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

1.1 Product identifier

Marston Cleaner
Article number: MCL

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

1.2.1 Relevant uses

Solvent

1.2.2 Uses advised against

None known.

1.3 Details of the supplier of the safety data sheet

Company

Marston Domsel GmbH
Bergheimer Str. 15
53909 Zülpich / GERMANY
Phone +49 (0) 22 52 94 15 0
Fax +49 (0) 22 52 17 44
Homepage www.marston-domsel.de
E-mail info@marston-domsel.de

Address enquiries to

Technical information info@marston-domsel.de

Safety Data Sheet sdb@chemiebuero.de

1.4 Emergency telephone number

Advisory body +49 (0)89-19240 (24h) (English)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture [REGULATION (EC) No 1272/2008]

Flam. Liq. 2: H225 Highly flammable liquid and vapour.
Eye Irrit. 2: H319 Causes serious eye irritation.
STOT SE 3: H336 May cause drowsiness or dizziness.

2.2 Label elements

The product is required to be labelled in accordance with regulation (EC) No 1272/2008 (CLP).

Hazard pictograms

Signal word DANGER

Contains: Acetone

Butanone

Hazard statements

H225 Highly flammable liquid and vapour.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.

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, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261 Avoid breathing vapours / spray.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves / eye protection / face protection.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313 If eye irritation persists: Get medical advice / attention.
P403+P235 Store in a well-ventilated place. Keep cool.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/national regulation.

Special labelling

EUH066 Repeated exposure may cause skin dryness or cracking.

2.3 Other hazards

Physico-chemical hazards Evolution of flammable mixtures possible in air when heated above flash point and/or during spraying or misting.

Environmental hazards Does not contain any PBT or vPvB substances.

Other hazards Further hazards were not determined with the current level of knowledge.

SECTION 3: Composition / Information on ingredients

Product-type:

3.2 The product is a mixture.

Range [%]	Substance
50 - 90	Acetone
	CAS: 67-64-1, EINECS/ELINCS: 200-662-2, EU-INDEX: 606-001-00-8, Reg-No.: 01-2119471330-49-XXXX
	GHS/CLP: Flam. Liq. 2: H225 - Eye Irrit. 2: H319 - STOT SE 3: H336
10 - 25	Butanone
	CAS: 78-93-3, EINECS/ELINCS: 201-159-0, EU-INDEX: 606-002-00-3, Reg-No.: 01-2119457290-43-XXXX
	GHS/CLP: Flam. Liq. 2: H225 - Eye Irrit. 2: H319 - STOT SE 3: H336
2,5 - 10	Ethyl acetate
	CAS: 141-78-6, EINECS/ELINCS: 205-500-4, EU-INDEX: 607-022-00-5, Reg-No.: 01-2119475103-46-XXXX
	GHS/CLP: Flam. Liq. 2: H225 - Eye Irrit. 2: H319 - STOT SE 3: H336

Comment on component parts Substances of Very High Concern - SVHC: substances are not contained or are below 0.1%.
For full text of H-statements: see SECTION 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General information Change soaked clothing.

Inhalation Ensure supply of fresh air.
In the event of symptoms seek medical treatment.

Skin contact In case of contact with skin wash off with warm water.
Consult a doctor if skin irritation persists.

Eye contact In case of contact with eyes rinse thoroughly with plenty of water and seek medical advice.

Ingestion Consult a doctor immediately.
Rinse out mouth and give plenty of water to drink.
Do not induce vomiting.

4.2 Most important symptoms and effects, both acute and delayed

Irritant effects
Vertigo
Drowsiness

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.
Forward this sheet to the doctor.

SECTION 5: Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media Carbon dioxide.
Water spray jet.
Dry powder.
Alcohol-resistant foam.

Extinguishing media that must not be used Full water jet.

5.2 Special hazards arising from the substance or mixture

Risk of formation of toxic pyrolysis products.

5.3 Advice for firefighters

Do not inhale explosion and/or combustion gases.
Use self-contained breathing apparatus.

Cool containers at risk with water spray jet.
Fire residues and contaminated firefighting water must be disposed of in accordance within the local regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Keep away from all sources of ignition.
Ensure adequate ventilation.

6.2 Environmental precautions

Do not discharge into the drains/surface waters/groundwater.
Do not discharge into the drains. Risk of explosion!

