Safety data sheet
complying with Regulation 1907/2006/EC (REACH Regulation), EU 2020/878 and Regulation No 1272/2008/EC (CLP)

Printing date 27.09.2021 **Version number 1** **Revision: 27.09.2021**

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

1.1 Product identifier

Trade name: DALCO-100 **UFI:** C37V-S17U-K007-M8D7

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

Sector of Use
SU3 Industrial uses: Uses of substances as such or in preparations at industrial sites
SU4 Manufacture of food products
SU5 Manufacture of textiles, leather, fur
SU6b Manufacture of pulp, paper and paper products
SU21 Consumer uses: Private households / general public / consumers
SU22 Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
SU23 Electricity, steam, gas water supply and sewage treatment
SU24 Scientific research and development

Product category
PC8 Biocidal products
PC15 Non-metal-surface treatment products
PC19 Intermediate
PC20 Processing aids such as pH-regulators, flocculants, precipitants, neutralization agents
PC21 Laboratory chemicals
PC25 Metal working fluids
PC26 Paper and board treatment products
PC34 Textile dyes, and impregnating products
PC35 Washing and cleaning products (including solvent based products)
PC37 Water treatment chemicals

Process category
PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions.
PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions
PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition
PROC4 Chemical production where opportunity for exposure arises
PROC5 Mixing or blending in batch processes
PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities
PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities
PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing)
PROC10 Roller application or brushing
PROC13 Treatment of articles by dipping and pouring
PROC15 Use as laboratory reagent
PROC19 Manual activities involving hand contact

Environmental release category
ERC1 Manufacture of the substance
ERC2 Formulation into mixture
ERC6b Use of reactive processing aid at industrial site (no inclusion into or onto article)
ERC7 Use of functional fluid at industrial site
ERC8b Widespread use of reactive processing aid (no inclusion into or onto article, indoor)
ERC8e Widespread use of reactive processing aid (no inclusion into or onto article, outdoor)

Application of the substance / the mixture: Drinking water disinfectant

(Contd. on page 2)

Safety data sheet
complying with Regulation 1907/2006/EC (REACH Regulation), EU 2020/878 and Regulation No 1272/2008/EC (CLP)

Printing date 27.09.2021 **Version number 1** **Revision: 27.09.2021**

Trade name: DALCO-100

(Contd. of page 1)

1.3 Details of the supplier of the safety data sheet
Manufacturer/Supplier:
DALCOCHEM SA
DETERGENTS, DISINFECTANTS, COSMETICS INDUSTRY
213 KARAMANLI AV, ACHARNAI
Zip Code: 13677
TEL .: +30 210 2460401/609
www.dalcochem.gr
e-mail: info@dalcochem.gr
1.4 Emergency telephone number:

European Emergency Tel.: 112

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture
Classification according to Regulation EC No 1272/2008 CLP:

GHS07

Skin Irrit. 2 H315 Causes skin irritation.
Eye Irrit. 2 H319 Causes serious eye irritation.

2.2 Label elements
Labelling according to Regulation EC No 1272/2008 CLP:
The product is classified and labelled according to the CLP regulation.
Hazard pictograms:

GHS07

Signal word: Warning

Hazard statements:
H315 Causes skin irritation.
H319 Causes serious eye irritation.

Precautionary statements

P102	Keep out of reach of children.
P280	Wear eye protection / face protection
P302+P352	IF ON SKIN: Wash with plenty of water and soap.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P332+P313	If skin irritation occurs: Get medical advice/attention.

(Contd. on page 3)

Safety data sheet
complying with Regulation 1907/2006/EC (REACH Regulation), EU 2020/878 and Regulation No 1272/2008/EC (CLP)

Printing date 27.09.2021 **Version number 1** **Revision: 27.09.2021**

Trade name: DALCO-100

(Contd. of page 2)

P337+P313 If eye irritation persists: Get medical advice/attention.
Additional information:
EUH206 - 'Warning! Do not use together with other products. May release dangerous gases (chlorine)'
EUH032 Contact with acids liberates very toxic gas.

