

Page 1 of 12  
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II  
 Revised on / Version: 24.11.2011 / 0002  
 Replaces revision of / Version: 13.09.2010 / 0001  
 Valid from: 24.11.2011  
 PDF print date: 24.11.2011  
 Fuel Cartridge - M5, M10, M28

## Safety data sheet according to Regulation (EC) No 1907/2006, Annex II

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

#### 1.1 Product identifier

#### Fuel Cartridge - M5, M10, M28

Methanol  
 Registration number (ECHA): --  
 Index: 603-001-00-X  
 EINECS/ELINCS: 200-659-6  
 CAS: 67-56-1

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

##### Relevant identified uses of the substance or mixture:

Fuel Cell

##### Uses advised against:

No information available at present.

#### 1.3 Details of the supplier of the safety data sheet

SFC Energy AG, Eugen-Sänger-Ring 7, D-85649 Brunthal  
 Telephone +49 (0)89 673-592-0, Fax +49 (0)89 673-592-369  
 info@sfc.com

E-mail address of the competent person: info@chemical-check.de, k.schnurbusch@chemical-check.de

#### 1.4 Emergency telephone

##### Advisory office in case of poisoning:

+49 89 19240 (D-81675 Munich, 24 hour)

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

##### 2.1.1 Classification according to Regulation (EC) 1272/2008 (CLP)

Hazard class	Hazard category	Hazard statement
Flam. Liq.	2	H225-Highly flammable liquid and vapour.
Acute Tox.	3	H331-Toxic if inhaled.
Acute Tox.	3	H311-Toxic in contact with skin.
STOT SE	1	H370-Causes damage to organs.
Acute Tox.	3	H301-Toxic if swallowed.

##### 2.1.2 Classification according to Directives 67/548/EEC and 1999/45/EC (including amendments).

F, Highly flammable, R11  
 T, Toxic, R23/24/25  
 T, Toxic, R39/23/24/25

#### 2.2 Label elements

##### 2.2.1 Labeling according to Regulation (EC) 1272/2008 (CLP)



Methanol  
 CAS 67-56-1, Index:603-001-00-X EC: 200-659-6

Safety data sheet according to Regulation (EC) No 1907/2006, Annex II

Revised on / Version: 24.11.2011 / 0002

Replaces revision of / Version: 13.09.2010 / 0001

Valid from: 24.11.2011

PDF print date: 24.11.2011

Fuel Cartridge - M5, M10, M28

## Danger

### Hazard statement

H225-Highly flammable liquid and vapour. H331-Toxic if inhaled. H311-Toxic in contact with skin. H370-Causes damage to organs. H301-Toxic if swallowed.

P101-If medical advice is needed, have product container or label at hand. P102-Keep out of reach of children. P103-Read label before use.

### Prevention

P210-Keep away from heat/sparks/open flames/hot surfaces. - No smoking. P241-Use explosion-proof electrical/ventilating/lighting/material-handling equipment. P243-Take precautionary measures against static discharge. P260-Do not breathe vapour.

### Response

P307+P311-IF exposed: Call a POISON CENTER or doctor/physician.

### Storage

P403+P235-Store in a well-ventilated place. Keep cool. P405-Store locked up.

### Disposal

P501-Dispose of contents and container in accordance with all local, regional, national and international regulations.

## 2.3 Other hazards

No vPvB substance

No PBT substance

## SECTION 3: Composition/information on ingredients

### 3.1 Substance

<b>Methanol</b>	Substance for which an EU exposure limit value applies.
<b>Registration number (ECHA)</b>	--
<b>Index</b>	603-001-00-X
<b>EINECS, ELINCS</b>	200-659-6
<b>CAS</b>	CAS 67-56-1
<b>content %</b>	
<b>Symbol</b>	F/T
<b>R-phrases</b>	11-23/24/25-39/23/24/25
<b>Classification categories / Indications of danger</b>	Highly flammable, Toxic
<b>Hazard class/Hazard category</b>	<b>Hazard statement</b>
Flam. Liq./2	H225
Acute Tox./3	H331
Acute Tox./3	H311
Acute Tox./3	H301
STOT SE/1	H370

### 3.2 Mixture

n.a.

