VAPCO PRODUCTS, INC.

Safety Data Sheet
Blowout Cylinder

SECTION 1: Identification

1.1 GHS Product identifier

Product name	Blowout Cylinder
Product number	BLO-LC, BLO-SC
Brand	Vapco

1.3 Recommended use of the chemical and restrictions on use

Recommended use: High pressure, no rinse coil cleaner

Restrictions on use: After December 8, 2026, this chemical substance (as defined in TSCA section 3(2))/product cannot be distributed in commerce to retailers for any use. After March 8, 2027, this chemical substance (as defined in TSCA section 3(2))/product is and can only be distributed in commerce or processed with a concentration of PCE equal to or greater then 0.1% by weight for the following purposes: (1) Processing as a reactant/intermediate; (2) Processing into formulation, mixture or reaction product; (3) Processing by repackaging; (4) Recycling; (5) Industrial and commercial use a solvent in open-top batch vapor degreasing; (6) Industrial and commercial use as solvent in closed-loop batch vapor degreasing; (7) Industrial and commercial use in maskant for chemical milling; (8) Industrial and commercial use as a processing aid in catalyst regeneration in petrochemical manufacturing; (9) Industrial and commercial use as a processing aid in sectors other than petrochemical manufacturing; (10) Industrial and commercial use as solvent for cold cleaning of tanker vessels; (11) Industrial and commercial use as energized electrical cleaner; (12) Industrial and commercial use in laboratory chemicals; (13) Industrial and commercial use in solvent-based adhesives and sealants; (14) Industrial and commercial use in dry cleaning in 3rd generation machines until December 20, 2027; (15) Industrial and commercial use in all dry cleaning and related spot cleaning until December 19, 2034; (16) Export; and (17) Disposal.

1.4 Supplier's details

Name	Vapco Products, Inc.
Address	401 Marshall Road Valley Park, Missouri 63088 United States
Telephone	(636) 923-2121
Fax	(636) 923-3002
email	info@VapcoProducts.com

1.5 Emergency phone number

(800) 255-3924

SECTION 2: Hazard identification

2.1 Classification of the substance or mixture

GHS classification in accordance with: OSHA (29 CFR 1910.1200)

- Carcinogenicity, Cat. 2
- Gases under pressure, compressed gas
- Skin corrosion/irritation, Cat. 2
- Sensitization, skin, Cat. 1

2.2 GHS label elements, including precautionary statements

Pictograms

Signal word **Warning**

Hazard statement(s)

H280	Contains gas under pressure; may explode if heated
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H351	Suspected of causing cancer

Precautionary statement(s)

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P261	Avoid breathing dust/fume/gas/mist/vapors/spray.
P264	Wash hands thoroughly after handling.
P272	Contaminated work clothing must not be allowed out of the workplace.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352	IF ON SKIN: Wash with plenty of water.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P321	Specific treatment (see First Aid on this label).
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P362+P364	Take off contaminated clothing and wash it before reuse.
P363	Wash contaminated clothing before reuse.
P405	Store locked up.
P410+P403	Protect from sunlight. Store in a well-ventilated place.
P501	Dispose of contents/container to the specifications of local, regional, national, and international regulations.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Hazardous components

1. Perchloroethylene

Concentration	70 - 100 % (weight)
EC no.	204-825-9

CAS no.	127-18-4
Index no.	602-028-00-4

2. D-Limonene

Concentration	3 - 7 % (weight)
EC no.	227-813-5
CAS no.	5989-27-5

3. Carbon Dioxide

Concentration	2 - 4 % (weight)
CAS no.	124-38-9

4. Orange Terpenes

Concentration	0.1 - 1 % (weight)
EC no.	232-433-8
CAS no.	8028-48-6

SECTION 4: First-aid measures

4.1 Description of necessary first-aid measures

General advice	Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
If inhaled	First, take proper precautions to ensure your own safety before attempting rescue (e.g. wear appropriate respiratory protective equipment, use the buddy system), then remove the exposed person to fresh air. Keep at rest in a position comfortable for breathing. Get medical advice/attention.
In case of skin contact	Immediately drench affected area with water for at least 15 minutes. Remove contaminated clothing immediately. Obtain medical attention if irritation develops or persists.
In case of eye contact	Immediately rinse with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention if irritation develops or persists.
If swallowed	Rinse mouth. Do NOT induce vomiting. Obtain medical attention.

