SAFETY DATA SHEET

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

1.1. Product identifier

Trade name or designation of the mixture	Instant Out Aerosol
Registration number	-
Synonyms	None.
Product Code	126419
Issue date	04-11-2016
Version number	05

Distributer in New Zealand
Pacer Car Clean Products NZ LTD
33 Ha Crescent Wiri
Auckland, New Zealand
Telephone: +64 9 25000 91
Fax: +64 9 25000 92
Web: :www.pacer.co.nz

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

Identified uses	Carpet Cleaner
Uses advised against	None known.

24hr Emergency Assistance in New Zealand
National Poison Control Center: 0800 Poison [764 766]

1.3. Details of the supplier of the safety data sheet

Supplier

Company name	Malco Products, Inc.	
Address	361 Fairview Ave Barberton, OH 44203 US	
Division		
Telephone	Phone	800-253-2526
	Fax	330-777-8317
e-mail	msdsinfo@malcopro.com	
Contact person	Not available.	

1.4. Emergency telephone number

Phone	1-800-424-9300

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

The mixture has been assessed and/or tested for its physical, health and environmental hazards and the following classification applies.

Classification according to Regulation (EC) No 1272/2008 as amended

Physical hazards		
Flammable gases (including chemically unstable gases)	Category 1	H220 - Extremely flammable gas.
Aerosols	Category 1	H222 - Extremely flammable aerosol. H229 - Pressurized container: May burst if heated.
Gases under pressure	Compressed gas	H280 - Contains gas under pressure; may explode if heated.
Health hazards		
Acute toxicity, oral Acute	Category 4	H302 - Harmful if swallowed.
toxicity, dermal Acute	Category 4	H312 - Harmful in contact with skin.
toxicity, inhalation Skin	Category 4	
corrosion/irritation	Category 2	H315 - Causes skin irritation.
Serious eye damage/eye irritation	Category 2	H319 - Causes serious eye irritation.

Hazard summary	CONTENTS UNDER PRESSURE. Aerosol. Pressurized container may explode when exposed to heat or flame. Vapors may cause a flash fire or ignite explosively. Harmful if inhaled. Harmful in contact with skin. Harmful if swallowed. Causes skin irritation. Causes serious eye irritation.

Hazard Summary (according to Dangerous Substances Directive)

Physical hazards	Extremely flammable.

Health hazards	Harmful by inhalation, in contact with skin and if swallowed. Irritating to eyes and skin. Occupational exposure to the substance or mixture may cause adverse health effects.
Environmental hazards	Not classified for hazards to the environment.
Specific hazards	None known.
Main symptoms	Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain.

2.2. Label elements

Label according to Regulation (EC) No. 1272/2008 as amended

Contains: Ethylene Glycol Monobutylether

Hazard pictograms

Signal word: Danger

Hazard statements

H220	Extremely flammable gas.
H222	Extremely flammable aerosol.
H229	Pressurized container: May burst if heated.
H280	Contains gas under pressure; may explode if heated.
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.

Precautionary statements

Prevention

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P211	Do not spray on an open flame or other ignition source.
P261	Avoid breathing vapors.
P264	Wash thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear eye protection/face protection.
P280	Wear protective gloves/protective clothing.

Response

P301 + P312	IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
P302 + P352	IF ON SKIN: Wash with plenty of water.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312	Call a POISON CENTER/doctor if you feel unwell.
P330	Rinse mouth.
P332 + P313	If skin irritation occurs: Get medical advice/attention.
P337 + P313	If eye irritation persists: Get medical advice/attention.
P362 + P364	Take off contaminated clothing and wash it before reuse.
P377	Leaking gas fire: Do not extinguish, unless leak can be stopped safely.
P381	Eliminate all ignition sources if safe to do so.

Storage

P403	Store in a well-ventilated place.
P410 + P403	Protect from sunlight. Store in a well-ventilated place.
P410 + P412	Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.

Disposal

P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

Supplemental label information	90% of the mixture consists of component(s) of unknown acute oral toxicity. 90% of the mixture consists of component(s) of unknown acute dermal toxicity.
2.3. Other hazards	None known.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

General information

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	Index No.	Notes
2-(2-Butoxyethoxy)ethanol	5 - < 10	112-34-5 203-961-6	-	603-096-00-8	#
Classification:	Eye Irrit. 2;H319				
Ethylene Glycol Monobutylether	5 - < 10	111-76-2 203-905-0	-	603-014-00-0	#
Classification:	Acute Tox. 4;H302, Acute Tox. 4;H312, Skin Irrit. 2;H315, Eye Irrit. 2;H319, Acute Tox. 4;H332				
N-butane	3 - < 5	106-97-8 203-448-7	-	601-004-01-8	
Classification:	Flam. Gas 1;H220				

Other components below reportable levels 70 - < 80

List of abbreviations and symbols that may be used above

CLP: Regulation No. 1272/2008.
DSD: Directive 67/548/EEC.
M: M-factor
vPvB: very persistent and very bioaccumulative substance.
PBT: persistent, bioaccumulative and toxic substance.
#: This substance has been assigned Community workplace exposure limit(s).

