



SAFETY DATA SHEET

acc. to Regulation (EC) No. 1907/2006 (REACH)

WE MAKE
CHEMISTRY
WORK

SHADOW REMOVER STRONG

Version number: GHS 6.0
Replaces version of: 2023-04-18 (GHS 5)

Revision: 2023-06-28

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

1.1 Product identifier

Trade name **Shadow Remover Strong**
Alternative number(s) 57698

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

Relevant identified uses Graffiti shadow remover

1.3 Details of the supplier of the safety data sheet

Mavro International BV
Heksekamp 1
5301 LX Zaltbommel
Netherlands

Telephone: +31 418 680 680
e-mail: info@mavro-int.com
Website: <https://www.mavro-int.com>

1.4 Emergency telephone number

Emergency information service +31 418 680 680
This number is only available during the following office hours: Mon-Fri 09:00 AM - 05:00 PM

Poison centre					
Country	Name	Postal code/city	Telephone	Telefax	Opening hours
United Kingdom	National Poisons Information Service (Birmingham Centre) City Hospital		0344 892 0111		Mon - Fri 12:00 AM - 12:00 AM

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification acc. to GHS

Section	Hazard class	Category	Hazard class and category	Hazard statement
3.2	skin corrosion/irritation	1B	Skin Corr. 1B	H314
3.3	serious eye damage/eye irritation	1	Eye Dam. 1	H318
4.1A	hazardous to the aquatic environment - acute hazard	1	Aquatic Acute 1	H400
4.1C	hazardous to the aquatic environment - chronic hazard	2	Aquatic Chronic 2	H411

SHADOW REMOVER STRONG

Version number: GHS 6.0
Replaces version of: 2023-04-18 (GHS 5)

Revision: 2023-06-28

For full text of abbreviations: see SECTION 16.

The most important adverse physicochemical, human health and environmental effects

Skin corrosion produces an irreversible damage to the skin; namely, visible necrosis through the epidermis and into the dermis. Spillage and fire water can cause pollution of watercourses.

2.2 Label elements

Labelling

- Signal word danger

- Pictograms

GHS05, GHS09



- Hazard statements

H314 Causes severe skin burns and eye damage.
H410 Very toxic to aquatic life with long lasting effects.

- Precautionary statements

P260 Do not breathe dust/fume/gas/mist/vapours/spray.
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.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
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.
P391 Collect spillage.
P501 Dispose of contents/container to industrial combustion plant.

- Supplemental hazard information

EUH031 Contact with acids liberates toxic gas.

- Hazardous ingredients for labelling Sodium hypochlorite solution

2.3 Other hazards

Special danger of slipping by leaking/spilling product.

Results of PBT and vPvB assessment

Does not contain a PBT-/vPvB-substance in a concentration of $\geq 0,1\%$.

Endocrine disrupting properties

Does not contain an endocrine disruptor (EDC) in a concentration of $\geq 0,1\%$.

SECTION 3: Composition/information on ingredients

3.1 Substances

Not relevant (mixture)


3.2 Mixtures

SHADOW REMOVER STRONG

Version number: GHS 6.0
Replaces version of: 2023-04-18 (GHS 5)

Revision: 2023-06-28

Description of the mixture

Name of substance	Identifier	Wt%	Classification acc. to GHS	Pictograms
Sodium hypochlorite solution	CAS No 7681-52-9 EC No 231-668-3 Index No 017-011-00-1	5 - <10	Skin Corr. 1B / H314 Eye Dam. 1 / H318 Aquatic Acute 1 / H400 Aquatic Chronic 1 / H410	

Name of substance	Specific Conc. Limits	M-Factors	ATE	Exposure route
Sodium hypochlorite solution	-	M-factor (acute) = 10 M-factor (chronic) = 1	1,100 mg/kg	oral

For full text of abbreviations: see SECTION 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General notes

Do not leave affected person unattended. Remove victim out of the danger area. Keep affected person warm, still and covered. Take off immediately all contaminated clothing. In all cases of doubt, or when symptoms persist, seek medical advice.

