

Material Safety Data Sheet

Printing date 10/10/2008

Version 12

Reviewed on 10/10/2008

1 Identification of substance

- **Product details**

- **Trade name:** Lasershield 6

- **Article number:** 144-04-0015

- **Creation date:** 10/10/2008

- **Manufacturer/Supplier:**

Linde Canada Limited

5860 Chedworth Way

Mississauga, Ontario L5R 0A2

Telephone (905) 501-1700

24-HOUR EMERGENCY TELEPHONE NUMBER:

(905) 501-0802

Linde

575 Mountain Avenue

Murray Hill, NJ 07974

Telephone (908) 464-8100

24-HOUR EMERGENCY TELEPHONE NUMBER:



CHEMTREC (800) 424-9300

- **Information department:** Customer Service Centre: 1-866-385-5349

2 Composition/Data on components

- **Chemical characterization**

- **Dangerous components:**

630-08-0	Carbon Monoxide	Danger:  2.2/1	<5%
		Warning:  2.5/C	

- **Chemical components**

7727-37-9	Nitrogen Gaseous	23 - 100%
7440-59-7	Helium	23 - 100%
124-38-9	Carbon Dioxide	5 - <23%

3 Hazards identification

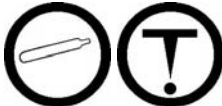
- **Hazard description:**



Toxic

- **WHMIS-symbols:**

A - Compressed gas



- **HMIS-ratings (scale 0 - 4)**

HEALTH	2	Health = 2
FIRE	0	Fire = 0
REACTIVITY	0	Reactivity = 0

(Contd. on page 2)

CDN

Material Safety Data Sheet

Printing date 10/10/2008

Version 12

Reviewed on 10/10/2008

Trade name: Lasershield 6

(Contd. of page 1)

- **NFPA ratings (scale 0 - 4)**



Health = 2
Fire = 0
Reactivity = 0

- **Information pertaining to particular dangers for man and environment:**

The product has to be labelled due to the calculation procedure of international guidelines.

May cause harm to the unborn child.

Danger of serious damage to health by prolonged exposure.

- **Classification system:**

The classification is in line with internationally approved calculation standards. It is expanded, however, by information from technical literature and by information furnished by supplier companies.

- **GHS label elements**



Warning

2.5/C - Contains gas under pressure; may explode if heated.

- **Storage:**

Protect from sunlight. Store in a well-ventilated place.

* 4 First aid measures

- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Generally the product does not irritate the skin.
- **After eye contact:** Rinse opened eye for at least 15 minutes under running water. Then consult a doctor.
- **After swallowing:** Not applicable

* 5 Fire fighting measures

- **Suitable extinguishing agents:**
CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Protective equipment:** Wear self-contained respiratory protective device.

* 6 Accidental release measures

- **Person-related safety precautions:**
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation.
Stop leak - ONLY if possible to do so without risk.
- **Measures for environmental protection:**
Prevent seepage into sewage system, workpits and/or cellars.
In case of gas release or seepage into the ground inform responsible authorities.
- **Measures for cleaning/collecting:**
Dispose contaminated material as waste according to item 13.

(Contd. on page 3)

CDN

Material Safety Data Sheet

Printing date 10/10/2008

Version 12

Reviewed on 10/10/2008

Trade name: Lasershield 6

Ensure adequate ventilation.

(Contd. of page 2)

7 Handling and storage

· Handling:

· Information for safe handling:

Ensure good ventilation/exhaustion at the workplace.

Open and handle cylinder with care.

Handle with care. Avoid jolting, friction, and impact.

Use only in well ventilated areas.

Store cylinders upright with valve protection cap in place and firmly secured to prevent falling or being knocked over.

· Information about protection against explosions and fires:

Keep ignition sources away - Do not smoke.

Keep respiratory protective device available.

Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use.

· Storage:

· Requirements to be met by storerooms and receptacles:

Do not expose cylinder to temperatures higher than 50°C (122 °F)

· Information about storage in one common storage facility:

Sources of ignition should be removed from storage area.

· Further information about storage conditions:

Keep cylinder valve tightly closed.

Store cylinder in a well ventilated area.

Store in accordance with local fire code and/or building code or any pertaining regulations.

8 Exposure controls and personal protection

· Additional information about design of technical systems:

Adequate local ventilation.

Safety showers and eyewash stations should be nearby.

· Components with limit values that require monitoring at the workplace:

7727-37-9 Nitrogen Gaseous (23 - 100%)

EL Simple asphyxiant

7440-59-7 Helium (23 - 100%)

EL Simple asphyxiant

124-38-9 Carbon Dioxide (5 - <23%)

EL Short-term value: 15000 ppm

Long-term value: 5000 ppm

630-08-0 Carbon Monoxide (<5%)

EL Short-term value: 100 ppm

Long-term value: 25 ppm

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· Additional information: The lists that were valid during the creation were used as basis.

(Contd. on page 4)

Material Safety Data Sheet

Printing date 10/10/2008

Version 12

Reviewed on 10/10/2008

Trade name: Lasershield 6

(Contd. of page 3)

- **Personal protective equipment:**
- **General protective and hygienic measures:**
 - Keep away from foodstuffs, beverages and feed.
 - Immediately remove all soiled and contaminated clothing.
 - Wash hands before breaks and at the end of work.
 - Store protective clothing separately.
 - Protective clothing should be kept free of oil and grease.
 - PPE should be inspected and maintained regularly to retain its effectiveness.
- **Breathing equipment:**
 - Use atmosphere-supplying respirators (e.g. supplied-air: demand, pressure-demand, or continuous-flow or self-contained breathing apparatus: demand or pressure-demand or combination supplied-air with auxiliary self-contained air supply atmosphere-supplying respirator) in case of insufficient ventilation.
- **Protection of hands:**



Protective gloves.