Regulation (EC) No 648/2004 on detergents / Labelling for contents	
chlorine-based bleaching agents	<5%

2.3 Other hazards
Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.

SECTION 3: Composition/information on ingredients

3.2 Mixtures
Description: Mixture consisting of the following dangerous ingredients:

Ingredients according Regulation (EU) 2020/878:		
CAS: 7758-19-2 EINECS: 231-836-6 Reg.nr.: 01-2119529240-51-XXXX	sodium chlorite Ox. Liq. 1, H271; Acute Tox. 3, H301; Acute Tox. 2, H310; STOT RE 2, H373; Skin Corr. 1B, H314; Aquatic Acute 1, H400; Aquatic Chronic 3, H412, EUH032, EUH071	≥1-<2.4%

Additional information: For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures
General information:
Take affected persons out into the fresh air.
Seek immediate medical advice.
After inhalation:
In case of unconsciousness place patient stably in side position for transportation.
Seek medical treatment in case of complaints.
After skin contact:
Wash the skin immediately with soap and water.
In case of skin irritation, consult a physician.
After eye contact:
Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids.
Check for and remove any contact lenses.
Continue to rinse for at least 15 minutes.
Get medical attention if irritation occurs.
Avoid strong water jet-risk of cornea damage, consult a doctor.
After swallowing:
Drink plenty of water and provide fresh air. Call for a doctor immediately.
Do not induce vomiting; call for medical help immediately.
Seek immediate medical advice.
Never give anything by mouth to an unconscious person.
4.2 Most important symptoms and effects, both acute and delayed
No further relevant information available.

(Contd. on page 4)

Safety data sheet
complying with Regulation 1907/2006/EC (REACH Regulation), EU 2020/878 and Regulation No 1272/2008/EC (CLP)

Printing date 27.09.2021 **Version number 1** **Revision: 27.09.2021**

Trade name: DALCO-100

(Contd. of page 3)

4.3 Indication of any immediate medical attention and special treatment needed
No further relevant information available.

SECTION 5: Firefighting measures

5.1 Extinguishing media
Suitable extinguishing agents:
Dry chemical powder
Water spray
Foam
Sand or earth
For safety reasons unsuitable extinguishing agents: Carbon dioxide (CO2)
5.2 Special hazards arising from the substance or mixture
Drying of this product on clothes or on burnt materials is possible
to cause a fire:
In the event of a fire, dangerous products may form
split. acid fumes Sodium oxides
5.3 Advice for firefighters
Protective equipment:
Mouth respiratory protective device.
Self contained breathing apparatus and full protective clothing must be worn in case of fire.
Wear protective goggles.
Additional information
Collect contaminated fire fighting water separately. It must not enter the sewage system.
Suppress gases/vapours/mists with water spray jet.
Fight fire from safe distance.
Bear in mind the direction of the wind.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures:
Mouth respiratory protective device.
Wear protective equipment. Keep unprotected persons away.
6.1.1 For non-emergency personnel Avoid contact with dripping or leaking material
6.1.2 For emergency responders
Wear protective equipment. Keep unprotected persons away.
First-aid responders must wear protectice clothing, gloves, goggles and respiratory device with filter type A.
6.2 Environmental precautions: Do not allow to enter sewers/ surface or ground water.
6.3 Methods and material for containment and cleaning up:
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust, silica gel).
Dilute with plenty water.
Clean with warm water
6.4 Reference to other sections:
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

(Contd. on page 5)

Safety data sheet
complying with Regulation 1907/2006/EC (REACH Regulation), EU 2020/878 and Regulation No 1272/2008/EC (CLP)

Printing date 27.09.2021 **Version number 1** **Revision: 27.09.2021**

Trade name: DALCO-100

(Contd. of page 4)

