



SAFETY DATA SHEET

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product name: MILTON® Disinfecting Fluid

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

Biocidal product. Disinfecting fluid. Product-types 02 and 04.

For professional and general public.

Type of formulation: soluble concentrate (SL)

Use descriptor system (REACH):

No data available.

1.3. Details of the supplier of the safety data sheet

Registered company name: Laboratoire Rivadis

Address: Impasse du petit Rosé, Z.I., 79100 Louzy - France

Phone: +33 (0)5 49 68 15 15

Fax.: +33 (0)5 49 66 16 41

E-mail: fds@labo-rivadis.fr

<http://www.labo-rivadis.com>

1.4. Emergency telephone number:

Country	Phone number	Website
Austria	112	-
Belgium	+ 32 070 245 245	http://www.centreantipoisons.be/
Bulgaria	+359 2 9154 409	http://www.pirogov.bg
Croatia	(+385 1) 23-48-342.	-
Cyprus	112	-
Czech Republic	+420 224 919 293, +420 224 915 402	www.tis-cz.cz
Denmark	+45 82 12 12 12	-
Estonia	16662 / (+372) 626 93 90	-
Finland	112	-
France	+33 (0)1 45 42 59 59	INRS / ORFILA http://www.centres-antipoison.net .
Germany	112	-
Greece	112	-
Hungary	+36 1 476 6464 / +36 80 201 199	-
Iceland	112	-
Ireland	01 809 2166	-
Italy	112	-
Latvia	+371 67042473	-
Liechtenstein	112	-
Lithuania	+370 5 236 20 52 / +370 687 53378	http://www.tox.lt/
Luxembourg	112	-
Malta	112	-
Netherlands	(+31) 030-2748888	-
Norway	(+42) 2259 1300	-
Poland	112	-
Portugal	0808 250 143	-
Romania	112	-
Slovakia	(+421) 2 54 774 166	-

Country	Phone number	Website
Slovenia	112	-
Spain	+ 34 91 562 04 20	-
Sweden	112	-
Switzerland	145	-
United Kingdom	111	-

Other emergency numbers

In case of emergency, call nearest poison center or 112.

SECTION 2 : HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

In compliance with EC regulation No. 1272/2008 and its amendments.

Mixture that is corrosive to metals, Category 1 (Met. Corr. 1, H290).

Skin irritation, Category 2 (Skin Irrit. 2, H315).

Hazardous to the aquatic environment - Acute hazard, Category 1 (Aquatic Acute 1, H400).

Hazardous to the aquatic environment - Chronic hazard, Category 3 (Aquatic Chronic 3, H412).

Contact with acids liberates toxic gas (EUH031).

Warning! Do not use together with other products. May release dangerous gases (chlorine) (EUH206).

In compliance with directives 67/548/EEC, 1999/45/EC and their amendments.

Skin irritation (Xi, R 38).

Contact with acids liberates toxic gas (R 31).

Aquatic environmental hazard, acute toxicity: very toxic (N, R 50).

This mixture does not present a physical hazard. Refer to the recommendations regarding the other products present on the site.

2.2. Label elements

Biocidal product. Sterilising fluid. Product-types 02 and 04.

In compliance with EC regulation No. 1272/2008 and its amendments.



Hazard pictograms:

Signal Word: WARNING

Hazard statements:

H290 May be corrosive to metals.

H315 Causes skin irritation.

H400 Very toxic to aquatic life.

H412 Harmful 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.

P234 Keep only in original container.

P273 Avoid release to the environment.

P332+P313 If skin irritation occurs: Get medical advice/ attention.

P391 Collect spillage.

P501 Dispose of contents / container to hazardous waste collection authorized in accordance with local, regional, national and / or international regulations.

Additional labelling:

EUH031 Contact with acids liberates toxic gas (EUH031).

EUH206 Warning! Do not use together with other products. May release dangerous gases (chlorine).

2.3. Other hazards

The mixture does not contain any substances classified as 'Substances of Very High Concern' (SVHC) as defined by criteria of article 57 and as per article 59 of REACH (Regulation EC No.1907/2006) at concentration $\geq 0.1\%$ - list published by the European Chemicals Agency (ECHA): (<http://echa.europa.eu/fr/candidate-list-table>).

The mixture does not contain any PBT or vPvB substances as defined in annex XIII of the REACH regulation EC No.1907/2006.

SECTION 3 : COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

Not applicable (mixture).

3.2. Mixtures

Composition:

INDEX No.	CAS No.	CE No.	Name	Pictogram	Classification	% w/w
017-011-00-1	7681-52-9	231-668-3	Sodium hypochlorite, 12-16% solution	GHS 05 GHS 09	H290* H314 (1B) H400 (M = 10*) H411* EUH031	13.61%

*According to supplier's SDS

Information on ingredients:

No data available.

