

# 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

# 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

|                       |                                                                                                                                            |
|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| P374<br>P501          | Fire fighting under normal precautions from a reasonable distance<br>Dispose of contents / container to authorized waste disposal facility |
| <b>Other hazards:</b> | May be mildly irritating to skin and respiratory system.<br>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<br>Acute toxic Cat. 4 – H302/332<br>Aquatic chronic Cat. 2 – H411                     |
| Solvent Orange 86  | 81-64-1   | 01-2119494917-18      | 35% | 70       | Skin irritant Cat. 2 – H315<br>Skin sensitiser Cat. 1 – H317<br>Eye irritant Cat. 2 – H319<br>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                            |
| <b>Advice for doctors</b>            |                                                            |
| 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: ACCIDENTIAL 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.

# 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

**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/cm<sup>3</sup>): 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

# 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 10: STABILITY AND REACTIVITY

|                                            |                                                                  |
|--------------------------------------------|------------------------------------------------------------------|
| <b>Reactivity:</b>                         | Stable product under recommended handling and storage conditions |
| <b>Chemical stability:</b>                 | Stable product under recommended handling and storage conditions |
| <b>Possibility of hazardous reactions:</b> | Stable product under recommended handling and storage conditions |
| <b>Conditions to avoid:</b>                | High temperatures, above 100°C                                   |
| <b>Incompatible materials:</b>             | Not applicable                                                   |
| <b>Hazardous decomposition products:</b>   | 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

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

## SECTION 12: ECOLOGICAL INFORMATION

### Toxicity

Potassium chlorate: EC<sub>50</sub> 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)

# 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 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                           |

# 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

|      |                                                 |
|------|-------------------------------------------------|
| 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</u> (EINECS) |
| 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 | Carcinogen, Mutagen, 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.