



SAFETY DATA SHEET

Page : 1 / 3

Revised edition no : 1

Date : 15 / 4 / 2008

Supersedes : 0 / 0 / 0

0 to 1000 ppb nitrogen dioxide in air**86954**

1 IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND OF THE COMPANY / UNDERTAKING

Trade name : 0 to 1000 ppb nitrogen dioxide in air
Company identification : Air Liquide UK Ltd.
Station Road
Coleshill
Birmingham B46 1JY United Kingdom
Emergency phone nr : 01675 462695

2 COMPOSITION / INFORMATION ON INGREDIENTS

Substance / Preparation : Preparation.
Components : This product is hazardous.

3 HAZARDS IDENTIFICATION

Hazards identification : Oxidant. Strongly supports combustion. May react violently with combustible materials.
Compressed gas.

4 FIRST AID MEASURES

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

5 FIRE-FIGHTING MEASURES

Flammable class : Non flammable.
Specific hazards : Supports combustion.
Exposure to fire may cause containers to rupture/explode.
Hazardous combustion products : None.
Extinguishing media
- Suitable extinguishing media : All known extinguishants can be used.
Specific methods : If possible, stop flow of product.
Move away from the container and cool with water from a protected position.
Special protective equipment for fire fighters : Do not enter fire area without proper protective equipment, including respiratory protection.

6 ACCIDENTAL RELEASE MEASURES

Personal precautions : Evacuate area.
Ensure adequate air ventilation.
Eliminate ignition sources.
Environmental precautions : Try to stop release.
Clean up methods : Ventilate area.

7 HANDLING AND STORAGE

Storage : Segregate from flammable gases and other flammable materials in store.
Keep container below 50°C in a well ventilated place.
Handling : Open valve slowly to avoid pressure shock.
Suck back of water into the container must be prevented.
Do not allow backfeed into the container.



SAFETY DATA SHEET

Page : 2 / 3

Revised edition no : 1

Date : 15 / 4 / 2008

Supersedes : 0 / 0 / 0

0 to 1000 ppb nitrogen dioxide in air**86954**

7 HANDLING AND STORAGE (continued)

Use only properly specified equipment which is suitable for this product, its supply pressure and temperature. Contact your gas supplier if in doubt.
Refer to supplier's container handling instructions.

8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Personal protection : Do not smoke while handling product.
Ensure adequate ventilation.

Occupational Exposure Limits : Nitrogen dioxide : TLV[©] -TWA [ppm] : 3
Nitrogen dioxide : TLV[©] -STEL [ppm] : 5
Nitrogen dioxide : OEL (UK)-LTEL [ppm] : 5
Nitrogen dioxide : OEL (UK)-STEL [ppm] : 5
Nitrogen dioxide : VLE - France [ppm] : 3
Nitrogen dioxide : MAK - Germany [ppm] : 5

9 PHYSICAL AND CHEMICAL PROPERTIES

Physical state at 20 °C : Compressed gas.

Colour : Colourless.

Odour : Negligible.

Relative density, gas (air=1) : Lighter or similar to air.

Solubility in water [mg/l] : No reliable data available.

10 STABILITY AND REACTIVITY

Stability and reactivity : May react violently with combustible materials.
May react violently with reducing agents.
Violently oxidises organic material.

11 TOXICOLOGICAL INFORMATION

Toxicity information : No data available.

12 ECOLOGICAL INFORMATION

Ecological effects information : No known ecological damage caused by this product.

Effect on ozone layer : None.

13 DISPOSAL CONSIDERATIONS

General : Do not discharge into any place where its accumulation could be dangerous.
Contact supplier if guidance is required.

Disposal method : Consult supplier for specific recommendations.

14 TRANSPORT INFORMATION

UN No. : 3156

H.I. nr : 25

ADR/RID

Proper shipping name : COMPRESSED GAS, OXIDIZING, N.O.S. (Compressed air)



SAFETY DATA SHEET

Page : 3 / 3

Revised edition no : 1

Date : 15 / 4 / 2008

Supersedes : 0 / 0 / 0

0 to 1000 ppb nitrogen dioxide in air**86954**

14 TRANSPORT INFORMATION (continued)

- ADR Class : 2
- ADR/RID Classification code : 1 O
Labelling ADR : Label 2.2 : Non flammable, non toxic gas.
Label 5.1 : Oxidizing substances.
Other transport information : Avoid transport on vehicles where the load space is not separated from the driver's compartment.
Ensure vehicle driver is aware of the potential hazards of the load and knows what to do in the event of an accident or an emergency.
Before transporting product containers :
- Ensure that containers are firmly secured.
- Ensure cylinder valve is closed and not leaking.
- Ensure valve outlet cap nut or plug (where provided) is correctly fitted.
- Ensure valve protection device (where provided) is correctly fitted.
- Ensure there is adequate ventilation.
- Compliance with applicable regulations.