SECTION 7: Handling and storage

7.1 Precautions for safe handling
Avoid contact with eyes, skin and clothing.
Remove contaminated clothing.
Ensure good ventilation.
Prevent formation of aerosols.
Information about fire - and explosion protection: No special measures required.
7.2 Conditions for safe storage, including any incompatibilities
Storage:
Store in cool, dry conditions in well sealed receptacles.
Keep away from heat and other ignition sources
Do not freeze.
Avoid ultraviolet radiation.
Do not let it dry.
Requirements to be met by storerooms and receptacles: Store in a cool location.
Information about storage in one common storage facility:
Keep away from food, beverages & animal feed.
Store in a shady place.
It is not stored together with strong oxidizing agents.
Do not store together with acids.
Further information about storage conditions: Keep container tightly sealed.
7.3 Specific end use(s) No further relevant information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters
Ingredients with limit values that require monitoring at the workplace:
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
DNELs
CAS: 7758-19-2 Sodium chloride

Employees
Skin contact
Acute - systemic effects
Value: 0.58 mg / kg body weight (bw) / day
Employees
Skin contact
Health Impact: Long Term - Systemic Impact
Value: 0.58 mg / kg body weight (bw) / day
Employees

Inhalation
Effect on Health: Acute - systemic effects
Value: 0.41 mg / m 3
Employees
Inhalation
Health Impact: Long Term - Systemic Impact
Value: 0.41 mg / m 3
Consumers

(Contd. on page 6)

Safety data sheet
complying with Regulation 1907/2006/EC (REACH Regulation), EU 2020/878 and Regulation No 1272/2008/EC (CLP)

Printing date 27.09.2021 **Version number 1** **Revision: 27.09.2021**

Trade name: DALCO-100

(Contd. of page 5)

Skin contact
Effect on Health: Acute - systemic effects
Value: 0.29 mg / kg body weight (bw) / day
Consumers
Routes of exposure: Inhalation

Effect on Health: Acute - systemic effects
Value: 0.1 mg / m 3
Consumers
Skin contact
Health Impact: Long Term - Systemic Impact

Value: 0.29 mg / kg body weight (bw) / day
Consumers
Inhalation
Health Impact: Long Term - Systemic Impact
Value: 0.1 mg / m 3
Consumers
Ingestion
Health Impact: Long Term - Systemic Impact
Value: 0.029 mg / kg body weight (bw) / day
Consumers
Routes of exposure: Ingestion
Effect on Health: Acute - systemic effects
Value: 0.029 mg / kg body weight (bw) / day
PNECs
(CAS: 7758-19-2) Sodium Chlorite
Fresh water): 0.65 µg / L
Seawater: 0.065 µg / L
Intermediate releases: 0.0065 mg / L
Sewage treatment plant: 1 mg / L

8.2 Exposure controls

8.2.1. Appropriate engineering controls Provide adequate ventilation.

Individual protection measures, such as personal protective equipment
General protective and hygienic measures:
Keep away from foodstuffs, beverages and feed.
Wash hands before breaks and at the end of work.
Immediately remove all soiled and contaminated clothing.
Contaminated clothing should be laundered before re-use
Respiratory protection:

In case of insufficient ventilation use suitable respiratory protective device.

(Contd. on page 7)

Safety data sheet
complying with Regulation 1907/2006/EC (REACH Regulation), EU 2020/878 and Regulation No 1272/2008/EC (CLP)

Printing date 27.09.2021 **Version number 1** **Revision: 27.09.2021**

Trade name: DALCO-100

(Contd. of page 6)

Hand protection
After use of gloves apply skin-cleaning agents and skin cosmetics.


Protective gloves

EN 374
The protective gloves must meet the requirements of EU Directives 89/689 / EEC and EN 374.
Material of gloves
Neoprene
PVC
Penetration time of glove material
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
The determined penetration times according to EN 16523-1:2015 are not performed under practical conditions. Therefore a maximum wearing time, which corresponds to 50% of the penetration time, is recommended.
Eye/face protection


It is recommended that you wear chemical goggles or a face mask.