Composition comments The full text for all R- and H-phrases is displayed in section 16.

SECTION 4: First aid measures

General information 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.

4.1. Description of first aid measures

Inhalation Remove victim to fresh air and keep at rest in a position comfortable for breathing. Oxygen or artificial respiration if needed. Call a POISON CENTER or doctor/physician if you feel unwell.

Skin contact No adverse effects due to skin contact are expected. Remove contaminated clothing. Wash with plenty of soap and water. Get medical advice/attention if you feel unwell. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.

Eye contact Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists. No specific first aid measures noted.

Ingestion Not likely, due to the form of the product. Rinse mouth. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Get medical advice/attention if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain.

4.3. Indication of any immediate medical attention and special treatment needed Provide general supportive measures and treat symptomatically. Keep victim warm. Keep victim under observation. Symptoms may be delayed.

SECTION 5: Firefighting measures

General fire hazards Extremely flammable aerosol. Extremely flammable gas. Contents under pressure. Pressurized container may explode when exposed to heat or flame.

5.1. Extinguishing media

Suitable extinguishing media Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture Contents under pressure. Pressurized container may explode when exposed to heat or flame. During fire, gases hazardous to health may be formed.

5.3. Advice for firefighters

Special protective equipment for firefighters Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

Special fire fighting procedures	In case of fire and/or explosion do not breathe fumes. DO NOT EXTINGUISH A LEAKING GAS FIRE UNLESS LEAK CAN BE STOPPED. In case of fire: Stop leak if safe to do so. Do not move cargo or vehicle if cargo has been exposed to heat. Move containers from fire area if you can do so without risk. Do not direct water at source of leak or safety devices as icing may occur. Containers should be cooled with water to prevent vapor pressure build up. For massive fire in cargo area, use unmanned hose holder or monitor nozzles, if possible. If not, withdraw and let fire burn out.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials. Move containers from fire area if you can do so without risk. In the event of fire and/or explosion do not breathe fumes.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	Keep unnecessary personnel away. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Many gases are heavier than air and will spread along ground and collect in low or confined areas (sewers, basements, tanks). Wear appropriate protective equipment and clothing during clean-up. Avoid inhalation of vapors and spray mists. Emergency personnel need self-contained breathing equipment. Do not touch or walk through spilled material. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
For emergency responders	Keep unnecessary personnel away. Use personal protection recommended in Section 8 of the SDS.
6.2. Environmental precautions	Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.
6.3. Methods and material for containment and cleaning up	Refer to attached safety data sheets and/or instructions for use. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. Isolate area until gas has dispersed. Stop leak if you can do so without risk. Move the cylinder to a safe and open area if the leak is irreparable. If possible, turn leaking containers so that gas escapes rather than liquid. Use water spray to reduce vapors or divert vapor cloud drift. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. 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.
6.4. Reference to other sections	For personal protection, see section 8 of the SDS. For waste disposal, see section 13 of the SDS.

SECTION 7: Handling and storage

7.1. Precautions for safe handling	Pressurized container: Do not pierce or burn, even after use. Do not use if spray button is missing or defective. Do not spray on a naked flame or any other incandescent material. Do not smoke while using or until sprayed surface is thoroughly dry. Do not cut, weld, solder, drill, grind, or expose containers to heat, flame, sparks, or other sources of ignition. All equipment used when handling the product must be grounded. Close valve after each use and when empty. Protect cylinders from physical damage; do not drag, roll, slide, or drop. When moving cylinders, even for short distances, use a cart (trolley, hand truck, etc.) designed to transport cylinders. Suck back of water into the container must be prevented. Do not allow backfeed into the container. Purge air from system before introducing gas. Use only properly specified equipment which is suitable for this product, its supply pressure and temperature. Contact your gas supplier if in doubt. Do not re-use empty containers. Do not get in eyes, on skin, or on clothing. Avoid inhalation of vapors and spray mists. Avoid prolonged exposure. Do not taste or swallow. When using, do not eat, drink or smoke. Use only outdoors or in a well-ventilated area. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Wash contaminated clothing before reuse. Observe good industrial hygiene practices.
7.2. Conditions for safe storage, including any incompatibilities	Level 1 Aerosol. Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 50°C/122 °F. Do not puncture, incinerate or crush. Do not handle or store near an open flame, heat or other sources of ignition. This material can accumulate static charge which may cause spark and become an ignition source. Cylinders should be stored upright, with valve protection cap in place, and firmly secured to prevent falling or being knocked over. Stored containers should be periodically checked for general condition and leakage. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS).
7.3. Specific end use(s)	Not available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

Austria. MAK List, OEL Ordinance (GwV), BGBl. II, no. 184/2001

Components	Type	Value
2-(2-Butoxyethoxy)ethanol (CAS 112-34-5)	MAK	97,5 mg/m3
		10 ppm
	STEL	101,2 mg/m3
		15 ppm
Ethylene Glycol Monobutylether (CAS 111-76-2)	MAK	98 mg/m3
		20 ppm
	STEL	200 mg/m3
		40 ppm
N-butane (CAS 106-97-8)	Ceiling	3800 mg/m3
		1600 ppm
	MAK	1900 mg/m3
		800 ppm
Propane (CAS 74-98-6)	Ceiling	3600 mg/m3
		2000 ppm
	MAK	1800 mg/m3
		1000 ppm

Belgium. Exposure Limit Values

Components	Type	Value
N-butane (CAS 106-97-8)	TWA	1000 ppm
Propane (CAS 74-98-6)	TWA	1000 ppm

Belgium. Exposure Limit Values.

