Safety Data Sheet

Section 1: Identification of the Substance/Mixture and of the Company/Undertaking

1.1 Product identifier

Product Name • **TruCoax/TCF Laser Gas**

Product Code • MSDS No. 90053

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

Relevant identified use(s) • Laser Gas

1.3 Details of the supplier of the safety data sheet

Manufacturer • Air Liquide

2700 Post Oak Blvd.
Houston, TX 77056
United States
www.us.airliquide.com

Telephone (Technical) • 713-896-2896

Telephone (Technical) • 800-819-1704

1.4 Emergency telephone number

Manufacturer • 800-424-9300 - CHEMTREC

Manufacturer • +1 703-527-3887 - Outside United States

Section 2: Hazards Identification

EU/EEC

According to EU Directive 1272/2008 (CLP)/REACH 1907/2006 [amended by 453/2010]
According to EU Directive 67/548/EEC (DSD) or 1999/45/EC (DPD)

2.1 Classification of the substance or mixture

CLP • Compressed Gas - H280
Reproductive Toxicity 1A - H360D
Specific Target Organ Toxicity Repeated Exposure 2 - H373

DSD/DPD • Harmful (Xn)
Substances Toxic To Reproduction - Category 1
R20, R48/20, R61

2.2 Label Elements

CLP

DANGER

Hazard statements
- H280 - Contains gas under pressure; may explode if heated
H360D - May damage the unborn child.
H373 - May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

Prevention
- P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P260 - Do not breathe gas.
P281 - Use personal protective equipment as required.

Response
- P314 - Get medical advice/attention if you feel unwell.
P308+P313 - IF exposed or concerned: Get medical advice/attention.
P309+P311 - IF exposed or if you feel unwell: Call a POISON CENTER or doctor/physician.

Storage/Disposal
- P403 - Store in a well-ventilated place.
P405 - Store locked up.
P501 - Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

DSD/DPD

Risk phrases
- R20 - Harmful by inhalation.
R48/20 - Harmful: danger of serious damage to health by prolonged exposure through inhalation.
R61 - May cause harm to the unborn child.

Safety phrases
- S53 - Avoid exposure - obtain special instructions before use.

2.3 Other Hazards

CLP
- This material is a simple asphyxiant. May displace or reduce oxygen available for breathing especially in confined spaces.
According to Regulation (EC) No. 1272/2008 (CLP) this material is considered hazardous.

DSD/DPD
- This material is a simple asphyxiant. May displace or reduce oxygen available for breathing especially in confined spaces.
According to European Directive 1999/45/EC this preparation is considered dangerous.

United States (US)

According to OSHA 29 CFR 1910.1200 HCS

2.1 Classification of the substance or mixture

OSHA HCS 2012
- Compressed Gas - H280
Reproductive Toxicity 1A - H360
Simple Asphyxiant

2.2 Label elements

OSHA HCS 2012

DANGER

Hazard statements
- H280 - Contains gas under pressure; may explode if heated
H360 - May damage fertility or the unborn child.
May displace oxygen and cause rapid suffocation.

Precautionary statements

Prevention
- P201 - Obtain special instructions before use.

P202 - Do not handle until all safety precautions have been read and understood.
P281 - Use personal protective equipment as required.

Response • P308+P313 - IF exposed or concerned: Get medical advice/attention.

Storage/Disposal • P403 - Store in a well-ventilated place.
P405 - Store locked up.
P501 - Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

2.3 Other hazards

OSHA HCS 2012

- Under United States Regulations (29 CFR 1910.1200 - Hazard Communication Standard), this product is considered hazardous.

Canada

According to WHMIS

2.1 Classification of the substance or mixture

WHMIS

- Compressed Gas - A
  Very Toxic - D1A
  Other Toxic Effects - D2A

2.2 Label elements

WHMIS

- Compressed Gas - A
  Very Toxic - D1A
  Other Toxic Effects - D2A

2.3 Other hazards

WHMIS

- This material is a simple asphyxiant. May displace or reduce oxygen available for breathing especially in confined spaces.
  In Canada, the product mentioned above is considered hazardous under the Workplace Hazardous Materials Information System (WHMIS).

Section 3 - Composition/Information on Ingredients

3.1 Substances

- Material does not meet the criteria of a substance in accordance with Regulation (EC) No 1272/2008.