EN 166
Also, wear a face shield when there is a high chance
contact of this material with the face due to splashing, spraying or
Air transport.
Body protection:


Protective work clothing


Boots

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties
General Information

Physical state	Liquid
Colour:	Colourless
Odour:	Odourless
Odour threshold:	Not determined
Boiling point or initial boiling point and boiling range	101.1 °C °C
Flammability	Not applicable
Lower and upper explosion limit	
Lower:	Not applicable

(Contd. on page 8)

Safety data sheet
complying with Regulation 1907/2006/EC (REACH Regulation), EU 2020/878 and Regulation No 1272/2008/EC (CLP)

Printing date 27.09.2021 **Version number 1** **Revision: 27.09.2021**

Trade name: DALCO-100

(Contd. of page 7)

Upper:	Not applicable
Flash point:	Not Flammable
Auto-ignition temperature:	Product is not selfigniting.
Decomposition temperature:	Not determined
pH at 20 °C	8.5-9.5
Viscosity:	
Kinematic viscosity	Not determined
Kinematic viscosity	
Dynamic:	Not determined
Solubility	
water:	Fully miscible
Partition coefficient n-octanol/water (log value)	Not determined
Vapour pressure:	Not determined
Density and/or relative density	
Density at 25 °C:	1.012±0.002 g/cm³
	Osmotic pressure (20 ° C) Same as water
Relative density	Not determined
Vapour density	Not determined

9.2 Other information	
Appearance:	
Form:	Liquid
Important information on protection of health and environment, and on safety.	
Auto-ignition temperature:	Not applicable
Explosive properties:	Product does not present an explosion hazard.
Cloud point / clarification point:	
Oxidising properties	Not oxidising
Evaporation rate	Not determined

Information with regard to physical hazard classes	
Explosives	Void
Flammable gases	Void
Aerosols	Void
Oxidising gases	Void
Gases under pressure	Void
Flammable liquids	Void
Flammable solids	Void
Self-reactive substances and mixtures	Void
Pyrophoric liquids	Void
Pyrophoric solids	Void
Self-heating substances and mixtures	Void
Substances and mixtures, which emit flammable gases in contact with water	Void
Oxidising liquids	Void
Oxidising solids	Void
Organic peroxides	Void
Corrosive to metals	Void

(Contd. on page 9)

Safety data sheet
complying with Regulation 1907/2006/EC (REACH Regulation), EU 2020/878 and Regulation No 1272/2008/EC (CLP)

Printing date 27.09.2021 **Version number 1** **Revision: 27.09.2021**

Trade name: DALCO-100

(Contd. of page 8)

Desensitised explosives	Void

SECTION 10: Stability and reactivity

10.1 Reactivity Stable under normal conditions
10.2 Chemical stability Material is stable under normal conditions.
Thermal decomposition / conditions to be avoided
Stable at environment temperature.
Decomposition when heated.
10.3 Possibility of hazardous reactions
Contact with acids, organic materials, reducing and oxidizing
releases toxic chlorine and / or dioxide gases chlorine.
10.4 Conditions to avoid
Avoid high temperatures.
Avoid contact with acids, oxidizing or reducing agents and chlorine 'donors'.
10.5 Incompatible materials
Warning! Do not use together with other products. May release dangerous gases (chlorine).
Strong Acids
Strong oxidizing agents
Organic matter
chlorinated compounds
Reducing Agents
10.6 Hazardous decomposition products
Chlorine
Chlorine dioxide
In case of fire the following can be formed:
Oxygen
acidic fumes
Sodium oxide

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008
Acute toxicity Based on available data, the classification criteria are not met.
LD/LC50 values relevant for classification:
CAS: 7758-19-2 Sodium chloride
oral LD50 140 mg / kg bw (Rat) (Sodium chloride)
NOAEL 10 mg / kg bw / day (Rat) (Sodium chloride)
Acute oral toxicity LD50 / Rat: 390 mg / kg (sol.31% w / w)
Sodium chloride: LD50 / Rat: 284 mg / kg
Acute dermal toxicity LD50 / Rabbit:> 2 000 mg / kg (sol.31% w / w)
Sodium chloride: LD50 / Rabbit: 134 mg / kg
Skin corrosion/irritation
Causes skin irritation.
Serious eye damage/irritation
Causes serious eye irritation.
Respiratory or skin sensitisation Based on available data, the classification criteria are not met.
Germ cell mutagenicity Based on available data, the classification criteria are not met.
Carcinogenicity Based on available data, the classification criteria are not met.

