



SECTION 1: Identification of the substance or the mixture and of the enterprise or company

1.1. Product identifier

- Designation:	Red light rocket with parachute Models: L-35A / L-31.
- Other means of identification:	-
- CAS No.:	Not applicable (mixture). See section 3 for the components.
- CE No.:	Not applicable (mixture). See section 3 for the components.
- Index No.:	Not applicable (mixture). See section 3 for the components.
- REACH registration number:	Not applicable (mixture). See section 3 for the components.
- CLP notification number:	Not applicable (mixture). See section 3 for the components.

1.2. Relevant uses identified for the substance or the mixture, and uses which are not recommended

Pyrotechnic article manufactured for use as a visual signal for maritime assistance.

Rescue equipment approved according to Directive 2014/90/EC for marine equipment and the international Convention for the safety of life at sea (SOLAS - rudder indicator).

1.3. Details of the safety data sheet supplier

LECEA Sistemas Pirotécnicos Avanzados, S.A.
Barrio Epiztegia, 3
01208 Larrea - Barrundia (Alava - España) Tel.:
(+34) 945 317 024
Email: info@pirolec.com

1.4. Emergency telephone number

Tel.: (+34) 945 317 024 (Office hours)

SECTION 2: Identification of hazards

2.1. Mixture classification

Classification derived from applying the classification standards in Directive 99/45/EC


Physicochemical hazards:	Complete article:
	- Fire or projection hazard (Explosive).



Health hazards:	Propellant mixture (lower part of the article):
	- Harmful if swallowed (Xn, R22). - May cause sensitisation if in contact with the skin (Xi, R43).
Environmental hazards:	Luminous mixture (top part of the article):
	- Risk of serious eye injuries (R 41, Xi).
Environmental hazards:	Propellant mixture (lower part of the article):
	- Not classified as dangerous to the environment.
Environmental hazards:	Luminous mixture (top part of the article):
	- Not classified as dangerous to the environment.
Classification derived from applying the classification standards in Regulations 1272/ 2008 (CLP)	
Physicochemical hazards:	Complete article:
	- Explosive, division 1.3: Explosive, fire hazard, shock wave or projection hazard (H203).
Health hazards:	Propellant mixture (lower part of the article):
	- Harmful if swallowed (Acute tox. 4, H302). - Causes serious eye irritation (Eye Damage 2, H319). - May cause an allergic reaction to skin (Skin Sens 1, H317).
Health hazards:	Luminous mixture (top part of the article):
	- Causes serious eye injuries (Eye Damage 1, H318).
Environmental hazards:	Propellant mixture (lower part of the article):
	- Not classified as dangerous to the environment.
Environmental hazards:	Luminous mixture (top part of the article):
	- Not classified as dangerous to the environment.

2.2. Label features

Article subject to reduced labelling according to section 1.3.5 of Appendix I of Regulations EC 1272/2008: *Explosives sold with the objective of producing an explosive or pyrotechnic effect will be labelled and packed exclusively in compliance with requirements for explosives.*

- Risk phrases	H203: Explosive; fire, blast or projection hazard.
- Caution phrases	P210 – Keep away from heat/sparks/open flames/hot surfaces. — No smoking. P373 – DO NOT fight fire when fire reaches explosives. P401 – Store in a dry place protected from sources of ignition.
- Hazard pictograms	
- Signal word	Hazard

2.3. Other hazards

Should the article break, avoid inhaling the powder as it could irritate the respiratory tract. Avoid inhaling the smoke when igniting.
The mixture is not classified as PBT or vPvB.

SECTION 3: Composition/information on the components

3.1. Substances

Not applicable.