For the text of the R-phrases / H-phrases and classification codes (GHS/CLP), see Section 16.

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

Medical supervision necessary due to possibility of delayed reaction.

Assure the safety of the rescuer.

Never pour anything into the mouth of an unconscious person!

#### Inhalation

Remove person from danger area.

Supply person with fresh air. Call doctor immediately.

If the person is unconscious, place in a stable side position and consult a doctor.

Keep Data Sheet available.

The following may occur:

Coordination disorders

Dizziness

Headaches

### **Skin contact**

Remove polluted, soaked clothing immediately, wash thoroughly with plenty of water and soap. Call a doctor immediately, keep datasheet at hand

The following may occur:

Product removes fat.

Repeated exposure may cause skin dryness or cracking.

Skin resorption

### **Eye contact**

Wash thoroughly for several minutes using copious water - call doctor immediately, have Data Sheet available.

### **Ingestion**

Rinse the mouth thoroughly with water.

Give copious water to drink - consult doctor immediately.

Induce vomiting.

Allow drinking approx. 100 ml approx. 40% ethanol in esculent.

Keep Data Sheet available.

The following may occur:

After resorption:

Nausea

Vomiting

Headaches

Dizziness

Danger of blindness

Acidosis

Drop in blood pressure

Cramps

Narcotic effect.

Coma

Liver and kidney damage

Disturbed heart rhythm

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

If applicable delayed symptoms and effects can be found in section 11 and the absorption route in section 4.1.

### **4.3 Indication of any immediate medical attention and special treatment needed**

n.c.

## **SECTION 5: Firefighting measures**

### **5.1 Extinguishing media**

#### **Suitable extinguishing media**

CO<sub>2</sub>

Alcohol resistant foam

Cool container at risk with water.

#### **Unsuitable extinguishing media**

High volume water jet

### **5.2 Special hazards arising from the substance or mixture**

In case of fire the following can develop:

Oxides of carbon

Toxic pyrolysis products.

Explosive vapour/air mixture

Dangerous vapours heavier than air.

In case of spreading near the ground, flashback to distance sources of ignition is possible.

### **5.3 Advice for firefighters**

Protective respirator with independent air supply.

Full protection

Dispose of contaminated extinction water according to official regulations.

In case of fire and/or explosion do not breathe fumes.

## **SECTION 6: Accidental release measures**

### **6.1 Personal precautions, protective equipment and emergency procedures**

Ensure sufficient ventilation.

Avoid inhalation, and contact with eyes or skin.  
Remove possible causes of ignition - do not smoke.  
Take measures against electrostatic charging, if appropriate.  
If applicable, caution - risk of slipping

## 6.2 Environmental precautions

If leakage occurs, dam up.  
Prevent surface and ground-water infiltration, as well as ground penetration.  
Prevent from entering drainage system.  
If accidental entry into drainage system occurs, inform responsible authorities.  
Danger of explosion

## 6.3 Methods and material for containment and cleaning up

Soak up with absorbent material (e.g. universal binding agent, sand, diatomaceous earth) and dispose of according to Section 13.  
Use no flammable substances.  
Flush residue using copious water.  
Fill the absorbed material into lockable containers.

## 6.4 Reference to other sections

For personal protective equipment see Section 8 and for disposal instructions see Section 13.

# SECTION 7: Handling and storage

In addition to information given in this section, relevant information can also be found in section 8 and 6.1.