6.3 Methods and material for containment and cleaning up

Take up with absorbent material (e.g. general-purpose binder).
Dispose of absorbed material in accordance within the regulations.

6.4 Reference to other sections

See SECTION 8+13

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Use only in well-ventilated areas.
Avoid spilling or spraying in enclosed areas.

Keep away from all sources of ignition - Refrain from smoking.
Vapours can form an explosive mixture with air.
Take precautionary measures against static discharges.

Do not eat, drink, smoke or take drugs at work.
Wash hands before breaks and after work.
Use barrier skin cream.

7.2 Conditions for safe storage, including any incompatibilities

Provide solvent-resistant and impermeable floor.

Do not store together with oxidizing agents.

Keep container in a well-ventilated place.
Keep in a cool place, heat causes increase in pressure and risk of bursting.
Protect from heat/overheating.

7.3 Specific end use(s)

See product use, SECTION 1.2

SECTION 8: Exposure controls / personal protection

8.1 Control parameters

Ingredients with occupational exposure limits to be monitored (GB)

Substance
Acetone
CAS: 67-64-1, EINECS/ELINCS: 200-662-2, EU-INDEX: 606-001-00-8, Reg-No.: 01-2119471330-49-XXXX
Long-term exposure: 500 ppm, 1210 mg/m³
Short-term exposure (15-minute): 1500 ppm, 3620 mg/m³
Ethyl acetate
CAS: 141-78-6, EINECS/ELINCS: 205-500-4, EU-INDEX: 607-022-00-5, Reg-No.: 01-2119475103-46-XXXX
Long-term exposure: 200 ppm, 730 mg/m³
Short-term exposure (15-minute): 400 ppm, 1460 mg/m³
Butanone
CAS: 78-93-3, EINECS/ELINCS: 201-159-0, EU-INDEX: 606-002-00-3, Reg-No.: 01-2119457290-43-XXXX
Long-term exposure: 200 ppm, 600 mg/m³, Sk, BmgV
Short-term exposure (15-minute): 300 ppm, 899 mg/m³

Ingredients with occupational exposure limits to be monitored (EU)

Substance / EC LIMIT VALUES
Acetone
CAS: 67-64-1, EINECS/ELINCS: 200-662-2, EU-INDEX: 606-001-00-8, Reg-No.: 01-2119471330-49-XXXX
Eight hours: 500 ppm, 1210 mg/m³
Ethyl acetate
CAS: 141-78-6, EINECS/ELINCS: 205-500-4, EU-INDEX: 607-022-00-5, Reg-No.: 01-2119475103-46-XXXX
Eight hours: 200 ppm, 734 mg/m³
Short-term (15-minute): 400 ppm, 1468 mg/m³
Butanone
CAS: 78-93-3, EINECS/ELINCS: 201-159-0, EU-INDEX: 606-002-00-3, Reg-No.: 01-2119457290-43-XXXX
Eight hours: 600 mg/m³
Short-term (15-minute): 300 ppm, 900 mg/m³

DNEL

Substance
Butanone, CAS: 78-93-3
Industrial, dermal, Long-term - systemic effects: 1161 mg/kg bw/day.
Industrial, inhalative (vapor), Long-term - systemic effects: 600 mg/m³.
general population, dermal, Long-term - systemic effects: 412 mg/kg bw/day.
general population, inhalative (vapor), Long-term - systemic effects: 106 mg/m³.
general population, oral, Long-term - systemic effects: 31 mg/kg bw/day.
Ethyl acetate, CAS: 141-78-6
Industrial, dermal, Long-term - systemic effects: 63 mg/kg bw/d.
Industrial, inhalative, Long-term - systemic effects: 734 mg/m³.
Industrial, inhalative, Long-term - local effects: 734 mg/m³.
Industrial, inhalative, Acute - systemic effects: 1468 mg/m³.
Industrial, inhalative, Acute - local effects: 1468 mg/m³.
general population, inhalative, Long-term - systemic effects: 367 mg/m³.
general population, inhalative, Acute - local effects: 734 mg/m³.
general population, inhalative, Long-term - local effects: 367 mg/m³.

