



SAFETY DATA SHEET

according to Regulation (EU) 2015/830

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VERSION: 2.0

1. SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

| | |
|--------------|----------------|
| Trade name | OVA-FLAMM |
| Product code | 8447 |
| SDS Number | 399 |
| Product use | Industrial use |

1.2. Relevant identified uses of the substance or mixture and uses advised against

| | |
|--------------------------|-------------|
| Relevant identified uses | Preparation |
| Uses advised against | None known |

1.3. Details of the supplier of the safety data sheet

Supplier
 STANNOL GmbH
 Haberstr. 24
 42551 Velbert
 Germany
 Tel.+49 (0) 202 585 - 732 (Mo. - Fr. 08:00 - 16:00)

1.4. Emergency telephone number

+49 (0) 202 585 - 732 (Mo. - Fr. 08:00 - 16:00)

2. SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008

| | | | |
|------------------|--------------------------------------|------|---|
| Physical hazards | Flammable gases, Category 1 | H220 | Extremely flammable gas. |
| | Gases under pressure : Liquefied gas | H280 | Contains gas under pressure; may explode if heated. |

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008

Hazard pictograms



Signal word

Danger

Hazard statements

H220

Extremely flammable gas.

H280

Contains gas under pressure; may explode if heated.

Precautionary statements

Prevention

P210

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Response

| | |
|----------------|---|
| P377 | Leaking gas fire: Do not extinguish, unless leak can be stopped safely. |
| P381 | In case of leakage, eliminate all ignition sources. |
| Storage | |
| P403 | Store in a well-ventilated place. |
| P410+P403 | Protect from sunlight. Store in a well-ventilated place. |

2.3. Other hazards

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII.

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII.

3. SECTION 3: Composition/information on ingredients

3.2. Mixtures

| Chemical name | CAS- No EC- No Index No RRN | % | Classification according to Regulation (EC) No. 1272/2008 | Notes |
|---|--|-----------|--|------------------|
| butane | 106-97-8 203-448-7 601-004-00-0 01-2119474691-32-XXXX | 50 - 75 | Flam. Gas 1, H220 Press. Gas (Comp.), H280 | (Note C)(Note U) |
| Propane | 74-98-6 200-827-9 601-003-00-5 01-2119486944-21-XXXX | 25 - 50 | Flam. Gas 1, H220 Press. Gas (Comp.), H280 | (Note U) |
| isobutane | 75-28-5 200-857-2 601-004-00-0 01-2119485395-27-XXXX | 10 - 12,5 | Flam. Gas 1, H220 Press. Gas (Comp.), H280 | (Note C)(Note U) |
| Naphtha, hydrotreated light (<1% Benzene) | 64742-49-0 265-151-9 649-328-00-1 | 0,1 - < 1 | Flam. Liq. 2, H225 Skin Irrit. 2, H315 Muta. 1B, H340 Carc. 1B, H350 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 2, H411 | (Note P, UVCB) |

Note C : Some organic substances may be marketed either in a specific isomeric form or as a mixture of several isomers. In this case the supplier must state on the label whether the substance is a specific isomer or a mixture of isomers.

Note U : When put on the market gases have to be classified as 'Gases under pressure', in one of the groups compressed gas, liquefied gas, refrigerated liquefied gas or dissolved gas. The group depends on the physical state in which the gas is packaged and therefore has to be assigned case by case.

Note P : The classification as a carcinogen or mutagen need not apply if it can be shown that the substance contains less than 0,1 % w/w benzene (EINECS No 200-753-7). When the substance is not classified as a carcinogen at least the precautionary statements (P102-)P260-P262- P301 + P310-P331 (Table 3.1) or the S-phrases (2-)23-24-62 (Table 3.2) shall apply. This note applies only to certain complex oil-derived substances in Part 3.

Full text of H-statements: see section 16

4. SECTION 4: First aid measures

4.1. Description of first aid measures

General information Remove contaminated clothes.