Following inhalation

If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions. In case of respiratory tract irritation, consult a physician. Provide fresh air.

Following skin contact

After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water.

Following eye contact

Remove contact lenses, if present and easy to do. Continue rinsing. Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart. Get immediate medical advice/attention.

Following ingestion

Rinse mouth with water (only if the person is conscious). Do NOT induce vomiting. Get immediate medical advice/attention.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms and effects are not known to date.

4.3 Indication of any immediate medical attention and special treatment needed

none

SHADOW REMOVER STRONG

Version number: GHS 6.0
Replaces version of: 2023-04-18 (GHS 5)

Revision: 2023-06-28

SECTION 5: Firefighting measures**5.1 Extinguishing media****Suitable extinguishing media**

Water spray, Alcohol resistant foam, BC-powder, Carbon dioxide (CO₂)

Unsuitable extinguishing media

Water jet

5.2 Special hazards arising from the substance or mixture**Hazardous combustion products**

Carbon monoxide (CO), Carbon dioxide (CO₂), Hydrogen chloride (HCl)

5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Co-ordinate firefighting measures to the fire surroundings. Do not allow firefighting water to enter drains or water courses. Collect contaminated firefighting water separately. Fight fire with normal precautions from a reasonable distance.

SECTION 6: Accidental release measures**6.1 Personal precautions, protective equipment and emergency procedures****For non-emergency personnel**

Remove persons to safety.

For emergency responders

Wear breathing apparatus if exposed to vapours/dust/spray/gases.

6.2 Environmental precautions

Keep away from drains, surface and ground water. Retain contaminated washing water and dispose of it. If substance has entered a water course or sewer, inform the responsible authority.

6.3 Methods and material for containment and cleaning up**Advice on how to contain a spill**

Covering of drains

Advice on how to clean up a spill

Wipe up with absorbent material (e.g. cloth, fleece). Collect spillage: sawdust, kieselgur (diatomite), sand, universal binder

Appropriate containment techniques

Neutralisation techniques. Use of adsorbent materials.

Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

6.4 Reference to other sections

Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

SHADOW REMOVER STRONG

Version number: GHS 6.0
Replaces version of: 2023-04-18 (GHS 5)

Revision: 2023-06-28

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Recommendations

- Measures to prevent fire as well as aerosol and dust generation

Use local and general ventilation. Use only in well-ventilated areas.

- Handling of incompatible substances or mixtures

Do not mix with acids.

Advice on general occupational hygiene

Wash hands after use. Do not eat, drink and smoke in work areas. Remove contaminated clothing and protective equipment before entering eating areas. Never keep food or drink in the vicinity of chemicals. Never place chemicals in containers that are normally used for food or drink. Keep away from food, drink and animal feed-stuffs.

7.2 Conditions for safe storage, including any incompatibilities

- Packaging compatibilities

Only packagings which are approved (e.g. acc. to ADR) may be used.

7.3 Specific end use(s)

See section 16 for a general overview.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limit values (Workplace Exposure Limits)

this information is not available

Relevant DNELs of components of the mixture						
Name of substance	CAS No	Endpoint	Threshold level	Protection goal, route of exposure	Used in	Exposure time
Sodium hypochlorite solution	7681-52-9	DNEL	1.55 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
Sodium hypochlorite solution	7681-52-9	DNEL	3.1 mg/m ³	human, inhalatory	worker (industry)	acute - systemic effects
Sodium hypochlorite solution	7681-52-9	DNEL	1.55 mg/m ³	human, inhalatory	worker (industry)	chronic - local effects
Sodium hypochlorite solution	7681-52-9	DNEL	3.1 mg/m ³	human, inhalatory	worker (industry)	acute - local effects

Relevant PNECs of components of the mixture						
Name of substance	CAS No	Endpoint	Threshold level	Organism	Environmental compartment	Exposure time
Sodium hypochlorite solution	7681-52-9	PNEC	0.21 µg/l	aquatic organisms	freshwater	short-term (single instance)
Sodium hypochlorite solution	7681-52-9	PNEC	0.042 µg/l	aquatic organisms	marine water	short-term (single instance)
Sodium hypochlorite solution	7681-52-9	PNEC	4.69 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)

SHADOW REMOVER STRONG

Version number: GHS 6.0
Replaces version of: 2023-04-18 (GHS 5)

Revision: 2023-06-28

8.2 Exposure controls

Appropriate engineering controls

General ventilation.

