

Name of the product	<b>Sodium hypochlorite, 15% solution</b>			Page:
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**SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**

<b>1.1</b>	<b>Product identifier</b>	
	Product name:	<b>Sodium hypochlorite, 15% solution technical grade</b> CAS No.: 7681-52-9 EINECS No.: 231-668-3 Index No.: 017-011-00-1
	Registration number:	01-2119488154-34-0000
	Other means of identification:	not set
<b>1.2</b>	<b>Relevant identified uses of the substance or mixture and uses advised against</b>	
	Identified uses:	bleaching in textile / paper industry; oxidizing agent for chemical industry
	Uses advised against:	not set
<b>1.3</b>	<b>Details of the supplier of the safety data sheet</b>	
	Distributor: (responsible for marketing)	VIA-REK, a.s. Ol. Blažka 145 679 02 Rájec-Jestřebí Czech Republic tel.: +420 516 499 945 / +420 516 499 955 fax: +420 516 499 948 / +420 516 499 933 web: <a href="http://www.via-rek.cz">www.via-rek.cz</a> e-mail: <a href="mailto:expedice@via-rek.cz">expedice@via-rek.cz</a>
	Competent person responsible for the safety data sheet: PharmDr. Vladimír Végh, PHARMIS, info@pharmis.cz	
	<b>1.4 Emergency telephone number</b>	
	National Toxicological Information Centre (NTIC), FNŠP, Limbová 5, 833 05 Bratislava 37, Slovak Republic, tel.: 00421 (0)2 5477 4166 ; tel.: 00421 (0) 2 5477 4605, (24 h non-stop), www.ntic.sk	

**SECTION 2: HAZARDS IDENTIFICATION**



**General classification of the substance: the substance is classified as hazardous in compliance with Directive 67/548/EEC and 1999/45/EC, Regulation (EC) No 1907/2006 and Regulation (EC) No 1272/2008.**

<b>2.1</b>	<b>Classification of the substance or mixture</b>							
	Classification in accordance with 1272/2008/EC:	<table border="0"> <tr> <td>Skin Corr. 1B H314</td> <td>Skin corrosion/irritation, category 1 Causes severe skin burns and eye damage.</td> </tr> <tr> <td>STOT SE3 H335</td> <td>Specific target organ toxicity — Single exposure, Hazard Category 3 May cause respiratory irritation.</td> </tr> <tr> <td>Aquatic Acute 1 H400</td> <td>Hazardous to the aquatic environment, category 1 Very toxic to aquatic life.</td> </tr> </table>	Skin Corr. 1B H314	Skin corrosion/irritation, category 1 Causes severe skin burns and eye damage.	STOT SE3 H335	Specific target organ toxicity — Single exposure, Hazard Category 3 May cause respiratory irritation.	Aquatic Acute 1 H400	Hazardous to the aquatic environment, category 1 Very toxic to aquatic life.
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STOT SE3 H335	Specific target organ toxicity — Single exposure, Hazard Category 3 May cause respiratory irritation.							
Aquatic Acute 1 H400	Hazardous to the aquatic environment, category 1 Very toxic to aquatic life.							

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according Regulation EC No. 1907/2006 (REACH), Regulation EC No. 1272/2008 (CLP)  
and Commission Regulation EU No. 453/2010