15 REGULATORY INFORMATION

- EC Classification : O; R8
EC Labelling
Symbol(s) : O : Oxidizing
R Phrase(s) : R8 : Contact with combustible material may cause fire.
S Phrase(s) : S17 : Keep away from combustible material.

16 OTHER INFORMATION

- Training advice : Receptacle under pressure.
Ensure all national/local regulations are observed.

End of document



SAFETY DATA SHEET

Page : 1 / 3

Revised edition no : 2

Date : 16 / 3 / 2009

Supersedes : 15 / 4 / 2008

< 200 ppm carbon monoxide in air**3318**

1 IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND OF THE COMPANY / UNDERTAKING

Trade name : < 200 ppm carbon monoxide in air
Company identification : Air Liquide UK Ltd.
Station Road
Coleshill
Birmingham B46 1JY United Kingdom
Emergency phone nr : 01675 462695

2 COMPOSITION / INFORMATION ON INGREDIENTS

Substance / Preparation : Preparation.
Components : This product is not hazardous but contains hazardous components.

| Substance name | Contents | CAS No | EC No | Annex No | Classification |
|-----------------|--------------|-------------|-----------|--------------|--|
| Carbon monoxide | : <= 200 ppm | 630-08-0 | 211-128-3 | 006-001-00-2 | F+; R12 Repr. Cat. 1; R61 T; R23-48/23 |
| Compressed air | : balance % | 132259-10-0 | ----- | ----- | |

3 HAZARDS IDENTIFICATION

Hazards identification : In high concentrations may cause asphyxiation.
Compressed gas.

4 FIRST AID MEASURES

First aid measures

- **Inhalation** : In high concentrations may cause asphyxiation. Symptoms may include loss of mobility/consciousness. Victim may not be aware of asphyxiation. Remove victim to uncontaminated area wearing self contained breathing apparatus. Keep victim warm and rested. Call a doctor. Apply artificial respiration if breathing stopped.
- **Ingestion** : Ingestion is not considered a potential route of exposure.

5 FIRE-FIGHTING MEASURES

Flammable class : Non flammable.
Specific hazards : Exposure to fire may cause containers to rupture/explode.
Hazardous combustion products : Under fire conditions, hazardous fumes will be present.
Extinguishing media

- **Suitable extinguishing media** : All known extinguishants can be used.

Specific methods : If possible, stop flow of product.
Move away from the container and cool with water from a protected position.

Special protective equipment for fire fighters : In confined space use self-contained breathing apparatus.

6 ACCIDENTAL RELEASE MEASURES

Personal precautions : Evacuate area.
Ensure adequate air ventilation.
Wear self-contained breathing apparatus when entering area unless atmosphere is proved to be safe.

Environmental precautions : Try to stop release.



SAFETY DATA SHEET

Page : 2 / 3

Revised edition no : 2

Date : 16 / 3 / 2009

Supersedes : 15 / 4 / 2008

< 200 ppm carbon monoxide in air**3318**

6 ACCIDENTAL RELEASE MEASURES (continued)

Clean up methods : Ventilate area.

7 HANDLING AND STORAGE

Storage : Keep container below 50°C in a well ventilated place.

Handling : Open valve slowly to avoid pressure shock.
Suck back of water into the container must be prevented.
Do not allow backfeed into the container.
Use only properly specified equipment which is suitable for this product, its supply pressure and temperature. Contact your gas supplier if in doubt.
Refer to supplier's container handling instructions.

8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Personal protection : Ensure adequate ventilation.

Occupational Exposure Limits : Carbon monoxide : TLV[©] -TWA [ppm] : 25
Carbon monoxide : OEL (UK)-LTEL [ppm] : 30
Carbon monoxide : OEL (UK)-STEL [ppm] : 200
Carbon monoxide : VME - France [ppm] : 50
Carbon monoxide : MAK - Germany [ppm] : 30

9 PHYSICAL AND CHEMICAL PROPERTIES

Physical state at 20 °C : Compressed gas.

Colour : Colourless.

Odour : Odourless.

Relative density, gas (air=1) : Lighter or similar to air.