3.2. Mixtures

Composition/information on the ingredients

Comp.	Name	CAS No.	CE No.	REACH No.	Classification: (DSD/CLP)	R/H phrases	Conc.
Propellant mixture (lower part of the article)	Potassium perchlorate	7778-74-7	231-912-9	Not available	- Oxidiser - Harmful	R9 R22	< 80 %
					- Ox. Sol. 1 - Acute Tox. 4 *	H271 H302	
Propellant mixture (lower part of the article)	Bisphenol A	80-05-7	201-245-8	Not available	- Repr. Cat. 3 - Irritant - Sensitising - Hazardous to the environment	R62 R37-41 R43 R52	< 3 %
					- Repr. 2 - STOT SE 3 - Eye Dam. 1 - Skin Sens. 1	H361f H335 H318 H317	
Luminous mixture (top part of the article)	Strontium nitrate	10042-76-9	233-131-9	Not available	- Oxidiser - Irritant	R8 R41	< 50 %
					- Oxid. Solid 1 - Eye Damage 1	H271 H318	
Luminous mixture (top part of the article)	Magnesium	7439-95-4	231-104-6	Not available	- Highly flammable	R11 R15	< 30 %
					- Flamm. Sol. 1 - Water-react. 2 - Self-heat. 1	H228 H261 H252	

The complete meaning of the H and R phrases can be found in section 16.

SECTION 4: First aid

4.1. Description of first aid

The symptoms resulting from chemical poisoning can occur after exposure. As such, if in doubt, or in the event of discomfort, seek medical attention and show medical staff this SDS.

In the event of ingesting the content of the article	<p>Rinse your mouth thoroughly and spit out. Do not induce vomiting unless ordered to do so by a doctor. In the event of spontaneous vomiting keep the casualty's head lowered to prevent inhalation.</p> <p>Seek medical attention and show this SDS to the emergency services.</p>
In the event of eye contact with the content of the article	<p>Rinse eyes with plenty of water at ambient temperature for at least 10 minutes. Ensure that the casualty does not rub or close their eyes. In the event that the casualty uses contact lenses these must be removed provided they are not stuck to the eyes, in which case additional injury could be caused.</p> <p>Seek medical attention and show this SDS to the emergency services.</p>
In the event of burns	<p>Cool the wound with water for ten minutes (do not use ice). Carefully remove any object such as rings, watches, etc. before the area becomes inflamed.</p> <p>Cover the wound with a sterile gauze and apply a bandage without tightening it to prevent infections. Depending on the size of the burn medical attention may be required.</p>
Smoke inhalation	<p>In the event of symptoms of poisoning from smoke, move the casualty to a quiet area where they have access to fresh air. In the event of those suffering from asthma or with respiratory problems medical attention is required.</p>

4.2. Main symptoms and effects, acute and delayed-action

If the content of the article is ingested in the event of an accident:

- Propellant load: given its potassium perchlorate content its ingestion could cause irritating effects, diarrhoea, nausea and vomiting.
- Luminous load (top part of the device): given the high content of magnesium, a burning sensation in the mouth may occur.

If powder comes into contact with the eyes reddening and pain will probably occur.

The smoke produced during ignition could cause eye and throat irritation.

4.3. Indication of all medical attention and of special treatments which must be applied immediately

No indication required.

SECTION 5: Firefighting measures

5.1. Extinguishing means

Do not fight the fire if it has reached a large volume of articles of this type, evacuate the area and protect yourself. A jet of water SHOULD NOT BE USED as an extinguishing agent.

Use extinguishing powder (class D) or sand to extinguish.

5.2. Specific hazards derived from the substance or mixture

Formation of hazardous combustion gases and vapours in the event of fire.
The pyrotechnic mixture contains a high proportion of oxidisers which can considerably worsen a fire.
Possible spontaneous combustion and risk of explosion, should the product spread as powder.
Contains magnesium: in contact with water hydrogen can be produced (highly flammable gas).

5.3. Recommendations for firefighting personnel

Act in accordance with the Internal Emergency Plan and/or the information sheets on conduct in the event of accidents and other emergencies.

The procedures drawn up to fight fires must include the physicochemical properties of the product. In addition to the risk of fire, the product has a shock wave and projection risk.

In the event of fire, quickly isolate the area by evacuating anyone in the vicinity of the incident. No action should be performed which could cause a personal risk or without adequate training.