Components	Type	Value
2-(2-Butoxyethoxy)ethanol (CAS 112-34-5)	STEL	101,2 mg/m3
		15 ppm
	TWA	67,5 mg/m3
		10 ppm
Ethylene Glycol Monobutylether (CAS 111-76-2)	STEL	246 mg/m3
		50 ppm
	TWA	98 mg/m3
		20 ppm

Bulgaria. OELs. Regulation No 13 on protection of workers against risks of exposure to chemical agents at work

Components	Type	Value
2-(2-Butoxyethoxy)ethanol (CAS 112-34-5)	STEL	101,2 mg/m3
		15 ppm
	TWA	67,5 mg/m3
		10 ppm
Ethylene Glycol Monobutylether (CAS 111-76-2)	STEL	246 mg/m3
		50 ppm
	TWA	98 mg/m3
		20 ppm
N-butane (CAS 106-97-8)	TWA	1800 mg/m3
Propane (CAS 74-98-6)	TWA	1800 mg/m3

Croatia. Dangerous Substance Exposure Limit Values in the Workplace (ELVs), Annexes 1 and 2, Narodne Novine, 13/09

Components	Type	Value
2-(2-Butoxyethoxy)ethanol (CAS 112-34-5)	MAC	67,5 mg/m3
		10 ppm
	STEL	101,2 mg/m3
		15 ppm

Croatia. Dangerous Substance Exposure Limit Values in the Workplace (ELVs), Annexes 1 and 2, Narodne Novine, 13/09

Components	Type	Value
Ethylene Glycol Monobutylether (CAS 111-76-2)	MAC	98 mg/m3
		20 ppm
	STEL	246 mg/m3
		50 ppm
N-butane (CAS 106-97-8)	MAC	1450 mg/m3
		10 ppm
	STEL	1810 mg/m3
		750 ppm

Czech Republic. OELs. Government Decree 361

Components	Type	Value
2-(2-Butoxyethoxy)ethanol (CAS 112-34-5)	Ceiling	100 mg/m3
	TWA	70 mg/m3
Ethylene Glycol Monobutylether (CAS 111-76-2)	Ceiling	200 mg/m3
	TWA	100 mg/m3

Denmark. Exposure Limit Values

Components	Type	Value
2-(2-Butoxyethoxy)ethanol (CAS 112-34-5)	TLV	68 mg/m3
		10 ppm
Ethylene Glycol Monobutylether (CAS 111-76-2)	TLV	98 mg/m3
		20 ppm
N-butane (CAS 106-97-8)	TLV	1200 mg/m3
		500 ppm
Propane (CAS 74-98-6)	TLV	1800 mg/m3
		1000 ppm

Estonia. OELs. Occupational Exposure Limits of Hazardous Substances. (Annex of Regulation No. 293 of 18 September 2001)

Components	Type	Value
2-(2-Butoxyethoxy)ethanol (CAS 112-34-5)	TWA	67,5 mg/m3
		10 ppm
Ethylene Glycol Monobutylether (CAS 111-76-2)	STEL	246 mg/m3
		50 ppm
	TWA	98 mg/m3
		20 ppm
N-butane (CAS 106-97-8)	TWA	1500 mg/m3
		800 ppm
Propane (CAS 74-98-6)	TWA	1800 mg/m3
		1000 ppm

Finland. Workplace Exposure Limits

Components	Type	Value
2-(2-Butoxyethoxy)ethanol (CAS 112-34-5)	TWA	68 mg/m3
		10 ppm
Ethylene Glycol Monobutylether (CAS 111-76-2)	STEL	250 mg/m3
		50 ppm
	TWA	98 mg/m3
		20 ppm
N-butane (CAS 106-97-8)	STEL	2400 mg/m3
		1000 ppm
	TWA	1900 mg/m3

Finland. Workplace Exposure Limits

Components	Type	Value
		800 ppm
Propane (CAS 74-98-6)	STEL	2000 mg/m3
		1100 ppm
	TWA	1500 mg/m3
		800 ppm

France. Threshold Limit Values (VLEP) for Occupational Exposure to Chemicals in France, INRS ED 984

Components	Type	Value
2-(2-Butoxyethoxy)ethanol (CAS 112-34-5)	VLE	101,2 mg/m3
		15 ppm
	VME	67,5 mg/m3
		10 ppm
Ethylene Glycol Monobutylether (CAS 111-76-2)	VLE	246 mg/m3
		50 ppm
	VME	49 mg/m3
		10 ppm
N-butane (CAS 106-97-8)	VME	1900 mg/m3
		800 ppm

Germany. DFG MAK List (advisory OELs). Commission for the Investigation of Health Hazards of Chemical Compounds in the Work Area (DFG)