3.2 Mixtures

Hazardous Components					
Chemical Name	**Identifiers**	**%(weight)**	**LD50/LC50**	**Classifications According to Regulation/Directive**	**Comments**
TruCoax/TCF Laser Gas Proprietary blend	*Proprietary*	> 1%	Inhalation-Rat LC50 • 470000 ppm 30 Minute (s)	**EU DSD/DPD:** Not Classified - Criteria not met **EU CLP:** Self Classified - Press. Gas - Comp. H280 **OSHA HCS 2012:** Press. Gas - Comp; Simple Asphyxiant	NDA

TruCoax/TCF Laser Gas Proprietary blend	*Proprietary*	> 1%	Inhalation-Rat LC50 • 13500 mg/m³ 15 Minute(s) Inhalation-Rat LC50 • 6600 ppm 30 Minute(s)	**EU DSD/DPD:** Annex I - F+; R12 Repr. Cat. 1; R61 T; R23-48/23 **EU CLP:** Annex VI - Flam. Gas 1 H220; Press. Gas; Repr. 1A H360D; Acute Tox. 3* H331; STOT RE 1 H372 **OSHA HCS 2012:** Flam. Gas 1; Press. Gas - Comp; Acute Tox. 3 (Inhalation); Repr. 1A	NDA
TruCoax/TCF Laser Gas Proprietary blend	*Proprietary*	> 1%	NDA	**EU DSD/DPD:** Not Classified - Criteria not met **EU CLP:** Self Classified - Press. Gas - Comp. H280 **OSHA HCS 2012:** Press. Gas - Comp; Simple Asphyxiant	NDA
TruCoax/TCF Laser Gas Proprietary blend	*Proprietary*	> 1%	NDA	**EU DSD/DPD:** Not Classified - Criteria not met **EU CLP:** Self Classified - Press. Gas - Comp, H280 **OSHA HCS 2012:** Press. Gas - Comp; Simple Asphyxiant	NDA
TruCoax/TCF Laser Gas Proprietary blend	*Proprietary*	> 1%	NDA	**EU DSD/DPD:** Not Classified - Criteria not met **EU CLP:** Self Classified - Press. Gas - Comp. H280 **OSHA HCS 2012:** Press. Gas - Comp; Simple Asphyxiant	NDA

Section 4 - First Aid Measures

4.1 Description of first aid measures

Inhalation
- IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, give artificial respiration. If signs/symptoms continue, get medical attention.

Skin
- In case of contact, immediately flush with plenty of water for at least 15 minutes. Take off contaminated clothing. If irritation develops and persists, get medical attention.

Eye
- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Ingestion
- Ingestion is not considered a potential route of exposure.

4.2 Most important symptoms and effects, both acute and delayed

- Refer to Section 11 - Toxicological Information.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to Physician
- Treat symptoms and eliminate over-exposure. Hyperbaric oxygen is the most efficient antidote to Carbon Monoxide poisoning, the optimum range being 2-2.5 atm. A special mask, or, preferably, a compression chamber to utilize oxygen at these pressures is required. Avoid administering stimulant drugs. Be observant for initial signs of pulmonary edema in the event of severe inhalation over-exposures.

4.4 Other information

- RESCUERS SHOULD NOT ATTEMPT TO RETRIEVE VICTIMS OF EXPOSURE TO THIS GAS MIXTURE WITHOUT ADEQUATE PERSONAL PROTECTIVE EQUIPMENT. At a minimum, Self-Contained Breathing Apparatus must be worn. Victim(s) who experience any adverse effect after over-exposure to this gas mixture must be taken for medical attention. Rescuers should be taken for medical attention if necessary. Take a copy of the label and the MSDS to physician or other health professional with victim(s).

Section 5 - Firefighting Measures

5.1 Extinguishing media

Suitable Extinguishing Media
- Non-flammable gas mixture. Use extinguishing media appropriate for surrounding fire.

Unsuitable Extinguishing Media
- No data available

5.2 Special hazards arising from the substance or mixture

Unusual Fire and Explosion Hazards
- Containers may explode when heated.
Ruptured cylinders may rocket.

Hazardous Combustion Products
- No data available

5.3 Advice for firefighters

- Structural firefighters' protective clothing will only provide limited protection.
Wear positive pressure self-contained breathing apparatus (SCBA).
FIRE: If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also, consider initial evacuation for 800 meters (1/2 mile) in all directions.
FIRE INVOLVING TANKS: Fight fire from maximum distance or use unmanned hose holders or monitor nozzles.
FIRE INVOLVING TANKS: Cool containers with flooding quantities of water until well after fire is out.
FIRE INVOLVING TANKS: Do not direct water at source of leak or safety devices; icing may occur.
FIRE INVOLVING TANKS: Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.
FIRE INVOLVING TANKS: ALWAYS stay away from tanks engulfed in fire.

