

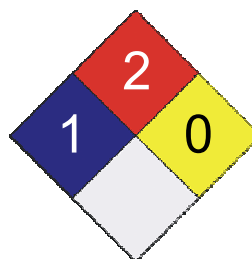
MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Product Name 641 – RA101C Pro Link Non-Butyl Glass Cleaner
CAS # Mixture
Product Use Glass Cleaner
Manufacturer Pro-Link, Inc.
Ottawa, ON K1Z 1E9
Canada
Phone: 1-800-74-LINKS
Emergency Phone: 1-866-836-8855

LEGEND HMIS/NFPA	
Severe	4
Serious	3
Moderate	2
Slight	1
Minimal	0

Health	* 1
Flammability	2
Physical Hazard	0
Personal Protection	B



2. Hazards Identification

Emergency Overview DANGER
EYE AND SKIN IRRITANT.
Contains a potential teratogen.
Contains a potential mutagen.
Contents under pressure. Containers may explode when heated.

Potential short term health effects

Routes of exposure Eye, Skin contact, Inhalation, Ingestion.

Eyes May cause irritation.

Skin May cause irritation.

Inhalation Excessive intentional inhalation may cause respiratory tract irritation and central nervous system effects (headache, dizziness).

Ingestion Not a normal route of exposure. May cause stomach distress, nausea or vomiting.

Target organs Blood. Eyes. Liver. Respiratory system. Skin.

Chronic effects Prolonged or repeated exposure can cause drying, defatting and dermatitis.

Signs and symptoms Symptoms may include redness, oedema, drying, defatting and cracking of the skin. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.

3. Composition/Information on Ingredients

Ingredient(s)	CAS #	Percent
Methyl alcohol	67-56-1	0.5 - 1.5
Butane	106-97-8	1 - 5
Ethanol	64-17-5	10 - 30

4. First Aid Measures

First aid procedures

Eye contact Immediately flush with cool water. Remove contact lenses, if applicable, and continue flushing for 15 minutes. Obtain medical attention immediately.

Skin contact Flush with cool water. Wash with soap and water. Obtain medical attention if irritation persists.

Inhalation	If symptoms develop, move victim to fresh air. If symptoms persist, obtain medical attention. If breathing has stopped, trained personnel should administer CPR immediately.
Ingestion	Do not induce vomiting. Rinse mouth with water, then drink one or two glasses of water. Obtain medical attention. Never give anything by mouth if victim is unconscious, or is convulsing.
Notes to physician	Symptoms may be delayed.
General advice	If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.

5. Fire-fighting Measures

Flammable properties	Non-flammable aerosol by flame projection test. Containers may explode when heated.
Extinguishing media	
Suitable extinguishing media	Water spray. Fog. Foam.
Unsuitable extinguishing media	Do not use a solid water stream as it may scatter and spread fire.
Protection of firefighters	
Specific hazards arising from the chemical	Contents under pressure. Pressurized container may explode when exposed to heat or flame. Cool containers with flooding quantities of water until well after fire is out.
Protective equipment for firefighters	Firefighters should wear full protective clothing including self contained breathing apparatus.
Hazardous combustion products	May include and are not limited to: Oxides of carbon.
Explosion data	
Sensitivity to mechanical impact	Not available
Sensitivity to static discharge	Not available

6. Accidental Release Measures

Personal precautions	Keep unnecessary personnel away. Do not touch or walk through spilled material. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep people away from and upwind of spill/leak.
Methods for containment	Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Stop leak if you can do so without risk. Prevent entry into waterways, sewers, basements or confined areas.
Methods for cleaning up	Before attempting clean up, refer to hazard data given above. Remove sources of ignition. Although the chance of a significant spill or leak is unlikely in aerosol containers, in the event of such an occurrence, absorb spilled material with a non-flammable absorbent such as sand or vermiculite.

7. Handling and Storage

Handling	Use good industrial hygiene practices in handling this material.
Storage	Keep out of reach of children. Do not store at temperatures above 49°C (120.2°F). Keep away from heat, open flames or other sources of ignition.

8. Exposure Controls / Personal Protection

Exposure limits Ingredient(s)	Exposure limits
Butane	ACGIH-TLV TWA: 1000 ppm
Ethanol	ACGIH-TLV TWA: 1000 ppm
Methyl alcohol	ACGIH-TLV TWA: 200 ppm STEL: 250 ppm

Engineering controls	General ventilation normally adequate.
Personal protective equipment	
Eye/Face protection	Wear safety glasses with side shields.
Hand protection	Rubber gloves. Confirm with a reputable supplier first.
Skin and body protection	As required by employer code.
Respiratory protection	Where exposure guideline levels may be exceeded, use an approved NIOSH respirator.
General hygiene considerations	Handle in accordance with good industrial hygiene and safety practice. When using do not eat or drink. Wash hands and face before breaks and immediately after handling the product.