Components	Type	Value	Form
2-(2-Butoxyethoxy)ethanol (CAS 112-34-5)	TWA	67 mg/m3	Vapor and aerosol.
		10 ppm	Vapor and aerosol.
Ethylene Glycol Monobutylether (CAS 111-76-2)	TWA	49 mg/m3	
		10 ppm	
N-butane (CAS 106-97-8)	TWA	2400 mg/m3	
		1000 ppm	
Propane (CAS 74-98-6)	TWA	1800 mg/m3	
		1000 ppm	

Germany. TRGS 900, Limit Values in the Ambient Air at the Workplace

Components	Type	Value	Form
2-(2-Butoxyethoxy)ethanol (CAS 112-34-5)	AGW	67 mg/m3	Vapor and aerosol.
		10 ppm	Vapor and aerosol.
Ethylene Glycol Monobutylether (CAS 111-76-2)	AGW	49 mg/m3	
		10 ppm	
N-butane (CAS 106-97-8)	AGW	2400 mg/m3	
		1000 ppm	
Propane (CAS 74-98-6)	AGW	1800 mg/m3	
		1000 ppm	

Greece. OELs (Decree No. 90/1999, as amended)

Components	Type	Value
2-(2-Butoxyethoxy)ethanol (CAS 112-34-5)	STEL	101,2 mg/m3
		15 ppm
	TWA	67,5 mg/m3
		10 ppm
Ethylene Glycol Monobutylether (CAS 111-76-2)	TWA	120 mg/m3
		25 ppm
N-butane (CAS 106-97-8)	TWA	2350 mg/m3
		1000 ppm
Propane (CAS 74-98-6)	TWA	1800 mg/m3

Greece. OELs (Decree No. 90/1999, as amended)

Components	Type	Value
		1000 ppm

Hungary. OELs. Joint Decree on Chemical Safety of Workplaces

Components	Type	Value
2-(2-Butoxyethoxy)ethanol (CAS 112-34-5)	STEL	101,2 mg/m3
	TWA	67,5 mg/m3
Ethylene Glycol Monobutylether (CAS 111-76-2)	STEL	246 mg/m3
	TWA	98 mg/m3
N-butane (CAS 106-97-8)	STEL	9400 mg/m3
	TWA	2350 mg/m3

Iceland. OELs. Regulation 154/1999 on occupational exposure limits

Components	Type	Value
2-(2-Butoxyethoxy)ethanol (CAS 112-34-5)	STEL	101,2 mg/m3
		15 ppm
	TWA	67,5 mg/m3
		10 ppm
Ethylene Glycol Monobutylether (CAS 111-76-2)	STEL	246 mg/m3
		50 ppm
	TWA	100 mg/m3
		20 ppm
N-butane (CAS 106-97-8)	TWA	1200 mg/m3
		500 ppm
Propane (CAS 74-98-6)	TWA	1800 mg/m3
		1000 ppm

Ireland. Occupational Exposure Limits

Components	Type	Value
2-(2-Butoxyethoxy)ethanol (CAS 112-34-5)	STEL	101,2 mg/m3
		15 ppm
	TWA	67,5 mg/m3
		10 ppm
Ethylene Glycol Monobutylether (CAS 111-76-2)	STEL	246 mg/m3
		50 ppm
	TWA	98 mg/m3
		20 ppm
N-butane (CAS 106-97-8)	TWA	1000 ppm
Propane (CAS 74-98-6)	TWA	1000 ppm

Italy. Occupational Exposure Limits

Components	Type	Value
2-(2-Butoxyethoxy)ethanol (CAS 112-34-5)	STEL	101,2 mg/m3
		15 ppm
	TWA	67,5 mg/m3
		10 ppm
Ethylene Glycol Monobutylether (CAS 111-76-2)	STEL	246 mg/m3
		50 ppm
	TWA	98 mg/m3
		20 ppm
N-butane (CAS 106-97-8)	STEL	1000 ppm

Latvia. OELs. Occupational exposure limit values of chemical substances in work environment

Components	Type	Value
2-(2-Butoxyethoxy)ethanol (CAS 112-34-5)	STEL	101,2 mg/m3
		15 ppm
	TWA	67,5 mg/m3
		10 ppm
Ethylene Glycol Monobutylether (CAS 111-76-2)	STEL	246 mg/m3
		50 ppm
	TWA	98 mg/m3
		20 ppm
N-butane (CAS 106-97-8)	TWA	300 mg/m3

Lithuania. OELs. Limit Values for Chemical Substances, General Requirements

Components	Type	Value
2-(2-Butoxyethoxy)ethanol (CAS 112-34-5)	STEL	200 mg/m3
		30 ppm
	TWA	100 mg/m3
		15 ppm
Ethylene Glycol Monobutylether (CAS 111-76-2)	STEL	100 mg/m3
		20 ppm
	TWA	50 mg/m3
		10 ppm

Luxembourg. Binding Occupational exposure limit values (Annex I), Memorial A

Components	Type	Value
2-(2-Butoxyethoxy)ethanol (CAS 112-34-5)	STEL	101,2 mg/m3
		15 ppm
	TWA	67,5 mg/m3
		10 ppm
Ethylene Glycol Monobutylether (CAS 111-76-2)	STEL	246 mg/m3
		50 ppm
	TWA	98 mg/m3
		20 ppm