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<b>2.2</b>	<b>Label elements</b>																
Contains:	sodium hypochlorite 15% solution CAS No.: 7681-52-9 EINECS No.: 231-668-3 Index No.: 017-011-00-1																
Hazard pictograms:	 																
Signal word:	<b>DANGER</b>																
Hazard statements:	<table style="width: 100%; border: none;"> <tr> <td style="width: 20%;">H314</td> <td>Causes severe skin burns and eye damage.</td> </tr> <tr> <td>H335</td> <td>May cause respiratory irritation.</td> </tr> <tr> <td>H400</td> <td>Very toxic to aquatic life.</td> </tr> </table>					H314	Causes severe skin burns and eye damage.	H335	May cause respiratory irritation.	H400	Very toxic to aquatic life.						
H314	Causes severe skin burns and eye damage.																
H335	May cause respiratory irritation.																
H400	Very toxic to aquatic life.																
Supplemental hazard information:	EUH031      Contact with acids liberates toxic gas																
Supplemental label elements for certain mixtures:	not required																
Precautionary statements:	<table style="width: 100%; border: none;"> <tr> <td style="width: 20%;">P273</td> <td>Avoid release to the environment.</td> </tr> <tr> <td>P280</td> <td>Wear protective gloves/protective clothing/eye protection/face protection.</td> </tr> <tr> <td>P301+P330+P331</td> <td>IF SWALLOWED: Rinse mouth. Do NOT induce vomiting</td> </tr> <tr> <td>P303+P361+P353</td> <td>IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.</td> </tr> <tr> <td>P304+340</td> <td>IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.</td> </tr> <tr> <td>P305+P351+P338</td> <td>IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</td> </tr> </table>					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): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.	P304+340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.	P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
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P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.																
Other required labeling:	not required																

<b>2.3</b>	<b>Other hazards</b> The substance does not meet the PBT/vPvB criteria according to REACH, annex XIII; the substance is not included in the Candidate List of SVHC.
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## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

<b>3.1</b>	<b>Substances</b>					
<b>Substance</b> <i>REACH Registration number</i>	<b>Content</b> (% w/w)	<b>EC Number</b> <b>CAS Number</b> <b>Index Number</b>		<b>Classification</b> <b>1272/2008/EC*</b>		<b>Exposure limits</b>
sodium hypochlorite, solution <i>REACH</i> 01-2119488154-34-0000	15	231-668-3 7681-52-9 017-011-00-1		Skin Corr. 1B Aquatic Acute 1 -	H314 H400 EUH031	-

\* For full wording of used Risk Phrases (R-phrases) and Hazard Statements (H-phrases) see Section 16.e.

<b>3.2</b>	<b>Mixtures</b> not relevant
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## SECTION 4: FIRST AID MEASURES

<b>4.1</b>	<b>Description of first aid measures</b>	Observe all user considerations and safety measures stated on the packaging. In case of any health problem or uncertainty seek medical attention and provide information from this Material Safety Data Sheet. Unconscious persons place in the stabilized position and observe the breathing. Never give any fluids to unconscious persons.
	Inhalation:	Remove from further exposure. For those providing assistance, avoid exposure to yourself or others. Use adequate respiratory protection. If applicable, wash mouth or nasal cavities with water. If respiratory irritation, dizziness, nausea, or unconsciousness occurs, seek immediate medical assistance. If breathing has stopped, assist ventilation with a mechanical device or use mouth-to-mouth resuscitation.
	Skin contact:	Immediately remove all soiled or stained clothing. Wash the affected area immediately and repeatedly with water for 10 - 30 min.. Cover burned skin with sterile dressing. If the contaminated area is widespread and/or there is damage to the skin, a doctor must be consulted or the patient transferred to hospital. Use appropriate regenerating cream for irritated skin. Seek medical advice if the skin irritation persists.
	Eye contact:	Keep eyelids open and rinse immediately and repeatedly with copious amount of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Immediately seek medical advice, even if only a small amount of the product had hit the eyes.
	Ingestion:	If swallowed, rinse mouth with cold water and give 2 - 5 dl of (preferentially ice-) cold water for drinking (only if the person is conscious) to attenuate the heating effect of the corrosive substance. <b>Do not induce vomiting! Risk of GIT perforation!</b> In case of vomiting avoid aspiration of the vomits. Do not give any food or activated charcoal. Get medical attention immediately and show product package or label!
<b>4.2</b>	<b>Most important symptoms and effects, both acute and delayed</b>	Corrosive. Risk of GIT perforation!
<b>4.3</b>	<b>Indication of any immediate medical attention and special treatment needed</b>	No specific therapy known. Use supporting and symptomatic treatment.