general population, oral, Long-term - systemic effects: 4,5 mg/kg bw/d.
general population, dermal, Long-term - systemic effects: 37 mg/kg bw/d.
general population, inhalative, Acute - systemic effects: 734 mg/m³.
Acetone, CAS: 67-64-1
Industrial, inhalative, Long-term - local effects: 2420 mg/m³.
Industrial, dermal, Long-term - systemic effects: 186 mg/kg bw/d.
Industrial, inhalative, Long-term - systemic effects: 1210 mg/m³.
general population, dermal, Long-term - systemic effects: 62 mg/kg bw/d.
general population, oral, Long-term - systemic effects: 62 mg/kg bw/d.
general population, inhalative, Long-term - systemic effects: 200 mg/m³.

PNEC

Substance
Butanone, CAS: 78-93-3
freshwater, 55,8 mg/L.
oral (food), 1000 mg/kg.
soil, 22,5 mg/kg.
sediment (seawater), 284,74 mg/kg.
sediment (freshwater), 284,74 mg/kg.
sewage treatment plants (STP), 709 mg/L.
seawater, 55,8 mg/L.
Ethyl acetate, CAS: 141-78-6
sediment (seawater), 115 µg/kg sediment dw.
sediment (freshwater), 1,15 mg/kg sediment dw.
soil, 148 µg/kg soil dw.
oral (food), 200 mg/kg.
sewage treatment plants (STP), 650 mg/l.
freshwater, 240 µg/L.
seawater, 24 µg/L.
Acetone, CAS: 67-64-1
freshwater, 10,6 mg/L.
seawater, 1,06 mg/L.
sediment (freshwater), 30,4 mg/kg sediment dw.
sediment (seawater), 3,04 mg/kg sediment dw.
sewage treatment plants (STP), 100 mg/L.
soil, 29,5 mg/kg soil dw.

8.2 Exposure controls

Additional advice on system design	Ensure adequate ventilation on workstation.
Eye protection	Safety glasses. (EN 166:2001)
Hand protection	The details concerned are recommendations. Please contact the glove supplier for further information. In full contact: Butyl rubber, >120 min (EN 374-1/-2/-3). In splash contact: Nitrile rubber, >480 min (EN 374-1/-2/-3).
Skin protection	Solvent-resistant protective clothing (EN 340)
Other	Personal protective equipment should be selected specifically for the working place, depending on concentration and quantity handled. The resistance of this equipment to chemicals should be ascertained with the respective supplier. Avoid contact with eyes and skin. Do not inhale aerosols.
Respiratory protection	Respiratory protection mask in the event of high concentrations. Short term: filter apparatus, filter A. (DIN EN 14387)
Thermal hazards	not applicable
Delimitation and monitoring of the environmental exposition	See SECTION 6+7.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Form	liquid
Color	colourless
Odor	characteristic
Odour threshold	No information available.
pH-value	not applicable
pH-value [1%]	not applicable
Boiling point [°C]	> 60
Flash point [°C]	ca. -18
Flammability (solid, gas) [°C]	200°C
Lower explosion limit	0,6 Vol.-%
Upper explosion limit	15 Vol.-%
Oxidising properties	no
Vapour pressure/gas pressure [kPa]	247 hPa (20°C)
Density [g/ml]	0,798 (20°C)
Bulk density [kg/m³]	not applicable
Solubility in water	partially miscible
Partition coefficient [n-octanol/water]	No information available.
Viscosity	No information available.
Relative vapour density determined in air	No information available.
Evaporation speed	No information available.
Melting point [°C]	No information available.
Autoignition temperature [°C]	No information available.
Decomposition temperature [°C]	No information available.

9.2 Other information

none

SECTION 10: Stability and reactivity

10.1 Reactivity

See SECTION 10.3.

10.2 Chemical stability

Stable under normal ambient conditions (ambient temperature).

10.3 Possibility of hazardous reactions

Evolution of flammable mixtures possible in air when heated above flash point and/or during spraying or misting.
Reactions with oxidizing agents.

10.4 Conditions to avoid

Strong heating.

10.5 Incompatible materials

Use solvent-resistant equipment.