## 7.1 Precautions for safe handling

Ensure good ventilation.  
If applicable, suction measures at the workstation or on the processing machine necessary.  
Avoid inhalation of the vapours.  
Avoid contact with eyes or skin.  
Keep away from sources of ignition - Do not smoke.  
Take precautions against electrostatic charges.  
Take explosion-prevention measures if applicable.  
Use explosion-proof equipment.  
Earth devices.  
Do not use on hot surfaces.  
Also seal emptied tanks and tanks in the process after they have been used.  
Eating, drinking, smoking, as well as food-storage, is prohibited in work-room.  
Observe directions on label and instructions for use.  
Use working methods according to operating instructions.  
General hygiene measures for the handling of chemicals are applicable.  
Wash hands before breaks and at end of work.  
Keep away from food, drink and animal feedingstuffs.  
Remove contaminated clothing and protective equipment before entering areas in which food is consumed.

## 7.2 Conditions for safe storage, including any incompatibilities

Keep out of access to unauthorised individuals.  
Store product closed and only in original packing.  
Not to be stored in gangways or stair wells.  
Solvent resistant floor  
Do not store with flammable or self-igniting materials.  
Do not store with oxidizing agents.  
Unsuitable material:  
Various plastics  
Magnesium  
Zinc alloys  
Protect against moisture and store closed.  
Store in a well ventilated place.  
Protect from direct sunlight and warming.  
Observe special storage conditions (in Germany, e.g., in accordance with the regulations in the "Betriebssicherheitsverordnung").  
Keep locked away.  
Store cool

## 7.3 Specific end use(s)

No information available at present.

# SECTION 8: Exposure controls/personal protection

## 8.1 Control parameters

Page 5 of 12  
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II  
 Revised on / Version: 24.11.2011 / 0002  
 Replaces revision of / Version: 13.09.2010 / 0001  
 Valid from: 24.11.2011  
 PDF print date: 24.11.2011  
 Fuel Cartridge - M5, M10, M28

Chemical Name	Methanol	Content %:
WEL-TWA: 200 ppm (266 mg/m3) (WEL), 200 ppm (260 mg/m3) (EC)	WEL-STEL: 250 ppm (333 mg/m3) (WEL)	---
BMGV: ---	Other information: Sk (WEL, EC)	

Chemical Name	Methanol	Content %:
WEL-TWA: 200 ppm (266 mg/m3) (WEL), 200 ppm (260 mg/m3) (EC)	WEL-STEL: 250 ppm (333 mg/m3) (WEL)	---
BMGV: ---	Other information: Sk (WEL, EC)	

(GB) WEL-TWA = Workplace Exposure Limit - Long-term exposure limit (8-hour TWA (= time weighted average) reference period) EH40. AGW = "Arbeitsplatzgrenzwert" (workplace limit value, Germany). | WEL-STEL = Workplace Exposure Limit - Short-term exposure limit (15-minute reference period). | BMGV = Biological monitoring guidance value EH40. BGW = "Biologischer Grenzwert" (biological limit value, Germany) | Other information: Sen = Capable of causing occupational asthma. Sk = Can be absorbed through skin. Carc = Capable of causing cancer and/or heritable genetic damage.  
 \*\* = The exposure limit for this substance is repealed through the TRGS 900 (Germany) of January 2006 with the goal of revision.

(IRL) OELV-8h = Occupational Exposure Limit Value (8-hour reference period) | OELV-15min = Occupational Exposure Limit Value (15-minute reference period) | BLV = Biological limit value | Other information: C1, C2 = carcinogenic substance, Cat. 1 or 2. Mut 1, 2 = mutagenic substance, Cat. 1 or 2. Repro 1, 2 = Substances known to be toxic for reproduction, Cat. 1 or 2. Sk = can be absorbed through skin. Asphyx = asphyxiant. Sen = Respiratory sensitizer.  
 \*\* = The exposure limit for this substance is repealed through the TRGS 900 (Germany) of January 2006 with the goal of revision.