Firefighters must wear appropriate protective equipment and a self-contained breathing apparatus with a full face mask which operates in positive pressure mode. Protective equipment for firefighters (including helmets, gloves and boots), in accordance with European Standard EN 469, provide a basic protection level in the event of a chemical incident.

SECTION 6: Measures in the event of accidental spillage

6.1. Personal precautions, protective equipment and emergency procedures

In the event that the article is damaged, and the content spills, it is fundamental to avoid the generation of powder and sparks. Do not dispose of waste in drains (explosion risk).

In the event of extensive spillage contact the supplier of this safety data sheet.

6.2. Environmental precautions

Inform the relevant authorities if a large volume of the article content reaches watercourses or the sewerage system.

6.3. Contention and cleaning methods and material

In the event of the article breaking and the content spilling, NEVER USE metal clear-up materials such as shovels or rakes which can generate sources of ignition as the result of sparks, friction or impact when clearing up the spillage.

In the event of the device breaking, the contaminated area must be hosed with water immediately to prevent the formation of powder: clear up the spillage carefully using absorbent, non-combustible materials (soil, sand, vermiculite, diatomaceous earth, etc.). Take into account that if in contact with water the material can emit flammable gases which is why sources of ignition and accumulation of electrostatic charges should be avoided when cleaning up; brushes with natural hair or palm bristles should be used. The collected material will be placed in a closed container away from heat sources in order to be delivered to a port reception facility. Do not forget that pyrotechnic compositions can easily recover their properties once dry.

Should any type of fault be observed in the article, contact the supplier (see section 1.3). Destruction may only be performed by specialised personnel using controlled processes and in authorised facilities. Keep the article in a dry and safe place and follow the instructions given by telephone or take it to a port reception facility. If in doubt contact your distributor.

6.4. Reference to other sections

For more information on the handling of waste see section 13.
For more information on personal protection see section 8.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Use outdoors. Always launch leeward with your arm outstretched, with the tube practically vertical and away from other people and flammable materials. Initially there will be a slight delay which is why you should have dry hands to prevent it from slipping. Fired vertically, when the rocket reaches the highest point of its trajectory, or is close to this point, a flare will be launched with a parachute which will burn with an intense red colour.

Observe and test the instructions indicated on the label. It is worthwhile reading and learning the handling instructions by heart as you may need it at night and in poor weather conditions.

The material expiry date must be strictly observed. It must be inspected periodically to ascertain its condition and removed if its useful life has been completed. Take into account that a rocket which has expired will work, however could do so erratically: it could release red hot slag or burn violently.

If you suspect that the product could be in poor conditions, replace it and contact the supplier (see section 1.3) or your distributor.

This article is not a toy, keep it away from children and take into account that help signals should only be used in the event of danger and when help is required.

DO NOT ATTEMPT TO DISASSEMBLE THE ARTICLE.

7.2. Safe storage conditions including possible incompatibility

Avoid friction or impacts to the product. Store in a wetproof container which protects from moisture. It is advisable to stow on the navigating bridge in order to be accessed quickly in the event of an emergency.

For the storage of large volumes keep in a cool and dry place. Away from flammable substances, ignition sources and protected from high temperatures. Avoid excess stacking of the product, the device must not be crushed.

7.3. Final specific uses

Pyrotechnic rescue device (luminous signal).