(Contd. on page 10)

Safety data sheet
complying with Regulation 1907/2006/EC (REACH Regulation), EU 2020/878 and Regulation No 1272/2008/EC (CLP)

Printing date 27.09.2021 **Version number 1** **Revision: 27.09.2021**

Trade name: DALCO-100

(Contd. of page 9)

Reproductive toxicity Based on available data, the classification criteria are not met.
STOT-single exposure Based on available data, the classification criteria are not met.
STOT-repeated exposure Based on available data, the classification criteria are not met.
Aspiration hazard Based on available data, the classification criteria are not met.
Additional toxicological information:
Repeated dose toxicity
CAS: 7758-19-2 Sodium chloride
NOAEL 10 mg / kg bw / day (Rat) (subcronic 90 days)
Based on available data, the classification criteria are not met.
11.2 Information on other hazards

Endocrine disrupting properties
None of the ingredients is listed.

SECTION 12: Ecological information

12.1 Toxicity
Aquatic toxicity: No further relevant information available.
12.2 Persistence and degradability
The product does not contain surfactants, as defined in Regulation 648/2004 / EC.
12.3 Bioaccumulative potential
Not bioaccumulative.
No further relevant information available.
12.4 Mobility in soil No further relevant information available.
12.5 Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.
12.6 Endocrine disrupting properties
The product does not contain substances with endocrine disrupting properties.
12.7 Other adverse effects
Additional ecological information:
General notes: Do not allow product to reach ground water, water course or sewage system.

SECTION 13: Disposal considerations

13.1 Waste treatment methods
Recommendation

Dispose according to National Regulations.

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

Contact manufacturer for recycling information.

Uncleaned packaging:
Recommendation:
Disposal must be made according to official regulations.

(Contd. on page 11)

Safety data sheet
complying with Regulation 1907/2006/EC (REACH Regulation), EU 2020/878 and Regulation No 1272/2008/EC (CLP)

Printing date 27.09.2021 **Version number 1** **Revision: 27.09.2021**

Trade name: DALCO-100

(Contd. of page 10)

Packaging may be reused or recycled after cleaning.
Recommended cleansing agents: Water, if necessary together with cleansing agents.

SECTION 14: Transport information

14.1 UN number or ID number	
ADR, IMDG, IATA	UN1908
14.2 UN proper shipping name	
ADR	1908 CHLORITE SOLUTION
IMDG, IATA	CHLORITE SOLUTION
14.3 Transport hazard class(es)	
ADR, IMDG, IATA	

Class	8 Corrosive substances.
Label	8
14.4 Packing group	
ADR, IMDG, IATA	III
14.5 Environmental hazards:	Not applicable.
14.6 Special precautions for user	Warning: Corrosive substances.
Hazard identification number (Kemler code):	80
EMS Number:	F-A,S-B
Segregation groups	Chlorites
Stowage Category	B
Segregation Code	SG6 Segregation as for class 5.1 SG8 Stow "away from" class 4.1 SG10 Stow "away from" class 5.1 SG12 Stow "away from" class 7 SG20 Stow "away from" SGG1-acids
14.7 Maritime transport in bulk according to IMO instruments	Not applicable.
Transport/Additional information:	
ADR	
Limited quantities (LQ)	5L
Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
Transport category	3
Tunnel restriction code	E

(Contd. on page 12)

Safety data sheet
complying with Regulation 1907/2006/EC (REACH Regulation), EU 2020/878 and Regulation No 1272/2008/EC (CLP)