Malta. OELs. Occupational Exposure Limit Values (L.N. 227. of Occupational Health and Safety Authority Act (CAP. 424), Schedules I and V)

Components	Type	Value
2-(2-Butoxyethoxy)ethanol (CAS 112-34-5)	STEL	101,2 mg/m3
		15 ppm
	TWA	67,5 mg/m3
		10 ppm
Ethylene Glycol Monobutylether (CAS 111-76-2)	STEL	246 mg/m3
		50 ppm
	TWA	98 mg/m3
		20 ppm

Netherlands. OELs (binding)

Components	Type	Value
2-(2-Butoxyethoxy)ethanol (CAS 112-34-5)	STEL	100 mg/m3
	TWA	50 mg/m3
Ethylene Glycol Monobutylether (CAS 111-76-2)	STEL	246 mg/m3
	TWA	100 mg/m3

Norway. Administrative Norms for Contaminants in the Workplace

Components	Type	Value
2-(2-Butoxyethoxy)ethanol (CAS 112-34-5)	TLV	68 mg/m3
		10 ppm
Ethylene Glycol Monobutylether (CAS 111-76-2)	TLV	50 mg/m3
		10 ppm
N-butane (CAS 106-97-8)	TLV	600 mg/m3
		250 ppm
Propane (CAS 74-98-6)	TLV	900 mg/m3
		500 ppm

Poland. MACs. Minister of Labour and Social Policy Regarding Maximum Allowable Concentrations and Intensities in Working Environment

Components	Type	Value
2-(2-Butoxyethoxy)ethanol (CAS 112-34-5)	STEL	100 mg/m3
	TWA	67 mg/m3
Ethylene Glycol Monobutylether (CAS 111-76-2)	STEL	200 mg/m3
	TWA	98 mg/m3
N-butane (CAS 106-97-8)	STEL	3000 mg/m3
	TWA	1900 mg/m3
Propane (CAS 74-98-6)	TWA	1800 mg/m3

Portugal. OELs. Decree-Law n. 290/2001 (Journal of the Republic - 1 Series A, n.266)

Components	Type	Value
2-(2-Butoxyethoxy)ethanol (CAS 112-34-5)	STEL	101,2 mg/m3
		15 ppm
	TWA	67,5 mg/m3
		10 ppm
Ethylene Glycol Monobutylether (CAS 111-76-2)	STEL	246 mg/m3
		50 ppm
	TWA	98 mg/m3
		20 ppm

Portugal. VLEs. Norm on occupational exposure to chemical agents (NP 1796)

Components	Type	Value
Ethylene Glycol Monobutylether (CAS 111-76-2)	TWA	20 ppm
Propane (CAS 74-98-6)	TWA	2500 ppm

Romania. OELs. Protection of workers from exposure to chemical agents at the workplace

Components	Type	Value
2-(2-Butoxyethoxy)ethanol (CAS 112-34-5)	STEL	250 mg/m3
	TWA	150 mg/m3
Ethylene Glycol Monobutylether (CAS 111-76-2)	STEL	250 mg/m3
		50 ppm
	TWA	150 mg/m3
		30 ppm
Propane (CAS 74-98-6)	STEL	1800 mg/m3
		1000 ppm
	TWA	1400 mg/m3
		778 ppm

Slovakia. OELs for carcinogens and mutagens. Regulation No. 46/2002 on carcinogenic and mutagenic substances

Components	Type	Value
N-butane (CAS 106-97-8)	TWA	2400 mg/m3

Slovakia. OELs for carcinogens and mutagens. Regulation No. 46/2002 on carcinogenic and mutagenic substances

Components	Type	Value
		1000 ppm

Slovakia. OELs. Regulation No. 300/2007 concerning protection of health in work with chemical agents

Components	Type	Value
2-(2-Butoxyethoxy)ethanol (CAS 112-34-5)	STEL	101,2 mg/m3
		15 ppm
	TWA	67,5 mg/m3
		10 ppm
Ethylene Glycol Monobutylether (CAS 111-76-2)	STEL	246 mg/m3
		50 ppm
	TWA	98 mg/m3
		20 ppm

Slovenia. OELs. Regulations concerning protection of workers against risks due to exposure to chemicals while working (Official Gazette of the Republic of Slovenia)

Components	Type	Value
2-(2-Butoxyethoxy)ethanol (CAS 112-34-5)	TWA	67,5 mg/m3
		10 ppm
Ethylene Glycol Monobutylether (CAS 111-76-2)	TWA	98 mg/m3
		20 ppm
N-butane (CAS 106-97-8)	TWA	2400 mg/m3
		1000 ppm
Propane (CAS 74-98-6)	TWA	1800 mg/m3
		1000 ppm

Spain. Occupational Exposure Limits

Components	Type	Value
2-(2-Butoxyethoxy)ethanol (CAS 112-34-5)	STEL	101,2 mg/m3
		15 ppm
	TWA	67,5 mg/m3
		10 ppm
Ethylene Glycol Monobutylether (CAS 111-76-2)	STEL	245 mg/m3
		50 ppm
	TWA	98 mg/m3
		20 ppm