Solubility in water [mg/l] : No reliable data available.

10 STABILITY AND REACTIVITY

Stability and reactivity : Stable under normal conditions.

11 TOXICOLOGICAL INFORMATION

Toxicity information : No known toxicological effects from this product.

12 ECOLOGICAL INFORMATION

Ecological effects information : No known ecological damage caused by this product.

Effect on ozone layer : None.

13 DISPOSAL CONSIDERATIONS

General : Do not discharge into any place where its accumulation could be dangerous.
Contact supplier if guidance is required.

Disposal method : Consult supplier for specific recommendations.



SAFETY DATA SHEET

Page : 3 / 3

Revised edition no : 2

Date : 16 / 3 / 2009

Supersedes : 15 / 4 / 2008

< 200 ppm carbon monoxide in air**3318**

14 TRANSPORT INFORMATION

UN No. : 1956
H.I. nr : 20
ADR/RID
Proper shipping name : COMPRESSED GAS, N.O.S. (Compressed air, Carbon monoxide)
- ADR Class : 2
- ADR/RID Classification code : 1 A
Labelling ADR : Label 2.2 : Non flammable, non toxic gas.
Other transport information : Avoid transport on vehicles where the load space is not separated from the driver's compartment.
Ensure vehicle driver is aware of the potential hazards of the load and knows what to do in the event of an accident or an emergency.
Before transporting product containers :
- Ensure that containers are firmly secured.
- Ensure cylinder valve is closed and not leaking.
- Ensure valve outlet cap nut or plug (where provided) is correctly fitted.
- Ensure valve protection device (where provided) is correctly fitted.
- Ensure there is adequate ventilation.
- Compliance with applicable regulations.

15 REGULATORY INFORMATION

EC Labelling : Not classified as dangerous preparation/substance.
Symbol(s) : None.
R Phrase(s) : None.
S Phrase(s) : None.

16 OTHER INFORMATION

Training advice : Asphyxiant in high concentrations.
Keep container in a well-ventilated place.
Do not breathe the gas.
The hazard of asphyxiation is often overlooked and must be stressed during operator training.
Receptacle under pressure.
Ensure all national/local regulations are observed.

End of document



SAFETY DATA SHEET

Page : 1 / 3

Revised edition no : 1

Date : 22 / 6 / 2009

Supersedes : 0 / 0 / 0

0 to 200 ppm nitric oxide in nitrogen**3390**

1 IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND OF THE COMPANY / UNDERTAKING

Trade name : 0 to 200 ppm nitric oxide in nitrogen
Company identification : Air Liquide UK Ltd.
Station Road
Coleshill
Birmingham B46 1JY United Kingdom
Emergency phone nr : 01675 462695

2 COMPOSITION / INFORMATION ON INGREDIENTS

Substance / Preparation : Preparation.
Components : This product is not hazardous but contains hazardous components.

3 HAZARDS IDENTIFICATION

Hazards identification : In high concentrations may cause asphyxiation.
Compressed gas.

4 FIRST AID MEASURES

First aid measures

- **Inhalation** : In high concentrations may cause asphyxiation. Symptoms may include loss of mobility/consciousness. Victim may not be aware of asphyxiation. Remove victim to uncontaminated area wearing self contained breathing apparatus. Keep victim warm and rested. Call a doctor. Apply artificial respiration if breathing stopped.
- **Ingestion** : Ingestion is not considered a potential route of exposure.

5 FIRE-FIGHTING MEASURES

Flammable class : Non flammable.
Specific hazards : Exposure to fire may cause containers to rupture/explode.
Hazardous combustion products : None.
Extinguishing media

- **Suitable extinguishing media** : All known extinguishants can be used.

Specific methods : If possible, stop flow of product.
Move away from the container and cool with water from a protected position.

Special protective equipment for fire fighters : In confined space use self-contained breathing apparatus.

6 ACCIDENTAL RELEASE MEASURES

Personal precautions : Evacuate area.
Ensure adequate air ventilation.
Wear self-contained breathing apparatus when entering area unless atmosphere is proved to be safe.

Environmental precautions : Try to stop release.

Clean up methods : Ventilate area.



SAFETY DATA SHEET

Page : 2 / 3

Revised edition no : 1

Date : 22 / 6 / 2009

Supersedes : 0 / 0 / 0

0 to 200 ppm nitric oxide in nitrogen**3390**

7 HANDLING AND STORAGE

Storage : Keep container below 50°C in a well ventilated place.