Other data:

No data available.

SECTION 4: FIRST AID MEASURES

As a general rule, in case of doubt or if symptoms persist, always call a doctor.

NEVER induce swallowing if the victim is unconscious.

4.1. Description of first aid measures

In the event of exposure by inhalation:

In the event of massive inhalation, remove the exposed person to fresh air. Keep warm and at rest.

In the event of splashes or contact with eyes:

Wash thoroughly with soft, clean water holding the eyelids open.

If there is any redness, pain or visual impairment, consult an ophthalmologist.

In the event of splashes or contact with skin:

Remove contaminated clothing and wash the skin thoroughly with soap and water or a recognised cleaner.

Watch out for any remaining product between skin and clothing, watches, shoes, etc.

If the contaminated area is widespread and/or there is damage to the skin, a doctor must be consulted or the victim transferred to hospital.

In the event of swallowing:

Do not give the victim anything orally.

In the event of swallowing, if the quantity is small (no more than one mouthful), rinse the mouth with water and consult a doctor.

Seek medical attention immediately, showing the label.

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

No data available.

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

Specific and immediate treatment:

Treat symptomatically.

Information for the doctor:

No data available.

SECTION 5: FIREFIGHTING MEASURES

Non-flammable.

5.1. Extinguishing media

Suitable methods of extinction

In the event of a fire, use:

- sprayed water or water mist
- foam
- dry powder
- carbon dioxide (CO₂)

Unsuitable methods of extinction

In the event of a fire, do not use:

- water jet

5.2. Special hazards arising from the substance or mixture

A fire will often produce a thick black smoke. Exposure to decomposition products may be hazardous to health.

Do not breathe in smoke.

In the event of a fire, the following may be formed:

- chlorine and chlorinated decomposition products

5.3. Advice for firefighters

No data available.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Consult safety advice of sections 7 and 8.

For non first aid worker

Avoid any contact with the skin and eyes.

In the event of accidental release of a large quantity, evacuate all unnecessary personnel and allow intervention only by trained operators equipped with suitable personal protective equipment (See section 8).

For first aid worker

First aid workers will be equipped with suitable personal protective equipment (See section 8).

6.2. Environmental precautions

Contain and control the leaks or spills with non-combustible absorbent materials such as sand, earth, vermiculite, diatomaceous earth in drums for waste disposal.

Prevent any material from entering drains or waterways.

6.3. Methods and material for containment and cleaning up

If the ground is contaminated, once the product has been recovered by sponging with an inert and non-combustible absorbent material, wash the contaminated area in plenty of water.

Clean preferably with a detergent, do not use solvents.

6.4. Reference to other sections

Consult sections 8 and 13.

SECTION 7: HANDLING AND STORAGE

Requirements relating to storage premises apply to all facilities where the mixture is handled.

7.1. Precautions for safe handling

Always wash hands after handling.

Remove and wash contaminated clothing before re-using.

Fire prevention:

Prevent access by unauthorised personnel.

Recommended equipment and procedures:

For personal protection, see section 8.

Observe precautions stated on label and also industrial safety regulations.

Avoid skin and eye contact with this mixture.

Prohibited equipment and procedures:

No smoking, eating or drinking in areas where the mixture is used.

7.2. Conditions for safe storage, including any incompatibilities

Always keep in original packaging.

Keep the container tightly closed in a dry, well-ventilated place, protected from heat and direct sunlight.

Keep away from food, drink and animal feedingstuffs.

7.3. Specific end use(s)

No data available.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Occupational exposure limits:

No data available.

Biological limits:

No data available.

8.2. Exposure controls

Suitable technical inspections:

No data available.

Personal protection measures, such as personal protective equipment

Pictogram(s) indicating the obligation of wearing personal protective equipment (PPE):



Use personal protective equipment that is clean and has been properly maintained.

Store personal protective equipment in a clean place, away from the work area.

Never eat, drink or smoke during use. Remove and wash contaminated clothing before re-using. Ensure that there is adequate ventilation, especially in confined areas.

- Eye / face protection

Avoid contact with eyes.

- Hand protection

Avoid skin contact.

Wear suitable protective gloves in the event of prolonged or repeated skin contact.

Use suitable protective gloves that are resistant to chemical agents in accordance with standard EN374.

Gloves must be selected according to the application and duration of use at the workstation.

Protective gloves need to be selected according to their suitability for the workstation in question: other chemical products that may be handled, necessary physical protections (cutting, pricking, heat protection), level of dexterity required.

Type of gloves recommended:

- Natural latex

Recommended properties:

- Impervious gloves in accordance with standard EN374

- Body protection

Avoid skin contact.

Work clothing worn by personnel shall be laundered regularly.

After contact with the product, all parts of the body that have been soiled must be washed.

