

Safety Data Sheet (SDS) In compliance with EC 1907/2006 Article 31

1. PRODUCT AND COMPANY IDENTIFICATION

- Product Description: Gas Springs
- Primary use: Motion Control/ Assist
- Manufacturer:

	Alrose Products Ltd
	6 Stapledon Road
	Orton Southgate
	Peterborough
	PE2 6TB
	United Kingdom

- Emergency telephone: 01733 570008
- Contact: Managing Director or Quality Manager

2. PRODUCT CONTENT INFORMATION

Description: It is a closed system containing tube, piston rod, seals, oil, and nitrogen gas.

Dangerous Components: None
Additional Information: Gas Springs contains compressed gas (nitrogen) at a pressure of between 0 and 180 bar.

Composition / Information on Ingredients

Chemical Name Common names/ acronyms CAS Number	Common names/ acronyms	CAS Number
Highly refined mineral oil	Hydraulic oil	8020-83-5
Nitrogen	N2, compressed gas	7727-37-9
Polyurethane	PU seals	N/A (ECHA List No: 618-449-1)
Ethylene Propylene Rubber	EPDM seals	25038-36-2
Fluoro-Carbon Rubber	FKM, Vitron seals	9011-17-0
Nitrile rubber	NBR seals	9005-98-5

3. HAZARDS IDENTIFICATION

The gas spring is filled with compressed nitrogen (colourless, odourless, inert inflammable gas). Gas springs should not be heated or opened.

Information pertaining to particular dangers for people and environment:

Caution Pressurised Container.

Nitrogen is suffocating by replacing ambient oxygen.

Injection of oil through the skin resulting from contact with oil at high pressure constitutes a major medical emergency.

Oil is water polluting and some may be harmful to aquatic life.

Hazard Description:

In its manufactured state, and under normal and expected conditions of use, the product is not expected to cause any acute or chronic health effects. The health effects listed below are for accidental release of gas or oil if the product is damaged.

Route of entry:

Skin contact	Handling of oil causes no particular hazard when appropriate personal protective equipment is used taking normal handling precautions.
Eye contact	Oil may cause irritation with prolonged contact.
Skin Absorption	This is not expected to be an entry route in to the body.
Ingestion	This is not expected to be an entry route in to the body.
Inhalation	This is not expected to be an entry route in to the body.

4. FIRST AID MEASURES

Skin Contact	Wash thoroughly with mild soap and water. Seek medical attention if irritation develops. Change clothes or shoes contaminated by the oil and launder thoroughly before reuse. (Never put rags contaminated by the oil into cloth pockets).
Eye Contact	Immediately flush thoroughly for at least 20 minutes. Seek medical attention if irritation persists
Inhalation	Provide fresh air. Keep victim quiet and warm. If breathing is difficult, oxygen may be administered. If breathing has stopped artificial respiration should be started immediately. Seek medical attention.
Ingestion	This is not expected to be an important route of entry in to the body. If large amounts of oil are ingested, do not induce vomiting. Seek medical attention immediately.

5. FIRE FIGHTING MEASURES.

Extinguishing Media	Use water fog, foam, dry chemical or carbon dioxide extinguisher or spray.
Fire Fighting Procedures	As in any fire, self-contained breathing apparatus should be used. Water containing oils should be prevented from being discharged into any waterway, sewer or drain.
Unusual Hazards	Small quantities of irritating and/ or toxic and/ or asphyxiate gases may be released during a fire. Sources of these gases are in very small quantities in each spring.
Hazardous Combustion	Oil may produce Carbon monoxide, metal oxides, and elemental oxides. Only a small amount of oil is present in each spring.
Condition under which ignition occurs.	Exposure to fire may cause containers to rupture or explode.
Additional Information	Non-flammable. Remove items from incendiary zone, if possible. Cool endangered items with water spray.

6. ACCIDENTAL RELEASE MEASURES.

Person related safety precautions	Ensure adequate ventilation Keep away from ignition sources. Particular danger of slipping on leaked oil.
Measures for environmental protection	Do not allow oil to enter drainage system, surface or ground water. Do not allow accumulation of large quantities of gas in basements, work pits/ sewers, or other low-lying areas where accumulation could be dangerous.
Measures for cleaning/ collecting	Absorb oil with liquid binding material (e.g. sand, sawdust, diatomite, universal binders) and dispose in suitable containers.

