

Safety Data Sheet

Product :

Simulated town gas

Page :1/5

MSDS Nr : 302-10-2056BOC

Version : 1

Date : 01/03/2002

1 IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY

Product name	Simulated town gas
Company identification	see heading and/or footer
Emergency phone numbers	see heading and/or footer

2 COMPOSITION/INFORMATION ON INGREDIENTS

Substance/Preparation	Preparation
Components/Impurities	Simulated town gas - Contains the following components: 55.2% Hydrogen {F+;R12}/27.4% Natural gas {F+;R12}/17.4% Nitrogen Natural gas - Contains between 0% and 0.1% of Benzene {F;R11 Carc.Cat.1;R45 T;R48/23/24/25} Contains between 0% and 5% of Toluene {F;R11 Xn;R20} Contains n-Hexane {F;R11 Xi;R38 Xn;R48/20 N;R51-53 R62 R65 R67} Contains Butane n- {F+;R12} Contains Isobutane {F+;R12} Contains Carbon dioxide
EC Nr (from EINECS)	Not applicable for preparations

3 HAZARDS IDENTIFICATION

Hazards identification	Extremely flammable In high concentrations may cause asphyxiation. Compressed gas
------------------------	---

4 FIRST AID MEASURES

Inhalation	Low concentrations of CO2 cause increased respiration and headache. In low concentrations may cause narcotic effects. Symptoms may include dizziness, headache, nausea and loss of co-ordination. 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. Delayed adverse effects possible.
Ingestion	Ingestion is not considered a potential route of exposure.

Safety Data Sheet

Product :

Simulated town gas

Page :2/5

MSDS Nr : 302-10-2056BOC

Version : 1

Date : 01/03/2002

5 FIRE FIGHTING MEASURES

Specific hazards	Exposure to fire may cause containers to rupture/explode.
Hazardous combustion products	Incomplete combustion may form carbon monoxide.
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. Do not extinguish a leaking gas flame unless absolutely necessary. Spontaneous/explosive re-ignition may occur. Extinguish any other fire.
Special protective equipment for fire fighters	Use self-contained breathing apparatus.

6 ACCIDENTAL RELEASE MEASURES

Personal precautions	Wear self-contained breathing apparatus when entering area unless atmosphere is proved to be safe. Evacuate area. Ensure adequate air ventilation. Eliminate ignition sources.
Environmental precautions	Try to stop release.
Clean up methods	Ventilate area.

7 HANDLING AND STORAGE

Handling and storage	Ensure equipment is adequately earthed. Suck back of water into the container must be prevented. Purge air from system before introducing gas. 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. Keep away from ignition sources (including static discharges). Segregate from oxidant gases and other oxidants in store. Refer to supplier's container handling instructions. Keep container below 50°C in a well ventilated place.
----------------------	--

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure limit value for country	UK: Benzene - LTEL:3ppm (EH40/2000) UK: Toluene - LTEL:50ppm; STEL:150ppm (EH40/2000)
----------------------------------	--

Safety Data Sheet

Product :

Simulated town gas

Page :3/5

MSDS Nr : 302-10-2056BOC

Version : 1

Date : 01/03/2002

Personal protection

UK: n-Hexane - LTEL: 20ppm (EH40/2000)
UK: Butane n- - LTEL: 600ppm; STEL: 750ppm (EH40/2000)
UK: Isobutane - LTEL: 600ppm; STEL: 750ppm (EH40/2000)
UK: Carbon dioxide - LTEL: 5000ppm; STEL: 15000ppm (EH40/2000)
Ensure adequate ventilation.
Do not smoke while handling product.

9 PHYSICAL AND CHEMICAL PROPERTIES

Relative density, gas	Lighter or similar to air
Solubility mg/l water	No reliable data available.
Appearance/Colour	Colourless gas
Odour	Stenchant often added

10 STABILITY AND REACTIVITY

Stability and reactivity	Can form explosive mixture with air. May react violently with oxidants.
--------------------------	--

11 TOXICOLOGICAL INFORMATION

General	Benzene - Toxic by inhalation./May have carcinogenic effect./Can affect blood cell formation. Toluene - In low concentrations may cause narcotic effects. Symptoms may include dizziness, headache, nausea and loss of co-ordination./Irritation to eyes./Can affect blood cell formation. n-Hexane - In low concentrations may cause narcotic effects. Symptoms may include dizziness, headache, nausea and loss of co-ordination. / May cause irritation to the respiratory tract. Butane n- - In low concentrations may cause narcotic effects. Symptoms may include dizziness, headache, nausea and loss of co-ordination. Isobutane - In low concentrations may cause narcotic effects. Symptoms may include dizziness, headache, nausea and loss of co-ordination. Carbon dioxide - In high concentrations cause rapid circulatory insufficiency. Symptoms are headache, nausea and vomiting, which may lead to unconsciousness.
---------	---

Safety Data Sheet

Product :

Simulated town gas

Page :4/5

MSDS Nr : 302-10-2056BOC

Version : 1

Date : 01/03/2002

12 ECOLOGICAL INFORMATION

General

Benzene - Toxic to water organisms.

n-Hexane - Toxic to water organisms.

Carbon dioxide - When discharged in large quantities may contribute to the greenhouse effect.

13 DISPOSAL CONSIDERATIONS

General

Avoid discharge to atmosphere.

Do not discharge into areas where there is a risk of forming an explosive mixture with air. Waste gas should be flared through a suitable burner with flash back arrestor.

Do not discharge into any place where its accumulation could be dangerous.

Contact supplier if guidance is required.

14 TRANSPORT INFORMATION

UN Nr

1954

Class/Div

2.1

ADR/RID Classification code

1F

ADR/RID Hazard Nr

23

Labelling ADR

Label 2.1: flammable 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 they are firmly secured and:

- cylinder valve is closed and not leaking
- valve outlet cap nut or plug (where provided) is correctly fitted
- valve protection device (where provided) is correctly fitted
- there is adequate ventilation.
- compliance with applicable regulations.

15 REGULATORY INFORMATION

Number in Annex I of Dir 67/548

Not applicable for preparations

EC Classification

F+;R12

-Symbols

F+: Extremely flammable

Safety Data Sheet

Product :**Simulated town gas**

Page :5/5

MSDS Nr : 302-10-2056BOC

Version : 1

Date : 01/03/2002

Labelling of cylinders

-Symbols

Label 3: flammable gas

-Risk phrases

R12 Extremely flammable.

-Safety phrases

S9 Keep container in well ventilated place.

S16 Keep away from ignition sources - No smoking.

S33 Take precautionary measures against static discharges.

16 OTHER INFORMATION

Ensure all national/local regulations are observed.

Ensure operators understand the flammability hazard.

The hazard of asphyxiation is often overlooked and must be stressed during operator training.

Users of breathing apparatus must be trained.

Before using this product in any new process or experiment, a thorough material compatibility and safety study should be carried out.

Details given in this document are believed to be correct at the time of going to press. Whilst proper care has been taken in the preparation of this document, no liability for injury or damage resulting from its use can be accepted.

End of document.**Number of pages :5**