Section 6 - Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal Precautions
- Wear appropriate personal protective equipment. See section 8 for more information.

Emergency Procedures
- In the event of a release in which the atmosphere is unknown, and in which other chemicals are potentially involved, evacuate immediate area. Such releases should be responded to by trained personnel using pre-planned procedures. Proper protective equipment should be used. In case of a leak, clear the affected area, protect people, and respond with trained personnel.

6.2 Environmental precautions

- Avoid release to the environment.

6.3 Methods and material for containment and cleaning up

Containment/Clean-up Measures
- Allow the gas mixture to dissipate.
If necessary, monitor the surrounding area (and the original area of the release) for concentrations of component gases.
Concentrations of component gases must be below any exposure limits listed in Section 8 and Oxygen levels must be above 19.5% before non-emergency personnel are allowed to re-enter area.

6.4 Reference to other sections

- Refer to Section 8 - Exposure Controls/Personal Protection and Section 13 - Disposal Considerations.

Section 7 - Handling and Storage

7.1 Precautions for safe handling

Handling

- Use good safety and industrial hygiene practices. Use only with adequate ventilation. Be aware of any signs of dizziness or fatigue, especially if work is done in a poorly ventilated area; exposures to fatal concentrations of this gas mixture could occur without any significant warning symptoms, due to olfactory fatigue or oxygen deficiency. Cylinders should be firmly secured to prevent falling or being knocked-over. Do not attempt to repair, adjust, or in any other way modify cylinders. If there is a malfunction or another type of operational problem, contact nearest distributor immediately.

7.2 Conditions for safe storage, including any incompatibilities

Storage

- Cylinders should be stored in dry, well-ventilated areas away from sources of heat, ignition and direct sunlight. Do not allow area where cylinders are stored to exceed 52°C (125°F). Cylinders must be protected from the environment, and preferably kept at room temperature (approximately 21°C (70°F). Cylinders should be firmly secured to prevent falling or being knocked-over. Protect cylinders against physical damage. Store locked up.

7.3 Specific end use(s)

- Refer to Section 1.2 - Relevant identified uses.

Section 8 - Exposure Controls/Personal Protection

8.1 Control parameters

Exposure Limits/Guidelines						
	Result	**ACGIH**	**Canada Ontario**	**Canada Quebec**	**China**	**Europe**
TruCoax/TCF Laser Gas Proprietary blend (Proprietary)	TWAs	5000 ppm TWA	5000 ppm TWA	5000 ppm TWAEV; 9000 mg/m3 TWAEV	9000 mg/m3 TWA	5000 ppm TWA; 9000 mg/m3 TWA
	STELs	30000 ppm STEL	30000 ppm STEL	30000 ppm STEV; 54000 mg/m3 STEV	18000 mg/m3 STEL	Not established
TruCoax/TCF Laser Gas Proprietary blend (Proprietary)	Ceilings	Not established	Not established	Not established	20 mg/m3 Ceiling [MAC] (high altitude area, 2000-3000m); 15 mg/m3 Ceiling [MAC] (high altitude area, >3000m)	Not established
	STELs	Not established	100 ppm STEL	200 ppm STEV; 230 mg/m3 STEV	30 mg/m3 STEL (not in high altitude area)	Not established
	TWAs	25 ppm TWA	25 ppm TWA	35 ppm TWAEV; 40 mg/m3 TWAEV	20 mg/m3 TWA (not in high altitude area)	Not established

Exposure Limits/Guidelines (Con't.)						
	Result	**Germany DFG**	**Germany TRGS**	**NIOSH**	**OSHA**	**Singapore**
TruCoax/TCF Laser Gas Proprietary blend (Proprietary)	STELs	Not established	Not established	30000 ppm STEL; 54000 mg/m3 STEL	Not established	30000 ppm STEL; 54000 mg/m3 STEL
	TWAs	Not established	5000 ppm TWA AGW (exposure factor 2); 9100 mg/m3 TWA AGW (exposure factor 2)	5000 ppm TWA; 9000 mg/m3 TWA	5000 ppm TWA; 9000 mg/m3 TWA	5000 ppm PEL; 9000 mg/m3 PEL
	Ceilings	10000 ppm Peak; 18200 mg/m3 Peak	Not established	Not established	Not established	Not established
	MAKs	5000 ppm TWA MAK; 9100 mg/m3 TWA MAK	Not established	Not established	Not established	Not established