## SECTION 5: FIREFIGHTING MEASURES

<b>5.1</b>	<b>Extinguishing media</b>	
	Suitable extinguishing media:	water spray, heavy foam, carbon dioxide - the product is not flammable, use extinguishing media appropriate to the burning material
	Unsuitable extinguishing media:	direct water stream
<b>5.2</b>	<b>Special hazards arising from the substance or mixture</b>	The product is not flammable. However; as a substance with oxidative properties it can support violent burning or initiate ignition/explosion of other flammable substances. Thermolysis may produce toxic, corrosive and irritant products (such as chlorine, phosgene, and other chlorine compounds). Do not inhale smokes.
<b>5.3</b>	<b>Advice for fire-fighters</b>	Evacuate area. Prevent run-off from fire control or dilution from entering streams, sewers or drinking water supply. Fire-fighters should use standard protective equipment, helmets and in enclosed spaces, self-contained breathing apparatus (SCBA). Use water spray to cool fire exposed surfaces and to protect personnel.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

<b>6.1</b>	<b>Personal precautions, protective equipment and emergency procedures</b>	Observe all user considerations and safety measures. Avoid contact with skin, eyes and mucous membranes. Do not touch leaked substance with bare hands. See Section 8 for advice on the minimum requirements for personal protective equipment. All unprotected persons should be restraint. Do not inhale gases, vapours or aerosols. Ensure adequate ventilation in closed areas. Additional protective measures may be necessary, depending on the specific circumstances and/or the expert judgment of the emergency responders.
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- 6.2 Environmental precautions**  
Stop leak if you can do so without risk. Confine the spill immediately with booms. Avoid entering soil, surface- and ground-waters, drains, cellars or other closed rooms. In case of serious leakage inform appropriate authorities. If you cannot stop the accidental leak, excessive dilution with water can reduce harmful effects in environment.
- 6.3 Methods and materials for containment and cleaning up**  
Soak up the rests with inert absorbent material (sand, diatomite, kaolin, vapex...). Dispose according to valid legislation; send to dangerous wastes treatment facility. Ensure adequate ventilation in closed areas. Clean up affected areas with water and detergent. Contaminated water should not enter drains, surface- and ground-waters.
- 6.4 Reference to other sections**  
Adhere to instructions in the section 8 and 13.

## SECTION 7: HANDLING AND STORAGE

- 7.1 Precautions for safe handling**  
Observe all user considerations, safety measures and exposure limits. Avoid contact with skin, eyes and mucous membranes. Avoid eating, drinking, and smoking during handling. See Section 8 for advice on the minimum requirements for personal protective equipment. Prevent small spills and leakage to avoid slip hazard. Avoid breathing mists or vapours. Use only with adequate ventilation. Do not mix with acids.
- 7.2 Conditions for safe storage, including any incompatibilities**  
Store in loosely closed original packages or in rubberized (or other sodium hypochlorite resistant) containers. The storage containers should not be gas-tight closed, as small amounts of gases are produced during the storage. Gas-tight containers could burst. Storage containers should be filled max. up to  $90 \pm 3$  % of nominal volume. Store in dry, banded areas, with the ventilation at the floor level. Keep away from direct light and heat sources. Recommended storage temperature:  $< 20^{\circ}\text{C}$ . Higher temperatures accelerate decomposition. Store away from reductive compounds and strong acids. Keep locked out of the reach of children. Keep away from food, beverages and forage.
- 7.3 Specific end uses**  
not specified

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Control parameters

National Exposure limits (Denmark):

CAS	Substance name	NPEL	
7782-50-5	chlorine*	OEL TWA (8 h):	0.5 ppm / $1.5 \text{ mg}\cdot\text{m}^{-3}$
		STEL (15 min):	1 ppm / $3.0 \text{ mg}\cdot\text{m}^{-3}$

*\* sodium hypochlorite decomposes to chlorine*

Indicative occupational exposure limit ES (2000/39/EC, Directive 2006/15/EC and Directive 2009/161/EC):

CAS	Substance name	OEL	
7782-50-5	chlorine*	OEL TWA (8 h):	0.5 ppm / $1.5 \text{ mg}\cdot\text{m}^{-3}$
		STEL (15 min):	-

*\* sodium hypochlorite decomposes to chlorine*

Other recommended values:

CAS	Substance name	OEL - equivalents	
7782-50-5	chlorine*	TLV (ACGIH - USA):	0.5 ppm

