SAFETY DATA SHEET accord. 2001/58/EC Date: **18.11. 2006**

(Amending for the second time Directive 91/155/EEC in implementation Article 14, Directive 1999/45/EC / Article 27 – Directive 67/548/EEC)

1 SUBSTANCE/PREPARATION AND COMPANY/UNDERTAKING

1.1 Identification of the substance or preparation:

FLAME JETTT CARTRIDGE (Aerosol can)

1.2 Use of the substance/preparation:

Aerosol can for creating flame effects in conjunction with special designed flame effect apparatus

1.3 Company/undertaking:

GÜNTHER SCHAIDT SAFEX-CHEMIE GMBH - BLANKENESER CHAUSSEE 26/32 - D 22869 SCHENEFELD
Tel.: +49 (09 40 - 83 92 11-0 - FAX: +49 (0) 40 - 830 14 52 - eMail: info@safex.de

1.4 Emergency telephone:

+49 (0)40 83 92 110 or +49 (0)40 830 99 560

2 COMPOSITION/INFORMATION ON INGREDIENTS

Aerosol can, containing a **mixture of low boiling and high-boiling, aliphatic hydrocarbons**:

R 600; R 290 as well as C11 - C13 hydro carbons

The can has no valve to be operated by the user! The can valve is self-closing!

3 HAZARDS

Can is under pressure! Product can be released due to inappropriate manipulation / damage of the aerosol can or their valve, e.g., through incorrect valve use. Also explosive dismantling and inflammation can occur, e.g., due to overheating, mechanical damage of the can body or the valve etc.

The HC-mixture is highly inflammable and can easily be ignited by ignition sources and can impregnate also working clothes (Fire hazard). With air formation of explosion capable mixtures are possible. While spraying in the eye or on the skin an irritation can appear temporarily.

4 FIRST AID MEASURES

Routes of exposure:

Inhalation:	Not to expect by adequate application, if incorrect handled bring person into fresh air, in case of unconsciousness or dizziness consult doctor immediately.
Ingestion:	Not to expect, because aerosol can possesses no directly usable valve.
Skin:	Wash away product with water and soap, only very low irritation is to be expected and only with prolonged contact. If necessary apply fatty cream afterwards on skin. (Repeated contact can lead to brittle or cracked skin)
Eyes:	Only comparatively low irritation is to expect. Flush eye immediately with plentifully water by open eyelid, in case of bigger amounts brought into the eye visit directly doctor.
Burns:	Cool burned skin with water, in case of large surface redness, blistering and third degree flesh burns seek medical help. If necessary insure immediate emergency transport to a hospital. Hold treatment for flesh burns ready. Specific toxic effects are not to be expected!

5 FIRE-FIGHTING MEASURES

suitable extinguishing media:	foam, powder, CO2, water fog
not suitable extinguishing media:	nn.
special exposure hazards:	Aerosol cans with combustible content can explode in the case of fire, therefore, take care for self protection!
special protective equipment:	In case of a massive fire or burning of a large quantity of aerosol cans: full protective clothing

6 ACCIDENTAL RELEASE MEASURES

An unintentional release of the content of the aerosol can is likely only if the can is damaged, overheated or a outlet valve is used contrary to regulations or the can is used in an unsuitable apparatus!

Personal precautions:	Leave endangered area immediately, avoid ignition sources, remove product contaminated clothes immediately, take care for ventilation of the site!
Environmental precautions:	Because of the evaporability of the components measures are possible only in low

SAFETY DATA SHEET accord. 2001/58/EC Date: **18.11. 2006**
(Amending for the second time Directive 91/155/EEC in implementation Article 14, Directive 1999/45/EC / Article 27 – Directive 67/548/EEC)

extent, if necessary take up residues with oil absorbent.

Methods for cleaning up: If necessary take up residues with oil absorbent.

7 HANDLING AND STORAGE

7.1 Handling:

Use only according to the instruction manual in suitable devices; do not damage valve, **Place valve protection cap always over the valve meanwhile transportation or non-use!**
Product is determined only for the professional user! Every use for other purposes, particularly with spray-heads is dangerous and to refrain from. Pay attention to the devices operating instruction!

7.2 Storage:

Store aerosol cans cool (clearly below 50°C) and dry, away from heat sources and inaccessible for unauthorized (children). Do not store in passage ways, stair cases, corridors, floor halls nor on attics! Store large quantities of aerosol cans only according to local and national regulations.

7.3 Specific use(s):

Use only in certain and suitable flame-effect devices according to the operating instruction, every other application is inappropriate / inadmissible!

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Exposure limit values:	not necessary if used as directed, because of no product release
8.2 Exposure controls:	nn.
8.2.1 Occupational exposure controls:	not necessary if used as directed, because of no product release
8.2.1.1 Respiratory protection:	not necessary if used as directed, because of no product release
8.2.1.2 Hand protection:	not necessary if used as directed
8.2.1.3 Eye protection:	not necessary if used as directed, safety goggles only if cans will be replaced in effect device
8.2.1.4 Skin protection	necessary if used as directed, because of no product release
8.2.2 Environmental exposure controls:	not necessary if used as directed, because of no product release

9 PHYSICAL AND CHEMICAL PROPERTIES

9.1 General information:

Appearance:	aerosol can
Odor:	hardly perceptibly

9.2 Important health, safety and environmental information:

pH:	neutral
Boiling point/boiling range:	- 42.2 °C to + 213 °C
Flash point:	- 104 °C to + 60 °C
Flammability (solid, gas):	gaseous component is high inflammatory
Explosive properties:	only if can is heated more than 50 °C
Explosions limits	
lower:	0.6% v/v - 31 g/m³
upper:	10.8% v/v - 231 g/m³
Oxidizing properties:	nn.
Vapor pressure:	8,5 bar / 20° C
Relative density:	nn.
Solubility:	
water solubility	very little
fat solubility	not determined
Partition coefficient: n-oktan / water:	nn.
Viscosity:	nn.
Vapor density:	nn.
Evaporation rate:	very high

