

**Safety data sheet**  
according to 1907/2006/EC, Article 31

Printing date 12.10.2016

Version number 5

Revision: 12.10.2016

**SECTION 1: Identification of the substance/mixture and of the company/undertaking**· **1.1 Product identifier**· **Trade name:** **STIHL Markerspray ECO**  
**Fluorescent marking paint**· **Article number:**

0000 881 1787, 0000 881 1789, 0000 881 1790, 0000 881 1791, 0000 881 1792, 0000 881 1793

· **1.2 Relevant identified uses of the substance or mixture and uses advised against**· **Sector of Use**

SU1 Agriculture, forestry, fishery

SU21 Consumer uses: Private households / general public / consumers

SU22 Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

· **Application of the substance / the mixture** Marker Spray (Aerosol)· **1.3 Details of the supplier of the safety data sheet**· **Manufacturer/Supplier:**

ANDREAS STIHL AG &amp; Co.KG

Badstr. 115

D-71336 Waiblingen

Tel: +49(0)7151-26-3237

Fax: +49(0)7151-26-8-3237

Email: info@stihl.com

· **Informing department:**

Produktmanagement Forsttechnik

Tel: +49(0)7151-26-3237

Fax: +49(0)7151-26-83237

· **1.4 Emergency telephone number:**

Emergency control center for poisoning cases Berlin +49 (0) 30 30 686 790 (German and English)

Information for transport Tel.: +49-621-60-43333 Fax: 49-621-60-92664

**SECTION 2: Hazards identification**· **2.1 Classification of the substance or mixture**· **Classification according to Regulation (EC) No 1272/2008**

GHS02 flame

Aerosol 1 H222-H229 Extremely flammable aerosol. Pressurised container: May burst if heated.

· **2.2 Label elements**· **Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the CLP regulation.

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- **Hazard pictograms**



GHS02

- **Signal word** *Danger*

- **Hazard statements**

H222-H229 *Extremely flammable aerosol. Pressurised container: May burst if heated.*

- **Precautionary statements**

P101 *If medical advice is needed, have product container or label at hand.*

P102 *Keep out of reach of children.*

P210 *Keep away from heat/sparks/open flames/hot surfaces. No smoking.*

P251 *Pressurized container: Do not pierce or burn, even after use.*

P211 *Do not spray on an open flame or other ignition source.*

P410+P412 *Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.*

- **2.3 Other hazards**

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.

- **vPvB:** Not applicable.

### SECTION 3: Composition/information on ingredients

- **3.2 Chemical characterisation: Mixtures**

- **Description:** *Mix of the substances listed below including additives not requiring identification.*

- **Dangerous components:**

CAS: 64-17-5 EINECS: 200-578-6	ethanol	Flam. Liq. 2, H225	25-<50%
CAS: 106-97-8 EINECS: 203-448-7	butane	Flam. Gas 1, H220; Press. Gas C, H280	25-<50%
CAS: 74-98-6 EINECS: 200-827-9	propane	Flam. Gas 1, H220; Press. Gas C, H280	10-<25%

- **Additional information** *For the wording of the listed hazard phrases refer to section 16.*

### SECTION 4: First aid measures

- **4.1 Description of first aid measures**

- **General information** *Take affected persons into the open air.*

- **After inhalation** *Supply fresh air; consult doctor in case of symptoms.*

- **After skin contact**

*Instantly wash with water and soap and rinse thoroughly.*

*If skin irritation continues, consult a doctor.*

- **After eye contact**

*Rinse opened eye for several minutes under running water. Then consult doctor.*

*In case of persistent symptoms consult doctor.*

- **After swallowing**

*Rinse out mouth and then drink plenty of water.*

*In case of persistent symptoms consult doctor.*

- **4.2 Most important symptoms and effects, both acute and delayed**

*No further relevant information available.*

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- **4.3 Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

### SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents**  
Extinguishing powder, foam or water jet. Fight larger fires with water jet or alcohol-resistant foam.
- **For safety reasons unsuitable extinguishing agents** Water with a full water jet.
- **5.2 Special hazards arising from the substance or mixture**  
No further relevant information available.
- **5.3 Advice for firefighters**
- **Protective equipment:**  
Wear self-contained breathing apparatus.  
Do not inhale explosion gases or combustion gases.
- **Additional information** Cool endangered containers with water spray jet.

### SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**  
Keep away from ignition sources  
Ensure adequate ventilation  
Wear protective equipment. Keep unprotected persons away.
- **6.2 Environmental precautions:**  
Do not allow product to reach sewage system or water bodies.  
Inform respective authorities in case product reaches water or sewage system.
- **6.3 Methods and material for containment and cleaning up:**  
Dispose of the material collected according to regulations.  
Ensure adequate ventilation.  
Do not flush with water or aqueous cleansing agents
- **6.4 Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for information on disposal.

### SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**  
Keep away from heat and direct sunlight.  
Ensure good interior ventilation, especially at floor level. (Fumes are heavier than air).
- **Information about protection against explosions and fires:**  
Highly volatile, flammable constituents are released during processing.  
Keep ignition sources away - Do not smoke.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage**
- **Requirements to be met by storerooms and containers:**  
Store only undamaged original packaging drums.  
Store containers in a well aired place at a temperature of less than 50 °C.  
Observe official regulations on storing packagings with pressurised containers.
- **Information about storage in one common storage facility:**  
Take also into account special standards when storing the containers together with inflammable liquids.

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Store away from flammable substances.

- **Further information about storage conditions:**  
 Keep container tightly sealed.  
 Store in cool, dry conditions in well sealed containers.  
 Protect from heat and direct sunlight.
- **7.3 Specific end use(s)** No further relevant information available.

### SECTION 8: Exposure controls/personal protection

#### · 8.1 Control parameters

- **Components with limit values that require monitoring at the workplace:**

##### **64-17-5 ethanol**

WEL	Long-term value: 1920 mg/m <sup>3</sup> , 1000 ppm
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##### **106-97-8 butane**

WEL	Short-term value: 1810 mg/m <sup>3</sup> , 750 ppm Long-term value: 1450 mg/m <sup>3</sup> , 600 ppm Carc (if more than 0.1% of buta-1.3-diene)
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- **Additional information:** The lists that were valid during the compilation were used as basis.

#### · 8.2 Exposure controls

##### · **Personal protective equipment**

##### · **General protective and hygienic measures**

Do not eat, drink or smoke while working.  
 Wash hands during breaks and at the end of the work.  
 Keep away from foodstuffs, beverages and food.  
 Avoid contact with the eyes and skin.

##### · **Breathing equipment:**

In case of insufficient removal by suction or longer inhalation a breathing protection is required.

##### · **Protection of hands:**

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

##### · **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

##### · **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

##### · **For the permanent contact gloves made of the following materials are suitable:**

PVC or PE gloves

##### · **Eye protection:** Safety glasses

##### · **Body protection:** Protective work clothing.

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### SECTION 9: Physical and chemical properties

#### · 9.1 Information on basic physical and chemical properties

##### · General Information

##### · Appearance:

Form:	Aerosol
Colour:	According to product specification
Odour:	Characteristic

##### · Change in condition

Melting point/Melting range:	Not determined
Boiling point/Boiling range:	Not applicable, as aerosol.

· Flash point: Not applicable, as aerosol

· Ignition temperature: 365 °C

· Self-inflammability: Product is not selfigniting.

· Danger of explosion: Product is not explosive. However, formation of explosive air/steam mixtures is possible.

##### · Critical values for explosion:

Lower:	1.5 Vol %
Upper:	15.0 Vol %

· Vapour pressure at 20 °C: 4200 hPa

· Density at 20 °C 0.795 g/cm<sup>3</sup>

##### · Solubility in / Miscibility with

Water: Not miscible or difficult to mix

##### · Solvent content:

Organic solvents:	80.4 %
VOC EU	565.8 g/l
VOC EU	79.69 %
9.2 Other information	No further relevant information available.

### SECTION 10: Stability and reactivity

· 10.1 Reactivity No further relevant information available.

#### · 10.2 Chemical stability

##### · Thermal decomposition / conditions to be avoided:

No decomposition if used according to specifications.