10.6 Hazardous decomposition products

No hazardous decomposition products known.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product
dermal, Based on the available information, the classification criteria are not fulfilled.:
inhalative, Based on the available information, the classification criteria are not fulfilled.:
oral, Based on the available information, the classification criteria are not fulfilled.:

Substance
Butanone, CAS: 78-93-3
LD50, dermal, Rabbit: > 5000 mg/kg (Lit.).
LD50, oral, Rat: 3300 mg/kg (Lit.).
LC50, inhalative, Rat: > 20 mg/l/4h (Lit.).
Ethyl acetate, CAS: 141-78-6
LD50, dermal, mouse: 20000 mg/kg.
LD50, oral, Rat: 5620 mg/kg.
LC50, inhalative, Rat: 50 mg/l (4 h).
Acetone, CAS: 67-64-1
LD50, dermal, Rabbit: > 15800 mg/kg.
LD50, oral, Rat: 5800 mg/kg (OECD 401).
LC50, inhalative, Rat: 76 mg/l (4h).

Serious eye damage/irritation	Toxicological data of complete product are not available. Irritant Calculation method
Skin corrosion/irritation	Based on the available information, the classification criteria are not fulfilled.
Respiratory or skin sensitisation	Based on the available information, the classification criteria are not fulfilled.
Specific target organ toxicity — single exposure	Toxicological data of complete product are not available. Vapours may cause drowsiness and dizziness. Calculation method
Specific target organ toxicity — repeated exposure	Based on the available information, the classification criteria are not fulfilled.
Mutagenicity	Based on the available information, the classification criteria are not fulfilled.
Reproduction toxicity	Based on the available information, the classification criteria are not fulfilled.
Carcinogenicity	Based on the available information, the classification criteria are not fulfilled.
Aspiration hazard	Based on available data, the classification criteria are not met.
General remarks	

Toxicological data of complete product are not available.
The toxicity data listed pertaining to the ingredients are intended for those working in the medicinal professions, experts for occupational health and safety and toxicologists.

SECTION 12: Ecological information

12.1 Toxicity

Product
Based on the available information, the classification criteria are not fulfilled.:

Substance
Butanone, CAS: 78-93-3
LC50, (48h), Leuciscus idus: > 100 mg/l (Lit.).
EC50, (48h), Daphnia magna: > 100 mg/l (Lit.).
Ethyl acetate, CAS: 141-78-6
LC50, (96h), Salmo gairdneri: 230 mg/l.
LC50, (96h), Pimephales promelas: 230 mg/l.
EC50, (48h), Daphnia magna: 164 mg/l.
EC50, (48h), Algae: 5600 mg/l.
Acetone, CAS: 67-64-1
LC50, (48h), Daphnia pulex: 8800 mg/l.
LC50, (96h), Oncorhynchus mykiss: 5540 mg/l.
NOEC, (28d), Daphnia magna: 2212 mg/l.
NOEC, (96h), Algae: 430 mg/l.

12.2 Persistence and degradability

Behaviour in environment compartments	not determined
Behaviour in sewage plant	not determined
Biological degradability	not determined

12.3 Bioaccumulative potential

not determined

12.4 Mobility in soil

not determined

12.5 Results of PBT and vPvB assessment

Based on all available information not to be classified as PBT or vPvB respectively.

12.6 Other adverse effects

No classification on the basis of the calculation procedure of the preparation directive.
Do not discharge product unmonitored into the environment or into the drainage.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Waste material must be disposed of in accordance with the Directive on waste 2008/98/EC as well as other national and local regulations. It is not possible to determine a waste code for this product in accordance with the European Waste Catalogue (EWC) since it is only possible to classify it according to how it is used by the customer. The waste code is to be determined within the EU in liaison with the waste-disposal operator.

Product

	Dispose of as hazardous waste.
Waste no. (recommended)	070604*

Contaminated packaging

	Uncontaminated packaging may be taken for recycling.
Waste no. (recommended)	150110*

SECTION 14: Transport information

14.1 UN number

Transport by land according to ADR/RID	1993
Inland navigation (ADN)	1993
Marine transport in accordance with IMDG	1993
Air transport in accordance with IATA	1993

