

Safety Data Sheet 50053

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 04/01/2015 Version: 1.0

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

Product identifier

Product form : Mixture

: Toluene (0.001% - 0.099%), Oxygen (19.5% - 23.5%) in balance Nitrogen Product name

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

Use of the substance/mixture : Test gas/Calibration gas.

Details of the supplier of the safety data sheet

Calgaz, division of Air Liquide 821 Chesapeake Drive Cambridge, 21613 - USA

T 1-410-228-6400 - F 1-410-228-4251 info@Calgaz.com - www.Calgaz.com

Emergency telephone number

Emergency number : CHEMTREC: 1-800-424-9300

Internationally: 1-703-527-3887

SECTION 2: Hazards identification

Classification of the substance or mixture 2.1.

Classification (GHS-US)

Compressed gas H280

Full text of H-phrases: see section 16

2.2. Label elements

GHS-US labeling

Hazard pictograms (GHS-US)



GHS04

Signal word (GHS-US)

: Warning Hazard statements (GHS-US) H280 - Contains gas under pressure; may explode if heated

OSHA-H01 - May displace oxygen and cause rapid suffocation

CGA-HG24 - Supports combustion.

Precautionary statements (GHS-US) P202 - Do not handle until all safety precautions have been read and understood

P271 - Use only outdoors or in a well-ventilated area

P280 - Wear eye protection, face protection, protective gloves, protective clothing

P403 - Store in a well-ventilated place

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

regulations

CGA-PG02 - Protect from sunlight when ambient temperature exceeds 52°C (125°F)

CGA-PG05 - Use a back flow preventive device in the piping CGA-PG06 - Close valve after each use and when empty CGA-PG10 - Use only with equipment rated for cylinder pressure CGA-PG14 - Approach suspected leak area with caution

CGA-PG21 - Open valve slowly

2.3. Other hazards

No additional information available

Unknown acute toxicity (GHS-US)

Not applicable

SECTION 3: Composition/information on ingredients

Substance

Not applicable

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3.2. Mixture

Name	Product identifier	%	Classification (GHS-US)
Nitrogen	(CAS No) 7727-37-9	76.401 - 80.499	Compressed gas, H280
Oxygen	(CAS No) 7782-44-7	19.5 - 23.5	Ox. Gas 1, H270
Toluene	(CAS No) 108-88-3	0.001 - 0.099	Flam. Liq. 2, H225 Skin Irrit. 2, H315 Repr. 2, H361 STOT SE 3, H336 STOT RE 2, H373 Asp. Tox. 1, H304

Full text of H-phrases: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation : Adverse effects not expected from this product.

First-aid measures after skin contact : Adverse effects not expected from this product.

First-aid measures after eye contact : Adverse effects not expected from this product.

First-aid measures after ingestion : Ingestion is not considered a potential route of exposure.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries after inhalation : May displace oxygen and cause rapid suffocation. Adverse effects not expected from this

product.

Symptoms/injuries after skin contact : Adverse effects not expected from this product. Symptoms/injuries after eye contact : Adverse effects not expected from this product.

Symptoms/injuries after ingestion : Ingestion is not considered a potential route of exposure.

Symptoms/injuries upon intravenous : Not known.

administration

Chronic symptoms : Adverse effects not expected from this product.

4.3. Indication of any immediate medical attention and special treatment needed

If you feel unwell, seek medical advice. If breathing is difficult, give oxygen.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Use extinguishing media appropriate for surrounding fire.

Unsuitable extinguishing media : Do not use water jet to extinguish.

5.2. Special hazards arising from the substance or mixture

Fire hazard : The product is not flammable.

Explosion hazard : Product is not explosive. Heat may build pressure, rupturing closed containers, spreading fire

and increasing risk of burns and injuries.

Reactivity : None known.

5.3. Advice for firefighters

Firefighting instructions : In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion. Use water spray

or fog for cooling exposed containers. Exercise caution when fighting any chemical fire.

