

Safety Data Sheet

according to Regulation (EC) No 1907/2006

Quick Browning Black Magic

Revision date: 17.09.2018

Product code: 0221

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

1.1. Product identifier

Quick Browning Black Magic

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

Use of the substance/mixture

Liquid for browning (blackening) ferrous metals

1.3. Details of the supplier of the safety data sheet

Company name:	MARAWE GmbH & Co. KG	
Street:	Donaustauer Str. 378 - Gebäude 64	
Place:	D-93055 Regensburg	
Telephone:	0941 / 29020439	Telefax: 0941 / 29020593
e-mail:	info@marawe.de	
Contact person:	Dr. Peter Raster, Dr. Stefan Weiss, Dr. Jonas Mark	
e-mail:	info@marawe.de	
Internet:	www.marawe.de	

1.4. Emergency telephone number:

0176 / 23510701

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No. 1272/2008

Hazard categories:

Acute toxicity: Acute Tox. 4

Acute toxicity: Acute Tox. 4

Skin corrosion/irritation: Skin Corr. 1

Serious eye damage/eye irritation: Eye Dam. 1

Specific target organ toxicity - repeated exposure: STOT RE 2

Hazardous to the aquatic environment: Aquatic Chronic 2

Hazard Statements:

Harmful if inhaled.

Harmful if swallowed.

Causes severe skin burns and eye damage.

Causes serious eye damage.

May cause damage to organs through prolonged or repeated exposure.

Toxic to aquatic life with long lasting effects.

2.2. Label elements

Regulation (EC) No. 1272/2008

Hazard components for labelling

Sulphuric acid ... %

Seleniumdioxide

copper sulphate

Sodium nitrate

Signal word: Danger

Pictograms:



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Hazard statements

H302+H332	Harmful if swallowed or if inhaled.
H314	Causes severe skin burns and eye damage.
H373	May cause damage to organs through prolonged or repeated exposure.
H411	Toxic to aquatic life with long lasting effects.

Precautionary statements

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.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P264	Wash Hände thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P312	Call a POISON CENTER/doctor if you feel unwell.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P363	Wash contaminated clothing before reuse.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P310	Immediately call a POISON CENTER/doctor.
P312	Call a POISON CENTER/doctor if you feel unwell.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER/doctor.
P314	Get medical advice/attention if you feel unwell.
P391	Collect spillage.
P405	Store locked up.
P501	Dispose of contents/container to sachgerechter Entsorgung.

Special labelling of certain mixtures

EUH071	Corrosive to the respiratory tract.
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SECTION 3: Composition/information on ingredients**3.2. Mixtures**

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Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification according to Regulation (EC) No. 1272/2008 [CLP]			
7446-08-4	Seleniumdioxide			8 - 10 %
	231-194-7			
	Acute Tox. 3, Acute Tox. 3, STOT RE 2, Aquatic Acute 1, Aquatic Chronic 1; H331 H301 H373 H400 H410			
7664-93-9	Sulphuric acid ... %			10 - < 15 %
	231-639-5	016-020-00-8		
	Skin Corr. 1A; H314			
7758-98-7	copper sulphate			1 - < 5 %
	231-847-6	029-004-00-0		
	Acute Tox. 4, Eye Irrit. 2, Skin Irrit. 2, Aquatic Acute 1, Aquatic Chronic 1; H302 H319 H315 H400 H410			
7631-99-4	Sodium nitrate			1 - < 5 %
	231-554-3			
	Ox. Liq. 2, Eye Irrit. 2; H272 H319			
7681-49-4	sodium fluoride			< 1 %
	231-667-8	009-004-00-7		
	Acute Tox. 3, Eye Irrit. 2, Skin Irrit. 2; H301 H319 H315 EUH032			

Full text of H and EUH statements: see section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

First aider: Pay attention to self-protection! Remove affected person from the danger area and lay down. This product contains selenium dioxide. Selenium dioxide can be absorbed by skin and can damage the nerves. Absolutely avoid contaminations. Don't use on aluminium, as this can create the highly toxic hydrogen selenide!

After inhalation

Provide fresh air. When in doubt or if symptoms are observed, get medical advice.

After contact with skin

After contact with skin, wash immediately with polyethylene glycol, followed by plenty of water. Take off immediately all contaminated clothing and wash it before reuse. Medical treatment necessary.

After contact with eyes

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist.

After ingestion

Rinse mouth immediately and drink plenty of water. Do NOT induce vomiting. Adverse human health effects and symptoms: Gastric perforation. Call a physician immediately. Do not allow a neutralisation agent to be drunk.

