

SAFETY DATA SHEET

Based on Regulation (EC) No. 1907/2006 as amended



SDS PyroPol Signal Orange Smoke CF3 and variants see Section 1
Issued: October 2015_Rev.02

SECTION 1: PRODUCT AND COMPANY INFORMATION

Product Name:

PyroPol Signal Orange Smoke CF3, Art.-No. 1294200
PYROTECH NEREUS ORANGE SMOKE, Art.-No. 1294210
PANZERA ORANGE SMOKE PM5, Art.-No. N235
CIL/ORION FLOATING ORANGE SMOKE SIGNAL 3 MINUTES, Art.-No. 52251, N235CAN

Area of Usage:

Marine distress signal

Manufacturer:

Company name: PyroPol GmbH
Company address: Lippenhorstweg 29, 21514 Hornbek, Germany
E-Mail / Internet: info@pyropol.de / www.pyropl.de
Telephone No.: +49 – (0) 4158 – 89 00 73
Telefax No.: +49 – (0) 4158 – 89 00 97

24 h Emergency Contact No.: +49 – (0) 171 – 126 15 95

SECTION 2: HAZARDS IDENTIFICATION

Main health hazard: Hazards refer to contents of signal
Inhalation: Irritating to respiratory system
Skin contact: Irritating to skin. May cause sensitisation by skin contact.
Contact with exhaust gases or hot casing can cause burns.
Eye contact: Irritating to eyes
Ingestion: May give rise to upset stomach, sickness, vomiting
Fire and explosion hazards: Risk of ignition by shock, fire, friction, or other sources of ignition
Environmental hazards: Toxic to aquatic organism. May cause long-term adverse effects in the aquatic environment.

CLP Classification	DPD Classification
Explosive division 1.4 – H204	Explosive – R2
Skin irritant category 2 – H315	Harmful – R20/22/36/37/38/43
Skin sensitiser category 1 – H317	Hazardous for Environment – R51/53
Eye irritant category 2 – H319	
Acute toxic category 4 – H332	
STOT SE category 3 – H335	
Aqueous chronic category 2 – H411	

For full wording of hazard statements see Section 16

Label:

Danger Symbol:



Key Word:

Warning

WARNING: Contains Potassium chlorate and Solvent Orange 86

Danger Advice Documents:

H204 Fire or projection hazard
H315 Causes skin irritation
H317 May cause an allergic skin reaction
H319 Causes serious eye irritation
H332 Harmful if inhaled
H335 May cause respiratory irritation
H411 Toxic to aquatic life with long lasting effects

P102 Keep out of reach of children
P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P280 Wearing of protective gloves, clothes, glasses and face mask
P309 + P311 If exposed or you feel unwell: call a POISON CENTER or a doctor/ physician
P370 + P380 During Fire, evacuate immediate area

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P374 Fire fighting under normal precautions from a reasonable distance
P501 Dispose of contents / container to authorized waste disposal facility

Other hazards: May be mildly irritating to skin and respiratory system.
Contact with exhaust smoke, hot gases or hot casing can cause severe burns.

SECTION 3: COMPONENT INFORMATION

Hazardous component(s):

Under CLP EC1272/2008

Substance	CAS No	REACH registration No	%	Mass (g)	CLP Hazard Category and H statements
Potassium chlorate	3811-04-9	01-2119971261-41	30%	60	Oxidizing solid Cat. 1 – H271 Acute toxic Cat. 4 – H302/332 Aquatic chronic Cat. 2 – H411
Solvent Orange 86	81-64-1	01-2119494917-18	35%	70	Skin irritant Cat. 2 – H315 Skin sensitiser Cat. 1 – H317 Eye irritant Cat. 2 – H319 STOT SE Cat. 3 – H335

Under DPD EC1999/45

Substance	CAS number	EC number	%	Mass (g)	Symbol and Risk phrases
Potassium chlorate	3811-04-9	223-289-7	30%	60	O, Xn, N: R9/20/22/51/53
Solvent Orange 86	81-64-1	201-368-7	35%	70	Xi: R36/37/38/43

SECTION 4: FIRST AID MEASURES

General Advice: Not defined
After Inhalation (Combustion Gases): Having problems after inhaling smoke, consult a physician.
After Skin Contact: Wash with lots of water
After Contact with Eyes: Wash with lots of water, contact a physician
After Swallowing: Not possible to swallow product
Advice for doctors
Symptoms: Not defined
Dangers: Not defined
Actions to be taken: Not defined

SECTION 5: FIRE FIGHTING MEASURES

Extinguishing media

Suitable extinguishing media: Use any extinguishing media at early stages of fire.
Once the product has ignited, it cannot be extinguished.