Methanol						
Use-Area	Exposure-Route	Exposure-Pattern	Descriptor	Value	Unit	Note
Worker	Human - dermal	Short term, systemic effects	DNEL (Derived No Effect Level)	40	mg/kg body weight/day	
Worker	Human - inhalation	Short term, systemic effects	DNEL (Derived No Effect Level)	260	mg/m3	
Worker	Human - inhalation	Short term, local effects	DNEL (Derived No Effect Level)	260	mg/m3	
Worker	Human - dermal	Long term, systemic effects	DNEL (Derived No Effect Level)	40	mg/kg body weight/day	
Worker	Human - inhalation	Long term, systemic effects	DNEL (Derived No Effect Level)	260	mg/m3	
Worker	Human - inhalation	Long term, local effects	DNEL (Derived No Effect Level)	260	mg/m3	
Consumer	Human - dermal	Short term, systemic effects	DNEL (Derived No Effect Level)	8	mg/kg body weight/day	
Consumer	Human - inhalation	Short term, systemic effects	DNEL (Derived No Effect Level)	50	mg/m3	
Consumer	Human - oral	Short term, systemic effects	DNEL (Derived No Effect Level)	8	mg/kg body weight/day	
Consumer	Human - inhalation	Short term, local effects	DNEL (Derived No Effect Level)	50	mg/m3	
Consumer	Human - dermal	Long term, systemic effects	DNEL (Derived No Effect Level)	8	mg/kg body weight/day	
Consumer	Human - inhalation	Long term, systemic effects	DNEL (Derived No Effect Level)	50	mg/m3	
Consumer	Human - oral	Long term, systemic effects	DNEL (Derived No Effect Level)	8	mg/kg body weight/day	
Consumer	Human - inhalation	Long term, local effects	DNEL (Derived No Effect Level)	50	mg/m3	

## 8.2 Exposure controls

### 8.2.1 Appropriate engineering controls

Ensure good ventilation. This can be achieved by local suction or general air extraction.

If this is insufficient to maintain the concentration under the WEL or AGW values, suitable breathing protection should be worn.

Page 6 of 12  
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II  
 Revised on / Version: 24.11.2011 / 0002  
 Replaces revision of / Version: 13.09.2010 / 0001  
 Valid from: 24.11.2011  
 PDF print date: 24.11.2011  
 Fuel Cartridge - M5, M10, M28

Applies only if maximum permissible exposure values are listed here.

### 8.2.2 Individual protection measures, such as personal protective equipment

General hygiene measures for the handling of chemicals are applicable.

Wash hands before breaks and at end of work.

Keep away from food, drink and animal feedingstuffs.

Remove contaminated clothing and protective equipment before entering areas in which food is consumed.

Eye/face protection:

Tight fitting protective goggles with side protection (EN 166).

Skin protection - Hand protection:

Chemical resistant protective gloves (EN 374).

Recommended

With short-term contact:

Protective Viton gloves (EN 374)

Permeation time (penetration time) in minutes:

> 120

With long-term contact:

Protective gloves in butyl rubber (EN 374).

Permeation time (penetration time) in minutes:

> 480

References

Protective hand cream recommended.

Skin protection - Other:

Protective working garments (e.g. safety shoes EN ISO 20345, long-sleeved protective working garments)

According to operation.

Protective working garment, antistatic (EN1149)

Natural fibre or heat-resistant synthetic fibre

Respiratory protection:

If OES or MEL is exceeded.

With short-term contact:

Gas mask filter AX (EN 14387), code colour brown.

With long-term contact:

Protective respirator with independent air supply.

Thermal hazards:

If applicable, these are included in the individual protective measures (eye/face protection, skin protection, respiratory protection).

Additional information on hand protection - No tests have been performed.

In the case of mixtures, the selection has been made according to the knowledge available and the information about the contents.

Selection of materials derived from glove manufacturer's indications.

Final selection of glove material must be made taking the breakthrough times, permeation rates and degradation into account.