Printing date 27.09.2021 **Version number 1** **Revision: 27.09.2021**

Trade name: DALCO-100

(Contd. of page 11)

IMDG	
Limited quantities (LQ)	5L
Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
UN "Model Regulation":	UN 1908 CHLORITE SOLUTION, 8, III

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
REACH Regulation 1907/2006/EC
Regulation (EU) 2020/878
CLP Regulation 1272/2008/EC
Directive 98/24/EC on the protection of health and safety of workers from the risks related to chemicals agents at work.
Council Directive 94/33/EC on the protection of young people at work, as ammended.
Directive 92/85/EEC on the introduction of measures to encourage improvements in the safety and health at work of pregnant workers and workers who have recently given birth or are breastfeeding, as ammended
Regulation (EC) No.648/2004 on detergents, as amended.

Directive 2012/18/EU
Named dangerous substances - ANNEX I Does not contain named substances.
REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3

DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II
None of the ingredients is listed.

REGULATION (EU) 2019/1148

Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))
None of the ingredients is listed.

Annex II - REPORTABLE EXPLOSIVES PRECURSORS
None of the ingredients is listed.

Regulation (EC) No 273/2004 on drug precursors
None of the ingredients is listed.

Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors
None of the ingredients is listed.

National regulations:

Other regulations, limitations and prohibitive regulations

Substances of very high concern (SVHC) according to REACH, Article 57
It doesn't contain substances of very high concern (SVHC).

(Contd. on page 13)

Safety data sheet
complying with Regulation 1907/2006/EC (REACH Regulation), EU 2020/878 and Regulation No 1272/2008/EC (CLP)

Printing date 27.09.2021 **Version number 1** **Revision: 27.09.2021**

Trade name: DALCO-100

(Contd. of page 12)

15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Relevant phrases

H271 May cause fire or explosion; strong oxidiser.
H301 Toxic if swallowed.
H310 Fatal in contact with skin.
H314 Causes severe skin burns and eye damage.
H373 May cause damage to organs through prolonged or repeated exposure.
H400 Very toxic to aquatic life.
H412 Harmful to aquatic life with long lasting effects.
EUH032 Contact with acids liberates very toxic gas.
EUH071 Corrosive to the respiratory tract.

Training hints

Suitable training on safety in handling, storing and converting the product should be given to the employees based on all the existing information.

Department issuing SDS:

SUSTCHEM S.A.
REACH & Chemical Services Department
A: 144, 3rd Septemvriou, GR 112 51 | Athens, Greece
T: +30 210 8252510 | F: +30 210 8252575
W: www.sustchem.gr | E: info@suschem.gr

Abbreviations and acronyms:

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
DNEL: Derived No-Effect Level (REACH)
PNEC: Predicted No-Effect Concentration (REACH)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
SVHC: Substances of Very High Concern
vPvB: very Persistent and very Bioaccumulative
Ox. Liq. 1: Oxidizing liquids – Category 1
Acute Tox. 3: Acute toxicity – Category 3
Acute Tox. 2: Acute toxicity – Category 2
Skin Corr. 1B: Skin corrosion/irritation – Category 1B
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2
Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

SODIUM CHLORITE (SOLUTION)

