Camloc
Motion Control

FORM 111: SAFETY DATA SHEET – GAS SPRINGS

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product name: GAS SPRINGS

Camloc Part numbers.

Camloc Part No.	Camloc Part No.	Camloc Part No.
13 Digit format (e.g.: SWF6050500001) with the following starting letters.	GS Part number format GS-X-1234 (e.g.: GS-8-1234 with and without optional extension) where 'X' can be:	GS Part number format (e.g.: GS-XY-1234 with and without optional extension) where 'X' can be any of the codes in previous column, and 'Y' can be:
S, C, P, E, R, X	6, 8, 1, 4, B, C, D, S, T,V	A, B, C, D. E. F

Manufacturer: Camloc Motion Control Ltd – Leicester
Address: 15 New Star Road
Leicester, LE4 9JD,
UK
Emergency Telephone: 0044 (0) 7719 439 602
Contact: Mark Stevenson

SECTION 2: INFORMATION ON INGREDIENTS

Description: Gas Spring is a closed system containing piston rod, tube, seals, oil, nitrogen gas and end fittings.
Dangerous Components: Void
Additional Information: Gas Springs contain up to a maximum of 0.25litres of compressed gas (nitrogen) at a pressure of between 0 and 180 bar. The maximum product pressure and volume is 45 bar*l.

Hazardous Ingredients: Product

Chemical Name	% By Weight
Zinc*	<3
Cadmium*	<0.0001
Lead*	<0.05

*Dependent on gas spring specification

Gas: Nitrogen Gas, compressed. Colourless, odourless gas.

Hazardous Components	Mass %	CAS #	R Phrases
Nitrogen gas	<1%	07727-37-9	None

Camloc
Motion Control

FORM 111: SAFETY DATA SHEET – GAS SPRINGS

Three types of oil used in gas springs, for lubrication and damping. Light amber/ red liquid with mild odour.

Composition: Refined base oil and additives

Oil Type	Hazardous Components	Mass %	R Phrases
Light oil	Base oil, low viscous	Variable <30%	R 65
Mid Oil	Base Oil	Variable <30%	R52/ R53
Heavy Oil	Base Oil	Variable <30%	None

SECTION 3: HAZARDS IDENTIFICATION

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

Information pertaining to particular dangers for man 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 (see section 12) 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.

SECTION 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.

FORM 111: SAFETY DATA SHEET – GAS SPRINGS

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.

SECTION 5: FIRE FIGHTING MEASURES.

Extinguishing Media:

Use water fog, foam, dry chemical or carbon dioxide extinguisher or spray.

Special 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 asphyxiant gases may be released during a fire. Sources of these gases are in very small quantities in each spring.

Hazardous Combustion Products:

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. Non-flammable.

Additional Information:

Remove items from incendiary zone, if possible.
Cool endangered items with water spray.

SECTION 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.

Camloc
Motion Control

FORM 111: SAFETY DATA SHEET – GAS SPRINGS

SECTION 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.
Store away from food stuffs.
Local regulations concerning handling and storage of water polluting products have to be followed.

SECTION 8: EXPOSURE CONTROL AND PERSONAL PROTECTION.

Components with limit values that required monitoring at the workplace:
7727-37-9 Nitrogen
TLV Simple asphyxiant.

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.

SECTION 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 oil. The product itself has no noticeable odour.

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

	Nitrogen Gas	Oil
General Information	Colourless Odourless gas	Light amber/ red liquid with mild odour
Form	Compressed gas	Liquid
Boiling Point	-196°C	>316°C
Flash Point	Not applicable	>150°C
Relative density (Gas)	0.97	
Density at 15°C	1.17kg/m^3	0.86 – 0.89g/cm^3
Solubility in water	20mg/l	Negligible
Self- Flammability	Product is not self-igniting.	

Camloc
Motion Control

FORM 111: SAFETY DATA SHEET – GAS SPRINGS

SECTION 10: STABILITY AND REACTIVITY

Chemical stability:	Product is stable if stored and used within specifications.
Conditions to be avoided:	Avoid storage above 50°C. Do not expose to strong acids or oxidising agents.
Reactivity:	Product is stable.
Hazardous Decomposition Products:	Product is stable.

SECTION 11: TOXICOLOGICAL INFORMATION

When used and handled according to specifications this product does not have any harmful effects.

Nitrogen Gas:

No known toxicological effects.
High concentrations of Nitrogen gas act as an asphyxiant.

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.

SECTION 12: ECOLOGICAL INFORMATION

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

SECTION 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.

Camloc
Motion Control

FORM 111: SAFETY DATA SHEET – GAS SPRINGS

SECTION 14: TRANSPORT INFORMATION.

Air Transport (ICAO/ IATA/ CAA):

UN/ ID:	1066
Proper shipping name:	Nitrogen, compressed
Hazard classification:	Non-Flammable Gas

On assembly of product to application (apparatus/ machinery), the proper shipping name may change. The application shipping classification becomes the responsibility of the shipper.

SECTION 15: REGULATIONS

Product contains no ingredients listed in Regulations.
The company sells this article in the EU in compliance with the current requirements of REACH.

SECTION 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 Camloc Motion Control Ltd does not 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 Camloc product, some of which are uniquely within the user's knowledge and control, it is essential that the user evaluate the Camloc product to determine whether it is fit for a particular purpose.

Camloc
Motion Control

FORM 111: SAFETY DATA SHEET – GAS SPRINGS
AMENDMENT RECORD

FORM 111: SAFETY DATA SHEET – GAS SPRINGS

Page	Brief Description of Change	Approved by	Date	Issue
All	Revised to 16 part format	G Hoyle	24.01.13	8
1 & 3	Part No. table added and transportation information amended.	G Hoyle	04.04.11	7
1	Amendment to remove hexavalent chrome from section 2	G Hoyle	09.02.11	6
3	Amendment to transportation information	G Hoyle	31.03.10	5
3	Additions made to Section 8	G Hoyle	30.07.07	4
1	Arvin Meritor contact details changed	A Read	05.04.07	3
All	Individual MSDS replaced by Gas Spring MSDS	G Hoyle	09.02.06	2
All	First Issue	B Lloyd	14.03.00	1