4.2. Most important symptoms and effects, both acute and delayed

No information available.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Co-ordinate fire-fighting measures to the fire surroundings.

5.2. Special hazards arising from the substance or mixture

Non-flammable.

5.3. Advice for firefighters

Wear a self-contained breathing apparatus and chemical protective clothing. Full protection suit.

Additional information

Suppress gases/vapours/mists with water spray jet. Collect contaminated fire extinguishing water separately.

Do not allow entering drains or surface water.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Provide adequate ventilation. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes. Use personal protection equipment.

6.2. Environmental precautions

Do not allow to enter into surface water or drains.

6.3. Methods and material for containment and cleaning up

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.

6.4. Reference to other sections

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray. Wenn eine lokale Absaugung nicht möglich oder unzureichend ist, muss der gesamte Arbeitsbereich ausreichend technisch belüftet werden.

Advice on protection against fire and explosion

No special fire protection measures are necessary.

Further information on handling

Geprüfte Schutzhandschuhe sind zu tragen

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep container tightly closed. Keep locked up. Store in a place accessible by authorized persons only.

Provide adequate ventilation as well as local exhaustion at critical locations.

Advice on storage compatibility

No special measures are necessary.

7.3. Specific end use(s)

Liquid for browning (blackening) ferrous metals

SECTION 8: Exposure controls/personal protection

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8.1. Control parameters

Exposure limits (EH40)

CAS No	Substance	ppm	mg/m ³	fibres/ml	Category	Origin
16984-48-8	Fluoride (inorganic as F)	-	2.5		TWA (8 h)	WEL
		-	-		STEL (15 min)	WEL
7664-93-9	Sulphuric acid (mist)	-	0.05		TWA (8 h)	WEL
		-	-		STEL (15 min)	WEL

8.2. Exposure controls

Appropriate engineering controls

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray.

Protective and hygiene measures

Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme.

Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat or drink.

Eye/face protection

Suitable eye protection: goggles.

Hand protection

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Skin protection

Wear suitable protective clothing.

Respiratory protection

In case of inadequate ventilation wear respiratory protection.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	Liquid
Colour:	black
Odour:	stinging
pH-Value (at 25 °C):	1,2

Changes in the physical state

Melting point:	not determined
Initial boiling point and boiling range:	100 - 110 °C
Flash point:	not determined

Flammability

Solid:	not applicable
Gas:	not applicable
Lower explosion limits:	not determined
Upper explosion limits:	not determined

Auto-ignition temperature

Solid:	not applicable
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Gas:	not applicable
Decomposition temperature:	not determined
Oxidizing properties	
Not oxidising.	
Vapour pressure:	not determined
Density:	not determined
Water solubility:	easily soluble
Solubility in other solvents	
not determined	
Partition coefficient:	not determined
Vapour density:	not determined
Evaporation rate:	not determined

9.2. Other information

Solid content:	not determined
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SECTION 10: Stability and reactivity

10.1. Reactivity

Possibility of hazardous reactions.

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

Exothermic reaction with: Base, Peroxides, Oxidizing agent. Reagiert heftig mit Basen. This product contains selenium dioxide. Selenium dioxide can be absorbed by skin and can damage the nerves. Absolutely avoid contaminations. Don't use on aluminium, as this can create the highly toxic hydrogen selenide!

10.4. Conditions to avoid

none

10.5. Incompatible materials

Keep away from: Base, Oxidizing agent, Peroxides. Aluminium

10.6. Hazardous decomposition products

No known hazardous decomposition products.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

ATEmix calculated

ATE (oral) 587,6 mg/kg; ATE (inhalative aerosol) 5,000 mg/l

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Acute toxicity

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
7446-08-4	Seleniumdioxide				
	oral	LD50 68,1 mg/kg	rat	Toxnet	
	inhalative vapour	ATE 3 mg/l			
	inhalative aerosol	ATE 0,5 mg/l			
7758-98-7	copper sulphate				
	oral	LD50 300 mg/kg	Rat	IUCLID	
7631-99-4	Sodium nitrate				
	oral	LD50 1267 mg/kg	Ratte	RTECS	
7681-49-4	sodium fluoride				
	oral	LD50 52 mg/kg	Rat	RTECS	

Additional information on tests

The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP].

