# SAFETY DATA SHEET



#### 1. Identification Gallo Gun™ 4179-01 (Mag 20), 4179-20 (Mag 20) and 4179-16 (Mag 16) **Product identifier** Other means of identification Not available. **Recommended use** Industrial applications None known. **Recommended restrictions** Manufacturer/Importer/Supplier/Distributor information Manufacturer Nu-Calgon Company name Address 2611 Schuetz Road St. Louis, MO 63043 United States Telephone 314-469-7000 / 800-554-5499 E-mail Not available. **Emergency phone number** 1-800-424-9300 (CHEMTREC) See above. Supplier 2. Hazard identification **Physical hazards** Gases under pressure Liquefied gas Simple asphyxiants Category 1 **Health hazards** Not classified. Not classified. **Environmental hazards** Not classified WHMIS 2015 defined hazards Label elements Signal word Warning Hazard statement Contains gas under pressure; may explode if heated. May displace oxygen and cause rapid suffocation. **Precautionary statement** Prevention Keep container tightly closed. Use only outdoors or in a well-ventilated area. Wear respiratory protection. Response Wash hands after handling. Protect from sunlight. Store in a well-ventilated place. Storage Dispose of container in accordance with local, regional, national and international regulations. Disposal WHMIS 2015: Health Hazard(s) None known not otherwise classified (HHNOC) WHMIS 2015: Physical None known Hazard(s) not otherwise classified (PHNOC) Hazard(s) not otherwise None known. classified (HNOC)

This product is a manufactured article and is exempt.

As per OSHA Definitions: 1910.1200 (c). Article means a manufactured item other than a fluid or particle: (i) which is formed to a specific shape or design during manufacture; (ii) which has end use function(s) dependent in whole or in part upon its shape or design during end use; and (iii) which under normal conditions of use does not release more than very small quantities, e.g., minute or trace amounts of a hazardous chemical (as determined under paragraph (d) of this section), and does not pose a physical hazard or health risk to employees.

As per the Hazardous Products Act: A manufactured article means any article that is formed to a specific shape or design during manufacture, the intended use of which when in that form is dependent in whole or in part on its shape or design, and that, when being installed, if the intended use of the article requires it to be installed, and under normal conditions of use, will not release or otherwise cause an individual to be exposed to a hazardous product.

### 3. Composition/Information on ingredients

#### Mixture

Chemical name	Common name and synonyms	CAS number	%
Carbon dioxide		124-38-9	100
All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.			ne.

4. First-aid measures			
Inhalation	Carbon dioxide is harmless at atmospheric pressure. The following statements apply to contact with the gaseous version. Remove from further exposure. For those providing assistance, avoid exposure to yourself or others. Use adequate respiratory protection. If respiratory tract irritation, dizziness, nausea, or unconsciousness occurs, seek immediate medical assistance. If breathing has stopped, assist ventilation with a mechanical device or use mouth-to-mouth resuscitation.		
Skin contact	Not a normal route of exposure. Carbon dioxide is harmless at atmospheric pressure. The following statements apply to contact with the liquefied version. Remove contaminated clothing. Treat for frostbite by gently warming affected area. Wash with soap and water. Obtain medical attention if irritation persists.		
Eye contact	Not a normal route of exposure. Carbon dioxide is harmless at atmospheric pressure. The following statements apply to contact with the liquefied version. Flush eye with lukewarm, gently flowing fresh water for at least 15 minutes. Obtain medical attention immediately.		
Ingestion	Carbon dioxide is harmless at atmospheric pressure. The following statements apply to contact with the liquefied version. Do not induce vomiting. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Never give anything by mouth if victim is unconscious or is convulsing. Obtain medical attention.		
Most important symptoms/effects, acute and delayed	Convulsions. Headache. Dizziness. Fatigue. Nausea, vomiting. Very high exposure can cause suffocation from lack of oxygen. Symptoms may include loss of mobility/consciousness. Victim may not be aware of asphyxiation. Asphyxiation may bring about unconsciousness without warning and so rapidly that victim may be unable to protect themself.		
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically.		
General information	If you feel unwell, seek medical advice (show the label where possible). Show this safety data sheet to the doctor in attendance. Avoid contact with eyes and skin. Keep out of reach of children.		
	5. Fire-fighting measures		

Suitable extinguishing media	Water fog. Water spray.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire-fighting equipment/instructions	In case of fire: Stop leak if safe to do so. Move containers from fire area if you can do so without risk. Use water spray to cool unopened containers. 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	Cool containers exposed to flames with water until well after the fire is out.
General fire hazards	Contents under pressure. Pressurized container may explode when exposed to heat or flame. Vapour may accumulate. Firefighters should wear a self-contained breathing apparatus.