*\* sodium hypochlorite decomposes to chlorine*

Indicative biological limits: not set

DNEL:

Oral

DNEL (population)

0.26 mg/kg bw/day (long-term - systemic effects)

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	<i>Inhalative</i>	
	DNEL (population)	1.55 mg/m <sup>3</sup> (long-term - local effects) 1.55 mg/m <sup>3</sup> (long-term - systemic effects) 3.1 mg/m <sup>3</sup> (acute/short-term exposure-local effects)
	DNEL (worker)	1.55 mg/m <sup>3</sup> (long-term - local effects) 1.55 mg/m <sup>3</sup> (long-term - systemic effects) 3.1 mg/m <sup>3</sup> (acute/short-term exposure-local effects)
	PNEC:	
	<i>for chlorine:</i>	
	fresh water:	0.21 µg/l
	marine water:	0.042 µg/l
	water - intermittent releases:	0.21 µg/l
	STP:	0.03 mg/l
<b>8.2</b>	<b>Exposure controls</b>	
	Avoid contact with skin, eyes and mucous membranes. Ensure adequate ventilation. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated clothing and footwear that cannot be cleaned. Personal protective equipment selections vary based on potential exposure conditions such as applications, handling practices, concentration and ventilation. Information on the selection of protective equipment for use with this material, as provided below, is based upon intended, normal usage.	
	<u>Appropriate engineering controls:</u>	
	Ensure adequate ventilation during handling and storage. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.	
	<u>Individual protection measures, such as personal protective equipment:</u>	
	a) Eye / face protection	Always use safety glasses with side shields (EN 166) to protect against liquid splashes. Chemical type goggles should be worn during misting operations. Individuals wearing contact lenses should wear prescription glasses during work where they may be exposed to irritant vapours. Prescription glasses are not considered as protection. In the event of high danger, protect the face with a face shield.
	b) Skin protection:	Use suitable protective gloves that are resistant to chemical agents in accordance with standard EN374. If contact with forearms is likely, wear gauntlet-style gloves. CEN standards EN 420 and EN 374 provide general requirements and lists of glove types. Glove suitability and breakthrough time will differ depending on the specific use conditions. Contact the glove manufacturer for specific advice on glove selection and breakthrough times for your use conditions. Inspect and replace worn or damaged gloves.
		Recommended material of gloves:
		<u>usual work / risk of splashes / short contact</u>
		natural latex (e.g. KCL-706), 0.6 mm, permeation time > 480 min. nitril (e.g. KCL-732), 0.4 mm, permeation time > 480 min.
		<u>accidents / long-term contact</u>
		viton (e.g. KCL-890, 0.7 mm, permeation time > 480 min.
	c) Respiratory protection:	Do not inhale vapours/aerosols/gases. Ensure appropriate ventilation or exhaustion at the workplace. If engineering controls do not maintain airborne contaminant concentrations at a level which is adequate to protect worker health, an approved respirator may be appropriate. Respirator selection, use, and maintenance must be in accordance with regulatory requirements, if applicable. Types of respirators to be considered for this material include: half-face filter respirator, type AVEC B-P3 filter (European Committee for Standardization (CEN) standards EN 136, 140 and 405 provide respirator masks and EN 149 and 143 (STN EN 14387+A1) provide filter recommendations).
		For high airborne concentrations, use an approved supplied-air respirator, operated in positive pressure mode. Supplied air respirators with an escape bottle may be appropriate when oxygen levels are inadequate, gas/vapour warning properties are poor, or if air purifying filter capacity/rating may be exceeded.

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d) Thermal hazards:  
Higher temperatures accelerate decompositions.