Individual protection measures (personal protective equipment)

Eye/face protection

Wear eye/face protection.

Skin protection

- Hand protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374.

- Type of material

NBR: acrylonitrile-butadiene rubber, IIR: isobutene-isoprene (butyl) rubber, Nitrile

- Material thickness

>0,32mm

- Breakthrough times of the glove material

>480 minutes (permeation: level 6)

- Other protection measures

Wash hands thoroughly after handling.

Body protection

Protective clothing against liquid chemicals.

Respiratory protection

In case of inadequate ventilation wear respiratory protection.

Environmental exposure controls

Use appropriate container to avoid environmental contamination. Keep away from drains, surface and ground water.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	liquid (gel)
Colour	white
Odour	characteristic
Melting point/freezing point	not determined
Boiling point or initial boiling point and boiling range	100 – 110 °C
Flammability	non-combustible
Lower and upper explosion limit	not determined
Flash point	not determined
Auto-ignition temperature	not determined

SHADOW REMOVER STRONG

 Version number: GHS 6.0
 Replaces version of: 2023-04-18 (GHS 5)

Revision: 2023-06-28

Decomposition temperature	not relevant
pH (value)	12 (base)
Kinematic viscosity	not determined

Solubility(ies)

Water solubility	miscible in any proportion
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Partition coefficient

Partition coefficient n-octanol/water (log value)	this information is not available
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Vapour pressure	not determined
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Density and/or relative density

Density	1.12 g/cm ³
Relative vapour density	information on this property is not available

Particle characteristics	not relevant (liquid)
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9.2 Other information

Information with regard to physical hazard classes	hazard classes acc. to GHS (physical hazards): not relevant
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Other safety characteristics

Miscibility	Completely miscible with water.
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SECTION 10: Stability and reactivity

10.1 Reactivity

Concerning incompatibility: see below "Conditions to avoid" and "Incompatible materials".

10.2 Chemical stability

See below "Conditions to avoid".

10.3 Possibility of hazardous reactions

No known hazardous reactions.

10.4 Conditions to avoid

There are no specific conditions known which have to be avoided.

10.5 Incompatible materials

Acids, Oxidisers

SHADOW REMOVER STRONG

Version number: GHS 6.0
Replaces version of: 2023-04-18 (GHS 5)

Revision: 2023-06-28

Release of toxic materials with:

Acids

10.6 Hazardous decomposition products

Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known. Hazardous combustion products: see section 5.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Test data are not available for the complete mixture.

Classification procedure

The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

Classification acc. to GHS

Acute toxicity

Shall not be classified as acutely toxic.

Acute toxicity estimate (ATE) of components of the mixture			
Name of substance	CAS No	Exposure route	ATE
Sodium hypochlorite solution	7681-52-9	oral	1,100 mg/kg

Skin corrosion/irritation

Causes severe skin burns and eye damage.

Serious eye damage/eye irritation

Causes serious eye damage.

Respiratory or skin sensitisation

Shall not be classified as a respiratory or skin sensitiser.

Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

Carcinogenicity

Shall not be classified as carcinogenic.

Reproductive toxicity

Shall not be classified as a reproductive toxicant.

Specific target organ toxicity - single exposure

Shall not be classified as a specific target organ toxicant (single exposure).

Specific target organ toxicity - repeated exposure

Shall not be classified as a specific target organ toxicant (repeated exposure).

Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

11.2 Information on other hazards

There is no additional information.

SHADOW REMOVER STRONG

Version number: GHS 6.0
Replaces version of: 2023-04-18 (GHS 5)

Revision: 2023-06-28

SECTION 12: Ecological information

12.1 Toxicity

Very toxic to aquatic life with long lasting effects.