Not to be used: No restriction

Special hazards arising from the substance or mixture: Product emits dense orange smoke that can be ignited in a confined space

Advice for fire fighters: The usual protective gear in case of fire

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions: Normal industrial hygiene. Use protective gloves.

Environmental Precautions: Do not let waste reach drains, sewers and bodies of water, or leak into ground

Methods and material for containment and cleaning up: Collect using non sparking tools, reuse if undamaged.
Otherwise, keep for disposal by experts.

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Reference to other sections: See Sections 8 and 13

SECTION 7: HANDLING AND STORAGE

Handling

Advice on Safe Handling: Conforming instructions printed on the signal.
Protect from exposure to impacts, friction, heat, fire, sparks,
electrostatic charges and other ignition sources.
Avoid dropping the signal on hard surfaces.
Do not use damaged product.

Conditions for safe storage, including any incompatibilities

Storage: Temperature should not exceed 75°C

Specific end use(s): Marine distress signal

Storage

Requirements of Storage Facility and Container: Store in a cool and dry place.
Store only in the original packaging and according to the local regulations regarding the storage of explosive materials.

SECTION 8: PERSONAL PROTECTION/EXPOSURE CONTROLS

Control parameters: None set

Exposure controls

Recommended engineering controls: No fire, sparks or welding close to the items. If cleaning up spillage, use tools which cannot strike sparks.
Personal protective equipment: Normally not needed. But in case of spillage:
Respiratory protection: In case of dust use particle filter mask such as EN143 Type P or EN149 Type FFP-S
Hand protection: Leather or similar protective gloves
Eye protection: Shatter proof glasses or goggles
Skin protection: Normal industrial hygiene
Specific hygiene measures: No smoking
Further information: Always check applicability with your supplier of protective equipment

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance: Colored metal body with red cap
Odor: None
Odor threshold value: Not applicable
pH (concentrated product): Not applicable
Melting point (°C): Not determined
Boiling point/ range (°C): Not applicable
Flash point (°C): Not applicable
Evaporation rate: Not applicable
Flammability: Contents are flammable
Explosive properties: Pyrotechnic smoke generator
Vapor pressure (mbar at 25°C): Not applicable
Vapor density: Not applicable
Density at 20°C (g/cm³): Not determined
Solubility in water (% by weight): Insoluble
Solubility in solvents: Not determined
Partition coefficient (log Pow): Not applicable
Autoignition temperature (°C): > 190
Decomposition temperature (°C): Not determined
Viscosity: Not applicable
Oxidizing properties: Contents have oxidizing properties

Other information

Note: These are typical values and do not constitute a specification

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SECTION 10: STABILITY AND REACTIVITY

Reactivity:	Stable product under recommended handling and storage conditions
Chemical stability:	Stable product under recommended handling and storage conditions
Possibility of hazardous reactions:	Stable product under recommended handling and storage conditions
Conditions to avoid:	High temperatures, above 100°C
Incompatible materials:	Not applicable
Hazardous decomposition products:	Product will emit dense orange smoke and become hot