7. HANDLING AND STORAGE.

Handling: Information for safe handling	Do not dent or pierce the spring, which contains a pressurised gas. Do not heat spring, which contains pressurised gas.
Storage	Store in a cool dry, ventilated area, preferably rod down. Do not store gas springs more than one year Store away from food stuffs. Local regulations concerning handling and storage of water polluting products have to be followed.

8. EXPOSURE CONTROL AND PERSONAL PROTECTION.

Components with limit values that required monitoring at the workplace	7727-37-9 Nitrogen TLV Simple asphyxiate.
Personal protective equipment	General protective and hygienic measures: Wear suitable protective clothing at work. Avoid close or long-term contact with skin. Do not carry cleaning cloths impregnated with oil in clothing pockets.
Breathing Equipment	Not required, local ventilation to ambient air.
Gloves	Not required, however good personal hygiene practices should be followed.
Eye	Normal industrial eye protection practices should be employed.
Other Equipment	Not required.

9. PHYSICAL AND CHEMICAL PROPERTIES.

General Information:

The product itself is a metal tube containing an extending piston rod, filled with nitrogen gas and a small amount of hydraulic oil. The product itself has no noticeable odour.

The information below is for the gas and oil contained in the tube.

Gas spring

Oil

Density at 15°C kg / m³ Flash point
Viscosity (40°C , cSt.) Pour point

0,887
140°C
68
-45°C

For Nitrogen Gas

Form Color Oder
Molecular weight Relative vapour
density Density
Specific volume Boiling
point/range Critical temperature
Melting point/range Water
solubility

Compressed
gas Colorless
gas
No odor warning
properties 28,01g/mol
0,967 (Air=1)
1,170 Kg/m³ (15 °C, 1bar)
13,80 ft³/lb (0,8615 m³/kg) at 70 °F (21
°C)
-195,8 °C (-321 °F)
-147 °C (-233 °F)
-209,86 °C (-346 °F)
20 mg/l

10. STABILITY AND REACTIVITY

Chemical stability

Product is stable if stored and used within normal conditions.

Conditions to be avoided

Avoid storage above 50°C.

Reactivity

Do not expose to strong acids or oxidising agents.

Hazardous Decomposition Products

Product is stable.

Product is stable.

11: TOXICOLOGICAL INFORMATION

Assembled product has no known toxicology issues beyond those of ingredients contained

Nitrogen Gas

No known toxicological effects.

High concentrations of Nitrogen gas act as an asphyxiant.

Suffocating Symptoms

Fast and hard breathing, fast tire, nausea/vomit, and death after loss of conscious

Oil	
Acute toxicity	Not applicable
Primary irritant effect:	
On Skin	No known irritant effect
On Eye	No known irritant effect
Sensitisation	No sensitising effect known.

Additional Information The manufacturer does not indicate that any of the oil constituents are highly toxic at concentrations present in the product.

12: ECOLOGICAL INFORMATION

Nitrogen Gas

Nitrogen is made of by compressing and decomposing the air. It has no harmful effect on ecologic balance.

Oil

Do not allow to reach ground water, water bodies or sewage systems. Oil is harmful to aquatic organisms. The oil swims on water surface.

13. DISPOSAL CONSIDERATIONS

Prior to disposal of product, gas pressure should be relieved to atmosphere in a well-ventilated place, and hydraulic fluid drained by a qualified mechanic.

Recycling of product is the recommended method of disposal.

All wastes should be evaluated with regard to local regulations and disposed of accordingly.

It is the user's responsibility to dispose of all wastes in accordance with local, state and federal regulations, at properly permitted or authorised facilities.

14. TRANSPORT INFORMATION.

HS-Code Harmonized System code	870 880 20
UN ID No.	UN3164
Class	2,2
Label	2,2
Designation	Articles Pressurized pneumatic or Hydraulic containing non-flammable gas
Packing group ADR IMDG IATA	Void

Road Carriage – RID

Danger code	6A
Special provision	283 371 594
Exempt from ADR regulations as special provisioned	

Sea Carriage - IMDG

EMS	F-C, S-V
Marine pollutant	No

Air Carriage – IATA / ICAO

Packing Instruction	208
Special Provision	A48 A114

15. REGULATIONS

Product contains no ingredients listed in Regulations.
We sell this article in the EU in compliance with the current requirements of REACH.

16. OTHER INFORMATION

The information in this Safety Data Sheet is believed to be, to the best of our knowledge, correct and complete as of the date issued. However, we cannot assume any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any product is the sole responsibility of the user. Given the variety of the factors that can affect a product, some of which are uniquely within the user's knowledge and control, it is essential that the user evaluate the product to determine whether it is fit for a particular purpose.

Alrose Products Ltd
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