SECTION 8: Exposure/personal protection checks

8.1. Control parameters

Limit ambient values							
Country	CE	CAS	Chemical agent	VLA-ED (8h)		VLA-EC (15 min)	
				ppm	mg/m3	ppm	mg/m3
Spain	215-171-9	1309-48-4	Magnesium oxide (fumes and powder)	-	10	-	-
France	215-171-9	1309-48-4	Magnesium oxide (fumes and powder)	-	10	-	-
Canada	215-171-9	1309-48-4	Magnesium oxide	-	10	-	-
USA - OSHA	215-171-9	1309-48-4	Magnesium oxide (total powder)	-	15	-	-
Spain	215-609-9	1333-86-4	Carbon black	-	3.5	-	-
Canada	215-609-9	1333-86-4	Carbon black	-	3.5	-	-
France	215-609-9	1333-86-4	Carbon black	-	3.5	-	-
USA - OSHA	215-609-9	1333-86-4	Carbon black	-	3.5	-	-
EU	201-245-8	80-05-7	Bisphenol A	-	10	-	-

8.2. Exposure checks

Take into account that in accordance with Directive 2014/90/EC, the following is required in order of priority:

- drawing up of appropriate work procedures and technical checks, the use of suitable equipment and materials,
- the application of collective protection measures at the source of the risk, such as adequate ventilation and appropriate organisational measures, and
- in the event that exposure cannot be prevented using other means, the use of personal protection measures such as personal protective equipment.

Personal protective equipment

Eyes	As a general rule protection is not required.
Inhalation	As a general rule protection is not required, avoid inhaling the smoke.
Skin protection	As a general rule protection is not required. Gloves or damp cloths can be used for ignition, whilst ensuring that the device does not slip due to the firing delay.
Should the article break and spillage of the content occur	Should the device break, use disposable gloves when clearing up the content and avoid inhaling the powder. If there is insufficient ventilation it may be necessary to use a mask type P2 (according to EN 143).



SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance/description	A device comprised of a complex container which has two pyrotechnic mixtures. Once lit the propellant mixture will launch a rocket which, upon completion of its trajectory, will release a flare with a parachute which will burn with an intense red colour.
Odour	-
Starting point and boiling range	-
Flashpoint	-
Spontaneous combustion	-
Vapour pressure at 20°C	-
Solubility	-
Density at 25°C	-
Boiling range	-
Melting point/crystallisation point	-
Explosive properties	Explosive article category 1.3: Articles which can cause a fire, with the hazard of producing minor shock wave or projection effects, or both, but not a mass explosion hazard.
Oxidising properties	-

9.2. Additional information

Nothing to note.

SECTION 10: Stability and reactivity

10.1. Reactivity

Given the magnesium content, when in contact with water, hydrogen can be produced (highly flammable gas).

10.2. Chemical stability

Not applicable.

10.3. Possibility of dangerous reactions

Explosive article.

10.4. Conditions to be avoided

Keep away from sources of heat, sparks, open flame and hot surfaces.

10.5. Incompatible materials

Not applicable.

10.6. Dangerous decomposition products

No information.

SECTION 11: Toxicology information

11.1. Information on toxicological effects

There is no information about the mixture in its present condition. In accordance with the established methodology in section 3 of Appendix I of Regulations 1272/2008, the pyrotechnic mixture contained in the article is classified according to its components as follows:

Propellant mixture (lower part of the article):

- Harmful if swallowed (Acute tox. 4, H302). ATE mix: > 600 mg/kg.
- Causes serious eye irritation (Eye Damage 2, H319).
- May cause an allergic skin reaction (Skin Sens 1, H317).

Luminous mixture (top part of the article):

- Causes serious eye injuries (Eye Damage 1, H318).

SECTION 12: Ecological information

12.1. Toxicity

There is no information about the mixture in its present condition. In accordance with the established methodology in section 4 of Appendix I of Regulations 1272/2008, the pyrotechnic mixture contained in the article is classified according to its components as follows:

- Not classified.

12.2. Persistence and degradability

There is no information about the mixture in its present condition.

12.3. Bioaccumulation potential

There is no information about the mixture in its present condition.

12.4. Mobility in soil

There is no information about the mixture in its present condition.

12.5. Results of the PBT and vPvB evaluation

There is no information about the mixture in its present condition. None of the components in the mixture meet the conditions to be classified as PBT or vPvB.