· 10.3 Possibility of hazardous reactions No dangerous reactions known

· 10.4 Conditions to avoid No further relevant information available.

· 10.5 Incompatible materials: No further relevant information available.

· 10.6 Hazardous decomposition products: No dangerous decomposition products known

### SECTION 11: Toxicological information

#### · 11.1 Information on toxicological effects

· Acute toxicity Based on available data, the classification criteria are not met.

##### · Primary irritant effect:

##### · Skin corrosion/irritation

More frequent and continuous contact with the skin may result in irritation of the skin.

· Serious eye damage/irritation Based on available data, the classification criteria are not met.

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- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

### SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**  
 Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water.  
 Do not allow undiluted product or large quantities of it to reach ground water, water bodies or sewage system.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

### SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**  
 The product is suitable for processing by an approved recycling facility or can be disposed of at any government approved waste disposal facility.  
 The waste code numbers mentioned are recommendations based on the probable use of the product.

- **European waste catalogue**

08 00 00	WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF COATINGS (PAINTS, VARNISHES AND VITREOUS ENAMELS), ADHESIVES, SEALANTS AND PRINTING INKS
08 01 00	wastes from MFSU and removal of paint and varnish
08 01 11	waste paint and varnish containing organic solvents or other dangerous substances
15 00 00	WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED
15 01 00	packaging (including separately collected municipal packaging waste)
15 01 10	packaging containing residues of or contaminated by dangerous substances

- **Uncleaned packagings:**
- **Recommendation:** Dispose of packaging according to regulations on the disposal of packagings.

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### SECTION 14: Transport information

· 14.1 UN-Number · ADR,RID,ADN, IMDG, IATA	UN1950
· 14.2 UN proper shipping name · ADR/RID/ADN · IMDG · IATA	1950 AEROSOLS AEROSOLS AEROSOLS, flammable
· 14.3 Transport hazard class(es) · ADR/RID/ADN	
	
· Class · Label	2 5F Gases. 2.1
· IMDG, IATA	
	
· Class · Label	2.1 2.1
· 14.4 Packing group · ADR,RID,ADN, IMDG, IATA	Void
· 14.5 Environmental hazards: · Marine pollutant:	No
· 14.6 Special precautions for user · Kemler Number: · EMS Number:	Warning: Gases. - F-D,S-U
· 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
· Transport/Additional information:	
· ADR/RID/ADN · Limited quantities (LQ) · Transport category · Tunnel restriction code	1L 2 D
· UN "Model Regulation":	UN1950, AEROSOLS, 2.1

### SECTION 15: Regulatory information

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
- Directive 2012/18/EU
- Qualifying quantity (tonnes) for the application of lower-tier requirements 150 t
- Qualifying quantity (tonnes) for the application of upper-tier requirements 500 t

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- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

#### SECTION 16: Other information

*These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.*

- **Relevant phrases**

H220 Extremely flammable gas.

H225 Highly flammable liquid and vapour.

H280 Contains gas under pressure; may explode if heated.

- **Department issuing data specification sheet:**

*The safety data sheets were drawn up in cooperation with the Umweltkanzlei Dr.Rhein Beratungs- und Prüfgesellschaft mbH, Phone: +49 5066 900990.*

- **Abbreviations and acronyms:**

*ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)*

*IMDG: International Maritime Code for Dangerous Goods*

*IATA: International Air Transport Association*

*GHS: Globally Harmonised System of Classification and Labelling of Chemicals*

*EINECS: European Inventory of Existing Commercial Chemical Substances*

*ELINCS: European List of Notified Chemical Substances*

*CAS: Chemical Abstracts Service (division of the American Chemical Society)*

*PBT: Persistent, Bioaccumulative and Toxic*

*vPvB: very Persistent and very Bioaccumulative*

*Flam. Gas 1: Flammable gases – Category 1*

*Aerosol 1: Aerosols – Category 1*

*Press. Gas C: Gases under pressure – Compressed gas*

*Flam. Liq. 2: Flammable liquids – Category 2*

- **\* Data compared to the previous version altered.**