Selection of a suitable glove depends not only on the material but also on other quality characteristics and varies from manufacturer to manufacturer.

In the case of mixtures, the resistance of glove materials cannot be predicted and must therefore be tested before use.

The exact breakthrough time of the glove material can be requested from the protective glove manufacturer and must be observed.

### 8.2.3 Environmental exposure controls

No information available at present.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Physical state:	Liquid
Colour:	Colourless
Odour:	Alcoholic
Odour threshold:	Not determined
pH-value:	Not determined
Melting point/freezing point:	-98 °C
Initial boiling point and boiling range:	64,7 °C
Flash point:	11 °C
Evaporation rate:	Not determined
Flammability (solid, gas):	Not determined

Lower explosive limit:	5,5 Vol-%
Upper explosive limit:	44 Vol-%
Vapour pressure:	128 hPa (20°C)
Vapour density (air = 1):	1,11 (References )
Density:	0,79 g/cm <sup>3</sup> (20°C)
Bulk density:	Not determined
Solubility(ies):	Not determined
Water solubility:	Soluble
Partition coefficient (n-octanol/water):	-0,77 (References log Pow )
Auto-ignition temperature:	455 °C (Ignition temperature )
Decomposition temperature:	Not determined
Viscosity:	0,597 mPas (20°C, References )
Explosive properties:	Possible build up of explosive/highly flammable vapour/air mixture., Product is not explosive.
Oxidising properties:	Not determined

## 9.2 Other information

Miscibility:	Not determined
Fat solubility / solvent:	Not determined
Conductivity:	Not determined
Surface tension:	Not determined
Solvents content:	Not determined

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

See also Subsection 10.4 to 10.6.

The product has not been tested.

### 10.2 Chemical stability

See also Subsection 10.4 to 10.6.

Stable with proper storage and handling.

### 10.3 Possibility of hazardous reactions

See also Subsection 10.4 to 10.6.

No decomposition if used as intended.

### 10.4 Conditions to avoid

See also section 7.

Heating, open flame, ignition sources

Protect from humidity.

Product is hygroscopic.

Electrostatic charge

### 10.5 Incompatible materials

See also section 7.

Alkali metals

Alkaline-earth metals

Development of:

Hydrogen gas

Exothermic reaction possible with:

Acids

Acid halide

Acid anhydrides

Reducing agent

Danger of explosion with:

Oxidizing agents

Perchlorates

Peroxides

Perchloric acid

Chromium (VI) trioxide

Chlorates

Nitric acid

Oxides of nitrogen

Halogens

Magnesium

Hydrogen peroxide

### 10.6 Hazardous decomposition products

See also Subsection 10.4 to 10.6.

See also section 5.2

No decomposition when used as directed.

**SECTION 11: Toxicological information**

<b>Methanol</b>						
<b>Toxicity/effect</b>	<b>Endpoint</b>	<b>Value</b>	<b>Unit</b>	<b>Organism</b>	<b>Test method</b>	<b>Notes</b>
Acute toxicity, by oral route:	LD0	143	mg/kg	Human being		
Acute toxicity, by oral route:	LD50	>5000	mg/kg	Rat	IUCLID Chem. Data Sheet (ESIS)	Not relevant for classification.
Acute toxicity, by oral route:	ATE	300	mg/kg	Human being		Experiences on persons.
Acute toxicity, by dermal route:						n.d.a.
Acute toxicity, by inhalation:	LC50	85	mg/l/4h	Rat		Not relevant for classification.
Skin corrosion/irritation:						n.d.a.
Serious eye damage/irritation:						n.d.a.
Respiratory or skin sensitisation:						n.d.a.
Germ cell mutagenicity:						n.d.a.
Carcinogenicity:						n.d.a.
Reproductive toxicity:						n.d.a.
Specific target organ toxicity - single exposure (STOT-SE):						n.d.a.
Specific target organ toxicity - repeated exposure (STOT-RE):						n.d.a.
Aspiration hazard:						n.d.a.
Respiratory tract irritation:						n.d.a.
Repeated dose toxicity:						n.d.a.
Symptoms:						abdominal pain, vomiting, headaches, gastrointestinal disturbances, drowsiness, visual disturbances, watering eyes, nausea, mental confusion