TruCoax/TCF Laser Gas Proprietary blend (Proprietary)	TWAs	Not established	30 ppm TWA AGW (The risk of damage to the embryo or fetus cannot be excluded even when AGW and BGW values are observed, exposure factor 1); 35 mg/m3 TWA AGW (The risk of damage to the embryo or fetus cannot be excluded even when AGW and BGW values are observed, exposure factor 1)	35 ppm TWA; 40 mg/m3 TWA	50 ppm TWA; 55 mg/m3 TWA	25 ppm PEL; 29 mg/m3 PEL
	Ceilings	60 ppm Peak; 70 mg/m3 Peak	Not established	200 ppm Ceiling; 229 mg/m3 Ceiling	Not established	Not established
	MAKs	30 ppm TWA MAK; 35 mg/m3 TWA MAK	Not established	Not established	Not established	Not established

Exposure Control Notations

Germany DFG

•TruCoax/TCF Laser Gas Proprietary blend (Proprietary): **Pregnancy:** (risk to embryo/fetus probable)

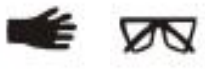
8.2 Exposure controls

Engineering Measures/Controls

- Adequate ventilation systems as needed to control concentrations of airborne contaminants below applicable threshold limit values. If this gas mixture is used in a poorly-ventilated area, install automatic monitoring equipment to detect the levels of component gases.

Personal Protective Equipment

Pictograms

- 

Respiratory

- In case of insufficient ventilation, wear suitable respiratory equipment. Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or symptoms are experienced.

Eye/Face

- Wear safety glasses.

Skin/Body

- Wear protective gloves leather gloves when handling cylinders; chemically resistant gloves when using this gas mixture and clothing .

Environmental Exposure Controls

- Controls should be engineered to prevent release to the environment, including procedures to prevent spills, atmospheric release and release to waterways.

Key to abbreviations

ACGIH = American Conference of Governmental Industrial Hygiene
MSHA = Mine Safety and Health Administration
NIOSH = National Institute of Occupational Safety and Health
OSHA = Occupational Safety and Health Administration
MAK = Maximale Arbeitsplatz Konzentration is the maximum permissible concentration
PEL = Permissible Exposure Level determined by the Occupational Safety and Health Administration (OSHA)
STEL = Short Term Exposure Limits are based on 15-minute exposures
STEV = Short Term Exposure Value
TWAEV = Time-Weighted Average Exposure Value
TWA = Time-Weighted Averages are based on 8h/day, 40h/week exposures

Section 9 - Physical and Chemical Properties

9.1 Information on Physical and Chemical Properties

Material Description			
Physical Form	Gas	**Appearance/Description**	Colorless gas with no odor.
Color	Colorless	**Odor**	Odorless
Taste	Data lacking	**Particulate Type**	Not relevant
Particulate Size	Not relevant	**Aerosol Type**	Not relevant
Odor Threshold	Not relevant	**Physical and Chemical Properties**	Data lacking
General Properties			
Boiling Point	Data lacking	**Melting Point**	Data lacking
Decomposition Temperature	Data lacking	**Heat of Decomposition**	Data lacking
pH	Data lacking	**Specific Gravity/Relative Density**	Data lacking
Density	Data lacking	**Bulk Density**	Data lacking
Water Solubility	Data lacking	**Solvent Solubility**	Data lacking
Viscosity	Not relevant	**Explosive Properties**	Data lacking
Oxidizing Properties:	Data lacking		
Volatility			
Vapor Pressure	Not relevant	**Vapor Density**	Data lacking
Evaporation Rate	Not relevant	**VOC (Wt.)**	Data lacking
VOC (Vol.)	Data lacking	**Volatiles (Wt.)**	Data lacking
Volatiles (Vol.)	Data lacking		
Flammability			
Flash Point	Not relevant	**UEL**	Not relevant
LEL	Not relevant	**Autoignition**	Not relevant
Self-Accelerating Decomposition Temperature (SADT)	Data lacking	**Heat of Combustion (ΔHc)**	Data lacking
Burning Time	Data lacking	**Flame Duration**	Data lacking
Flame Height	Data lacking	**Flame Extension**	Data lacking
Ignition Distance	Data lacking	**Flammability (solid, gas)**	Data lacking
Environmental			
Half-Life	Data lacking	**Octanol/Water Partition coefficient**	Data lacking
Coefficient of water/oil distribution	Not relevant	**Bioaccumulation Factor**	Data lacking
Bioconcentration Factor	Data lacking	**Biochemical Oxygen Demand BOD/BOD5**	Data lacking
Chemical Oxygen Demand	Data lacking	**Persistence**	Data lacking
Degradation	Data lacking		

9.2 Other Information

- No additional physical and chemical parameters noted.