Sweden. Occupational Exposure Limit Values

Components	Type	Value
2-(2-Butoxyethoxy)ethanol (CAS 112-34-5)	STEL	200 mg/m3
		30 ppm
	TWA	100 mg/m3
		15 ppm
Ethylene Glycol Monobutylether (CAS 111-76-2)	STEL	100 mg/m3
		20 ppm
	TWA	50 mg/m3
		10 ppm

Switzerland. SUVA Grenzwerte am Arbeitsplatz

Components	Type	Value
2-(2-Butoxyethoxy)ethanol (CAS 112-34-5)	STEL	101 mg/m3
		15 ppm
	TWA	67 mg/m3
		10 ppm

Switzerland. SUVA Grenzwerte am Arbeitsplatz

Components	Type	Value
Ethylene Glycol Monobutylether (CAS 111-76-2)	STEL	98 mg/m3
		20 ppm
	TWA	49 mg/m3
		10 ppm
N-butane (CAS 106-97-8)	STEL	7200 mg/m3
		3200 ppm
	TWA	1900 mg/m3
		800 ppm
Propane (CAS 74-98-6)	STEL	7200 mg/m3
		4000 ppm
	TWA	1800 mg/m3
		1000 ppm

UK. EH40 Workplace Exposure Limits (WELs)

Components	Type	Value
2-(2-Butoxyethoxy)ethanol (CAS 112-34-5)	STEL	101,2 mg/m3
		15 ppm
	TWA	67,5 mg/m3
		10 ppm
Ethylene Glycol Monobutylether (CAS 111-76-2)	STEL	246 mg/m3
		50 ppm
	TWA	123 mg/m3
		25 ppm
N-butane (CAS 106-97-8)	STEL	1810 mg/m3
		750 ppm
	TWA	1450 mg/m3
		600 ppm

EU. Indicative Exposure Limit Values in Directives 91/322/EEC, 2000/39/EC, 2006/15/EC, 2009/161/EU

Components	Type	Value
2-(2-Butoxyethoxy)ethanol (CAS 112-34-5)	STEL	101,2 mg/m3
		15 ppm
	TWA	67,5 mg/m3
		10 ppm
Ethylene Glycol Monobutylether (CAS 111-76-2)	STEL	246 mg/m3
		50 ppm
	TWA	98 mg/m3
		20 ppm

Biological limit values

Czech Republic. Limit Values for Indictators of Biological Exposure Tests in Urine and Blood, Annex 2, Tables 1 and 2, Government Decree 432/2003 Sb.

Components	Value	Determinant	Specimen	Sampling Time
Ethylene Glycol Monobutylether (CAS 111-76-2)	200 mg/g	Butoxyacetic acid (with hydrolysis)	Creatinine in urine	*
	0,17 mmol/mmol	Butoxyacetic acid (with hydrolysis)	Creatinine in urine	*

* - For sampling details, please see the source document.

Germany. TRGS 903, BAT List (Biological Limit Values)

Components	Value	Determinant	Specimen	Sampling Time
Ethylene Glycol Monobutylether (CAS 111-76-2)	100 mg/l	Butoxyessigsäure	Urine	*

* - For sampling details, please see the source document.

Spain. Biological Limit Values (VLBs), Occupational Exposure Limits for Chemical Agents, Table 4

Components	Value	Determinant	Specimen	Sampling Time
Ethylene Glycol Monobutylether (CAS 111-76-2)	200 mg/g	Ácido butoxiacético, con hidrólisis	Creatinine in urine	*

* - For sampling details, please see the source document.

Switzerland. BAT-Werte (Biological Limit Values in the Workplace as per SUVA)

Components	Value	Determinant	Specimen	Sampling Time
Ethylene Glycol Monobutylether (CAS 111-76-2)	200 mg/l	Gesamt-Butoxyessigsäure	Urine	*
	100 mg/l	Butoxyessigsäure	Urine	*

* - For sampling details, please see the source document.

UK. EH40 Biological Monitoring Guidance Values (BMGVs)

Components	Value	Determinant	Specimen	Sampling Time
Ethylene Glycol Monobutylether (CAS 111-76-2)	240 mmol/mol	Butoxyacetic acid	Creatinine in urine	*

* - For sampling details, please see the source document.

Recommended monitoring procedures Follow standard monitoring procedures.

Derived no-effect level (DNEL) Not available.

Predicted no effect concentrations (PNECs) Not available.

Exposure guidelines

EU Exposure Limit Values: Skin designation

Ethylene Glycol Monobutylether (CAS 111-76-2) Can be absorbed through the skin.

8.2. Exposure controls

Appropriate engineering controls 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. Eye wash facilities and emergency shower must be available when handling this product.

Individual protection measures, such as personal protective equipment

General information Use personal protective equipment as required. Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment.

Eye/face protection Wear safety glasses with side shields (or goggles).

Skin protection

- Hand protection Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove supplier.

- Other Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

Respiratory protection In case of insufficient ventilation, wear suitable respiratory equipment. Chemical respirator with organic vapor cartridge.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

Hygiene measures When using do not smoke. Keep away from food and drink. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

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

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance Aerosol.