Environmental exposure controls:

Comply with applicable environmental regulations limiting discharge to air, water and soil. Protect the environment by applying appropriate control measures to prevent or limit emissions.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

Properties	value	method / condition
Appearance:	liquid / water solution	20°C
Colour:	yellow-green	-
Odour:	chlorine / pungent	-
Odour threshold:	information not available	-
pH:	> 13	20°C
Melting point/freezing point:	information not available	-
Initial boiling point and boiling range:	information not available	-
Flash point:	> 111°C / non-flammable	101.3 kPa
Evaporation rate:	information not available	-
Flammability (solid, gas)	information not available	-
Upper/lower flammability or explosive limits:	information not available	-
Vapour pressure:	information not available	-
Vapour density:	> 1	relative, air = 1
Relative density:	1,22 kg/m <sup>3</sup>	20°C
Solubility/ies:	soluble in water without restraint	water, 20°C
Partition coefficient: n-octanol/water:	information not available	-
Auto-ignition temperature:	information not available	-
Decomposition temperature:	information not available	-
Viscosity:	information not available	-
Explosive properties:	information not available	-
Oxidising properties:	strong oxidant	-

### 9.2 Other information

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## SECTION 10: STABILITY AND REACTIVITY

### 10.1 Reactivity

Strong oxidant. Can react violently with many substances.

### 10.2 Chemical stability

Sodium hypochlorite decomposes slowly to chlorine. Higher temperatures (above 20°C) accelerate decomposition. Some metals (nickel, copper, iron etc.) catalyze decomposition.

### 10.3 Possibility of hazardous reactions

As strong oxidant can react violently with reducing agents; further with acids and some metals.



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<b>10.4</b>	<b>Conditions to avoid</b> Keep away from direct light (sunlight) and heat sources. Protect from water and humidity.
<b>10.5</b>	<b>Incompatible materials</b> Acids: violent reactions with chlorine development Aluminium: corrodes Amines: can form explosive chloramines Ammonium salts: can form explosive compounds Formic acid: can form explosive compounds Methanol: can form explosive compounds Organic and flammable substances: risk of fire Oxalic acid: violent reaction Reducing agents: risk of fire and violent reactions
<b>10.6</b>	<b>Hazardous decomposition products</b> Sodium hypochlorite decomposes to chlorine

## SECTION 11: TOXICOLOGICAL INFORMATION

<b>11.1</b>	<b>Information on toxicological effects</b>
a)	<i>Acute toxicity</i> Based on available data, the classification criteria are not met. Observed toxic effects are mainly due corrosive and irritant effects of the substance.  LD50, oral toxicity, rat: 1100 mg.kg <sup>-1</sup> LC50, inhalation, rat: 10,5 mg.l <sup>-1</sup> (1 h) LD50, dermal toxicity, rabbit: > 10 g.kg <sup>-1</sup>
b)	<i>Skin corrosion/irritation;</i> Causes severe skin burns. May cause irreversible damage to the skin; namely, visible necrosis through the epidermis and into the dermis, following exposure for up to three minutes. Corrosive reactions are typified by ulcers, bleeding, bloody scabs, and, by the end of observation at 14 days, by discolouration due to blanching of the skin, complete areas of alopecia, and scars.
c)	<i>Serious eye damage/irritation;</i> Causes severe eye damage. Small plashes can cause feelings of burn, redness and blurred vision. Only minor corneal epithelial damage is expected, which usually heals in a few days.
d)	<i>Respiratory or skin sensitisation;</i> Based on available data, the classification criteria are not met.
e)	<i>Germ cell mutagenicity</i> Based on available data, the classification criteria are not met.
f)	<i>Carcinogenicity</i> Based on available data, the classification criteria are not met.
g)	<i>Reproductive toxicity</i> Based on available data, the classification criteria are not met.
h)	<i>STOT-single exposure</i> May cause respiratory irritation, cough, asthma like symptoms and dyspnoea.
i)	<i>STOT-repeated exposure</i> Based on available data, the classification criteria are not met.
j)	<i>Aspiration hazard</i> Based on available data, the classification criteria are not met. Inhalation of liquid or gases in high concentration can cause severe lung damage and mucosal burns.