| | |
|--|---|
| Inhalation | Remove person to fresh air and keep comfortable for breathing. Get medical advice/attention if you feel unwell. |
| Skin contact | Wash with plenty of soap and water. Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse. |
| Eyes contact | In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. |
| Ingestion | Not applicable. |
| 4.2. Most important symptoms and effects, both acute and delayed | |
| Symptoms/effects | Not available. |
| 4.3. Indication of any immediate medical attention and special treatment needed | |
| Treat symptomatically. | |
| 5. SECTION 5: Firefighting measures | |
| 5.1. Extinguishing media | |
| Suitable extinguishing media | dry chemical powder, alcohol-resistant foam, carbon dioxide (CO ₂). |
| Unsuitable extinguishing media | Do not use water jet as an extinguisher, as this will spread the fire. |
| 5.2. Special hazards arising from the substance or mixture | |
| Fire hazard | The vapours are denser than air and may travel along the ground. Distance ignition possible. |
| Explosion hazard | Pressurised container: May burst if heated. |
| Hazardous combustion products | During fire, gases hazardous to health may be formed. |
| 5.3. Advice for firefighters | |
| Precautionary measures fire | Self-contained breathing apparatus and full protective clothing must be worn in case of fire. |
| Firefighting instructions | Move containers from fire area if it can be done without personal risk. |
| Other information | Use standard firefighting procedures and consider the hazards of other involved materials. |
| 6. SECTION 6: Accidental release measures | |
| 6.1. Personal precautions, protective equipment and emergency procedures | |
| For non-emergency personnel | |
| Emergency procedures | Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the MSDS. |
| For emergency responders | |
| Protective equipment | Wear recommended personal protective equipment. |
| Emergency procedures | Keep unnecessary personnel away. For personal protection, see section 8 of the MSDS. |
| 6.2. Environmental precautions | |
| Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground. | |
| 6.3. Methods and material for containment and cleaning up | |
| Methods for cleaning up | Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water. Small spills: Take up liquid spill into absorbent material. Clean surface thoroughly to remove residual contamination. Never return spills in original containers for re-use. |

Other information The product is immiscible with water and will spread on the water surface. Prevent entry into waterways, sewer, basements or confined areas.

6.4. Reference to other sections For further information refer to section 8: "Exposure controls/personal protection". For disposal of residues refer to section 13 : Disposal considerations" .

7. SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed In use, may form flammable vapour-air mixture.

Precautions for safe handling Keep away from sources of ignition - No smoking. Pressurized container: Do not pierce or burn, even after use. Use only outdoors or in a well-ventilated area. Ground/bond container and receiving equipment. Avoid prolonged exposure. Avoid contact with eyes. Observe good industrial hygiene practices. Do not eat, drink or smoke when using this product. Wear appropriate personal protective equipment. Keep only in original container. Avoid release to the environment.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions Protect from sunlight. Do not expose to temperatures exceeding 50 °C/ 122 °F. Store locked up. Store in a well-ventilated place. Keep container tightly closed. Keep away from ignition sources.

7.3. Specific end use(s) No additional information available.

8. SECTION 8: Exposure controls/personal protection

8.1. Control parameters

United Kingdom

| Regulation | Substance | Type | Value |
|------------|-----------------------------|--------------|--|
| EH40. HSE | butane (106-97-8) Butane | WEL TWA | 1450 mg/m ³ |
| | | WEL TWA | 600 ppm |
| | | WEL STEL | 1810 mg/m ³ |
| | | WEL STEL | 750 ppm |
| | | Remark (WEL) | Carc (Capable of causing cancer and/or heritable genetic damage. See paragraphs 49–51), (only applies if Butane contains more than 0.1% of buta-1,3-diene) |

DNEL: Derived no effect level

No data available.

PNEC: Predicted no effect concentration

No data available.

8.2. Exposure controls

Appropriate engineering controls Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level

Materials for protective clothing Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment

| Condition | Material | Comments | |
|--|----------------------------------|----------------|----------|
| Individual protection measures, such as personal protective equipment (PPE) | | | |
| Eye protection | Safety glasses with side shields | | |
| Skin protection | | | |
| Hand protection | Wear protective gloves | | |
| Material | Permeation | Thickness (mm) | Comments |
| Nitrile rubber (NBR) | 4 (> 120 minutes) | 0,45 | |

| | |
|--|---|
| Other protective measures | Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. |
| Respiratory protection | In case of inadequate ventilation wear respiratory protection |
| Thermal hazard protection | Wear appropriate thermal protective clothing, when necessary. |
| Environmental exposure controls | Inform appropriate managerial or supervisory personnel of all environmental releases. |

9. SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | |
|---|----------------------|
| Physical state | Gas |
| Colour | Colourless. |
| Odour | Characteristic. |
| Odour threshold | No data available. |
| pH | Not applicable. |
| Relative evaporation rate (butylacetate=1) | No data available. |
| Melting point | No data available. |
| Freezing point | No data available. |
| Boiling point | No data available. |
| Flash point | No data available. |
| Auto-ignition temperature | No data available. |
| Decomposition temperature | No data available. |
| Flammability (solid, gas) | 365 °C |
| Vapour pressure | 8300 hPa |
| Relative vapour density at 20 °C | No data available. |
| Relative density | No data available. |
| Density | 0.6 g/m ³ |
| Solubility | No data available. |
| Log Pow | No data available. |
| Viscosity, kinematic | No data available. |
| Viscosity, dynamic | No data available. |
| Explosive properties | No data available. |
| Oxidising properties | No data available. |
| Lower explosive limit (LEL) | 1.5 vol % |
| Upper explosive limit (UEL) | 10.9 vol % |

9.2. Other information

No additional information available.