Protection during firefighting : Standard protective clothing and equipment (e.g., Self Contained Breathing Apparatus) for fire

fighters. Do not enter fire area without proper protective equipment, including respiratory

protection.

Specific methods : Exposure to fire may cause containers to rupture/explode. Continue water spray from protected

position until container stays cool. Move containers away from the fire area if this can be done

without risk.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Ensure adequate ventilation.

6.1.1. For non-emergency personnel

Protective equipment : Wear protective equipment consistent with the site emergency plan.

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Emergency procedures

: Escape the danger area by the closest safe route. Close doors and windows of adjacent premises. Keep containers closed. Mark the danger area. Seal off low-lying areas. Keep upwind.

6.1.2. For emergency responders

Protective equipment

: Standard protective clothing and equipment (e.g., Self Contained Breathing Apparatus) for fire

fighters. Equip cleanup crew with proper protection.

Emergency procedures

: Evacuate and limit access. Ventilate area.

6.2. Environmental precautions

Try to stop release if safe to do so.

6.3. Methods and material for containment and cleaning up

For containment

: Try to stop release if safe to do so.

Methods for cleaning up

: Dispose of this material and its container in accordance with local regulations.

6.4. Reference to other sections

See also Sections 8 and 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed

: Pressurized container: Do not pierce or burn, even after use. Use equipment rated for cylinder

pressure. Close valve after each use and when empty.

Precautions for safe handling

: Do not handle until all safety precautions have been read and understood. Use only outdoors or

in a well-ventilated area.

Safe handling of the gas receptacle

Protect cylinders from physical damage; do not drag, roll, slide or drop. Do not remove or deface labels provided by the supplier for the identification of the cylinder contents.

deface labels provided by the supplier for the identification of the cylinder contents.

Safe use of the product

The substance must be handled in accordance with good industrial hygiene and safety procedures. Only experienced and properly instructed persons should handle gases under pressure. Consider pressure relief device(s) in gas installations. Ensure the complete gas system was (or is regularily) checked for leaks before use. Use only properly specified equipment with its suitable for this product, its supply pressure and temperature. Contact your

gas supplier if in doubt.

Hygiene measures : Do not eat, drink or smoke when using this product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures

: Comply with applicable regulations.

Storage conditions

: Do not expose to temperatures exceeding 52°C (125°F). Keep container closed when not in

use. Protect cylinder from physical damage. Store in well ventilated area.

Incompatible products

: None known.

Incompatible materials

: Flammable materials.

7.3. Specific end use(s)

See Section 1.2.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Toluene (0.001% - 0.099%),	Oxygen (19.5% - 23.5%) in balance Nitrogen		
ACGIH	Not applicable	lot applicable	
OSHA	Not applicable		
Toluene (108-88-3)			
ACGIH ACGIH TWA (ppm) 20 ppm		20 ppm	
OSHA PEL (TWA) (ppm) 200 ppm		200 ppm	
OSHA	OSHA PEL (Ceiling) (ppm)	300 ppm	

Oxygen (7782-44-7)	
ACGIH	Not applicable
OSHA	Not applicable

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Nitrogen (7727-37-9)	
ACGIH	Not applicable
OSHA	Not applicable

8.2. Exposure controls

Appropriate engineering controls : Ensure exposure is below occupational exposure limits. Provide adequate general and local

exhaust ventilation. Systems under pressure should be regularly checked for leakages.

Consider work permit system e.g. for maintenance activities.

Hand protection : Wear working gloves when handling gas containers. 29 CFR 1910.138: Hand Protection.

Eye protection : Wear safety glasses with side shields. 29 CFR 1910.133: Eye and Face Protection. Skin and body protection : Wear suitable protective clothing, e.g. - lab coats, coveralls or flame resistant clothing.

Respiratory protection : None necessary during normal and routine operations. See Sections 5 & 6.

Thermal hazard protection : None necessary during normal and routine operations.