4.2 Most important symptoms/effects, acute and delayed

Symptoms/Injuries: Harmful if inhaled. Causes serious eye and skin irritation. May cause drowsiness and dizziness. Asphyxia by lack of oxygen: risk of death.

Symptoms/Injuries After Inhalation: High concentrations may cause central nervous system depression such as dizziness, vomiting, numbness, drowsiness, headache, and similar narcotic symptoms. Inhalation is likely to cause adverse health effects including, but not limited to: irritation, difficulty breathing, and unconsciousness. In elevated concentrations, may cause asphyxiation, central nervous system effects, and increased pulse, mood changes, tremors, cyanosis, muscular weakness, narcosis, numbness of the extremities, unconsciousness and death. This product contains chlorinated solvent material, which is associated with cardiac sensitization following very high exposures or with concurrent exposure to high stress levels or heart-stimulating substances like epinephrine and catecholamines. Careful consideration should be applied preceding administration of epinephrine or similar heart-stimulating substances.

Symptoms/Injuries After Skin Contact: Contact causes irritation and may cause an allergic skin reaction.

Symptoms/Injuries After Eye Contact: Contact causes irritation with stinging, tearing, and redness.

Chronic Health Hazards: Possible cancer causing agent and overexposure may also include damage to skin, kidneys, liver, dizziness, headache, nausea, mental confusion, visual disturbances, lungs, blood, or central nervous system.

4.3 Indication of immediate medical attention and special treatment needed, if necessary

If exposed or concerned, get medical advice and attention. If medical advice is needed, have product container or label at hand. Note to physician: Do not administer adrenaline or epinephrine to a victim of chlorinated solvent poisoning. This product contains ingredients that may be anticipated to be a carcinogen.

SECTION 5: Fire-fighting measures

5.1 Suitable extinguishing media

Carbon dioxide (CO2), alcohol-resistant foam, dry chemical, or sand.

5.2 Specific hazards arising from the chemical

Explosion Hazard: Container may explode in heat of fire. Heat may build pressure, rupturing closed containers, spreading fire and increasing risk of burns and injuries. Vapors are heavier than air and may travel considerable distance to an ignition source and flash back to source of vapors.
Reactivity: Reacts with strong acids and alkalis, strong oxidizing agents, chemically active metals (e.g. aluminum, barium, lithium, sodium, magnesium, potassium, titanium, and beryllium), concentrated nitric acid, some plastics, rubbers and coatings. Increased risk of fire or explosion. Certain mixtures of chlorinated solvents may be flammable or reactive under certain conditions. Keep away from sparks, open flames, and hot surfaces. No smoking. Do not spray on open flame or other ignition source.

5.3 Special protective actions for fire-fighters

Precautionary Fire Measures: Exercise caution when fighting any chemical fire.
Firefighting Instructions: Use dry chemical, foam, or carbon dioxide (CO2). Do not breathe fumes from fire or vapors from decomposition. Do NOT fight fire when fire reaches containers. Evacuate area. Fight fire remotely due to the risk of explosion. Shut off all sources of ignition. Use water spray or fog for cooling exposed containers.
Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection. Wear NIOSH-approved Self-Contained Breathing Apparatus with a full face piece operated in a positive pressure demand mode with full body protective clothing when fighting fires.
Hazardous Combustion Products: Carbon oxide(s), chlorine, hydrogen chloride, and phosgene.

Further information

Do not allow run-off from fire fighting to enter drains or water courses.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

General Measures: Do not get in eyes, on skin, or on clothing. Do not breathe vapors, spray, mist, gas. Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. No smoking.
For Non-Emergency Personnel
Protective Equipment: Use appropriate personal protective equipment (PPE).
Emergency Procedures: Evacuate unnecessary personnel. Stop leak if safe to do so.
For Emergency Personnel
Protective Equipment: Equip cleanup crew with proper protection.
Emergency Procedure: Eliminate ignition sources first, then ventilate the area. Evacuate unnecessary personnel, isolate, and ventilate area. Upon arrival at the scene, a first responder is expected to recognize the presence of dangerous goods, protect oneself and the public, secure the area, and call for the assistance of trained personnel as soon as conditions permit.

6.2 Environmental precautions

Prevent entry to sewers and public waters. Avoid release to the environment.