Handling : Open valve slowly to avoid pressure shock.
Suck back of water into the container must be prevented.
Do not allow backfeed into the container.
Use only properly specified equipment which is suitable for this product, its supply pressure and temperature. Contact your gas supplier if in doubt.
Refer to supplier's container handling instructions.

8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Personal protection : Ensure adequate ventilation.

Occupational Exposure Limits : Nitric oxide : TLV© -TWA [ppm] : 25
Nitric oxide : LTEL - UK [ppm] : 25
Nitric oxide : STEL - UK [ppm] : 35
Nitric oxide : VME - France [ppm] : 25
Nitric oxide : MAK - Germany [ppm] : 25

9 PHYSICAL AND CHEMICAL PROPERTIES

Physical state at 20 °C : Compressed gas.

Colour : Colourless.

Odour : Barely perceptible.

Relative density, gas (air=1) : Lighter or similar to air.

Solubility in water [mg/l] : No reliable data available.

10 STABILITY AND REACTIVITY

Stability and reactivity : Stable under normal conditions.

11 TOXICOLOGICAL INFORMATION

Toxicity information : No known toxicological effects from this product.

12 ECOLOGICAL INFORMATION

Ecological effects information : No known ecological damage caused by this product.

Effect on ozone layer : None.

13 DISPOSAL CONSIDERATIONS

General : Do not discharge into any place where its accumulation could be dangerous.
Contact supplier if guidance is required.

Disposal method : Consult supplier for specific recommendations.

14 TRANSPORT INFORMATION

UN No. : 1956

H.I. nr : 20

ADR/RID



SAFETY DATA SHEET

Page : 3 / 3

Revised edition no : 1

Date : 22 / 6 / 2009

Supersedes : 0 / 0 / 0

0 to 200 ppm nitric oxide in nitrogen

3390

14 TRANSPORT INFORMATION (continued)

Proper shipping name : COMPRESSED GAS, N.O.S. (Nitrogen, Nitric oxide)
- ADR Class : 2
- ADR/RID Classification code : 1 A
Labelling ADR : Label 2.2 : Non flammable, non toxic gas.
Other transport information : Avoid transport on vehicles where the load space is not separated from the driver's compartment.
Ensure vehicle driver is aware of the potential hazards of the load and knows what to do in the event of an accident or an emergency.
Before transporting product containers :
- Ensure that containers are firmly secured.
- Ensure cylinder valve is closed and not leaking.
- Ensure valve outlet cap nut or plug (where provided) is correctly fitted.
- Ensure valve protection device (where provided) is correctly fitted.
- Ensure there is adequate ventilation.
- Compliance with applicable regulations.

15 REGULATORY INFORMATION

EC Labelling : Not classified as dangerous preparation/substance.
Symbol(s) : None.
R Phrase(s) : None.
S Phrase(s) : None.

16 OTHER INFORMATION

Training advice : Asphyxiant in high concentrations.
Keep container in a well-ventilated place.
Do not breathe the gas.
The hazard of asphyxiation is often overlooked and must be stressed during operator training.
Receptacle under pressure.
Ensure all national/local regulations are observed.

End of document



SAFETY DATA SHEET

Page : 1 / 3

Revised edition no : 2

Date : 16 / 3 / 2009

Supersedes : 15 / 4 / 2008

< 200 ppm sulphur dioxide in air**3390**

1 IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND OF THE COMPANY / UNDERTAKING

Trade name : < 200 ppm sulphur dioxide in air
Company identification : Air Liquide UK Ltd.
Station Road
Coleshill
Birmingham B46 1JY United Kingdom
Emergency phone nr : 01675 462695

2 COMPOSITION / INFORMATION ON INGREDIENTS

Substance / Preparation : Preparation.
Components : This product is not hazardous but contains hazardous components.

| Substance name | Contents | CAS No | EC No | Annex No | Classification |
|-----------------|--------------|-------------|-----------|--------------|------------------|
| Sulphur dioxide | : <= 200 ppm | 7446-09-5 | 231-195-2 | 016-011-00-9 | T; R23 C; R34 |
| Compressed air | : | 132259-10-0 | ---- | ---- | |

3 HAZARDS IDENTIFICATION

Hazards identification : In high concentrations may cause asphyxiation.
Compressed gas.

4 FIRST AID MEASURES

First aid measures

- **Inhalation** : In high concentrations may cause asphyxiation. Symptoms may include loss of mobility/consciousness. Victim may not be aware of asphyxiation. Remove victim to uncontaminated area wearing self contained breathing apparatus. Keep victim warm and rested. Call a doctor. Apply artificial respiration if breathing stopped.
- **Ingestion** : Ingestion is not considered a potential route of exposure.