Environmental exposure controls : Refer to local regulations for restriction of emissions to the atmosphere. See section 13 for

specific methods for waste gas treatment.

Other information : Wear safety shoes while handling containers. 29 CFR 1910.136: Foot Protection.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Gas

Appearance : Clear, colorless gas.

Molecular mass : Not applicable for gas-mixtures.

Color : Colorless
Odor : Odorless

Odor threshold : No Data Available pH : No data available Relative evaporation rate (butyl acetate=1) : No data available

Relative evaporation rate (ether=1) : Not applicable for gas-mixtures.

Melting point No Data Available Freezing point No data available No Data Available Boiling point No Data Available Flash point Auto-ignition temperature No data available Decomposition temperature No data available Flammability (solid, gas) See Section 2.1 and 2.2 Vapor pressure No data available Relative vapor density at 20 °C No data available Relative density No data available Relative gas density Similar to air Solubility No data available Log Pow No data available Log Kow No data available

Explosive properties : Not applicable - not flammable.

No data available

No data available

Oxidizing properties : Supports combustion.

Explosive limits : Not applicable - not flammable

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Viscosity, kinematic

Viscosity, dynamic

None known.

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Chemical stability

Stable under normal conditions.

Possibility of hazardous reactions

Can form explosive mixtures with flammable materials.

Conditions to avoid

None under recommended storage and handling conditions (see section 7).

Incompatible materials 10.5.

Flammable materials.

Hazardous decomposition products

Under normal conditions of storage and use hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity : Not classified

Toluene (108-88-3)	Toluene (108-88-3)	
LD50 oral rat	636 mg/kg	
LD50 dermal rabbit	8390 mg/kg	
LC50 inhalation rat (mg/l)	12.5 mg/l/4h	
LC50 inhalation rat (ppm)	13001.09 ppm/4h	
Oxvaen (7782-44-7)		

LC50 inhalation rat (ppm)	800000 ppm/4h
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Nitrogen (7727-37-9)

LC50 inhalation rat (ppm)	820000 ppm/4h
Skin corrosion/irritation :	Not classified
Serious eye damage/irritation :	Not classified
Respiratory or skin sensitization :	Not classified
Germ cell mutagenicity :	Not classified

Toluene (108-88-3)

Carcinogenicity

IARC group	3 - Not classifiable

Reproductive toxicity	:	Not classified
Specific target organ toxicity (single exposure)	:	Not classified

Specific target organ toxicity (repeated

exposure)

: Not classified

: Not classified

Aspiration hazard : Not classified

Symptoms/injuries after inhalation : May displace oxygen and cause rapid suffocation. Adverse effects not expected from this

Symptoms/injuries after skin contact : Adverse effects not expected from this product. Symptoms/injuries after eye contact Adverse effects not expected from this product.

Symptoms/injuries after ingestion Ingestion is not considered a potential route of exposure.

Symptoms/injuries upon intravenous : Not known.

administration

: Adverse effects not expected from this product. Chronic symptoms

SECTION 12: Ecological information

12.1. Toxicity

Toluene (108-88-3)	
LC50 fish 1	15.22 - 19.05 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])

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Toluene (108-88-3)		
EC50 Daphnia 1 5.46 - 9.83 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])		
EC50 other aquatic organisms 1 > 433 mg/l (Exposure time: 96 h - Species: Pseudokirchneriella subcapitata)		
LC50 fish 2 12.6 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])		
EC50 Daphnia 2 11.5 mg/l (Exposure time: 48 h - Species: Daphnia magna)		
EC50 other aquatic organisms 2	12.5 mg/l (Exposure time: 72 h - Species: Pseudokirchneriella subcapitata [static])	

12.2. Persistence and degradability

Oxygen (7782-44-7)	
Persistence and degradability	No ecological damage caused by this product.
Nitrogen (7727-37-9)	
Persistence and degradability	No ecological damage caused by this product.