10. SECTION 10: Stability and reactivity

| | |
|---|--|
| 10.1. Reactivity | In use, may form flammable vapour-air mixture. |
| 10.2. Chemical stability | Stable under normal conditions of use. |
| 10.3. Possibility of hazardous reactions | No additional information available. |
| 10.4. Conditions to avoid | No additional information available. |
| 10.5. Incompatible materials | Oxidizing agent. |

10.6. Hazardous decomposition products Carbon oxides (CO, CO₂).

11. SECTION 11: Toxicological information

11.1. Information on toxicological effects

| | |
|--|---|
| Acute toxicity | Not classified |
| Skin corrosion/irritation | Not classified |
| Serious eye damage/irritation | Not classified |
| Respiratory or skin sensitisation | Not classified |
| Germ cell mutagenicity | CAS 64742-49-0: Note P is applicable (contains less than 0,1 % w/w benzene (EINECS No 200-753-7), therefore no classification as mutagen |
| Carcinogenicity | CAS 64742-49-0: Note P is applicable (contains less than 0,1 % w/w benzene (EINECS No 200-753-7), therefore no classification as carcinogen |
| Reproductive toxicity | Not classified |
| STOT-single exposure | Not classified |
| STOT-repeated exposure | Not classified |
| Aspiration hazard | Not classified |

12. SECTION 12: Ecological information

12.1. Toxicity

Ecology - general The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

12.2. Persistence and degradability

No additional information available.

12.3. Bioaccumulative potential

No additional information available.

12.4. Mobility in soil

No additional information available.

12.5. Results of PBT and vPvB assessment

OVA-FLAMM

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII.

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII.

12.6. Other adverse effects

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this product.

13. SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional legislation (waste) Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Waste treatment methods Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with licensed collector's sorting instructions.

| | |
|---|--|
| Product/Packaging disposal recommendations | Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal. |
| Additional information | Dispose in accordance with all applicable regulations. |
| European List of Waste (LoW) code | |
| 16 05 04* | gases in pressure containers (including halons) containing dangerous substances |
| 15 01 04 | metallic packaging |

14. SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number

| | |
|----------------------|------|
| UN-No. (ADR) | 2037 |
| UN-No. (IMDG) | 2037 |
| UN-No. (IATA) | 2037 |
| UN-No. (ADN) | 2037 |
| UN-No. (RID) | 2037 |

14.2. UN proper shipping name

| | |
|------------------------------------|---|
| Proper Shipping Name (ADR) | RECEPTACLES, SMALL, CONTAINING GAS (GAS CARTRIDGES) |
| Proper Shipping Name (IMDG) | RECEPTACLES, SMALL, CONTAINING GAS (GAS CARTRIDGES) |
| Proper Shipping Name (IATA) | Gas cartridges |
| Proper Shipping Name (ADN) | RECEPTACLES, SMALL, CONTAINING GAS (GAS CARTRIDGES) |
| Proper Shipping Name (RID) | RECEPTACLES, SMALL, CONTAINING GAS (GAS CARTRIDGES) |

14.3. Transport hazard class(es)

ADR

| | |
|---|-----|
| Transport hazard class(es) (ADR) | 2.1 |
| Danger labels (ADR) | 2.1 |

IMDG

| | |
|--|-----|
| Transport hazard class(es) (IMDG) | 2.1 |
| Danger labels (IMDG) | 2.1 |

IATA

| | |
|--|-----|
| Transport hazard class(es) (IATA) | 2.1 |
| Hazard labels (IATA) | 2.1 |

ADN

| | |
|---|-----|
| Transport hazard class(es) (ADN) | 2.1 |
| Danger labels (ADN) | 2.1 |

RID

| | |
|---|-----|
| Transport hazard class(es) (RID) | 2.1 |
| Danger labels (RID) | 2.1 |