Physical state Liquid.

Form Aerosol. Compressed gas. Compressed liquefied gas.

Color Colorless

Odor Solvent.

Odor threshold	Not available.
pH	12
Melting point/freezing point	Not available.
Initial boiling point and boiling range	294,72 °F (145,96 °C) estimated
Flash point	-156,0 °F (-104,4 °C) -155,9 °F (-104,4 °C)
Evaporation rate	Not available.
Flammability (solid, gas)	Flammable gas.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	2,1 % estimated
Flammability limit - upper (%)	8,8 % estimated
Vapor pressure	Not available.
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Not available.
Solubility (other)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	500,23 °F (260,13 °C) estimated
Decomposition temperature	Not available.
Viscosity	Not available.
Explosive properties	Not explosive.
Oxidizing properties	Not oxidizing.
9.2. Other information	
Density	0,94 g/cm³
Heat of combustion (NFPA 30B)	8,25 kJ/g estimated
VOC (Weight %)	14,8 %

SECTION 10: Stability and reactivity

10.1. Reactivity	Reacts violently with strong acids. This product may react with oxidizing agents.
10.2. Chemical stability	Material is stable under normal conditions.
10.3. Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
10.4. Conditions to avoid	Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Do not mix with other chemicals. Contact with incompatible materials.
10.5. Incompatible materials	Acids. Strong oxidizing agents. Oxidizing agents.
10.6. Hazardous decomposition products	No hazardous decomposition products are known.

SECTION 11: Toxicological information

General information	Occupational exposure to the substance or mixture may cause adverse effects.
Information on likely routes of exposure	
Inhalation	Harmful if inhaled.
Skin contact	Harmful in contact with skin. Causes skin irritation. 2-Butoxy ethanol may be absorbed through the skin in toxic amounts if contact is repeated and prolonged. These effects have not been observed in humans.
Eye contact	Causes serious eye irritation.
Ingestion	Harmful if swallowed.
Symptoms	Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain.

11.1. Information on toxicological effects

Acute toxicity	In high concentrations, vapors are anesthetic and may cause headache, fatigue, dizziness and central nervous system effects. Harmful if inhaled. Harmful in contact with skin. Harmful if swallowed.

Components	Species	Test Results
2-(2-Butoxyethoxy)ethanol (CAS 112-34-5)		
Acute		
Dermal		
LD50	Rabbit	2700 mg/kg
Oral		
LD50	Guinea pig	2000 mg/kg
	Mouse	2400 mg/kg
	Rabbit	2200 mg/kg
	Rat	4500 mg/kg
Ethylene Glycol Monobutylether (CAS 111-76-2)		
Acute		
Dermal		
LD50	Rabbit	400 mg/kg
Inhalation		
LC50	Mouse	700 ppm, 7 Hours
	Rat	450 ppm, 4 Hours
Oral		
LD50	Guinea pig	1,2 g/kg
	Mouse	1,2 g/kg
	Rabbit	0,32 g/kg
	Rat	560 mg/kg
N-butane (CAS 106-97-8)		
Acute		
Inhalation		
LC50	Mouse	680 mg/l, 2 Hours
	Rat	658 mg/l, 4 Hours

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation	Causes skin irritation.
Serious eye damage/eye irritation	Causes serious eye irritation.
Respiratory sensitization	Due to partial or complete lack of data the classification is not possible.
Skin sensitization	Due to partial or complete lack of data the classification is not possible.
Germ cell mutagenicity	Due to partial or complete lack of data the classification is not possible.
Carcinogenicity	Due to partial or complete lack of data the classification is not possible.
IARC Monographs. Overall Evaluation of Carcinogenicity	
Ethylene Glycol Monobutylether (CAS 111-76-2)	3 Not classifiable as to carcinogenicity to humans.
Reproductive toxicity	Due to partial or complete lack of data the classification is not possible.
Specific target organ toxicity - single exposure	Due to partial or complete lack of data the classification is not possible.
Specific target organ toxicity - repeated exposure	Due to partial or complete lack of data the classification is not possible.
Aspiration hazard	Due to partial or complete lack of data the classification is not possible.
Mixture versus substance information	No information available.
Other information	Not available.

SECTION 12: Ecological information

12.1. Toxicity	The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Components		Species	Test Results
2-(2-Butoxyethoxy)ethanol (CAS 112-34-5)			
Aquatic			
Fish	LC50	Bluegill (Lepomis macrochirus)	1300 mg/l, 96 hours
Ethylene Glycol Monobutylether (CAS 111-76-2)			
Aquatic			
Fish	LC50	Inland silverside (Menidia beryllina)	1250 mg/l, 96 hours

* Estimates for product may be based on additional component data not shown.

12.2. Persistence and degradability	No data is available on the degradability of this product.
12.3. Bioaccumulative potential	No data available.

