: 3600 mg/kg	
	Oral (Rabbit) LD50: 6410 mg/kg	
	Oral (Rat) LD50: 5000 mg/kg	
	Oral (rat) LD50: 5045 mg/kg	
	Not Available	Not Available

RALI ISOPROPYL ALCOHOL, ISOPROPANOL	For isopropanol (IPA): Acute toxicity: Isopropanol has a low order of acute toxicity.
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Acute Toxicity	✔	Carcinogenicity	⊖
Skin Irritation/Corrosion	✔	Reproductivity	⊖
Serious Eye Damage/Irritation	✔	STOT - Single Exposure	⊖
Respiratory or Skin sensitisation	⊖	STOT - Repeated Exposure	⊖
Mutagenicity	⊖	Aspiration Hazard	⊖

Legend: ✔ – Data required to make classification available
 ✘ – Data available but does not fill the criteria for classification
 ⊖ – Data Not Available to make classification

CMR STATUS

Not Applicable

SECTION 12 ECOLOGICAL INFORMATION**Toxicity**

For isopropanol (IPA):
 log Kow : -0.16- 0.28
 Half-life (hr) air : 33-84
 Half-life (hr) H2O surface water : 130
 Henry's atm m3/mol: 8.07E-06
 BOD 5: 1.19,60%
 COD : 1.61-2.30,97%
 ThOD : 2.4
 BOD 20: >70% * [Akzo Nobel]

Environmental Fate

Based on calculated results from a lever 1 fugacity model, IPA is expected to partition primarily to the aquatic compartment (77.7%) with the remainder to the air (22.3%).

Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
isopropanol	low (Half-life = 14 #days)	low (Half-life = 3 #days)

Bioaccumulative potential

Ingredient	Bioaccumulation
isopropanol	low (BCF = 3.162)

Mobility in soil

Continued...

RALI ISOPROPYL ALCOHOL

Ingredient	Mobility
isopropanol	high (KOC = 1.06)


SECTION 13 DISPOSAL CONSIDERATIONS

Waste treatment methods

Product / Packaging disposal	Legislation addressing waste disposal requirements may differ by country, state and/ or territory.
	Insure that the disposal of material is carried out in accordance with Hazardous Substances (Disposal) Regulations 2001.

SECTION 14 TRANSPORT INFORMATION

Labels Required

	
Marine Pollutant	NO
HAZCHEM	Not Applicable

Land transport (UN)

UN number	1219				
Packing group	II				
UN proper shipping name	Not Applicable				
Environmental hazard	No relevant data				
Transport hazard class(es)	<table border="1"> <tbody> <tr> <td>Class</td> <td>3</td> </tr> <tr> <td>Subrisk</td> <td>Not Applicable</td> </tr> </tbody> </table>	Class	3	Subrisk	Not Applicable
Class	3				
Subrisk	Not Applicable				
Special precautions for user	<table border="1"> <tbody> <tr> <td>Special provisions</td> <td>Not Applicable</td> </tr> <tr> <td>Limited quantity</td> <td>Not Applicable</td> </tr> </tbody> </table>	Special provisions	Not Applicable	Limited quantity	Not Applicable
Special provisions	Not Applicable				
Limited quantity	Not Applicable				

Air transport (ICAO-IATA / DGR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Sea transport (IMDG-Code / GGVSee): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

SECTION 15 REGULATORY INFORMATION

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

This substance can be managed under the controls specified in the Transfer Notice or alternatively it may be managed using the conditions specified in an applicable Group Standard.

HSR Number	Group Standard
HSR006433	Not Available

isopropanol(67-63-0) is found on the following regulatory lists	"New Zealand Inventory of Chemicals (NZIoC)", "International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs", "New Zealand Workplace Exposure Standards (WES)", "New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals"
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Location Test Certificate

Subject to Regulation 55 of the Hazardous Substances (Classes 1 to 5 Controls) Regulations a location test certificate is required when quantity greater than or equal to those indicated below are present.

Hazard Class	Quantity beyond which controls apply for closed containers	Quantity beyond which controls apply when use occurring in open containers
3.1B	100 L in containers greater than 5 L 250 L in containers up to and including 5 L	50 L 50 L

Approved Handler

Subject to Regulation 56 of the Hazardous Substances (Classes 1 to 5 Controls) Regulations, the substance must be under the personal control of an Approved Handler when present in a quantity greater than or equal to those indicated below.

Class of substance	Quantities
3.1B	250 L (when in containers greater than 5 L) 500 L (when in containers up to and including 5 L)

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:

Continued...

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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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