Section 10: Stability and Reactivity

10.1 Reactivity

- No dangerous reaction known under conditions of normal use.

10.2 Chemical stability

- Stable under normal temperatures and pressures.

10.3 Possibility of hazardous reactions

- Hazardous polymerization will not occur.

10.4 Conditions to avoid

- Excess heat. Incompatible materials.

10.5 Incompatible materials

- Titanium, Lithium.

10.6 Hazardous decomposition products

- Sulfur oxide.

Section 11 - Toxicological Information

11.1 Information on toxicological effects

Component Name	CAS	Data
TruCoax/TCF Laser Gas Proprietary blend (> 1%)	*Proprietary*	**Acute Toxicity:** ihl-rat LC50:470000 ppm/30M
TruCoax/TCF Laser Gas Proprietary blend (> 1%)	*Proprietary*	**Acute Toxicity:** ihl-rat LC50:13500 mg/m3/15M; ihl-rat LC50:6600 ppm/30M

GHS Properties	Classification
Acute toxicity	**EU/CLP** • Classification criteria not met **OSHA HCS 2012** • Classification criteria not met
Aspiration Hazard	**EU/CLP** • Not relevant **OSHA HCS 2012** • Classification criteria not met
Carcinogenicity	**EU/CLP** • Classification criteria not met **OSHA HCS 2012** • Classification criteria not met
Germ Cell Mutagenicity	**EU/CLP** • Classification criteria not met **OSHA HCS 2012** • Classification criteria not met
Skin corrosion/Irritation	**EU/CLP** • Classification criteria not met **OSHA HCS 2012** • Classification criteria not met
Skin sensitization	**EU/CLP** • Classification criteria not met **OSHA HCS 2012** • Classification criteria not met
STOT-RE	**EU/CLP** • Specific Target Organ Toxicity Repeated Exposure 2 **OSHA HCS 2012** • Classification criteria not met
STOT-SE	**EU/CLP** • Classification criteria not met **OSHA HCS 2012** • Classification criteria not met
Toxicity for Reproduction	**EU/CLP** • Toxic to Reproduction 1A **OSHA HCS 2012** • Toxic to Reproduction 1A
Respiratory sensitization	**EU/CLP** • Classification criteria not met **OSHA HCS 2012** • Classification criteria not met

Serious eye damage/Irritation	**EU/CLP** • Classification criteria not met **OSHA HCS 2012** • Classification criteria not met

Route(s) of entry/exposure
- Inhalation, Skin, Eye, Ingestion

Potential Health Effects

Inhalation

Acute (Immediate)
- Inhalation over-exposures to atmospheres containing more than the Threshold Limit Value of a component of this material, can result in serious health consequences. This component is classified as a chemical asphyxiant, producing a toxic action by combining with the hemoglobin of the blood and replacing the available oxygen. Through this replacement, the body is deprived of the required oxygen, and asphyxiation occurs. Since the affinity of this gas for hemoglobin is about 200-300 times that of oxygen, only a small amount of it will cause a toxic reaction to occur. Exposures to this chemical in excess of 50 ppm will produce symptoms of poisoning if breathed for a sufficiently long time. If this gas mixture is released in a small, poorly ventilated area (i.e. an enclosed or confined space), symptoms which may develop include the following: bright red lips and fingernails, headache progessing to heart palpitations, staggering, confusion, nausea, dizziness and unconsciousness with higher concentration exposures. For exposures greater than 2500 ppm there is potential for collapse and death before warning symptoms are experienced. If this material is released in a small, poorly ventilated area (i.e. an enclosed or confined space), an oxygen-deficient environment may occur. Individuals breathing such an atmosphere may experience symptoms which include headaches, ringing in ears, dizziness, drowsiness, unconsciousness, nausea, vomiting, and depression of all the senses. Under some circumstances of over-exposure, death may occur. The following effects associated with decreased levels of oxygen: increase in breathing and pulse rate, emotional upset, abnormal fatigue, nausea, vomiting, collapse, loss of consciousness, convulsive movements, respiratory collapse and death.

