

# Material and safety data sheet

## 1. NAME OF THE PRODUCT AND COMPANY INFORMATION

**TRADE NAME:** BRANDAX VS  
**USE:** SMOKE FOR AIRFLOW STUDIES, LEAKAGE TEST.  
**MANUFACTURER:** BJÖRNAX AB  
**ADDRESS:** STRÅSSA FÖRETAGSBY  
S-711 77 STRÅSSA SWEDEN  
**PHONE NUMBER:** 0046 581 43150  
**FAX NUMBER:** 0046 581 43206  
**E-MAIL:** webmaster@bjornax.se  
**ISSUED BY:** TORBJÖRN FREDRIKZON

## 2. COMPOSITION INFORMATION

<b>MATERIAL:</b>	<b>EG-No:</b>	<b>CAS-No:</b>	<b>Content %</b>	<b>Symbols:</b>	<b>R-phrases:</b>
Potassium Chlorate	223-289-7	3811-04-9	29	Xn, O, N	R9-20/22-51/53
Ammonium chloride	235-186-4	12125-02-9	28	Xn, Xi	R22-36

## 3. HAZARDS INFORMATION

### **Cartridge in solid form:**

Harmful and Oxidising

### **Special risks:**

Explosive when mixed with combustible material, Harmful by inhalation and if swallowed.

### **Generated smoke:**

Inhalation: Prolonged exposure or misuse can cause irritation.

Eyes: Prolonged exposure or misuse can cause irritation.

## 4. FIRST AID MEASURES

### **Cartridge in solid form:**

#### **General recommendation.**

Bring this safety data sheet when seeking medical advise.

#### **Ingestion:**

Not applicable-under normal use.

If parts or complete product has been swallowed give milk or water, do not induce vomiting, seek medical advise.

#### **Skin contact:**

Not applicable at normal use.

If product has broken and skin has been contaminated wash with soap and water.

#### **Eyes:**

Not applicable at normal use.

If product has broken and eyes has been contaminated rinse immediately with plenty of water and seek medical advice.

#### **Smoke:**

##### **General recommendation.**

Bring this safety data sheet when seeking medical advise.

##### **Inhalation:**

Fresh air, at remaining problems seek medical advise.

##### **Skin contact:**

Wash with soap and water.

##### **Eyes:**

At remaining irritation rinse eyes with water for 5 minutes.

# Material and safety data sheet

## 5. FIRE FIGHTING MEASURES

**Suitable fire fighting media:**

Water.

**Safety Equipment for fire fighters:**

Normal protection equipment.

**Unusual Fire Hazards:**

None specific.

## 6. ACCIDENTAL RELEASE MEASURES

**Personal:**

None specific.

**Environmentally:**

Unused product may not be released in drainage or natural water systems.

**Contamination cleanup:**

Collect separately, and keep dry, see section 13.

## 7. HANDLING AND STORAGE

**Storage precautions:**

Keep away from food, drink and animal feedingstuffs.

**Storage:**

Store dry and keep away from sources of ignition.

**Recommendation for safety handling:**

In general normal handling of pyrotechnic products, always make sure to place product on a Non inflammable base, dispose completely burned product with due care and attention.

## 8. EXPOSURE CONTROL AND PERSONAL PROTECTION

**Breathing Protection:**

At improper ventilation use a particle filter mask class P2.

All kinds of generated smoke consists of solid or liquid particles, why it is recommended to use a particle mask at longer participation in smoke filled rooms.

**Hygienic levels, particles / m<sup>3</sup> in surrounding air:**

See national exposure limits.

**Hygiene:**

Wash hands before eating.

## 9. PHYSICAL AND CHEMICAL QUALITIES

**Appearance :**

PP-sheath with hard pressed powder.

**Colour:**

White

**Smell:**

Minimal

**Ignition point:**

over 200 C°

# Material and safety data sheet

## 10. STABILITY AND REACTIVITY

**Cartridge:** Stable at recommended storage.  
**Smoke:** Stable in normal conditions.

## 11. TOXICOLOGICAL INFORMATION

### General information:

The complete product has not been toxicological tested.  
No personal hazard is anticipated provided that the product is handled and  
Used with due care and attention.

### Ingoing hazardous chemicals:

Following apply for ingoing hazardous chemicals in pure and concentrated form.

Potassium Chlorate:

LD<sub>50</sub> Oral rat: 1870mg/kg bodyweight. Dermal ,rabbit LD0 >2000 mg/kg.

Ammonium chloride:

LD<sub>50</sub> Oral rat: 1400mg/kg bodyweight.

## 12. ECO-TOXICOLOGICAL INFORMATION

### General information:

The complete product has not been eco-toxicological tested.  
No environmental hazard is anticipated provided that the product is handled and  
disposed of with due care and attention.

### Ingoing hazardous chemicals:

Following apply for ingoing hazardous chemicals in pure and concentrated form.

Potassium Chlorate:

LC<sub>50</sub> Fish 96h: 1750mg/1000ml, Oncorhynchus mykiss. EC<sub>50</sub> Daphnia 48h: 599 mg/1000ml, D.Magna. IC<sub>50</sub>

Algae 72h: 0,077 mg/1000ml. ( R 53. Source N-CLASS Database )

Ammonium chloride:

LC<sub>50</sub> Fish 96h: 0,21mg/1000ml. EC<sub>50</sub> Daphnia 48h: 0,96 mg/1000ml. IC<sub>50</sub> Algae 72h: 0,025 mg/1000ml.

## 13. DISPOSAL CONSIDERATIONS

### Used product:

Residue after complete combustion may be disposed with household waste, always make sure  
That product is completely turned out.

### Unused or broken products:

National: Shall be disposed acc. to: SFS 2001:1063. EWC-cod 16 03 04.

Europe: Shall be disposed acc. to EWC-cod 16 03 04

## 14. TRANSPORT INFORMATION

Product is not classified as dangerous goods acc, to: ADR / RID / IMO / DGD.  
For USA: Reference Number EX-0009108.

### Tests is performed according to:

UN- Recommendations Transport Of Dangerous Goods, Model Regulations,  
UN- Recommendations Transport Of Dangerous Goods Test and Criteria.

# Material and safety data sheet

## 15. REGULATORY INFORMATION

### Symbols:



**R and S-Phrases is only complying for ingoing ingredients in the product and not for generated smoke, gas analysis on request, product contain potassium chlorate and ammonium chloride.**

### R-Phrases:

R9 – Explosive when mixed with combustible material

R20/22 – Harmful by inhalation and if swallowed.

R22 – Harmful if swallowed.

R36 – Irritating to eyes.

R51/53-Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

### S-Phrases:

S13 – Keep away from food, drink and animal feedingstuffs.

S25 – Avoid contact with eyes.

S26 – In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S38 – In case of insufficient ventilation wear suitable respiratory equipment.

S61-Avoid release to the environment. Refer to safety data sheet.

## 16. OTHER INFORMATION

The information in this Health & Safety Data Sheet is considered correct regarding to today's knowledge and experience. But any insurance cannot be given that this information is complete. It is therefore in the users own interest to clarify if the information is enough for the purpose for which the product shall be used.

### Sources:

National Chemicals Inspectorate.

N-CLASS Database on environmental hazard classification.

Swedish Rescue Services Agency.

Swedish Defence Research Agency, report No: FOAtox 5004.

Team Safepac.

UN- Recommendations Transport Of Dangerous Goods Test and Criteria.

UN- Recommendations Transport Of Dangerous Goods, Model Regulations,