6.3 Methods and materials for containment and cleaning up

For Containment: Ventilate the area. Contain any spills with dikes or absorbents to prevent further migration and entry into sewers or streams. As an immediate precautionary measure, isolate spill or leak area in all directions.
Methods for Cleaning Up: Clean up spills immediately and dispose of waste safely. Eliminate all ignition sources. Ventilate area. Stop the ignition source of the release, if safe to do so. Consider the use of water spray to disperse vapors. Isolate the area until gas has dispersed. Ventilate and gas test area before entering. Take up liquid spill into absorbent material. Transfer spilled material to a suitable container for disposal. Contact competent authorities after a spill.
Waste Disposal: Dispose of in accordance with local, regional, national, and international regulations. Containers may be hazardous when empty. Do not flame cut, braze, or weld. Product should be fully characterized prior to disposal (40 CFR 261).

Reference to other sections

See Section 8 for exposure controls and personal protection and Section 13 for disposal considerations.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Additional Hazards When Processed: Do not pressurize, cut, or weld containers. Ruptured cylinders may rocket. Pressurized container: May burst if heated. Do not pierce or burn, even after use.
Precautions for Safe Handling: Do not handle until all safety precautions have been read and understood. Avoid contact with skin, eyes and clothing. Do not breathe gas, mist, spray, vapors. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Do not spray on open flame or other ignition source.
Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures.
Other Precautions: Keep out of reach of children. Follow label instructions. Vapors may collect in low lying areas.

7.2 Conditions for safe storage, including any incompatibilities

Technical Measures: Comply with applicable regulations. Proper grounding procedures to avoid static electricity should be followed.
Storage Conditions: Store in a dry, cool place. Keep only in the original container in a cool, well-ventilated place away from ignition sources. Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F. Keep/Store away from direct sunlight, extremely high or low temperatures and incompatible materials. Store locked up/in a secure area.
Incompatible Materials: Strong acids and alkalis, strong oxidizing agents, chemically active metals (e.g. aluminum, barium, lithium, sodium, magnesium, potassium, titanium, and beryllium), concentrated nitric acid, some plastics, rubbers and coatings.
Storage Temperature: < 50°C/122°F.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

1. Carbon Dioxide (CAS: 124-38-9)
PEL (Inhalation): 5000 ppm (Cal/OSHA)

PEL-ST (Inhalation): 30,000 ppm (Cal/OSHA)

REL (Inhalation): 5000 pm (NIOSH)

REL-ST (Inhalation): 30,000 ppm (NIOSH)

PEL (Inhalation): 5000 ppm; 9000 mg/m3 (US/OSHA)

2. D-Limonene (CAS: 5989-27-5 EC: 227-813-5)
TLV® (Inhalation): 20 ppm (ACGIH)

3. Perchloroethylene (CAS: 127-18-4)
TWA (Inhalation): 50 ppm; 340 mg/m3; AU (AU/SWA)

STEL (Inhalation): 150 ppm; 1020 mg/m3; AU (AU/SWA)

IOELV-LTEL [Tetrachloroethylene] (Inhalation): 138 mg/m3; EU (EU/OSHA)
Skin designation: Yes. List no. 4 under Council Directive 98/24/EC as amended. List last updated on 8/25/2023.

IOELV-LTEL [Tetrachloroethylene] (Inhalation): 20 ppm; EU (EU/OSHA)
Skin designation: Yes. List no. 4 under Council Directive 98/24/EC as amended. List last updated on 8/25/2023.

IOELV-STEL [Tetrachloroethylene] (Inhalation): 275 mg/m3; EU (EU/OSHA)
Skin designation: Yes. List no. 4 under Council Directive 98/24/EC as amended. List last updated on 8/25/2023.

IOELV-STEL [Tetrachloroethylene] (Inhalation): 40 ppm; EU (EU/OSHA)
Skin designation: Yes. List no. 4 under Council Directive 98/24/EC as amended. List last updated on 8/25/2023.

8.2 Appropriate engineering controls

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilation, especially in confined areas. Use explosion-proof equipment. Proper grounding procedures to avoid static electricity should be followed. Use only outdoors or in well-ventilated area. Ensure all local, regional, national, and international regulations are being observed. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.

8.3 Individual protection measures, such as personal protective equipment (PPE)

Eye/face protection
Chemical safety goggles. Insufficient ventilation: wear respiratory protection. Respiratory protection of the dependent type.

Skin protection
Wear protective gloves and clothing.

Body protection
Wear suitable protective clothing. Wear protective gloves. Chemical resistant materials and fabrics. Wear fire/flame resistant/retardant clothing.

Respiratory protection
Use a NIOSH-approved Self-Containing Breathing Apparatus whenever exposure may exceed established Occupational Exposure Limits.