6. Accidental release measures				
Personal precautions, protective equipment and emergency procedures	In the event of a leak evacuate all personnel until ventilation can restore oxygen concentrations to safe levels. Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. 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. Emergency personnel need self-contained breathing equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. 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.			
Methods and materials for containment and cleaning up	Isolate area until gas has dispersed. Stop the flow of material, if this is without risk. For waste disposal, see section 13 of the SDS.			
Environmental precautions	Avoid discharge into drains, water courses or onto the ground. Do not discharge into lakes, streams, ponds or public waters.			
	7. Handling and storage			
Precautions for safe handling	Keep away from heat, sparks, open flames, hot surfaces No smoking. 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. Do not allow backfeed into the container. 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 enter storage areas or confined spaces unless adequately ventilated. Use only outdoors or in a well-ventilated area. Oxygen concentration should not fall below 19.5 % at sea level (pO2 = 135 mmHg). Mechanical ventilation or local exhaust ventilation may be required. Wear appropriate personal protective equipment. Wash thoroughly after handling. Use good industrial hygiene practices in handling this material. When using do not eat or drink.			
Conditions for safe storage, including any incompatibilities	Store in a cool, dry place out of direct sunlight. Store in tightly closed container. Store in a well-ventilated place. 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. Keep out of reach of children.			

# 8. Exposure controls/Personal protection

upational exposure limits Canada, Alberta OELs (Occupa	tional Health & Safety Code, Sc	hedule 1. Table 2)
Components	Туре	Value
Carbon dioxide (CAS 124-38-9)	STEL	54000 mg/m3
,		30000 ppm
	TWA	9000 mg/m3
		5000 ppm
Canada. British Columbia OEL Safety Regulation 296/97, as ar	s. (Occupational Exposure Limit nended)	s for Chemical Substances, Occupational Health and
Components	Туре	Value
Carbon dioxide (CAS 124-38-9)	STEL	15000 ppm
	TWA	5000 ppm
Canada Manitoba OEL e (Pog	217/2006 The Workplace Safety	And Health Act)
Components	Type	Value
Carbon dioxide (CAS 124-38-9)	STEL	30000 ppm
	TWA	5000 ppm
Canada, Ontario OELS, (Contro	l of Exposure to Biological or C	hemical Agents)
Components		Value
Carbon dioxide (CAS 124-38-9)	STEL	30000 ppm
	TWA	5000 ppm
Canada, Quebec OFI s. (Minist	rv of Labor - Regulation respect	ing occupational health and safety)
Components	Туре	Value
Carbon dioxide (CAS	STEL	54000 mg/m3

Components	Туре	Value
		30000 ppm
	TWA	9000 mg/m3
		5000 ppm
Canada. Saskatchewan O Components	ELs (Occupational Health and Safety Ro Type	egulations, 1996, Table 21) Value
Carbon dioxide (CAS 124-38-9)	15 minute	30000 ppm
	8 hour	5000 ppm
US. OSHA Table Z-1 Limit Components	s for Air Contaminants (29 CFR 1910.10 Type	00) Value
Carbon dioxide (CAS 124-38-9)	PEL	9000 mg/m3
,		5000 ppm
US. ACGIH Threshold Lim	it Values	
Components	Туре	Value
Carbon dioxide (CAS	STEL	30000 ppm
124-38-9)	714/4	5000 mmm
	TWA	5000 ppm
US. NIOSH: Pocket Guide	to Chemical Hazards	Volue
Components	I ype	
124-38-9)	STEL	54000 mg/m3
,		30000 ppm
	TWA	9000 mg/m3 5000 ppm
logical limit values	No biological exposure limits noted for	the ingredient(s).
propriate engineering htrols	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. Ensure adequate ventilation	
ividual protection measure Eye/face protection	s, such as personal protective equipme Wear safety glasses with side shields	ent (or goggles).
Skin protection		
Hand protection	Wear appropriate chemical resistant g	loves. Confirm with a reputable supplier first.
Other	Wear suitable protective clothing. As required by employer code.	
Respiratory protection	In case of insufficient ventilation, wear suitable respiratory equipment. Where exposure guideline levels may be exceeded, use an approved NIOSH respirator. Respirator should be selected by and used under the direction of a trained health and safety professional following requirements found in OSHA's respirator standard (29 CFR 1910.134), CAN/CSA-Z94.4 and ANSI's standard for respiratory protection (788.2)	
Thermal hazards	Not applicable.	
neral hygiene nsiderations	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. When using do not eat or drink.	
	9. Physical and che	emical properties
nearance	Gaseous	· ·
vsical state	Gas	
m	Liquefied das	
lor	Clear colorless	
or	Odorless	
or	Odoriess	