5 FIRE-FIGHTING MEASURES

Flammable class : Non flammable.
Specific hazards : Exposure to fire may cause containers to rupture/explode.
Hazardous combustion products : None.
Extinguishing media

- **Suitable extinguishing media** : All known extinguishants can be used.
- Specific methods** : If possible, stop flow of product.
Move away from the container and cool with water from a protected position.

Special protective equipment for fire fighters : In confined space use self-contained breathing apparatus.

6 ACCIDENTAL RELEASE MEASURES

Personal precautions : Evacuate area.
Ensure adequate air ventilation.
Wear self-contained breathing apparatus when entering area unless atmosphere is proved to be safe.

Environmental precautions : Try to stop release.



SAFETY DATA SHEET

Page : 2 / 3

Revised edition no : 2

Date : 16 / 3 / 2009

Supersedes : 15 / 4 / 2008

< 200 ppm sulphur dioxide in air**3390**

6 ACCIDENTAL RELEASE MEASURES (continued)

Clean up methods : Ventilate area.

7 HANDLING AND STORAGE

Storage : Keep container below 50°C in a well ventilated place.

Handling : Open valve slowly to avoid pressure shock.
Suck back of water into the container must be prevented.
Do not allow backfeed into the container.
Use only properly specified equipment which is suitable for this product, its supply pressure and temperature. Contact your gas supplier if in doubt.
Refer to supplier's container handling instructions.

8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Personal protection : Ensure adequate ventilation.

Occupational Exposure Limits : Sulphur dioxide : TLV© -TWA [ppm] : 2
Sulphur dioxide : TLV© -STEL [ppm] : 5
Sulphur dioxide : OEL (UK)-LTEL [ppm] : 1
Sulphur dioxide : OEL (UK)-STEL [ppm] : 1
Sulphur dioxide : VLE - France [ppm] : 5
Sulphur dioxide : VME - France [ppm] : 2
Sulphur dioxide : MAK - Germany [ppm] : 0.5

9 PHYSICAL AND CHEMICAL PROPERTIES

Physical state at 20 °C : Compressed gas.

Colour : Colourless.

Odour : Negligible.

Relative density, gas (air=1) : Lighter or similar to air.

Solubility in water [mg/l] : No reliable data available.

10 STABILITY AND REACTIVITY

Stability and reactivity : Stable under normal conditions.

11 TOXICOLOGICAL INFORMATION

Toxicity information : No known toxicological effects from this product.

12 ECOLOGICAL INFORMATION

Ecological effects information : No known ecological damage caused by this product.

Effect on ozone layer : None.

13 DISPOSAL CONSIDERATIONS

General : Do not discharge into any place where its accumulation could be dangerous.
Contact supplier if guidance is required.

Disposal method : Consult supplier for specific recommendations.



SAFETY DATA SHEET

Page : 3 / 3

Revised edition no : 2

Date : 16 / 3 / 2009

Supersedes : 15 / 4 / 2008

< 200 ppm sulphur dioxide in air**3390**

14 TRANSPORT INFORMATION

UN No. : 1956
H.I. nr : 20
ADR/RID
Proper shipping name : COMPRESSED GAS, N.O.S. (Compressed air)
- ADR Class : 2
- ADR/RID Classification code : 1 A
Labelling ADR : Label 2.2 : Non flammable, non toxic gas.
Other transport information : Avoid transport on vehicles where the load space is not separated from the driver's compartment.
Ensure vehicle driver is aware of the potential hazards of the load and knows what to do in the event of an accident or an emergency.
Before transporting product containers :
- Ensure that containers are firmly secured.
- Ensure cylinder valve is closed and not leaking.
- Ensure valve outlet cap nut or plug (where provided) is correctly fitted.
- Ensure valve protection device (where provided) is correctly fitted.
- Ensure there is adequate ventilation.
- Compliance with applicable regulations.

15 REGULATORY INFORMATION

EC Labelling : Not classified as dangerous preparation/substance.
Symbol(s) : None.
R Phrase(s) : None.
S Phrase(s) : None.

16 OTHER INFORMATION

Training advice : Asphyxiant in high concentrations.
Keep container in a well-ventilated place.
Do not breathe the gas.
The hazard of asphyxiation is often overlooked and must be stressed during operator training.
Receptacle under pressure.
Ensure all national/local regulations are observed.

End of document