SECTION 9: Physical and chemical properties

Basic physical and chemical properties

Physical state	Liquid
Appearance	Liquid spray
Color	Colorless
Odor	Chlorinated solvent odor
Odor threshold	N/D
Melting point/freezing point	N/D
Boiling point or initial boiling point and boiling range	>188°F (87°C)
Flammability	Not considered a flammable aerosol or an extremely flammable aerosol by OSHA (29CFR 1910.1200)
Lower and upper explosion limit/flammability limit	N/D
Flash point	N/D

Explosive properties	N/D
Auto-ignition temperature	N/D
Decomposition temperature	N/D
Oxidizing properties	N/D
pH	N/A
Kinematic viscosity	N/D
Solubility	Insoluble in water
Partition coefficient n-octanol/water (log value)	N/D
Vapor pressure	N/D
Evaporation rate	> 3 Fast
Density and/or relative density	1.40-1.44
Relative vapor density	N/D
Particle characteristics	N/D

Supplemental information regarding physical hazard classes
N/D

Further safety characteristics (supplemental)
N/D

SECTION 10: Stability and reactivity

10.1 Reactivity
Reacts with chemically active metals and acids. Certain mixtures of chlorinated solvents may be flammable or reactive under certain conditions. Increased risk of fire or explosion.

10.2 Chemical stability
Contains gas under pressure; may explode of heated. Pressurized container: may burst if heated.

10.3 Possibility of hazardous reactions
None known.

10.4 Conditions to avoid
Direct sunlight, extremely high or low temperatures, heat, hot surfaces, sparks, open flames, incompatible materials, and other ignition sources.

10.5 Incompatible materials
Strong acids and alkalis, strong oxidizing agents, chemically active metals (e.g. aluminum, barium, lithium, sodium, magnesium, potassium, titanium, and beryllium), concentrated nitric acid, some plastics, rubbers and coatings.

10.6 Hazardous decomposition products
Carbon oxide(s), chlorine, hydrogen chloride, and phosgene.

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity
Perchloroethylene
LC50 Inhalation - Rat - 4100 ppm - 6 hrs
LD50 Skin - Rabbit - >10000 mg/kg
LD50 Oral - Rat - 2629 mg/kg

D-Limonene
LD50 Oral - Rat - 4,400 mg/kg
LD50 Skin - Rabbit - > 5,000 mg/kg

Skin corrosion/irritation
Contact causes irritation and may cause an allergic skin reaction that includes redness and pain. May cause localized defatting, blistering with prolonged skin contact. May be absorbed through the skin.

Serious eye damage/irritation
Contact causes irritation with stinging, burning, tearing, and redness.

Respiratory or skin sensitization
High concentrations may cause central nervous system depression such as dizziness, vomiting, numbness, drowsiness, headache, and similar narcotic symptoms. Inhalation is likely to cause adverse health effects including, but not limited to: irritation, difficulty breathing, and unconsciousness. In elevated concentrations, may cause asphyxiation, central nervous system effects, and increased pulse, mood changes, tremors, cyanosis, muscular weakness, narcosis, numbness of the extremities, unconsciousness and death. This product contains chlorinated solvent material, which is associated with cardiac sensitization following very high exposures or with concurrent exposure to high stress levels or heart-stimulating substances like epinephrine and catecholamines. Careful consideration should be applied preceding administration of epinephrine or similar heart-stimulating substances. Prolonged exposure may cause unconsciousness, heart effects, kidney effects, and death.

Germ cell mutagenicity
Not classified.

Carcinogenicity
Possible cancer causing agents and overexposure may also include damage to skin, kidneys, liver, dizziness, headache, nausea, mental confusion, visual disturbances, lungs, blood, or central nervous system.

Reproductive toxicity
Not classified.

Specific target organ toxicity (STOT) - single exposure
May cause drowsiness or dizziness.

Specific target organ toxicity (STOT) - repeated exposure
Not classified.

Aspiration hazard
Not classified.

SECTION 12: Ecological information

Toxicity
Perchloroethylene
LC50 - Pimephales promelas (fathead minnow) - 18.4 mg/L - 96 hrs
LC50 - Daphnia magna (water flea) - 18 mg/L - 48 hrs
LC50 - Oncorhynchus mykiss (rainbow trout) - 5 mg/L - 96 hrs
LC50 - Lepomis macrochirus (bluegill) - 13 mg/L - 96 hrs

D-Limonene
LC50 - Pimephales promelas (fathead minnow) - 0.72 mg/l - 96 hrs
EC50 - Daphnia magna (water flea) - 0.36 mg/l - 48 hrs

Persistence and degradability
Component or components of this product are not biodegradable.