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## SECTION 12: ECOLOGICAL INFORMATION

<b>12.1</b>	<b>Toxicity</b> The substance is classified as very toxic to aquatic life.  LC50, fishes: 0.06 mg/l LC50, algae: 0.04 mg/l EC50, crustaceans: 141 µg/l ( <i>Daphnia sp.</i> )
<b>12.2</b>	<b>Persistence and degradability</b> Sodium hypochlorite degrades very quickly.
<b>12.3</b>	<b>Bioaccumulative potential</b> Bioaccumulation is not expected.
<b>12.4</b>	<b>Mobility in soil</b> No data for the substance
<b>12.5</b>	<b>Results of PBT and vPvB assessment</b> The substance does not meet the PBT/vPvB criteria according to REACH, annex XIII; the substance is not included in the Candidate List of SVHC.
<b>12.6</b>	<b>Other adverse effects</b> not known

## SECTION 13: DISPOSAL CONSIDERATIONS

<b>13.1</b>	<p><b>Waste treatment methods</b> Proper waste management of the substance and/or its container must be determined in accordance with Directive 2008/98/EC. Avoid entering soil, drains, surface- and ground-waters. 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. Product and packages should be disposed in a certified hazardous waste facility. According to the European Waste Catalogue waste codes are not specific for product, but for its use. Therefore, appropriate waste code should assign final user according to his specific use.</p> <p><u>Proposed waste classification:</u> Dangerous waste according 2008/98/EC.</p> <p>06 WASTES FROM INORGANIC CHEMICAL PROCESSES</p> <p>06 13 wastes from inorganic chemical processes not otherwise specified</p> <p>06 13 99 wastes not otherwise specified</p> <p><u>Contaminated packages:</u> Wash empty packages with water and recycle. Contaminated packages are considered as dangerous waste according 2008/98/EC.</p> <p>15 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED</p> <p>15 01 packaging (including separately collected municipal packaging waste)</p> <p>15 01 10 packaging containing residues of or contaminated by dangerous substances (contaminated packages)</p> <p><b>15 01 02 (cleaned packages)</b></p>
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## SECTION 14: TRANSPORT INFORMATION

**The substance is classified as dangerous for transport according to ADR/RID/IMDG/ICAO/IATA.**

<b>14.1</b>	<b>UN Number:</b> UN 1791
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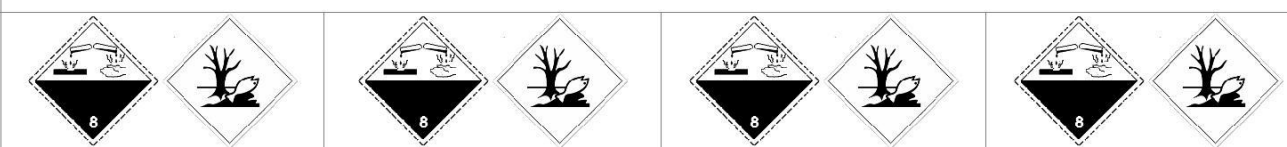


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according Regulation EC No. 1907/2006 (REACH), Regulation EC No. 1272/2008 (CLP)  
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<b>14.2 UN proper shipping name</b>				
<i>Road transport ADR</i>	<i>Rail transport RID</i>	<i>International maritime transport IMDG</i>	<i>Air transport ICAO/IATA</i>	
HYPOCHLORITE SOLUTION	HYPOCHLORITE SOLUTION	HYPOCHLORITE SOLUTION	HYPOCHLORITE SOLUTION	

<b>14.3 Transport hazard class(es)</b>				
<i>Road transport ADR</i>	<i>Rail transport RID</i>	<i>International maritime transport IMDG</i>	<i>Air transport ICAO/IATA</i>	
8	8	8	8	
<b>Classification code</b>				
C9	C9	C9	C9	
<b>Hazard identification number (Kemler)</b>				
80	80	80	80	
<b>Labels</b>				
				

<b>14.4 Packing group</b>				
<i>Road transport ADR</i>	<i>Rail transport RID</i>	<i>International maritime transport IMDG</i>	<i>Air transport ICAO/IATA</i>	
II	II	II	II	

<b>14.5 Environmental hazards:</b> yes				
<b>14.6 Special precautions for user:</b> not required				
<b>14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:</b> not transported				