APPENDIX I Exposure scenarios: Sodium Chlorite

1.- Title	
Manufacture stage	
Environment:	ERC 1
Worker	
Charging/discharging non-dedicated facilities	PROC 8a
Closed process	PROC 2
Transfer to small containers	PROC 9
Laboratory reagent	PROC 15
Trasfer at dedicated facilities	PROC 8b
2. Operational conditions and risk management measures	
Containement as defined by Seveso Directive.	
2.1.- Control of environmental exposure: 1	
Product characteristics	
Amounts used	
Daily use at a site	<= 23.53 tonnes/day
Annual use at a site	<= 6.087E3 tonnes/year
Percentage of tonnage used at regional scale	= 100 %
Frequency and duration of use	
Environment factors not influenced by risk management	
Receiving surface water flow rate	>= 1.8E4 m3/d
Other given operational conditions affecting environmental exposure	
Technical conditions and measures at process level (source) to prevent release	
Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil	
No releases	no releases [Water: 100%; Air: 100%; Soil: 100%]
Organizational measures to prevent/limit release from site	
Conditions and measures related to municipal sewage treatment plant	
Municipal STP	Yes [Water: 100%]
Discharge rate of STP	>= 2E3 m3/d
Application of the STP sludge on agricultural soil	No
Conditions and measures related to external treatment of waste for disposal	
Conditions and measures related to external recovery of waste	
Additional good practice advice beyond the REACH CSA	
The substance is corrosive, therefore the following Personal Protective Equipment is recommended as good industrial practice advice: • Avoid contact with contaminated tools and objects • Train staff on good standard of personal hygiene. • Wash skin after contact with substance/product containing the substance. Immediate removal/dry cleaning and disposal of spills.	

SODIUM CHLORITE (SOLUTION)

2.2.- Control of workers exposure					
Control of workers exposure for "Charging/discharging non-dedicated facilities" [PROC 8a]					
		Inhal*)		Derm*)	
		Loc	Sys	Loc	Sys
Product characteristics					
Substance in preparation	Yes		L		
Concentration of substance in product	> 25%		L		
Amounts used					
Frequency and duration of use/exposure					
Duration of activity	15 mins - 1 hour		L		
Human factors not influenced by risk management					
Other given operational conditions affecting workers exposure					
Place of use	Indoors		L		
Surface of skin exposed	Two hands (960 cm2)				L
Technical conditions and measures at process level (source) to prevent release					
Technical conditions and measures to control dispersion from source towards the worker					
Local Exhaust Ventilation	No		L		L
Organisational measures to prevent /limit releases, dispersion and exposure					
Conditions and measures related to personal protection, hygiene and health evaluation					
Respiratory protection	Respiratory protection capable offering a 90% reduction in inhaled concentrations of the substance		L		
respirator masks	half mask respirator [Inhalation: 90%]		L		
wear a respirator conforming to EN140 with type A filter or better					
gloves	chemically resistant gloves with specific activity training and intensive management supervision controls [Dermal: 98%]				L
Wear chemically resistant gloves (tested to EN374) in combination with intensive management supervision controls (PPE18)					
Additional good practice advice beyond the REACH CSA					
The substance is corrosive, therefore the following Personal Protective Equipment is recommended as good industrial practice advice: • Avoid contact with contaminated tools and objects • Train staff on good standard of personal hygiene. • Wash skin after contact with substance/product containing the substance. Immediate removal/dry cleaning and disposal of spills.					
Control of workers exposure for "Closed process" [PROC 2]					
		Inhal*)		Derm*)	
		Loc	Sys	Loc	Sys
Product characteristics					
Substance in preparation	Yes		L		

SODIUM CHLORITE (SOLUTION)

Concentration of substance in product	> 25%		L		
Amounts used					
Frequency and duration of use/exposure					
Duration of activity	>4 hours		L		
Human factors not influenced by risk management					
Other given operational conditions affecting workers exposure					
Place of use	Indoors		L		
Surface of skin exposed	Two hands face (480 cm2)				L
Technical conditions and measures at process level (source) to prevent release					
Level of containment	Use in closed, continuous process with occasional controlled exposure		L		
Technical conditions and measures to control dispersion from source towards the worker					
Local Exhaust Ventilation	Yes [Inhalation: 90%; Dermal: 90%]		L		L
Organisational measures to prevent /limit releases, dispersion and exposure					
Conditions and measures related to personal protection, hygiene and health evaluation					
Respiratory protection	Respiratory protection capable offering a 90% reduction in inhaled concentrations of the substance		L		
gloves	chemically resistant gloves with specific activity training [Dermal: 95%]				L
wear chemically resistant gloves (tested to EN374) in combination with specific activity training (PPE17)					
Additional good practice advice beyond the REACH CSA					
The substance is corrosive, therefore the following Personal Protective Equipment is recommended as good industrial practice advice: • Avoid contact with contaminated tools and objects • Train staff on good standard of personal hygiene. • Wash skin after contact with substance/product containing the substance. • Immediate removal/dry cleaning and disposal of spills.					
Control of workers exposure for "Transfer to small containers" [PROC 9]					
		Inhal*)		Derm*)	
		Loc	Sys	Loc	Sys
Product characteristics					
Substance in preparation	Yes		L		
Concentration of substance in product	> 25%		L		
Amounts used					
Frequency and duration of use/exposure					
Duration of activity	>4 hours		L		
Human factors not influenced by risk management					
Other given operational conditions affecting workers exposure					
Place of use	Indoors		L		
Surface of skin exposed	Two hands face (480 cm2)				L