pН

**Odor threshold** 

Information on likely routes of ex	xposure
Routes of exposure	Eye, Skin contact, Inhalation, Ingestion.
	11. Toxicological information
products	
Incompatible materials	Auminum. May include and are not limited to: Oxides of carbon
Conditions to avoid	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources.
Chemical stability	Material is stable under normal conditions.
reactions	
Reactivity	This product may react with strong oxidizing agents. No dangerous reaction known under conditions of normal use
	10. Stability and reactivity
Surface tension	16.2 mN/m
Oxidizing properties	Not oxidizina.
Molecular vointt	44 01
Molecular formula	C-O2
SUDJ Kinomatic viscosity	0.01323 mm <sup>2</sup> /s estimated
Heat of combustion (NFPA	0 kJ/g
Explosive properties	Not explosive.
Dynamic viscositv	0.02 mPa.s (68 °F (20 °C))
Density	1.51 g/cm3 estimated at -56.6 °C
Other information	
Viscosity	Not available.
Decomposition temperature	Not available.
Auto-ignition temperature	Not available.
Solubility(ies)	Complete
Relative density	Not available.
Vapor density	1.522 at 21°C
Vapor pressure	5723 kPa @20°C
Explosive limit - unner (%)	Not available.
(%) Explosive limit - lower (%)	Not available.
(%) Flammability limit - upper	Not available.
Flammability limit - lower	Not available.
Upper/lower flammability or exp	losive limits
Flammability (solid, gas)	Not available.
Evaporation rate	> 1 Ether
Flash point	None
Partition coefficient (n-octanol/water)	Not available.
Pour point	Not available.
Initial boiling point and boiling range	-109.3 °F (-78.5 °C)

Ingestion	Not a normal route of exposure. The product is a gas at room temperature.
Inhalation	Carbon dioxide is harmless at atmospheric pressure. The following statements apply to contact with the gaseous version. Suffocation (asphyxiant) hazard - if allowed to accumulate to concentrations that reduce oxygen below safe breathing levels.
Skin contact	Carbon dioxide is harmless at atmospheric pressure. The following statements apply to contact with the liquefied version. Contact with liquid may cause frostbite.
Eye contact	Carbon dioxide is harmless at atmospheric pressure. The following statements apply to contact with the liquefied version. Contact with liquid may cause frostbite.

Convulsions. Headache. Dizziness. Fatigue. Nausea, vomiting. Very high exposure can cause suffocation from lack of oxygen. Symptoms may include loss of mobility/consciousness. Victim may not be aware of asphyxiation. Asphyxiation may bring about unconsciousness without warning and so rapidly that victim may be unable to protect themself.

### Information on toxicological effects

## Acute toxicity

Components	Species	Test Results		
Carbon dioxide (CAS 124-38-9)				
Acute				
Dermal				
LD50	Not available			
Inhalation				
LC50	Not available	ot available		
Oral				
LD50	Not available			
Skin corrosion/irritation	Contact with liquid may ca	use frostbite.		
Exposure minutes	Not available.			
Erythema value	Not available.			
Oedema value	Not available.			
Serious eye damage/eye irritation	Contact with liquid may ca	use frostbite.		
Corneal opacity value	Not available.			
Iris lesion value	Not available.			
Conjunctival reddening value	Not available.			
Conjunctival oedema value	Not available.			
Recover days	Not available.			
Respiratory or skin sensitization				
<b>Respiratory sensitization</b>	Not a respiratory sensitizer.			
Skin sensitization	This product is not expected to cause skin sensitization.			
Mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.			
Carcinogenicity	See below.			
OSHA Specifically Regulated	I Substances (29 CFR 197	0.1001-1052)		
Not listed.	<b>-</b>			
Reproductive toxicity	I his product is not expect	ed to cause reproductive or developmental effects.		
	Not available.			
single exposure	Not classified.			
Specific target organ toxicity - repeated exposure	Not classified.			
Aspiration hazard	Not likely, due to the form	of the product.		
	12. Ecolo	gical information		
Ecotoxicity	Not available.			
Persistence and degradability	No data is available on the	e degradability of any ingredients in the mixture.		
Bioaccumulative potential	No data available.			
Mobility in soil	No data available.			
Mobility in general	Not available.			
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.			
	13. Dispo	sal considerations		
Disposal instructions	Collect and reclaim or dis contents/container in acco	oose in sealed containers at licensed waste disposal site. Dispose of rdance with local/regional/national/international regulations.		
Local disposal regulations	Dispose in accordance wi	spose in accordance with all applicable regulations.		

Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.		
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).		
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.		
	14. Transport information		
Transport of Dangerous Goods (TDG) Proof of Classification	Classification Method: Classified as per Part 2, Sections 2.1 – 2.8 of the Transportation of Dangerous Goods Regulations. If applicable, the technical name and the classification of the product will appear below.		
General	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.		
	US: See §173.306 Limited quantities of compressed gases for further details		
U.S. Department of Transportati	on (DOT)		
Basic shipping requirement	S:		
UN number Proper shipping name	Carbon dioxide		
Hazard class	Limited Quantity - US		
Packaging exceptions	<1L - Limited Quantity		
Packaging non bulk	302, 304		
Packaging bulk	302, 314, 315		
Pasic shipping requirement	ods (TDG - Canada)		
LIN number	5. UN1013		
Proper shipping name	CARBON DIOXIDE		
Hazard class	Limited Quantity - Canada		
Special provisions	148		
Packaging exceptions	<0.125 L - Limited Quantity		
DOT; TDG			
	15. Regulatory information		
Canadian federal regulations	This product is a manufactured article and is exempt.		
-	As per the Hazardous Products Act: A manufactured article means any article that is formed to a specific shape or design during manufacture, the intended use of which when in that form is dependent in whole or in part on its shape or design, and that, when being installed, if the intended use of the article requires it to be installed, and under normal conditions of use, will not release or otherwise cause an individual to be exposed to a hazardous product.		
Canada CEPA Schedule I: L	isted substance		
Carbon dioxide (CAS 124 Export Control List (CEPA 1	-38-9) Listed. 999, Schedule 3)		
Not listed.			

**Greenhouse Gases** 

Carbon dioxide (CAS 124-38-9) Precursor Control Regulations

Not regulated.

WHMIS 2015 Exemptions	Not applicable	
US federal regulations	This product is a manufactured article and is exempt.	
	As per OSHA Definitions: 1910.1200 (c). Article means a manufacture particle: (i) which is formed to a specific shape or design during manuse function(s) dependent in whole or in part upon its shape or design which under normal conditions of use does not release more than v minute or trace amounts of a hazardous chemical (as determined u section), and does not pose a physical hazard or health risk to emp	ured item other than a fluid or nufacture; (ii) which has end ign during end use; and (iii) /ery small quantities, e.g., inder paragraph (d) of this bloyees.
TSCA Section 12(b) Export	Notification (40 CFR 707, Subpt. D)	
Not regulated. CERCLA Hazardous Substa	ance List (40 CFR 302.4)	
Not listed. SARA 304 Emergency relea	ase notification	
Not regulated. OSHA Specifically Regulate Not listed.	ed Substances (29 CFR 1910.1001-1052)	
Superfund Amendments and Re	eauthorization Act of 1986 (SARA)	
SARA 302 Extremely hazardous substance	No	
Classified hazard categories	Gas under pressure Simple asphyxiant	
SARA 313 (TRI reporting) Not regulated.		
Other federal regulations		
Clean Air Act (CAA) Section	n 112 Hazardous Air Pollutants (HAPs) List	
Not regulated.		
Clean Air Act (CAA) Section	n 112(r) Accidental Release Prevention (40 CFR 68.130)	
Not regulated.		
US state regulations	See below	
US - California Hazardo	ous Substances (Director's): Listed substance	
Carbon dioxide (CA	S 124-38-9) Listed.	
US - Minnesota Haz Su	bs: Listed substance	
Carbon dioxide (CA	S 124-38-9) Listed.	
Carbon dioxida (CA)	Senning Levels Flazaru Data. Simple aspriyxiant	
US - Texas Effects Scr	eening Levels: Listed substance	
Carbon dioxide (CA	S 124-38-9) Listed.	
US. Massachusetts RT	K - Substance List	
Carbon dioxide (CA	S 124-38-9)	
US. New Jersey Worke	r and Community Right-to-Know Act	
Carbon dioxide (CA	S 124-38-9)	
US. Pennsylvania Work	(er and Community Right-to-Know Law	
Carbon dioxide (CA) US. Rhode Island RTK	S 124-38-9)	
Carbon dioxide (CA	S 124-38-9)	
US. California Proposition	65	
Not Listed.		
Inventory status		
Country(s) or region	Inventory name	On inventory (ves/no)*
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No

United States & Puerto Rico Toxic Substances Control Act (TSCA) Inventory

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

Yes

# 16. Other information

LEGEND	
Severe Serious	4 3
Moderate	2
Slight	1
Minimal	0

Disclaimer



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02-October-2020
Nu-Calgon Technical Service Phone: (314) 469-7000
Not available.
For an updated SDS, please contact the supplier/manufacturer listed on the first page of the document.

Issue date Version # Effective date Prepared by Further information Other information