Chronic (Delayed)
- Chronic exposure to oxygen-deficient atmospheres (below 18% oxygen in air) may affect the heart and nervous system.

Skin

Acute (Immediate)
- May cause irritation.

Chronic (Delayed)
- No data available

Eye

Acute (Immediate)
- May cause mild irritation.

Chronic (Delayed)
- No data available

Ingestion

Acute (Immediate)
- Under normal conditions of use, no health effects are expected.

Chronic (Delayed)
- No data available

Mutagenic Effects
- The components of this gas mixture are not reported to cause mutagenic effects in humans.

Carcinogenic Effects
- The components of this gas mixture are not found on the following lists: FEDERAL OSHA Z LIST, NTP and IARC; therefore, they are not considered to be, nor suspected to be, cancer-causing agents by these agencies.

Reproductive Effects
- A component of this gas mixture present in greater than 1%, can cause teratogenic effects in humans. Severe exposure to this component during pregnancy has caused adverse effects and the death of the fetus. In general, maternal symptoms are an indicator of the potential risk to the fetus since it is toxic to the mother before it is toxic to the fetus.

Key to abbreviations

TC = Toxic Concentration
TD = Toxic Dose
LC = Lethal Concentration

Section 12 - Ecological Information

12.1 Toxicity

TruCoax/TCF Laser Gas					
Dosage	**Species**	**Duration**	**Results**	**Exposure Conditions**	**Comments**
0.0071 to 0.55 mg/L	**Fish:** fathead minnow	96 Hour(s)	LC50	NDA	Component test data
0.009 to 0.014 mg/L	**Fish:** Bluegill	96 Hour(s)	LC50	NDA	Component test data

12.2 Persistence and degradability

- Material data lacking.

12.3 Bioaccumulative potential

- Material data lacking.

12.4 Mobility in Soil

- Material data lacking.

12.5 Results of PBT and vPvB assessment

- PBT and vPvB assessment has not been conducted.

12.6 Other adverse effects

- No evidence is currently available on this gas mixture's effects on plant, animal or aquatic life.

Section 13 - Disposal Considerations

13.1 Waste treatment methods

Product waste

- Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Packaging waste

- Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Section 14 - Transport Information

	14.1 UN number	14.2 UN proper shipping name	14.3 Transport hazard class(es)	14.4 Packing group	14.5 Environmental hazards
DOT	UN1956	Compressed gas, n.o.s. (contains Helium, Nitrogen)	2.2	NDA	NDA
TDG	UN1956	COMPRESSED GAS, N.O.S. (contains Helium, Nitrogen)	2.2	NDA	NDA
IMO/IMDG	UN1956	COMPRESSED GAS, N.O.S. (contains Helium, Nitrogen)	2.2	NDA	NDA
IATA/ICAO	UN1956	Compressed gas, n.o.s. (contains Helium, Nitrogen)	2.2	NDA	NDA

14.6 Special precautions for user

- Cylinders should be transported in a secure position, in a well-ventilated vehicle. The transportation of compressed gas cylinders in automobiles or in closed-body vehicles can present serious safety hazards. If transporting these cylinders in vehicles, ensure

these cylinders are not exposed to extremely high temperatures (as may occur in an enclosed vehicle on a hot day). Additionally, the vehicle should be well-ventilated during transportation.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

- This product is provided only in non-bulk containers.

Section 15 - Regulatory Information

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

SARA Hazard Classifications

- Acute, Chronic, Pressure(Sudden Release of)

State Right To Know				
Component	**CAS**	**MA**	**NJ**	**PA**
TruCoax/TCF Laser Gas Proprietary blend	*Proprietary*	Yes	Yes	Yes
TruCoax/TCF Laser Gas Proprietary blend	*Proprietary*	Yes	Yes	Yes
TruCoax/TCF Laser Gas Proprietary blend	*Proprietary*	Yes	Yes	Yes
TruCoax/TCF Laser Gas Proprietary blend	*Proprietary*	Yes	Yes	Yes
TruCoax/TCF Laser Gas Proprietary blend	*Proprietary*	No	No	No