SECTION 11: TOXICOLOGICAL INFORMATION

Information on toxicological effects

No data available on mixture. Data based on individual components shown below

Hazardous ingredients:	Potassium chlorate and Solvent Orange 86
Acute toxicity:	Potassium chlorate: LD ₅₀ oral rat 1870 mg/kg, harmful by ingestion Calculated product ATE ingestion = 17474 mg/kg, not classified as hazardous by ingestion Potassium chlorate: ATE inhalation 1.5 mg/l Calculated product ATE inhalation = 3.9 mg/l, harmful by inhalation
Skin corrosion / irritation:	Solvent Orange 86: Skin irritant category 2 under CLP
Serious eye damage / irritation:	Solvent Orange 86: Eye irritant category 2 under CLP
Respiratory or skin sensitisation:	Solvent Orange 86: Skin sensitiser category 1 under CLP
Germ cell mutagenicity:	No deleterious effects known
Carcinogenicity:	No deleterious effects known
Reproductive toxicity:	No deleterious effects known
STOT-single exposure:	Solvent Orange 86: Respiratory irritant category 3 under CLP
STOT-repeated exposure:	No deleterious effects known
Aspiration hazard:	No deleterious effects known
Likely routes of exposure:	Contact with skin
Symptoms related to the physical, chemical and toxicological characteristics:	Powders may be mildly irritating to the skin, eyes and respiratory tract. May cause sensitisation by skin contact. May cause gastric irritation, nausea and vomiting.
Delayed and immediate effects as well as chronic effects from short and long-term exposure:	No deleterious effects known
Other information:	None

SECTION 12: ECOLOGICAL INFORMATION

Toxicity

Potassium chlorate:	EC ₅₀ Daphnia magna 24h: 1.093 mg/l Toxic
Persistence and degradability:	Not applicable. Contains inorganic materials and is in form of solid article.
Bioaccumulative potential	
Mobility:	No test data on product
Mobility in soil:	None. Product in form of solid article.
Results of PBT and vPvB assessment:	Does not fulfill the criteria for classification as PBT or vPvB
Other adverse effects:	Not a marine pollutant (IMDG code)

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SECTION 13: DISPOSAL

Waste treatment methods

Disposal of waste materials: Disposal should be carried out in accordance with local health and safety, waste, environmental and storage / manufacture of explosives regulations.
DO NOT TRY TO DISMANTLE THE PRODUCT!

SECTION 14: TRANSPORT INFORMATION

Land transport (ADR/RID, GGVSEB)

UN No.: 0507
Proper Shipping Name: SIGNALS, SMOKE
Transport Class / Label: 1.4S
Packing Instruction: P135

Sea Transport (IMO-IMDG Code, GGVSee)

UN No.: 0507
Proper Shipping Name: SIGNALS, SMOKE
Transport Class / Label: 1.4S
Packing Instruction: P135
EMS Code: F - B, S - X
Comment: Not classified as Marine Pollutants

Air Transport (ICAO/IATA DGR)

UN No.: 0507
Proper Shipping Name: Signals, smoke
Transport Class / Label: 1.4S
Packing Instruction: P135
Additional information: Passenger and Cargo Aircraft

EX Number (DOT/USA): EX2008070055



Explosive substances and explosive articles
Subclass 1.4

SECTION 15: REGULATORY INFORMATION

Safety, health and environmental regulations / legislation specific for the substance or mixture: None specified

Chemical safety assessment: A chemical safety assessment has not been carried out on this mixture

Other Regulations: Work Protection Law, Health Protection Law, Explosives Regulations and Explosive Law must be conformed to. The item is not subject to safety evaluations.

SECTION 16: OTHER INFORMATION

R-phrases used in this document

R2	Risk of explosion by shock, friction, fire, or other sources of ignition
R9	Explosive if mixed with combustible material
R20/22	Harmful by inhalation and if swallowed
R36/37/38	Irritating to eyes / respiratory system and skin
R43	May cause sensitisation by skin contact
R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

H-statements used in this document

H204	Fire or projection hazard
H271	May cause fire or explosion, strong oxidizer
H302	Harmful if swallowed
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation
H332	Harmful if inhaled

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H335	May cause respiratory irritation
H411	Toxic to aquatic life with long lasting effects

Abbreviations and Acronyms:

GHS	Globally Harmonized System of Classification and Labelling of Chemicals
CAS-No.	Registration Number of the <u>Chemical Abstract Service</u>
EG-No.	Registration Number of the <u>European Inventory of Existing Chemical Substances (EINECS)</u>
EG-Index-No.	ID Code for a particular dangerous material
AGW-value	Work Place Safety/Limit Value
BGW-value	Biological Work Place Safety/Limit Value
CMR-Substance	Cancerogen, Mutanogen, Fertility Damaging

The information in the safety data sheet is based on our present knowledge. It is intended to describe our products with regard to safety requirements and is not intended to guarantee any particular properties.

This is a voluntary product information.

There is no legal obligation to issue a safety data sheet according to Regulation (EC) No 1907/2006 as amended.