- Respiratory protection

In the event of accidental release of a large quantity, recommended type of powered air-purifying respirator:

Anti-gas and vapour filter(s) (Combined filters) in accordance with standard EN14387.

- Thermal risks

Not applicable.

Exposure controls linked to environmental protection

No data available.

SECTION 9 : PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

General information:

Physical state:	Clear liquid
Odor:	Odor of bleach
Color:	Pale green/yellow

Important health, safety and environmental information

pH (1% m/v aqueous solution):	Not determined
Melting point/melting range:	Not applicable
Freezing point:	Not determined
Boiling point/boiling range:	around 110°C
Flash point:	No flash point up to 110°C (EC A.9, ISO Standard 3679)
Evaporation rate:	Not determined
Flammability:	Non flammable.
Lower/upper flammability limits:	Not determined
Lower/upper explosive limits:	Not determined
Vapour pressure:	Not determined
Vapour density:	Not determined
Relative density:	1.130 to 1.150
Solubility:	totally soluble in water
Partition coefficient:	Not determined
Auto-ignition temperature:	Not determined
Decomposition temperature:	Not determined
Viscosity:	Not determined
Explosive properties:	Not explosive (expert statement)
Oxidising properties:	Not oxidizing (expert statement)

9.2. Other information

No data available.

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

Mixture which by chemical action can corrode and even destroy metals.
Contact with acids liberates toxic gas (chlorine).
May release dangerous gases (chlorine).

10.2. Chemical stability

This mixture is stable under the recommended handling and storage conditions in section 7.
Stability of the solution decreases with the action of heat, light and in the presence of some trace impurities.

10.3. Possibility of hazardous reactions

Contact with acids liberates toxic gas (chlorine).
Reacts with ammonia solutions and amines to form explosive compounds.
Can react violently if in contact with methanol.
Decomposition with evolution of oxygen is accelerated by light and heat and also by contact with many metals, particularly copper, nickel, iron and "monel".
Oxidising agent; may assist combustion.
When exposed to high temperatures, the mixture can release hazardous decomposition products and fumes.
In the event of a fire, the following may be formed:
- chlorine and chlorinated decomposition products.

10.4. Conditions to avoid

Keep away from heat and direct sunlight.
Avoid contact with other chemicals.

10.5. Incompatible materials

- Keep away from:
- acids
 - ammonia and amines
 - methanol
 - metals (particularly copper, nickel, iron and "monel")

10.6. Hazardous decomposition products

- The thermal decomposition may release/form smoke and hazardous decomposition products:
- chlorine and chlorinated decomposition products.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

11.1.1. Substances

Sodium hypochlorite (CAS No.7681-52-9)

The following data are taken from CAR, 2010, Sodium hypochlorite

Acute toxicity

- Acute oral toxicity, rat: LD₅₀ = 8 910 mg/kg b.w.
- Acute dermal toxicity, rat: LD₅₀ > 10 000 mg/kg b.w./d
- Acute inhalation toxicity, rat: LD50 > 10 500 mg/m³.

Skin corrosion/skin irritation:

Causes severe skin burns.

Serious damage to eyes/eye irritation:

Causes serious eye damage.

Respiratory or skin sensitisation:

May be irritant to the respiratory tract.
Not skin sensitising.

Germ cell mutagenicity:

No genotoxic potential.

Carcinogenicity:

Not carcinogenic.

Reproductive toxicant:

No evidence of any adverse effects on development or fertility.

Specific target organ systemic toxicity - single exposure:

Not classified.

Specific target organ systemic toxicity - repeated exposure:

Not classified.

Aspiration hazard:

Not classified.

11.1.2. Mixture

Acute toxicity:

No data available.

Skin corrosion/skin irritation:

Not corrosive (OECD No.435, Corrositex® method on AFISE Javel 2.6)
Skin irritant. (Skin irritation, Category 2, OECD No.404, rabbit),

Serious damage to eyes/eye irritation:

Not irritant. (OECD No.405, rabbit),

Respiratory or skin sensitisation:

No data available.

Germ cell mutagenicity:

No data available.

Carcinogenicity:

No data available.

Reproductive toxicant:

No data available.

Specific target organ systemic toxicity - single exposure:

No data available.

Specific target organ systemic toxicity - repeated exposure:

No data available.

Aspiration hazard:

No data available.

Symptoms related to the physical, chemical and toxicological characteristics

No data available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

No data available.

Interactive effects

No data available.

Absence of specific data

No data available.

Other information

No data available.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

12.1.1. Substances

Sodium hypochlorite, solution ...% Cl active (CAS No.7681-52-9)

Aquatic Acute, Category 1: very toxic to aquatic life (M acute = 10)

12.1.2. Mixtures

Hazardous to the aquatic environment - Acute hazard, Category 1 (Aquatic Acute 1, H400).