Aquatic toxicity (acute) of components of the mixture					
Name of substance	CAS No	Endpoint	Value	Species	Exposure time
Sodium hypochlorite solution	7681-52-9	EC50	141 µg/l	aquatic invertebrates	48 h
Sodium hypochlorite solution	7681-52-9	ErC50	0.036 mg/l	algae	72 h

Aquatic toxicity (chronic) of components of the mixture					
Name of substance	CAS No	Endpoint	Value	Species	Exposure time
Sodium hypochlorite solution	7681-52-9	LC50	0.05 mg/l	fish	120 h
Sodium hypochlorite solution	7681-52-9	EC50	563 mg/l	microorganisms	3 h

12.2 Persistence and degradability

Data are not available.

12.3 Bioaccumulative potential

Data are not available.

Bioaccumulative potential of components of the mixture				
Name of substance	CAS No	BCF	Log KOW	BOD5/COD
Sodium hypochlorite solution	7681-52-9		-3.42 (pH value: 12.5, 20 °C)	

12.4 Mobility in soil

Data are not available.

12.5 Results of PBT and vPvB assessment

According to the results of its assessment, this substance is not a PBT or a vPvB. Does not contain a PBT-/vPvB-substance in a concentration of ≥ 0,1%.

12.6 Endocrine disrupting properties

Does not contain an endocrine disruptor (EDC) in a concentration of ≥ 0,1%.

12.7 Other adverse effects

Data are not available.

SHADOW REMOVER STRONG

Version number: GHS 6.0
Replaces version of: 2023-04-18 (GHS 5)

Revision: 2023-06-28

SECTION 13: Disposal considerations**13.1 Waste treatment methods****Waste treatment-relevant information**

Regeneration of bases.

Sewage disposal-relevant information

Do not empty into drains. Avoid release to the environment. Refer to special instructions/safety data sheets.

Waste treatment of containers/packagings

It is a dangerous waste; only packagings which are approved (e.g. acc. to ADR) may be used. Completely emptied packages can be recycled. Handle contaminated packages in the same way as the substance itself.

Remarks

Please consider the relevant national or regional provisions. Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities.

SECTION 14: Transport information**14.1 UN number or ID number**

ADR/RID	UN 1791
IMDG-Code	UN 1791
ICAO-TI	UN 1791

14.2 UN proper shipping name

ADR/RID	HYPOCHLORITE SOLUTION
IMDG-Code	HYPOCHLORITE SOLUTION
ICAO-TI	Hypochlorite solution

14.3 Transport hazard class(es)

ADR/RID	8
IMDG-Code	8
ICAO-TI	8

14.4 Packing group

ADR/RID	II
IMDG-Code	II
ICAO-TI	II

14.5 Environmental hazards

hazardous to the aquatic environment

14.6 Special precautions for user

Provisions for dangerous goods (ADR) should be complied within the premises.

14.7 Maritime transport in bulk according to IMO instruments

The cargo is not intended to be carried in bulk.

Information for each of the UN Model Regulations

SHADOW REMOVER STRONG

Version number: GHS 6.0
Replaces version of: 2023-04-18 (GHS 5)

Revision: 2023-06-28

Agreement concerning the International Carriage of Dangerous Goods by Road (ADR) - Additional information

Classification code C9
Danger label(s) 8, fish and tree



Environmental hazards **yes** (hazardous to the aquatic environment)
Special provisions (SP) 521
Excepted quantities (EQ) E2
Limited quantities (LQ) 1 L
Transport category (TC) 2
Tunnel restriction code (TRC) E
Hazard identification No 80
Emergency Action Code 2X

Regulations concerning the International Carriage of Dangerous Goods by Rail (RID) - Additional information

Classification code C9
Danger label(s) 8, fish and tree



Environmental hazards **yes** (hazardous to water)
Special provisions (SP) 521
Excepted quantities (EQ) E2
Limited quantities (LQ) 1 L
Transport category (TC) 2
Hazard identification No 80

International Maritime Dangerous Goods Code (IMDG) - Additional information

Marine pollutant **yes (P)** (hazardous to the aquatic environment) (Sodium hypochlorite solution)
Danger label(s) 8, fish and tree