Inventory						
Component	**CAS**	**Canada DSL**	**Canada NDSL**	**China**	**EU EINECS**	**EU ELNICS**
TruCoax/TCF Laser Gas Proprietary blend	*Proprietary*	Yes	No	Yes	Yes	No
TruCoax/TCF Laser Gas Proprietary blend	*Proprietary*	Yes	No	Yes	Yes	No
TruCoax/TCF Laser Gas Proprietary blend	*Proprietary*	Yes	No	Yes	Yes	No
TruCoax/TCF Laser Gas Proprietary blend	*Proprietary*	Yes	No	Yes	Yes	No
TruCoax/TCF Laser Gas Proprietary blend	*Proprietary*	Yes	No	Yes	Yes	No

Inventory (Con't.)				
Component	**CAS**	**Japan ENCS**	**Korea KECL**	**TSCA**
TruCoax/TCF Laser Gas Proprietary blend	*Proprietary*	Yes	Yes	Yes
TruCoax/TCF Laser Gas Proprietary blend	*Proprietary*	Yes	Yes	Yes
TruCoax/TCF Laser Gas Proprietary blend	*Proprietary*	No	Yes	Yes
TruCoax/TCF Laser Gas Proprietary blend	*Proprietary*	No	Yes	Yes
TruCoax/TCF Laser Gas Proprietary blend	*Proprietary*	No	Yes	Yes

Australia

Labor

Australia - Work Health and Safety Regulations - Hazardous Substances Requiring Health Monitoring

- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed

Australia - High Volume Industrial Chemicals List

- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed
- TruCoax/TCF Laser Gas Proprietary blend Proprietary > 1%
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed

Australia - List of Designated Hazardous Substances - Classification

- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% F+, T Repr.Cat.1 R12, R61, R23, R48/23
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Self classification required
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed

Environment

Australia - National Pollutant Inventory (NPI) Substance List

• TruCoax/TCF Laser Gas Proprietary blend	*Proprietary*	> 1%	10 tonne/yr Threshold category 1; 400 tonne/yr Threshold category 2a; 1 tonne/h Threshold category 2a; 2000 tonne/yr Threshold category 2b; 60000 MWH Threshold category 2b; 20 MW Threshold category 2b
• TruCoax/TCF Laser Gas Proprietary blend	*Proprietary*	> 1%	Not Listed
• TruCoax/TCF Laser Gas Proprietary blend	*Proprietary*	> 1%	Not Listed
• TruCoax/TCF Laser Gas Proprietary blend	*Proprietary*	> 1%	15 tonne/yr Threshold category 3 (total)
• TruCoax/TCF Laser Gas Proprietary blend	*Proprietary*	> 1%	Not Listed

Australia - Ozone Protection Act - Scheduled Substances

• TruCoax/TCF Laser Gas Proprietary blend	*Proprietary*	> 1%	Not Listed
• TruCoax/TCF Laser Gas Proprietary blend	*Proprietary*	> 1%	Not Listed
• TruCoax/TCF Laser Gas Proprietary blend	*Proprietary*	> 1%	Not Listed
• TruCoax/TCF Laser Gas Proprietary blend	*Proprietary*	> 1%	Not Listed
• TruCoax/TCF Laser Gas Proprietary blend	*Proprietary*	> 1%	Not Listed

Australia - Priority Existing Chemical Program

• TruCoax/TCF Laser Gas Proprietary blend	*Proprietary*	> 1%	Not Listed
• TruCoax/TCF Laser Gas Proprietary blend	*Proprietary*	> 1%	Not Listed
• TruCoax/TCF Laser Gas Proprietary blend	*Proprietary*	> 1%	Not Listed
• TruCoax/TCF Laser Gas Proprietary blend	*Proprietary*	> 1%	Not Listed
• TruCoax/TCF Laser Gas Proprietary blend	*Proprietary*	> 1%	Not Listed

Canada

Labor

Canada - WHMIS - Classifications of Substances

• TruCoax/TCF Laser Gas Proprietary blend	*Proprietary*	> 1%	A, B1, D1A, D2A
• TruCoax/TCF Laser Gas Proprietary blend	*Proprietary*	> 1%	A
• TruCoax/TCF Laser Gas Proprietary blend	*Proprietary*	> 1%	A; Uncontrolled product according to WHMIS classification criteria (solid)
• TruCoax/TCF Laser Gas Proprietary blend	*Proprietary*	> 1%	A
• TruCoax/TCF Laser Gas Proprietary blend	*Proprietary*	> 1%	A