SAFETY DATA SHEET accord. 2001/58/EC Date: **18.11. 2006**

(Amending for the second time Directive 91/155/EEC in implementation Article 14, Directive 1999/45/EC / Article 27 – Directive 67/548/EEC)

9.3 Other information:	nn.

10. STABILITY AND REACTIVITY

10.1 Conditions to avoid:	Heating of the can above 50°C and mechanical damage
10.2 Materials to avoid:	nn.
10.3 Hazardous decomposition products:	If used as directed carbon dioxide and water vapor, in rare cases very low amounts of carbon monoxide

11 TOXICOLOGICAL INFORMATION

A product incorporation, particularly oral, is hardly likely due to the packaging in an aerosol can without operate-able valve and in regard of the evaporability. This is also the case if used as directed in appropriate effect devices. The product has a general low toxicity.

Only in the case of damaging the can is to be expected in small rooms a narcotic effect and an aerosol inhalation due to product release. However, this toxic effect is to be expect only from approx. 10 Vol. % in air, also depending on the exposition time.

Threshold-value: 1000 mg / m³ - the lowest value of the components. No aromatic or other polycyclic HC's are contained.

LC50 4 h rat, > as the nearly saturated steam concentration, dizzy feeling from 10.000 ppm.

LD 50 dermal, > 2000 mg / kg BW - rat

A reproduction toxicity or mutagenic or carcinogenic effects are not known for all components.

12. ECOLOGICAL INFORMATION

12.1 Ecotoxicity:	slightly
12.1 Mobility:	high-boiling component swims on the surface of the water
12.3 Persistence and degradability:	quickly, fast photo-chemical oxidation in the air
12.4 Bioaccumulative potential:	potentially possibly but not to expect
12.5 Other adverse effects	nn.

13 DISPOSAL CONSIDERATIONS

Throw away aerosol can only if completely emptied

14 TRANSPORT INFORMATION

ADR / RID Class 2, No. 5 F - UN 1950 AEROSOLS, flammable; Label 2.1

Applicable Limited Quantity-Regulation:

Aerosol cans with **max. 1 ltr. of content** may up to a **maximal weight of 30 kgs**, packed in transport packaging/ boxes of good quality, are **carried/dispatched** as a so-called **LQ-Quantity without attention of other rules** of the European regulations for transportation on street or railroad in any vehicle. (ADR-regulations, Annex A, Chapter 3.4, No. 3.4.3 and 3.4.6 - LQ2)

15 REGULATORY INFORMATION

Aerosol can **fulfils the EU rules for aerosol cans** with combustible content:

Directive 75 / 324 / EWG of the council from the 20th May 1975 to the adjustment of the legal rules of the member states for aerosol packings (Germany: ABl. EC No L 147 S. 40)

Can correspond to German TRG 300 Annex 1.

Can pressure at 50°C	= 12 bar
Can nominal pressure	= max. 15 bar
Test pressure	= 21 bar,
Burst pressure	= > 21 bar

F + highly inflammable; **S 2** = may not get in the hands of children; **S 9** = keep container at well ventilated places

SAFETY DATA SHEET accord. 2001/58/EC Date: **18.11. 2006**

(Amending for the second time Directive 91/155/EEC in implementation Article 14, Directive 1999/45/EC / Article 27 – Directive 67/548/EEC)

Attention: Container is under pressure. Extremely flammable. Keep away from heat, sparks and open flame. Do not puncture or incinerate even after emptied completely. Do not store at temperatures above 50°C. Use only as directed. Keep out of reach of children. Protect it against direct sunlight.

Storage: (**Germany** TRG 300 - free of permission and not notifiable)

Storeroom: Room with space taken by aerosol cans not bigger than 20 m², e.g., in commercial enterprises etc. Storing together with pyrotechnic articles is not allowed!

Salesroom: Allowed amount: which does not cross the prospective daily requirement and is sufficient for the presentation of the assortment! Sales places may not lie at exits, no easily inflammatory material is allowed there, e.g., no pyrotechnic articles and also no demonstration of devices with open flames are allowed in close vicinity.

For storage rooms for the storage of bigger amounts exists special requirements!

16 OTHER INFORMATION

Application exclusively by adult, trained persons (theater and film technical engineer, artist, effect specialist) for intended purposes under arrangement with the responsible authorities (for public events) for fire safety.

The product is <u>not</u> determined for the use by nonprofessional and only for the professional user or specialized trading companies!

The aerosol can is determined only for the use in suitable and intended effect devices. A release of the content beyond this application, for example, by means of aerosol can-spray heads for other purposes is an inappropriate, inadmissible use.

The operating instruction of the effect devices in which the aerosol can will be uses is to be paid attention in all circumstances, in public meeting places, theatres etc. all rules for the dealing with flammable materials there have to be complied.

The adequate use of the aerosol can is a fire-hazardous action in meeting places and requires consultation with/authorization from the body responsible for fire prevention (fire department).

The rule-fair use of stage-pyrotechnic items together with the FlameJettt-Cartridge containing FlameJettt apparatus represents no rise of hazards if the FlameJettt is applied also rules-conformal and is in a security-technical good condition. However, the required safety distances have to be kept.