Special provisions (SP) 274, 900
Excepted quantities (EQ) E2
Limited quantities (LQ) 1 L
EmS F-A, S-B
Stowage category B
Segregation group 8 - Hypochlorites

SHADOW REMOVER STRONG

Version number: GHS 6.0
Replaces version of: 2023-04-18 (GHS 5)

Revision: 2023-06-28

International Civil Aviation Organization (ICAO-IATA/DGR) - Additional information

Environmental hazards	yes (hazardous to the aquatic environment)
Danger label(s)	8
	
Special provisions (SP)	A3
Excepted quantities (EQ)	E2
Limited quantities (LQ)	0,5 L

SECTION 15: Regulatory information

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

Relevant provisions of the European Union (EU)

Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS)

none of the ingredients are listed

Regulation concerning the establishment of a European Pollutant Release and Transfer Register (PRTR)

none of the ingredients are listed

Water Framework Directive (WFD)

List of pollutants (WFD)			
Name of substance	CAS No	Listed in	Remarks
Sodium hypochlorite solution		a)	

Legend

A) Indicative list of the main pollutants

Regulation on persistent organic pollutants (POP)

None of the ingredients are listed.

National inventories

Country	Inventory	Status
EU	REACH Reg.	all ingredients are listed

Legend

REACH Reg. REACH registered substances

15.2 Chemical safety assessment

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

SHADOW REMOVER STRONG

Version number: GHS 6.0
Replaces version of: 2023-04-18 (GHS 5)

Revision: 2023-06-28

SECTION 16: Other information

Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
ADR	Accord relatif au transport international des marchandises dangereuses par route (Agreement concerning the International Carriage of Dangerous Goods by Road)
Aquatic Acute	Hazardous to the aquatic environment - acute hazard
Aquatic Chronic	Hazardous to the aquatic environment - chronic hazard
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BOD	Biochemical Oxygen Demand
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
COD	Chemical oxygen demand
DGR	Dangerous Goods Regulations (see IATA/DGR)
DNEL	Derived No-Effect Level
EC50	Effective Concentration 50 %. The EC50 corresponds to the concentration of a tested substance causing 50 % changes in response (e.g. on growth) during a specified time interval
EC No	The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union)
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
EmS	Emergency Schedule
ErC50	≡ EC50: in this method, that concentration of test substance which results in a 50 % reduction in either growth (EbC50) or growth rate (ErC50) relative to the control
Eye Dam.	Seriously damaging to the eye
Eye Irrit.	Irritant to the eye
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
IATA	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)
ICAO	International Civil Aviation Organization
ICAO-TI	Technical instructions for the safe transport of dangerous goods by air
IMDG	International Maritime Dangerous Goods Code
IMDG-Code	International Maritime Dangerous Goods Code
index No	The Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008
LC50	Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval
log KOW	n-Octanol/water

SHADOW REMOVER STRONG

Version number: GHS 6.0
Replaces version of: 2023-04-18 (GHS 5)

Revision: 2023-06-28

Abbr.	Descriptions of used abbreviations
M-factor	Means a multiplying factor. It is applied to the concentration of a substance classified as hazardous to the aquatic environment acute category 1 or chronic category 1, and is used to derive by the summation method the classification of a mixture in which the substance is present
NLP	No-Longer Polymer
PBT	Persistent, Bioaccumulative and Toxic
PNEC	Predicted No-Effect Concentration
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail)
Skin Corr.	Corrosive to skin
Skin Irrit.	Irritant to skin
vPvB	Very Persistent and very Bioaccumulative

Key literature references and sources for data

Agreement concerning the International Carriage of Dangerous Goods by Road (ADR). Regulations concerning the International Carriage of Dangerous Goods by Rail (RID). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

Classification procedure

Physical and chemical properties: The classification is based on tested mixture.
Health hazards, Environmental hazards: The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

List of relevant phrases (code and full text as stated in section 2 and 3)

Code	Text
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
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.

Disclaimer

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.