9. Physical & Chemical Properties

Appearance	Compressed liquefied gas
Colour	White
Form	Foam
Odour	Floral
Odour threshold	Not available
Physical state	Gas
pH	10 - 11
Freezing point	Not available
Boiling point	93.00 °C (199.4 °F) (estimated)
Flash point	-104.44 °C (-156 °F) (estimated)
Evaporation Rate	Not available
Flammability	5.6387 kJ/g
Flammability limits in air, lower, % by volume	Not available
Flammability Limits in Air, Upper, % by Volume	Not available
Vapour pressure	515 - 584 kPa
Vapour density	Not available
Specific gravity	0.9707 (Concentrate)
Octanol/water coefficient	Not available
Solubility (H2O)	Partially
Auto-ignition temperature	Not available
VOC (Weight %)	Not available
Viscosity	Slightly viscous

10. Chemical Stability & Reactivity Information

Chemical stability	Stable under recommended storage conditions.
Conditions to avoid	Aerosol containers are unstable at temperatures above 49°C (120.2°F). Do not mix with other chemicals.
Incompatible materials	Acids. Oxidizers. Caustics.
Hazardous decomposition products	May include and are not limited to: Oxides of carbon.
Possibility of hazardous reactions	Hazardous polymerisation does not occur.

11. Toxicological Information

Component analysis - LC50

Ingredient(s)	LC50
Butane	Not available
Ethanol	31623 ppm rat
Methyl alcohol	83.2 mg/l/4h rat

Component analysis - Oral LD50

Ingredient(s)	LD50
Butane	Not available
Ethanol	3450 mg/kg mouse; 1501 mg/kg rat
Methyl alcohol	5628 mg/kg rat; 7300 mg/kg mouse; 14200 mg/kg rabbit; 7600 mg/kg Monkey

Effects of acute exposure

Eye	May cause irritation.
Skin	May cause irritation.
Inhalation	Excessive intentional inhalation may cause respiratory tract irritation and central nervous system effects (headache, dizziness).
Ingestion	Not a normal route of exposure. May cause stomach distress, nausea or vomiting.
Sensitisation	Non-hazardous by WHMIS criteria.
Chronic effects	Non-hazardous by WHMIS criteria.
Carcinogenicity	Non-hazardous by WHMIS criteria.

ACGIH - Threshold Limits Values - Carcinogens

Ethanol	64-17-5	A4 - Not Classifiable as a Human Carcinogen
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Mutagenicity Mutagenic effects were observed in somatic and reproductive cells of live animals (rats and mice) exposed to high oral doses of ethanol.

Reproductive effects Non-hazardous by WHMIS criteria.

Teratogenicity Methanol has produced teratogenic effects in mice exposed by inhalation to high concentrations that did not produce significant maternal toxicity.

12. Ecological Information

Ecotoxicity effects Components of this product have been identified as having potential environmental concerns.

Ecotoxicity - Freshwater Fish Species Data

Ethanol	64-17-5	96 Hr LC50 Oncorhynchus mykiss: 12900 mg/L [flow-through] (30 days old); 96 Hr LC50 Pimephales promelas: 14.2 mg/L
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Ecotoxicity - Microtox Data

Ethanol	64-17-5	5 min EC50 Photobacterium phosphoreum: 35470 mg/L; 30 min EC50 Photobacterium phosphoreum: 34634 mg/L
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Ecotoxicity - Water Flea Data

Ethanol	64-17-5	48 Hr EC50 Daphnia magna: 9268 mg/L; 24 Hr EC50 Daphnia magna: 10800 mg/L
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Environmental effects Not available

Aquatic toxicity Not available

Persistence and degradability Not available

Bioaccumulation/accumulation Not available

Partition coefficient Not available

Mobility in environmental media Not available

Chemical fate information Not available

13. Disposal Considerations

Waste codes Not available

Disposal instructions Dispose in accordance with all applicable regulations.

Waste from residues / unused products Not available

Contaminated packaging Not available

14. Transport Information

Transportation of Dangerous Goods (TDG)

Basic shipping requirements:

Proper shipping name AEROSOLS, non-flammable

Hazard class 2.2

UN number UN1950

Additional information:

Special provisions 80

Packaging exceptions <1L - Consumer Commodity



15. Regulatory Information

Canadian federal regulations

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

Canada - WHMIS - Ingredient Disclosure List

Butane	106-97-8	1 %
Ethanol	64-17-5	0.1 %

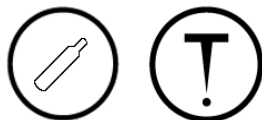
WHMIS classification

Class A - Compressed Gas, Class D - Division 2A, 2B

WHMIS status

Controlled

WHMIS labeling



Inventory Status

Country(s) or region	Inventory Name	On Inventory (Yes/No)*
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No

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

16. Other Information

Disclaimer

Information contained herein was obtained from sources considered technically accurate and reliable. While every effort has been made to ensure full disclosure of product hazards, in some cases data is not available and is so stated. Since conditions of actual product use are beyond control of the supplier, it is assumed that users of this material have been fully trained according to the requirements of all applicable legislation and regulatory instruments. No warranty, expressed or implied, is made and supplier will not be liable for any losses, injuries or consequential damages which may result from the use of or reliance on any information contained in this document.

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Prepared by

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