SECTION 13: Considerations regarding disposal

13.1. Methods for handling waste

LER code	Description
16 04 03*	Other explosive waste (pyrotechnic rescue signals).
Disposal according to the legislation in force.	
Spilled products must be handled as described in section 6.3 and then sent to an agent for disposal or recovery as appropriate. The waste should not be disposed of in the sewerage networks or at sea, but should be taken to a port reception facility as set forth in Directive 2000/59/EC. Consult your supplier to resolve any queries.	
Applicable standards	<ul style="list-style-type: none"> • Directive 2008/98/EC on waste. • Directive 2000/59/EC on port reception facilities for ship-generated waste and cargo residues.

SECTION 14: Information regarding transport

14.1. UN No.:

0195

14.2. Official United Nations transport designation

RESCUE SIGNALS for boats

14.3. Hazard class(es) for transport

1

14.4. Packaging group

Not set forth.

14.5. Environmental hazards

Marine pollutant: No

14.6. Specific precautions for users

Classification code: 1.3G

Label: 1

No special measures are described, follow the instructions set forth by UNECE in:

<http://www.unece.org/trans/danger/publi/adr/Instructions/English2011.pdf>

14.7. Bulk transport in accordance with Appendix II of the Marpol Convention 73/78 and the IBC Code

Not applicable.

SECTION 15: Regulatory information

15.1. Specific regulations and legislation with regard to health, safety and the environment for the substance or mixture

Article sold under the protection of Directive 2014/90/EC for marine equipment: Appendix A.1/1.8 Rocket parachute flares (pyrotechnics).

Approved product in compliance with the international Convention for the safety of life at sea (SOLAS - rudder indicator).

- In Spain: Category according to Royal Decree 989/2015: Pyrotechnic articles for use in navigation (luminous signal)

15.2. Evaluation of chemical safety

No evaluation of chemical safety has been performed concerning the product.

SECTION 16: Further information.

<i>Advice on training</i>	All the crew must know, understand and be duly skilled on the use of all pyrotechnic products onboard.
<i>Abbreviations and acronyms</i>	Glossary of the European Chemicals Agency: http://echa.cdt.europa.eu
<i>Bibliography</i>	<ul style="list-style-type: none"> - Database of ECHA substances: http://echa.europa.eu/web/guest/information-on-chemicals - Guidance on compilation of Safety Data Sheet (v 1.1. December 2011). - Supplier safety data sheets. - IFA - Databases on hazardous substance (GESTIS): http://limitvalue.ifa.dguv.de/ - International chemical safety sheets: ICSC: 0289 (magnesium). - Safety in nautical activities. Maritime rescue (2011).

Complete text of the R and H phrases referred to in section 3 of the SDS (these phrases are assigned to the components, the classification of the mixture is in section 2.1)

R41	Risk of serious damage to eyes.
R62	Possible risk of impaired fertility.
R37	Irritating to respiratory system.
R43	May cause sensitisation by skin contact.
R52	Harmful to aquatic organisms.
R8	Contact with combustible material may cause fire.
R9	Explosive when mixed with combustible material.
R22	Harmful if swallowed.
R11	Highly flammable.
R15	Contact with water liberates extremely flammable gases.
H228	Flammable solid.
H261	In contact with water releases flammable gases.
H302	Harmful if swallowed.
H271	May cause fire or explosion; strong oxidiser.
H318	Causes serious eye damage.
H252	Self-heating in large quantities; may catch fire.
H361f	Suspected of damaging fertility.



Safety Data Sheet (SDS)

In accordance with EC Regulations 1907/2006 REACH

H335	May cause respiratory irritation.
H317	May cause an allergic skin reaction.

We recommend that you study this Safety Data Sheet carefully and, if required, consult an expert in order to understand the information contained herein. The information contained herein is true and accurate with regard to the data referred to, corresponding to the current state of our knowledge and is supplied in good faith. Nevertheless, no express or implicit guarantee is given as the product quality can be affected by a wide variety of factors.

DO NOT HANDLE THE ARTICLE BEFORE HAVING READ AND UNDERSTOOD ALL THE SAFETY INSTRUCTIONS.