14.2 UN proper shipping name

Transport by land according to ADR/RID	Flammable liquid, n.o.s. (Acetone, Methyl ethyl ketone)
- Classification Code	F1
- Label	
- ADR LQ	1 l
- ADR 1.1.3.6 (8.6)	Transport category (tunnel restriction code) 2 (D/E)
Inland navigation (ADN)	Flammable liquid, n.o.s. (Acetone, Methyl ethyl ketone)
- Classification Code	F1
- Label	
Marine transport in accordance with IMDG	Flammable liquid, n.o.s. (Acetone, Methyl ethyl ketone)
- EMS	F-E, S-E
- Label	
- IMDG LQ	1 l
Air transport in accordance with IATA	Flammable liquid, n.o.s. (Acetone, Methyl ethyl ketone)
- Label	

14.3 Transport hazard class(es)

Transport by land according to ADR/RID	3
Inland navigation (ADN)	3
Marine transport in accordance with IMDG	3
Air transport in accordance with IATA	3

14.4 Packing group

Transport by land according to ADR/RID	II
Inland navigation (ADN)	II
Marine transport in accordance with IMDG	II
Air transport in accordance with IATA	II

14.5 Environmental hazards

Transport by land according to ADR/RID	no
Inland navigation (ADN)	no
Marine transport in accordance with IMDG	no
Air transport in accordance with IATA	no

14.6 Special precautions for user

Relevant information under SECTION 6 to 8.

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

No information available.

SECTION 15: Regulatory information

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

EEC-REGULATIONS	2008/98/EC 2000/532/EC); 2010/75/EU; 2004/42/EC; (EC) 648/2004; (EC) 1907/2006 (REACH); (EU) 1272/2008; 75/324/EEC ((EC) 2016/2037); (EU) 2015/830; (EU) 2016/131; (EU) 517/2014
TRANSPORT-REGULATIONS	ADR (2019); IMDG-Code (2019, 39. Amdt.); IATA-DGR (2020)
NATIONAL REGULATIONS (GB):	EH40/2005 Workplace exposure limits (Second edition, published December 2011).
- Observe employment restrictions for people	Observe employment restrictions for mothers-to-be and nursing mothers. Observe employment restrictions for young people.
- VOC (2010/75/CE)	100%

15.2 Chemical safety assessment

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

SECTION 16: Other information

16.1 Hazard statements (SECTION 03)

H336 May cause drowsiness or dizziness.
H319 Causes serious eye irritation.
H225 Highly flammable liquid and vapour.

16.2 Abbreviations and acronyms:

ADR = Accord européen relatif au transport international des marchandises Dangereuses par Route
RID = Règlement concernant le transport international ferroviaire de marchandises dangereuses
ADN = Accord européen relatif au transport international des marchandises dangereuses par voie de navigation intérieure
ATE = acute toxicity estimate
CAS = Chemical Abstracts Service
CLP = Classification, Labelling and Packaging
DMEL = Derived Minimum Effect Level
DNEL = Derived No Effect Level
EC50 = Median effective concentration
ECB = European Chemicals Bureau
EEC = European Economic Community
EINECS = European Inventory of Existing Commercial Chemical Substances
EL50 = Median effective loading
ELINCS = European List of Notified Chemical Substances
EmS = Emergency Schedules
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC-Code = International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
IC50 = Inhibition concentration, 50%
IMDG = International Maritime Code for Dangerous Goods
IUCLID = International Uniform ChemicaL Information Database
LC50 = Lethal concentration, 50%
LD50 = Median lethal dose
LC0 = lethal concentration, 0%
LOAEL = lowest-observed-adverse-effect level
LL50 = Median lethal loading
LQ = Limited Quantities
MARPOL = International Convention for the Prevention of Marine Pollution from Ships
NOAEL = No Observed Adverse Effect Level
NOEC = No Observed Effect Concentration
PBT = Persistent, Bioaccumulative and Toxic substance
PNEC = Predicted No-Effect Concentration
REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals
STP = Sewage Treatment Plant
TLV®/TWA = Threshold limit value – time-weighted average
TLV®STEL = Threshold limit value – short-time exposure limit
VOC = Volatile Organic Compounds
vPvB = very Persistent and very Bioaccumulative

16.3 Other information

Customs Tariff	not determined
Classification procedure	Flam. Liq. 2: H225 Highly flammable liquid and vapour. (Weight of evidence) Eye Irrit. 2: H319 Causes serious eye irritation. (Calculation method) STOT SE 3: H336 May cause drowsiness or dizziness. (Calculation method)
Modified position	none

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