**SECTION 12: Ecological information**

<b>Methanol</b>							
<b>Toxicity/effect</b>	<b>Endpoint</b>	<b>Time</b>	<b>Value</b>	<b>Unit</b>	<b>Organism</b>	<b>Test method</b>	<b>Notes</b>
Toxicity to fish:	LC50	96h	15400	mg/l	(Lepomis macrochirus)		
Toxicity to daphnia:	EC50	48h	>1000 0	mg/l	(Daphnia magna)		
Toxicity to algae:	IC50	72h	8000	mg/l			
Persistence and degradability:							Readily biodegradable
Bioaccumulative potential:							n.d.a.
Mobility in soil:							n.d.a.
Results of PBT and vPvB assessment							n.d.a.
Other adverse effects:							n.d.a.
Other ecotoxicological data:	DOC		<70	%			
Other ecotoxicological data:	BOD5		<50	%			
Other ecotoxicological data:	BOD		>60	%			



Page 9 of 12  
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II  
 Revised on / Version: 24.11.2011 / 0002  
 Replaces revision of / Version: 13.09.2010 / 0001  
 Valid from: 24.11.2011  
 PDF print date: 24.11.2011  
 Fuel Cartridge - M5, M10, M28

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

#### For the substance / mixture / residual amounts

EC disposal code no.:

The waste codes are recommendations based on the scheduled use of this product.  
 Owing to the user's specific conditions for use and disposal, other waste codes may be allocated under certain circumstances. (2001/118/EC, 2001/119/EC, 2001/573/EC)

07 01 04 other organic solvents, washing liquids and mother liquors

14 06 03 other solvents and solvent mixes

16 05 06 laboratory chemicals, consisting of or containing dangerous substances, including mixtures of laboratory chemicals

Recommendation:

Pay attention to local and national official regulations

E.g. suitable incineration plant.

E.g. dispose at suitable refuse site.

Do not dispose of with household waste.

#### For contaminated packing material

Pay attention to local and national official regulations

Empty container completely.

Uncontaminated packaging can be recycled.

Dispose of packaging that cannot be cleaned in the same manner as the substance.

Do not perforate, cut up or weld uncleaned container.

Residues may present a risk of explosion.

## SECTION 14: Transport information

### General statements

UN number: 3473

#### Transport by road/by rail (ADR/RID)

UN proper shipping name:

UN 3473 FUEL CELL CARTRIDGES

Transport hazard class(es):

3

Packing group:

-

Classification code:

F1

LQ (ADR 2011):

n.a.

LQ (ADR 2009):

13

Environmental hazards:

Not applicable

Tunnel restriction code:

E

#### Transport by sea (IMDG-code)

UN proper shipping name:

FUEL CELL CARTRIDGES

Transport hazard class(es):

3

Packing group:

-

EmS:

F-E, S-D

Marine Pollutant:

n.a.

Environmental hazards:

Not applicable

#### Transport by air (IATA)

UN proper shipping name:

Fuel cell cartridges

Transport hazard class(es):

3

Packing group:

-

Environmental hazards:

Not applicable

#### Special precautions for user

Persons employed in transporting dangerous goods must be trained.

All persons involved in transporting must observe safety regulations.

Precautions must be taken to prevent damage.

#### Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Freighted as packaged goods rather than in bulk, therefore not applicable.

Minimum amount regulations have not been taken into account.

Danger code and packing code on request.