Partition coefficient n-octanol/water (log Kow)

2-(2-Butoxyethoxy)ethanol	0,56
Ethylene Glycol Monobutylether	0,83
N-butane	2,89

Bioconcentration factor (BCF)	Not available.
12.4. Mobility in soil	No data available.
12.5. Results of PBT and vPvB assessment	Not available.
12.6. Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Residual waste	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).
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.
EU waste code	The Waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Disposal methods/information	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Contents under pressure. Do not puncture, incinerate or crush. Dispose of contents/container in accordance with local/regional/national/international regulations.
Special precautions	Dispose in accordance with all applicable regulations.

SECTION 14: Transport information

ADR

14.1. UN number	UN1950
14.2. UN proper shipping name	AEROSOLS, FLAMMABLE
14.3. Transport hazard class(es)	
Class	2.1
Subsidiary risk	-
Label(s)	2.1
Hazard No. (ADR)	Not available.
Tunnel restriction code	D
14.4. Packing group	Not applicable.
14.5. Environmental hazards	No.
14.6. Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

RID

14.1. UN number	UN1950
14.2. UN proper shipping name	AEROSOLS, FLAMMABLE
14.3. Transport hazard class(es)	
Class	2.1
Subsidiary risk	-
Label(s)	2.1

14.4. Packing group	Not applicable.
14.5. Environmental hazards	No.
14.6. Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

ADN

14.1. UN number	UN1950
14.2. UN proper shipping name	AEROSOLS, FLAMMABLE
14.3. Transport hazard class(es)	
Class	2.1
Subsidiary risk	-
14.4. Packing group	Not applicable.
14.5. Environmental hazards	No.
14.6. Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

IATA

14.1. UN number	UN1950
14.2. UN proper shipping name	Aerosols, flammable
14.3. Transport hazard class(es)	
Class	2.1
Subsidiary risk	-
14.4. Packing group	Not applicable.
14.5. Environmental hazards	No.
ERG Code	10L
14.6. Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Other information	
Passenger and cargo aircraft	Allowed.
Cargo aircraft only	Allowed.

IMDG

14.1. UN number	UN1950
14.2. UN proper shipping name	AEROSOLS, FLAMMABLE
14.3. Transport hazard class(es)	
Class	2.1
Subsidiary risk	-
14.4. Packing group	Not applicable.
14.5. Environmental hazards	
Marine pollutant	No.
EmS	Not available.
14.6. Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not established.

ADN; ADR; IATA; IMDG; RID

The HSNO Approval Number for this Group Standard is: HSR002518

General information	Avoid transport on vehicles where the load space is not separated from the driver's compartment. Ensure vehicle driver is aware of the potential hazards of the load and knows what to do in the event of an accident or an emergency. Before transporting product containers: Ensure that containers are firmly secured. Ensure cylinder valve is closed and not leaking. Ensure valve outlet cap nut or plug (where provided) is correctly fitted. Ensure valve protection device (where provided) is correctly fitted. Ensure adequate ventilation. Ensure compliance with applicable regulations.

SECTION 15: Regulatory information

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

EU regulations

Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I and II, as amended

Not listed.

Regulation (EC) No. 850/2004 On persistent organic pollutants, Annex I as amended

Not listed.

Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 1 as amended

Not listed.

Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 2 as amended

Not listed.

Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 3 as amended

Not listed.

Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex V as amended

Not listed.

Regulation (EC) No. 166/2006 Annex II Pollutant Release and Transfer Registry, as amended

Not listed.

Regulation (EC) No. 1907/2006, REACH Article 59(10) Candidate List as currently published by ECHA

Not listed.

Authorizations

Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorization, as amended

Not listed.

Restrictions on use

Directive 2004/37/EC: on the protection of workers from the risks related to exposure to carcinogens and mutagens at work, as amended

N-butane (CAS 106-97-8)

Directive 92/85/EEC: on the safety and health of pregnant workers and workers who have recently given birth or are breastfeeding, as amended

N-butane (CAS 106-97-8)

Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use as amended

2-(2-Butoxyethoxy)ethanol (CAS 112-34-5)
N-butane (CAS 106-97-8)

Other EU regulations

Directive 2012/18/EU on major accident hazards involving dangerous substances

N-butane (CAS 106-97-8)

Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work, as amended

2-(2-Butoxyethoxy)ethanol (CAS 112-34-5)
Ethylene Glycol Monobutylether (CAS 111-76-2)
N-butane (CAS 106-97-8)

Directive 94/33/EC on the protection of young people at work, as amended

N-butane (CAS 106-97-8)

Other regulations	The product is classified and labelled in accordance with EC directives or respective national laws. This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006.
National regulations	Young people under 18 years old are not allowed to work with this product according to EU Directive 94/33/EC on the protection of young people at work. Follow national regulation for work with chemical agents.
15.2. Chemical safety assessment	No Chemical Safety Assessment has been carried out.

SECTION 16: Other information

List of abbreviations	Not available.
References	Not available.

Information on evaluation method leading to the classification of mixture	The classification for health and environmental hazards is derived by a combination of calculation methods and test data, if available.
Full text of any H-statements not written out in full under Sections 2 to 15	H220 Extremely flammable gas. H302 Harmful if swallowed. H312 Harmful in contact with skin. H315 Causes skin irritation. H319 Causes serious eye irritation. H332 Harmful if inhaled.
Revision information	None.
Training information	Follow training instructions when handling this material.
Disclaimer	Malco Automotive cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.