Hazardous to the aquatic environment - Chronic hazard, Category 3 (Aquatic Chronic 3, H412).

(classification by conventional method).

12.2. Persistence and degradability

Sodium hypochlorite (CAS No.7681-52-9):

Sodium hypochlorite is a strong oxidiser. It will react with organic substances present in soil and sediments and degrades rapidly to chloride. Sodium hypochlorite is substantially removed in biological treatment processes.

12.3. Bioaccumulative potential

Sodium hypochlorite (CAS No.7681-52-9):

Sodium hypochlorite has low potential for bioaccumulation and decomposes in water (calculated log Kow = -3.42).

12.4. Mobility in soil

Sodium hypochlorite (CAS No.7681-52-9):

Sodium hypochlorite is mobile in soil and sediments.

12.5. Results of PBT and vPvB assessment

Sodium hypochlorite (CAS No.7681-52-9):

Not classified as PBT or vPvB.

12.6. Other adverse effects

Sodium hypochlorite (CAS No.7681-52-9):

Sodium hypochlorite is substantially removed in biological treatment processes. There is evidence of inhibition to the aerobic treatment process at a concentration (mg/l) of 0.05 mg/L.

SECTION 13: DISPOSAL CONSIDERATIONS

Proper waste management of the mixture and/or its container must be determined in accordance with Directive 2008/98/EC.

13.1. Waste treatment methods

Do not pour into drains or waterways.

Waste:

Waste management is carried out without endangering human health, without harming the environment and, in particular without risk to water, air, soil, plants or animals.

Recycle or dispose of waste in compliance with current legislation, preferably via a certified collector or company.

Do not contaminate the ground or water with waste, do not dispose of waste into the environment.

Soiled packaging:

Completely empty container. Keep label(s) on container.

Give to a certified disposal contractor.

Local arrangements:

No data available.

SECTION 14: TRANSPORT INFORMATION

Transport product in compliance with provisions of the ADR for road, RID for rail, IMDG for sea and ICAO/IATA for air transport (ADR 2013 - IMDG 2012 - ICAO/IATA 2014).

14.1 UN Number

1791

14.2. UN proper shipping name

UN1791 = HYPOCHLORITE SOLUTION

14.3. Transport hazard class(es)

Classification :



8

14.4. Packing group

III

14.5. Environmental hazards

- Environmentally hazardous material:



14.6. Special precautions for user

ADR/RID	Class	Code	Group	Label	Ident.	QL	Dispo.	EQ	Cat.	Tunnel
	8	C9	III	8	80	5 L	521	E1	3	E

IMDG	Class	2° Label	Group	QL	EMS	Dispo.	EQ
	8	-	III	5 L	F-A,S-B	223	E1

IATA	Class	2° Label.	Group	Passener	Passenger	Cargo	Cargo	Note	EQ
	8	-	III	852	5 L	856	60 L	A3 A803	E1
	8	-	III	Y841	1 L	-		A3 A803	E1

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

No data available.

SECTION 15: REGULATORY INFORMATION

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

- Classification and labelling information included in section 2:

The following regulations have been used:

- Directive 67/548/EEC and its adaptations
- Directive 1999/45/EC and its adaptations
- Regulation EC 1272/2008 and its modifications

- Container information:

No data available.

- Particular provisions:

No data available.

- Substances that deplete the ozone layer (EC Regulation No. 1005/2009, Montreal Protocol):

Not applicable.

15.2. Chemical safety assessment

No data available.

SECTION 16 : OTHER INFORMATION

The hazard pictogram GHS05 is not required on the label as the mixture is not classified as corrosive to skin and/or eyes and as the capacity of the packaging does not exceed 5 L."

Since the user's working conditions are not known by us, the information supplied on this safety data sheet is based on our current level of knowledge and on national and community regulations.

The mixture must not be used for other uses than those specified in section 1 without having first obtained written handling instructions.

It is at all times the responsibility of the user to take all necessary measures to comply with legal requirements and local regulations.

The information in this safety data sheet must be regarded as a description of the safety requirements relating to the mixture and not as a guarantee of the properties thereof.

Title for H, EUH and R indications mentioned in section 3:

H290 May be corrosive to metals.
H314 Causes severe skin burns and eye damage.
H400 Very toxic to aquatic life.
EUH031 Contact with acids liberates toxic gas.

Abbreviations :

ADR : European agreement concerning the international carriage of dangerous goods by Road.

IMDG : International Maritime Dangerous Goods.

IATA : International Air Transport Association.

ICAO : International Civil Aviation Organisation

RID : Regulations concerning the International carriage of Dangerous goods by rail.

Revision:

Vertical lines in the left-hand margin indicate changes compared with the previous version.

This version supersedes all previous versions.