14.4. Packing group

| | |
|-----------------------------|-----------------|
| Packing group (ADR) | Not applicable. |
| Packing group (IMDG) | Not applicable. |
| Packing group (IATA) | Not applicable. |
| Packing group (ADN) | Not applicable. |
| Packing group (RID) | Not applicable. |

14.5. Environmental hazards

| | |
|-------------------------------|---|
| Dangerous for the environment | No |
| Marine pollutant | No |
| Other information | No supplementary information available. |

14.6. Special precautions for user

Overland transport

| | |
|-------------------------------|---------------|
| Classification code (ADR) | 5F |
| Special provisions (ADR) | 191, 303, 344 |
| Limited quantities (ADR) | 1I |
| Packing instructions (ADR) | P003 |
| Tunnel restriction code (ADR) | D |

Transport by sea

| | |
|-----------------------------|--------------------|
| Special provisions (IMDG) | 191, 277, 303, 344 |
| Limited quantities (IMDG) | SP277 |
| Packing instructions (IMDG) | P003 |
| EmS-No. (Fire) | F-D |
| EmS-No. (Spillage) | S-U |
| Stowage category (IMDG) | B |

Air transport

| | |
|--|------|
| PCA Excepted quantities (IATA) | E0 |
| PCA Limited quantities (IATA) | Y203 |
| PCA limited quantity max net quantity (IATA) | 1kg |
| PCA packing instructions (IATA) | 203 |
| PCA max net quantity (IATA) | 1kg |
| CAO packing instructions (IATA) | 203 |
| CAO max net quantity (IATA) | 15kg |
| Special provisions (IATA) | A167 |
| ERG code (IATA) | 10L |

Inland waterway transport

| | |
|---------------------------|---------------|
| Classification code (ADN) | 5F |
| Special provisions (ADN) | 191, 303, 344 |
| Limited quantities (ADN) | 1 L |

Rail transport

| | |
|------------------------------------|---------------|
| Classification code (RID) | 5F |
| Special provisions (RID) | 191, 303, 344 |
| Limited quantities (RID) | 1L |
| Packing instructions (RID) | P003 |
| Hazard identification number (RID) | 23 |

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable.

15. SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

EU-Regulations

Contains no REACH substances with Annex XVII restrictions

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

Seveso Information

P2

National regulations

No additional information available.

15.2. Chemical safety assessment

No additional information available.

16. SECTION 16: Other information

Indication of changes

Section 1 - Section 16.

Abbreviations and acronyms

| | |
|------|--|
| ADN | European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways. |
| ADR | European Agreement concerning the International Carriage of Dangerous Goods by Road. |
| CLP | Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008. |
| IATA | International Air Transport Association. |
| IMDG | International Maritime Dangerous Goods. |
| LD50 | Median lethal dose. |
| OECD | Organisation for Economic Co-operation and Development. |
| OEL | Occupational Exposure Limit. |
| PBT | Persistent Bioaccumulative Toxic. |
| RID | Regulations concerning the International Carriage of Dangerous Goods by Rail. |
| vPvB | Very Persistent and Very Bioaccumulative. |

Full text of H- and EUH-statements

| | |
|--------------------|---|
| Aquatic Chronic 2 | Hazardous to the aquatic environment — Chronic Hazard, Category 2. |
| Asp. Tox. 1 | Aspiration hazard, Category 1. |
| Carc. 1B | Carcinogenicity, Category 1B. |
| Flam. Gas 1 | Flammable gases, Category 1. |
| Flam. Liq. 2 | Flammable liquids, Category 2. |
| Muta. 1B | Germ cell mutagenicity, Category 1B. |
| Press. Gas (Comp.) | Gases under pressure : Compressed gas. |
| Press. Gas (Liq.) | Gases under pressure : Liquefied gas. |
| Skin Irrit. 2 | Skin corrosion/irritation, Category 2. |
| STOT SE 3 | Specific target organ toxicity — Single exposure, Category 3, Narcosis. |
| H220 | Extremely flammable gas. |
| H225 | Highly flammable liquid and vapour. |
| H280 | Contains gas under pressure; may explode if heated. |
| H304 | May be fatal if swallowed and enters airways. |
| H315 | Causes skin irritation. |
| H336 | May cause drowsiness or dizziness. |
| H340 | May cause genetic defects. |
| H350 | May cause cancer. |
| H411 | Toxic to aquatic life with long lasting effects. |

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]

| | | |
|-------------|------|--------------------|
| Flam. Gas 1 | H220 | Calculation method |
|-------------|------|--------------------|

Press. Gas (Liq.)

H280

Calculation method

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.