## SECTION 15: Regulatory information

Safety data sheet according to Regulation (EC) No 1907/2006, Annex II  
 Revised on / Version: 24.11.2011 / 0002  
 Replaces revision of / Version: 13.09.2010 / 0001  
 Valid from: 24.11.2011  
 PDF print date: 24.11.2011  
 Fuel Cartridge - M5, M10, M28

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

For classification and labelling see Section 2.

Observe restrictions: Yes

Comply with trade association/occupational health regulations.

Observe youth employment law (German regulation).

Observe law on protection of expectant mothers (German regulation).

Regulation (EC) No 1907/2006, Annex XVII

VOC 1999/13/EC 100%

TA air:

I 100%

## 15.2 Chemical safety assessment

There is no chemical safety report available.

## SECTION 16: Other information

These details refer to the product as it is delivered.

Revised sections: 1 - 16

The following statements are the indicated R-phrases / H-phrases and classification codes (GHS/CLP) for the ingredients (listed in Section 3).

11 Highly flammable.

23/24/25 Toxic by inhalation, in contact with skin and if swallowed.

39/23/24/25 Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed.

H225 Highly flammable liquid and vapour.

H301 Toxic if swallowed.

H311 Toxic in contact with skin.

H331 Toxic if inhaled.

H370 Causes damage to organs.

Flam. Liq.-Flammable liquid

Acute Tox.-Acute toxicity - inhalation

Acute Tox.-Acute toxicity - dermal

STOT SE-Specific target organ toxicity - single exposure

Acute Tox.-Acute toxicity - oral

## Legend:

AC Article Categories

acc., acc. to according, according to

ACGIH American Conference of Governmental Industrial Hygienists

ADR Accord européen relatif au transport international des marchandises Dangereuses par Route (= European Agreement concerning the International Carriage of Dangerous Goods by Road)

AOEL Acceptable Operator Exposure Level

AOX Adsorbable organic halogen compounds

approx. approximately

Art., Art. no. Article number

ATE Acute Toxicity Estimate according to Regulation (EC) 1272/2008 (CLP)

BAM Bundesanstalt für Materialforschung und -prüfung (Federal Institute for Materials Research and Testing, Germany)

BAuA Bundesanstalt für Arbeitsschutz und Arbeitsmedizin (= Federal Institute for Occupational Health and Safety, Germany)

BCF Bioconcentration factor

BGV Berufsgenossenschaftliche Vorschrift (= Accident Prevention Regulation)

BHT Butylhydroxytoluol (= 2,6-Di-t-butyl-4-methyl-phenol)

BMGV Biological monitoring guidance value (EH40, UK)

BOD Biochemical oxygen demand

BSEF Bromine Science and Environmental Forum

bw body weight

CAS Chemical Abstracts Service

CESIO Comité Européen des Agents de Surface et de leurs Intermédiaires Organiques

CIPAC Collaborative International Pesticides Analytical Council

CLP Classification, Labelling and Packaging (REGULATION (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures)