SECTION 12: Ecological information

12.1. Toxicity

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

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] [d]	Species	Source	Method
7446-08-4	Seleniumdioxide					
	Acute fish toxicity	LC50 2,9 mg/l	96 h	Pimephales pramelas		
7758-98-7	copper sulphate					
	Acute fish toxicity	LC50 0,11 mg/l	96 h	Onchorhynchus mykiss	ECOTOX Database	
7631-99-4	Sodium nitrate					
	Acute fish toxicity	LC50 6200 mg/l	96 h	Ictalurus punctatus	IUCLID	
	Acute crustacea toxicity	EC50 3581 mg/l	48 h	Daphnia magna (Großer Wasserfloh)	IUCLID	
7681-49-4	sodium fluoride					
	Acute fish toxicity	LC50 925 mg/l	96 h	Gambusia affinis		
	Acute algae toxicity	ErC50 850 mg/l	72 h	Desmodesmus subspicatus		
	Acute crustacea toxicity	EC50 338 mg/l	48 h	Daphnia magna	IUCLID	

12.2. Persistence and degradability

The product has not been tested.

12.3. Bioaccumulative potential

The product has not been tested.

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Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
7631-99-4	Sodium nitrate	>=4

12.4. Mobility in soil

The product has not been tested.

12.5. Results of PBT and vPvB assessment

The product has not been tested.

12.6. Other adverse effects

No information available.

Further information

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Advice on disposal

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil. Dispose of waste according to applicable legislation.

Contaminated packaging

This material and its container must be disposed of as hazardous waste. Handle contaminated packages in the same way as the substance itself.

SECTION 14: Transport information

Land transport (ADR/RID)

<u>14.1. UN number:</u>	UN 1760
<u>14.2. UN proper shipping name:</u>	CORROSIVE LIQUID, N.O.S.
<u>14.3. Transport hazard class(es):</u>	8
<u>14.4. Packing group:</u>	II
Hazard label:	8
Classification code:	C9
Special Provisions:	274
Limited quantity:	1 L
Excepted quantity:	E2
Transport category:	2
Hazard No:	80
Tunnel restriction code:	E

Inland waterways transport (ADN)

<u>14.1. UN number:</u>	UN 1760
<u>14.2. UN proper shipping name:</u>	CORROSIVE LIQUID, N.O.S.
<u>14.3. Transport hazard class(es):</u>	8
<u>14.4. Packing group:</u>	II
Hazard label:	8
Classification code:	C9
Special Provisions:	274
Limited quantity:	1 L
Excepted quantity:	E2

Marine transport (IMDG)

<u>14.1. UN number:</u>	UN 1760
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14.2. UN proper shipping name:	ÄTZENDER FLÜSSIGER STOFF, N.A.G.
14.3. Transport hazard class(es):	8
14.4. Packing group:	II
Hazard label:	8
Special Provisions:	274
Limited quantity:	1 L
Excepted quantity:	E2
EmS:	F-A, S-B

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number:	UN 1760
14.2. UN proper shipping name:	ÄTZENDER FLÜSSIGER STOFF, N.A.G.
14.3. Transport hazard class(es):	8
14.4. Packing group:	II
Hazard label:	8
Special Provisions:	A3 A803
Limited quantity Passenger:	0.5 L
Passenger LQ:	Y840
Excepted quantity:	E2
IATA-packing instructions - Passenger:	851
IATA-max. quantity - Passenger:	1 L
IATA-packing instructions - Cargo:	855
IATA-max. quantity - Cargo:	30 L

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: no

14.6. Special precautions for user

Warning: strongly corrosive.

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

not applicable

SECTION 15: Regulatory information

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

EU regulatory information

Additional information

To follow: 850/2004/EC, 79/117/EEC, 689/2008/EC

National regulatory information

Employment restrictions: Observe restrictions to employment for juvenils according to the 'juvenile work protection guideline' (94/33/EC).

Water contaminating class (D): 3 - highly water contaminating

15.2. Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

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

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GHS: Globally Harmonized 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

LC50: Lethal concentration, 50%

LD50: Lethal dose, 50%

Classification for mixtures and used evaluation method according to Regulation (EC) No. 1272/2008 [CLP]

Classification	Classification procedure
Acute Tox. 4; H332	Calculation method
Acute Tox. 4; H302	Calculation method
Skin Corr. 1; H314	On basis of test data
Eye Dam. 1; H318	On basis of test data
STOT RE 2; H373	Calculation method
Aquatic Chronic 2; H411	Calculation method

Relevant H and EUH statements (number and full text)

H272	May intensify fire; oxidiser.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H302+H332	Harmful if swallowed or if inhaled.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
EUH032	Contact with acids liberates very toxic gas.
EUH071	Corrosive to the respiratory tract.

Further Information

The information is based on present level of our knowledge. It does not, however, give assurances of product properties and establishes no contract legal rights. The receiver of our product is singularly responsible for adhering to existing laws and regulations.

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)