12.3. Bioaccumulative potential

oluene (108-88-3)	
Log Pow	2.65
Oxygen (7782-44-7)	
Log Pow	Not applicable for inorganic gases.
Bioaccumulative potential	No ecological damage caused by this product.
litrogen (7727-37-9)	
Log Pow	Not applicable for inorganic gases.
Bioaccumulative potential	No ecological damage caused by this product.

12.4. Mobility in soil

Oxygen (7782-44-7)	
Ecology - soil	No ecological damage caused by this product.
Nitrogen (7727-37-9)	
Ecology - soil	No ecological damage caused by this product.

12.5. Other adverse effects

Effect on ozone layer : No known effects from this product.

Effect on the global warming : No known ecological damage caused by this product.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Contact supplier if guidance is required. Do not discharge into any place where its

accumulation could be dangerous. Ensure that the emission levels from local regulations or

operating permits are not exceeded.

Waste disposal recommendations : Refer to the CGA Pamphlet P-63 "Disposal of Gases" available at www.cganet.com for more

guidance on suitable disposal methods.

SECTION 14: Transport information

In accordance with DOT

Transport document description : UN1956 Compressed gas, n.o.s. (Oxygen, Nitrogen), 2.2

UN-No.(DOT) : UN1956

Proper Shipping Name (DOT) : Compressed gas, n.o.s.

Department of Transportation (DOT) Hazard

Classes

: 2.2 - Class 2.2 - Non-flammable compressed gas 49 CFR 173.115

Hazard labels (DOT) : 2.2 - Non-flammable gas



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DOT Symbols : G - Identifies PSN requiring a technical name

DOT Packaging Exceptions (49 CFR 173.xxx) : 306;307
DOT Packaging Non Bulk (49 CFR 173.xxx) : 302;305
DOT Packaging Bulk (49 CFR 173.xxx) : 314;315
DOT Quantity Limitations Passenger aircraft/rail : 75 kg

(49 CFR 173.27)

DOT Quantity Limitations Cargo aircraft only (49 : 150 kg

CFR 175.75)

DOT Vessel Stowage Location : A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a

passenger vessel.

Additional information

Other information : No supplementary information available.

ADR

Transport document description : UN 1956, 2.2, (E)

Class (ADR) : 2 - Gases

Hazard identification number (Kemler No.) : 20
Classification code (ADR) : 1A

Hazard labels (ADR) : 2.2 - Non-flammable compressed gas

2

Orange plates :

20 1956

Tunnel restriction code (ADR) : E LQ : 120ml Excepted quantities (ADR) : E1

Transport by sea

UN-No. (IMDG) : 1956

Proper Shipping Name (IMDG) : COMPRESSED GAS, N.O.S.

Class (IMDG) : 2 - Gases

Air transport

UN-No.(IATA) : 1956

Proper Shipping Name (IATA) : COMPRESSED GAS, N.O.S.

Class (IATA) : 2

SECTION 15: Regulatory information

15.1. US Federal regulations

Toluene (108-88-3)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
Listed on United States SARA Section 313

SARA Section 313 - Emission Reporting 1.0 %

Oxygen (7782-44-7)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Nitrogen (7727-37-9)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

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15.2. International regulations

CANADA

Toluene (108-88-3)		
isted on the Canadian DSL (Domestic Sustances List)		
WHMIS Classification	Class B Division 2 - Flammable Liquid Class D Division 2 Subdivision A - Very toxic material causing other toxic effects Class D Division 2 Subdivision B - Toxic material causing other toxic effects	
Oxygen (7782-44-7)		
Listed on the Canadian DSL (Domestic Sustances List)		
WHMIS Classification	Class A - Compressed Gas Class C - Oxidizing Material	
Nitrogen (7727-37-9)		
isted on the Canadian DSL (Domestic Sustances List)		
WHMIS Classification	Class A - Compressed Gas	

EU-Regulations

Toluene (108-88-3)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

Oxygen (7782-44-7)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

Nitrogen (7727-37-9)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Not classified

Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

15.2.2. National regulations

Toluene (108-88-3)

Listed on the AICS (Australian Inventory of Chemical Substances)

Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)

Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory

Listed on the Korean ECL (Existing Chemicals List)

Listed on NZIoC (New Zealand Inventory of Chemicals)

Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)

Japanese Poisonous and Deleterious Substances Control Law

Japanese Pollutant Release and Transfer Register Law (PRTR Law)

Listed on the Canadian IDL (Ingredient Disclosure List)

Oxygen (7782-44-7)

Listed on the AICS (Australian Inventory of Chemical Substances)

Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)

Listed on the Korean ECL (Existing Chemicals List)

Listed on NZIoC (New Zealand Inventory of Chemicals)

Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)

Nitrogen (7727-37-9)

Listed on the AICS (Australian Inventory of Chemical Substances)

Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)

Listed on the Korean ECL (Existing Chemicals List)

Listed on NZIoC (New Zealand Inventory of Chemicals)

Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)

15.3. US State regulations

Toluene (108-88-3)	Toluene (108-88-3)					
U.S California - Proposition 65 - Carcinogens List	U.S California - Proposition 65 - Developmental Toxicity	U.S California - Proposition 65 - Reproductive Toxicity - Female	U.S California - Proposition 65 - Reproductive Toxicity - Male	No significance risk level (NSRL)		
No	Yes	Yes	No			

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Toluene (108-88-3)

- U.S. Massachusetts Right To Know List
- U.S. New Jersey Right to Know Hazardous Substance List
- U.S. Pennsylvania RTK (Right to Know) Environmental Hazard List
- U.S. Pennsylvania RTK (Right to Know) List

Oxygen (7782-44-7)

- U.S. Massachusetts Right To Know List
- U.S. New Jersey Right to Know Hazardous Substance List
- U.S. Pennsylvania RTK (Right to Know) List

Nitrogen (7727-37-9)

- U.S. Massachusetts Right To Know List
- U.S. New Jersey Right to Know Hazardous Substance List
- U.S. Pennsylvania RTK (Right to Know) List

SECTION 16: Other information

Indication of changes

Other information

- : Revised safety data sheet in accordance with OSHA final rule on GHS implementation
- promulgated March 26, 2012.
 - : This Safety Data Sheet is offered pursuant to OSHA's Hazard Communication Standard, 29 CFR, 1910.1200. Other government regulations must be reviewed for applicability to this product.

Full text of H-phrases:

t of 11 prinases.		
Asp. Tox. 1	Aspiration hazard Category 1	
Compressed gas	Gases under pressure Compressed gas	
Flam. Liq. 2	Flammable liquids Category 2	
Ox. Gas 1	Oxidizing gases Category 1	
Repr. 2	Reproductive toxicity Category 2	
Skin Irrit. 2	Skin corrosion/irritation Category 2	
STOT RE 2	Specific target organ toxicity (repeated exposure) Category 2	
STOT SE 3	Specific target organ toxicity (single exposure) Category 3	
H225	Highly flammable liquid and vapor	
H270	May cause or intensify fire; oxidizer	
H280	Contains gas under pressure; may explode if heated	
H304	May be fatal if swallowed and enters airways	
H315	Causes skin irritation	
H336	May cause drowsiness or dizziness	
H361	Suspected of damaging fertility or the unborn child	
H373	May cause damage to organs through prolonged or repeated	
	exposure	

SDS US (GHS HazCom 2012)

This Safety Data Sheet is offered pursuant to OSHA's Hazard Communication Standard, 29 CFR, 1910.1200. Other government regulations must be reviewed for applicability to this gas mixture. To the best of Calgaz's knowledge, the information contained herein is reliable and accurate as of this date; however, accruacy, suitability or completeness are not guaranteed and no warranties of any type, either express or implied, are provided. The information contained herein relates only to this specific product. If this gas mixture is combined with other materials, all component properties must be considered. Data may be changed from time to time. Be sure to consult the latest edition.

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