Bioaccumulative potential
This product is not expected to bioaccumulate.

Mobility in soil
This product is mobile in soil.

Other adverse effects
Avoid release to the environment. This material is hazardous to aquatic environments.

SECTION 13: Disposal considerations

Disposal methods

Product disposal
Dispose of contents/container in accordance with local, regional, national, and international regulations. Do not pierce or burn, even after use.

Sewage disposal
Avoid release into the environment. This material is hazardous to the aquatic environment. Keep out of sewers and waterways.

Other disposal recommendations
Container may remain hazardous when empty. Continue to observe all precautions. Do not puncture or incinerate container. Product should be fully characterized prior to disposal.

SECTION 14: Transport information

DOT (US)
UN Number: UN1956
Class: 2.2
Packing Group: N/A
Proper Shipping Name: Compressed gas, n.o.s.

IMDG
UN Number: UN1956
Class: 2.2
Packing Group: N/A
EMS Number: N/A
Proper Shipping Name: Compressed gas, n.o.s.

IATA
UN Number: UN1956
Class: 2.2
Packing Group: N/A
Proper Shipping Name: Compressed gas, n.o.s.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations specific for the product in question

California Proposition 65 Chemicals List
WARNING: This product can expose you to chemicals including Tetrachloroethylene (Perchloroethylene), which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

Massachusetts Right To Know Components (105 CMR 670)
Chemical name: PERCHLOROETHYLENE
CAS number: 127-18-4

Chemical name: CARBON DIOXIDE
CAS number: 124-38-9

New Jersey Right To Know Components
Common name: TETRACHLOROETHYLENE
CAS number: 127-18-4

Common name: CARBON DIOXIDE
CAS number: 124-38-9

Pennsylvania Right To Know Components
Chemical name: ETHENE, TETRACHLORO-
CAS number: 127-18-4

Chemical name: CARBON DIOXIDE
CAS number: 124-38-9

US EPA TSCA public inventory
Chemical name: Perchloroethylene
CAS number: 127-18-4

Chemical name: D-Limonene
CAS number: 5989-27-5

Chemical name: Carbon Dioxide
CAS number: 124-38-9

15.2 Chemical Safety Assessment

After December 8, 2026, this chemical substance (as defined in TSCA section 3(2))/product cannot be distributed in commerce to retailers for any use. After March 8, 2027, this chemical substance (as defined in TSCA section 3(2))/product is and can only be distributed in commerce or processed with a concentration of PCE equal to or greater then 0.1% by weight for the following purposes: (1) Processing as a reactant/intermediate; (2) Processing into formulation, mixture or reaction product; (3) Processing by repackaging; (4) Recycling; (5) Industrial and commercial use a solvent in open-top batch vapor degreasing; (6) Industrial and commercial use as solvent in closed-loop batch vapor degreasing; (7) Industrial and commercial use in maskant for chemical milling; (8) Industrial and commercial use as a processing aid in catalyst regeneration in petrochemical manufacturing; (9) Industrial and commercial use as a processing aid in sectors other than petrochemical manufacturing; (10) Industrial and commercial use as solvent for cold cleaning of tanker vessels; (11) Industrial and commercial use as energized electrical cleaner; (12) Industrial and commercial use in laboratory chemicals; (13) Industrial and commercial use in solvent-based adhesives and sealants; (14) Industrial and commercial use in dry cleaning in 3rd

generation machines until December 20, 2027; (15) Industrial and commercial use in all dry cleaning and related spot cleaning until December 19, 2034; (16) Export; and (17) Disposal.

SECTION 16: Other information

N/A = Not applicable; N/D = Not determined

16.1 Further information/disclaimer

To the best of our knowledge, information contained herein is accurate. However there is no assumption of liability for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazard which exists. The information contained in this SDS was obtained from current and reliable sources; however, the data is provided without warranty, expressed or implied, regarding its correctness or accuracy. Since the conditions of handling, storage and disposal of this product are beyond the control of the manufacturer, the manufacturer will not be responsible for loss, injury, or expense arising out of the products inproper use. No warranty, expressed or inferred, regarding the product decribed in this SDS shall be created or inferred by any statement in this SDS. Various government agencies may have specific regulations regarding the transportation, handling, storage, use, or disposal of this product which may not be covered by this SDS. The user is reponsible for full compliance.

16.2 Preparation information

Prepared by: Jessica Wilson
Date prepared: 2/3/2025