- **Material of gloves**
 - The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.
- **Eye protection:** Safety glasses

* 9 Physical and chemical properties

· General Information

Form:	Gaseous.
Color:	Colorless
Odor:	Odorless

· Change in condition

Boiling point/Boiling range: -268°C

· Flash point: Not applicable.

· Danger of explosion: Product does not present an explosion hazard.

* 10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Dangerous reactions** No dangerous reactions known.
- **Dangerous products of decomposition:** No dangerous decomposition products known.

CDN

(Contd. on page 5)

Material Safety Data Sheet

Printing date 10/10/2008

Version 12

Reviewed on 10/10/2008

Trade name: Lasershield 6

(Contd. of page 4)

11 Toxicological information

· **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**

630-08-0 Carbon Monoxide

Inhalative	LC50/1hr	3760 ppm (rat)
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· **Primary irritant effect:**

· **on the skin:** No irritating effect.

· **on the eye:** No irritating effect.

· **Sensitization:** No sensitizing effects known.

· **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:

12 Ecological information

· **General notes:** Generally not hazardous for water.

13 Disposal considerations

· **Product:**

· **Recommendation:** Unused product should be returned to vendor.

· **Uncleaned packagings:**

· **Recommendation:**

Cylinder and unused product should be returned to vendor. Disposable cylinder must be disposed of in accordance with local regulations.

· **Recommended cleansing agent:** None applicable.

14 Transport information

· **TDG and DOT regulations:**



· **Hazard class:**

2

· **Identification number:**

UN1956

· **Proper shipping name (technical name):** COMPRESSED GAS, N.O.S.

· **Label**

2.2

(Contd. on page 6)

Material Safety Data Sheet

Printing date 10/10/2008

Version 12

Reviewed on 10/10/2008

Trade name: Lasershield 6

(Contd. of page 5)

· **Maritime transport IMDG:**



- **IMDG Class:** 2
- **UN Number:** 1956
- **Label:** 2.2
- **Marine pollutant:** No
- **Proper shipping name:** COMPRESSED GAS, N.O.S.

· **Air transport ICAO-TI and IATA-DGR:**



- **ICAO/IATA Class:** 2
- **UN/ID Number:** 1956
- **Label:** 2.2
- **Propper shipping name:** COMPRESSED GAS, N.O.S.
- **UN "Model Regulation":** UN1956, COMPRESSED GAS, N.O.S., 2.2

15 Regulations

· **Sara**

· **Section 355 (extremely hazardous substances):**

None of the ingredient is listed.

· **Section 313 (Specific toxic chemical listings):**

None of the ingredients is listed.

· **TSCA (Toxic Substances Control Act):**

All ingredients are listed.

· **Proposition 65**

· **Chemicals known to cause cancer:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

630-08-0	Carbon Monoxide
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(Contd. on page 7)

Material Safety Data Sheet

Printing date 10/10/2008

Version 12

Reviewed on 10/10/2008

Trade name: Lasershield 6

(Contd. of page 6)

· Cancerogenity categories
· EPA (Environmental Protection Agency)

None of the ingredients is listed.

· NTP (National Toxicology Program)

None of the ingredients is listed.

· TLV (Threshold Limit Value established by ACGIH)

None of the ingredients is listed.

· NIOSH-Ca (National Institute for Occupational Safety and Health)

None of the ingredients is listed.

· OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

· Canadian substance listings:
· Canadian Domestic Substances List (DSL)

7440-59-7 Helium

124-38-9 Carbon Dioxide

630-08-0 Carbon Monoxide

· Canadian Ingredient Disclosure list (limit 0.1%)

630-08-0 Carbon Monoxide

· Canadian Ingredient Disclosure list (limit 1%)

124-38-9 Carbon Dioxide

· Product related hazard informations:

Observe the general safety regulations when handling chemicals.

The product was classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

· Hazard symbols:

Toxic

· Hazard-determining components of labelling:

Carbon Monoxide

· Risk phrases:

May cause harm to the unborn child.

Danger of serious damage to health by prolonged exposure.

· Safety phrases:

Avoid exposure - obtain special instructions before use.

Keep container tightly closed in a cool place.

Keep container in a well-ventilated place.

When using do not eat or drink.

In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

This material and its container must be disposed of as hazardous waste.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

(Contd. on page 8)

Material Safety Data Sheet

Printing date 10/10/2008

Version 12

Reviewed on 10/10/2008

Trade name: Lasershield 6

(Contd. of page 7)

Please refer to the section 3 for NFPA and HMIS Hazard Codes.

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· **Department issuing MSDS:** Customer Service Centre: 1-866-385-5349

· **Abbreviations and Acronyms:**

ACGIH: American Conference of Governmental Industrial Hygienists
CAS: Chemical Abstract Service (Division of the American Chemical Society)
DOT: US Department of Transportation
EINECS: European Inventory of Existing Commercial Chemical Substances
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
HMIS: Hazardous Material Identification System
IATA: International Air Transportation Association
IATA-DGR: Dangerous Goods Regulations by the "International Air Transportation Association"
ICAO: International Civil Aviation Association
ICAO-TI: Technical Instructions by the "International Civil Aviation Organization (ICAO)"
IMDG: International Marine Code for Dangerous Goods
WHIMS: Workplace Hazardous Material Information System
LC50: Lethal Concentration, 50 Percent
LD50: Lethal Dose, 50 Percent
N/A: Not Applicable

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