## SECTION 15: REGULATORY INFORMATION

<b>15.1</b>	<p><b>Safety, health and environmental regulations/legislation specific for the substance or mixture</b></p> <p><u>Relevant legislation European Union:</u></p> <ul style="list-style-type: none"> <li>- Regulation (EC) No 1907/2006 of the European Parliament and of the , concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH)</li> <li>- Regulation EC No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006</li> <li>- Commission Regulation(ES) No 453/2010 of 20 May 2010 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)</li> <li>- Directive 1999/45/EC of the European Parliament and of the Council of 31 May 1999 concerning the approximation of the laws, regulations and administrative provisions of the Member States relating to the classification, packaging and labelling of dangerous preparations</li> <li>- Council Directive 67/548/EEC of 27 June 1967 on the approximation of laws, regulations and administrative provisions relating to the classification, packaging and labelling of dangerous substances</li> <li>- Commission Directive 2000/39/EC of 8 June 2000 establishing a first list of indicative occupational exposure limit values in implementation of Council Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work</li> <li>- Commission Directive 2006/15/EC of 7 February 2006 establishing a second list of indicative occupational exposure limit values in implementation of Council Directive 98/24/EC and amending Directives 91/322/EEC and 2000/39/EC</li> <li>- Commission Directive 2009/161/EU of 17 December 2009 establishing a third list of indicative occupational exposure limit values in implementation of Council Directive 98/24/EC and amending Commission Directive 2000/39/EC</li> <li>- Council Directive 1999/13/EC of 11 March 1999 on the limitation of emissions of volatile organic compounds due to the use of organic solvents in certain activities and installations</li> </ul>
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Name of the product	<b>Sodium hypochlorite, 15% solution</b>			Page:
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**15.2 Chemical safety assessment**  
Chemical safety assessment was carried.

## SECTION 16: OTHER INFORMATION

a) *Changes made to the previous version of the safety data sheet*  
2.1.2019: Update section 2.1, 3.1, 15.2

*Key or legend to abbreviations and acronyms used in the safety data sheet*

C	Corrosive
N	Dangerous for the environment
Skin Corr. 1B	Skin corrosion/irritation, category 1
Aquatic Acute 1	Hazardous to the aquatic environment, category 1
Exp. lim.	Exposure limit
OEL	Occupational exposure limit
TWA	Time-weighted average
STEL	Short-term exposure limit
PBT	Substances persistent, bioaccumulative and toxic
vPvB	Substances very persistent and very bioaccumulative
VOC	Volatile organic compound
DNEL	Derived No Effect Level
PNEC	Predicted No Effect Concentration

c) *Key literature references and sources for data*  
Not indicated

d) *Methods of evaluating information used for the purpose of classification*  
The substance was classified by expert judgment and conventional calculations methods in accordance with the Directive with 67/548/EEC and 1999/45/EC and Regulation EC No. 1272/2008 (CLP).

e) *Full wording of used Risk Phrases (R-phrases) and Hazard Statements (H-phrases)*

R31	Contact with acids liberates toxic gas
R34	Causes burns
R50	Very toxic to aquatic organisms
H314	Causes severe skin burns and eye damage.
H335	May cause respiratory irritation.
H400	Very toxic to aquatic life.

f) *Advice on any training appropriate for workers*  
Before handling, storing or using the present substance for the first time, employees must be informed - common training for handling chemicals, occupational safety training.

g) *Other information*  
Material Safety Data Sheet is compiled in accordance with the Regulation EC No. 1907/2006 (REACH), Regulation EC No. 1272/2008 (CLP) and Commission Regulation EU No. 453/2010, and contains information on safety use, occupational health protection, and environmental protection. The information contained herein is given in good faith and is accurate to the best of knowledge at the date indicated above. This particular information applies on the product as supplied and may not be valid in mixtures with other substances. If used for other purposes as identified in this MSDS, the distributor is not liable for any damage.

The information given herein in no way dispenses the user from knowing and applying all provisions regulating his activity. The user bears sole liability for the precautions required when using the product. The regulatory texts indicated herein are intended to aid the user to fulfill his obligations. This list is not to be considered complete and exhaustive. It is the user's responsibility to ensure that he is subject to no other obligations than those mentioned.

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