Canada - WHMIS - Ingredient Disclosure List

• TruCoax/TCF Laser Gas Proprietary blend	Proprietary	> 1%	0.1 %
• TruCoax/TCF Laser Gas Proprietary blend	*Proprietary*	> 1%	Not Listed
• TruCoax/TCF Laser Gas Proprietary blend	Proprietary	> 1%	1 %
• TruCoax/TCF Laser Gas Proprietary blend	*Proprietary*	> 1%	Not Listed
• TruCoax/TCF Laser Gas Proprietary blend	*Proprietary*	> 1%	Not Listed

Environment

Canada - CEPA - Priority Substances List

- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed

Europe

Other

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Classification

- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% F+; R12 T; R23-48/23 Repr.Cat.1; R61
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Concentration Limits

- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Labelling

- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% F+ T R:61-12-23-48/23 S:53-45
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Notes - Substances and Preparations

- TruCoax/TCF Laser Gas Proprietary blend Proprietary > 1% E
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Safety Phrases

- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% S:53-45

- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed

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Mexico

Other

Mexico - Hazard Classifications

- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Hazard Class = 2.3 (2.1) UN1016
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Hazard Class = 2.2 UN2036; Hazard Class = 2.2 UN2591
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Hazard Class = 2.2 UN1013; Hazard Class = 9 PG = III UN1845; Hazard Class = 2.3 UN2187
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Hazard Class = 2.2 UN1066; Hazard Class = 2.2 UN1977
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Hazard Class = 2.2 UN1046; Hazard Class = 2.2 UN1963

Mexico - Regulated Substances

- TruCoax/TCF Laser Gas Proprietary blend Proprietary > 1% UN1016
- TruCoax/TCF Laser Gas Proprietary blend Proprietary > 1% UN2036; UN2591
- TruCoax/TCF Laser Gas Proprietary blend Proprietary > 1% UN1013; UN1845; UN2187
- TruCoax/TCF Laser Gas Proprietary blend Proprietary > 1% UN1066; UN1977
- TruCoax/TCF Laser Gas Proprietary blend Proprietary > 1% UN1046; UN1963

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United States

Labor

U.S. - OSHA - Process Safety Management - Highly Hazardous Chemicals

- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed

U.S. - OSHA - Specifically Regulated Chemicals

- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed

Environment

U.S. - CAA (Clean Air Act) - 1990 Hazardous Air Pollutants

- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed

U.S. - CERCLA/SARA - Hazardous Substances and their Reportable Quantities

- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed

U.S. - CERCLA/SARA - Radionuclides and Their Reportable Quantities

- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed

U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances EPCRA RQs

- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed

U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances TPQs

- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed

U.S. - CERCLA/SARA - Section 313 - Emission Reporting

- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed

- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed

U.S. - CERCLA/SARA - Section 313 - PBT Chemical Listing

- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed

United States - California

Environment

U.S. - California - Proposition 65 - Carcinogens List

- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed

U.S. - California - Proposition 65 - Developmental Toxicity

- TruCoax/TCF Laser Gas Proprietary blend Proprietary > 1% developmental toxicity, initial date 7/1/89
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed

U.S. - California - Proposition 65 - Maximum Allowable Dose Levels (MADL)

- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed

U.S. - California - Proposition 65 - No Significant Risk Levels (NSRL)

- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed

U.S. - California - Proposition 65 - Reproductive Toxicity - Female

- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed

U.S. - California - Proposition 65 - Reproductive Toxicity - Male

- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed

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United States - Pennsylvania

Labor

U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List

- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1%
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed

U.S. - Pennsylvania - RTK (Right to Know) - Special Hazardous Substances

- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed

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United States - Rhode Island

Labor

U.S. - Rhode Island - Hazardous Substance List

- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Toxic
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Not Listed
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Toxic
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Flammable
- TruCoax/TCF Laser Gas Proprietary blend *Proprietary* > 1% Toxic

15.2 Chemical Safety Assessment

- No Chemical Safety Assessment has been carried out.

15.3 Other Information

- WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

Section 16 - Other Information

Relevant Phrases (code & full text)

- H331 - Extremely flammable gas
  H331 - Toxic if inhaled
  H372 - Causes damage to organs through prolonged or repeated exposure.

  R12 - Extremely flammable.
  R23 - Toxic by inhalation.
  R48/23 - Toxic: danger of serious damage to health by prolonged exposure through inhalation.

Last Revision Date	• 22/August/2012
Preparation Date	• 22/August/2012
Disclaimer/Statement of Liability	• To the best of Air Liquide's knowledge, the information contained herein is reliable and accurate as of this date; however, accuracy, 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.

Key to abbreviations

NDA = No data available