CMR carcinogenic, mutagenic, reproductive toxic

COD Chemical oxygen demand

CTFA Cosmetic, Toiletry, and Fragrance Association  
DMEL Derived Minimum Effect Level  
DNEL Derived No Effect Level  
DOC Dissolved organic carbon  
DT50 Dwell Time - 50% reduction of start concentration  
DVS Deutscher Verband für Schweißen und verwandte Verfahren e.V. (= German Association for Welding and Allied Processes)  
dw dry weight  
e.g. for example (abbreviation of Latin 'exempli gratia'), for instance  
EC European Community  
ECHA European Chemicals Agency  
EEA European Economic Area  
EEC European Economic Community  
EINECS European Inventory of Existing Commercial Chemical Substances  
ELINCS European List of Notified Chemical Substances  
EN European Norms  
EPA United States Environmental Protection Agency (United States of America)  
ERC Environmental Release Categories  
ES Exposure scenario  
etc. et cetera  
EU European Union  
EWC European Waste Catalogue  
Fax. Fax number  
gen. general  
GHS Globally Harmonized System of Classification and Labelling of Chemicals  
GWP Global warming potential  
HET-CAM Hen's Egg Test - Chorionallantoic Membrane  
IARC International Agency for Research on Cancer  
IATA International Air Transport Association  
IBC Intermediate Bulk Container  
IBC (Code) International Bulk Chemical (Code)  
IC Inhibitory concentration  
IMDG-code International Maritime Code for Dangerous Goods  
incl. including, inclusive  
IUCLID International Uniform Chemical Information Database  
LC lethal concentration  
LC50 lethal concentration 50 percent kill  
LCLo lowest published lethal concentration  
LD Lethal Dose of a chemical  
LD50 Lethal Dose, 50% kill  
LDLo Lethal Dose Low  
LMBG Lebensmittel- und Bedarfsgegenständegesetz (= Foodstuffs and Commodities Law)  
LOAEL Lowest Observed Adverse Effect Level  
LOEC Lowest Observed Effect Concentration  
LOEL Lowest Observed Effect Level  
LQ Limited Quantities  
MARPOL International Convention for the Prevention of Marine Pollution from Ships  
n.a. not applicable  
n.av. not available  
n.c. not checked  
n.d.a. no data available  
NIOSH National Institute of Occupational Safety and Health (United States of America)  
NOAEC No Observed Adverse Effective Concentration  
NOAEL No Observed Adverse Effect Level  
NOEC No Observed Effect Concentration  
NOEL No Observed Effect Level  
ODP Ozone Depletion Potential  
OECD Organisation for Economic Co-operation and Development  
org. organic  
PAH polycyclic aromatic hydrocarbon  
PC product category (= Chemical product category)  
PE Polyethylene  
PNEC Predicted No Effect Concentration  
POCP Photochemical ozone creation potential  
ppm parts per million  
PROC Process category  
PTFE Polytetrafluorethylene

Page 12 of 12

Safety data sheet according to Regulation (EC) No 1907/2006, Annex II

Revised on / Version: 24.11.2011 / 0002

Replaces revision of / Version: 13.09.2010 / 0001

Valid from: 24.11.2011

PDF print date: 24.11.2011

Fuel Cartridge - M5, M10, M28

REACH Registration, Evaluation, Authorisation and Restriction of Chemicals (REGULATION (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals)

RID Règlement concernant le transport International ferroviaire de marchandises Dangereuses (= Regulation concerning the International Carriage of Dangerous Goods by Rail)

SADT Self-Accelerating Decomposition Temperature

SAR Structure Activity Relationship

SU Sector of use

SVHC Substances of Very High Concern

Tel. Telephone

ThOD Theoretical oxygen demand

TOC Total organic carbon

TRGS Technische Regeln für Gefahrstoffe (=Technical Regulations for Hazardous Substances)

VbF Verordnung über brennbare Flüssigkeiten (= Regulation for flammable liquids (Austria))

VOC Volatile organic compounds

vPvB very persistent and very bioaccumulative

WEL-TWA, WEL-STEL WEL-TWA = Workplace Exposure Limit - Long-term exposure limit (8-hour TWA (= time weighted average) reference period), WEL-STEL = Workplace Exposure Limit - Short-term exposure limit (15-minute reference period) (EH40, UK).

WHO World Health Organization

The statements made here should describe the product with regard to the necessary safety precautions - they are not meant to guarantee definite characteristics - but they are based on our present up-to-date knowledge.

No responsibility.

These statements were made by:

**Chemical Check GmbH, Wöbbeler Straße 2-4, D-32839 Steinheim, Tel.: +49 5233 94 17 0, Fax: +49 5233 94 17 90**

© by Chemical Check GmbH Gefahrstoffberatung. The copying or changing of this document is forbidden except with consent of the Chemical Check GmbH Gefahrstoffberatung.