SODIUM CHLORITE (SOLUTION)

Technical conditions and measures at process level (source) to prevent release					
Technical conditions and measures to control dispersion from source towards the worker					
Local Exhaust Ventilation	Yes [Inhalation: 90%; Dermal: 90%]		L		L
Organisational measures to prevent /limit releases, dispersion and exposure					
Conditions and measures related to personal protection, hygiene and health evaluation					
Respiratory protection	Respiratory protection capable offering a 90% reduction in inhaled concentrations of the substance		L		
gloves	chemically resistant gloves with specific activity training [Dermal: 95%]				L
wear chemically resistant gloves (tested to EN374) in combination with specific activity training (PPE17)					
Additional good practice advice beyond the REACH CSA					
The substance is corrosive, therefore the following Personal Protective Equipment is recommended as good industrial practice advice: • Avoid contact with contaminated tools and objects • Train staff on good standard of personal hygiene. • Wash skin after contact with substance/product containing the substance. • Immediate removal/dry cleaning and disposal of spills.					

Control of workers exposure for "Laboratory reagent" [PROC 15]					
		Inhal*)		Derm*)	
		Loc	Sys	Loc	Sys
Product characteristics					
Substance in preparation	Yes		L		
Concentration of substance in product	> 25%		L		
Amounts used					
Frequency and duration of use/exposure					
Duration of activity	1 - 4 hours		L		
Human factors not influenced by risk management					
Other given operational conditions affecting workers exposure					
Place of use	Indoors		L		
Surface of skin exposed	One hand face only (240 cm2)				L
Technical conditions and measures at process level (source) to prevent release					
Technical conditions and measures to control dispersion from source towards the worker					
Local Exhaust Ventilation	Yes [Inhalation: 90%; Dermal: 90%]		L		L
Organisational measures to prevent /limit releases, dispersion and exposure					
Conditions and measures related to personal protection, hygiene and health evaluation					
Respiratory protection	Respiratory protection is not used		L		
gloves	chemically resistant gloves with basic training [Dermal: 90%]				L
wear chemically resistant gloves (tested to EN374) in combination with basic employee training					
Additional good practice advice beyond the REACH CSA					

SODIUM CHLORITE (SOLUTION)

The substance is corrosive, therefore the following Personal Protective Equipment is recommended as good industrial practice advice: • Avoid contact with contaminated tools and objects • Train staff on good standard of personal hygiene. • Wash skin after contact with substance/product containing the substance. • Immediate removal/dry cleaning and disposal of spills.					
Control of workers exposure for "Transfer at dedicated facilities" [PROC 8b]					
		Inhal*)		Derm*)	
		Loc	Sys	Loc	Sys
Product characteristics					
Substance in preparation	Yes		L		
Concentration of substance in product	> 25%		L		
Amounts used					
Frequency and duration of use/exposure					
Duration of activity	15 mins - 1 hour		L		
Human factors not influenced by risk management					
Other given operational conditions affecting workers exposure					
Place of use	Indoors		L		
Surface of skin exposed	Two hands face (480 cm2)				L
Technical conditions and measures at process level (source) to prevent release					
Technical conditions and measures to control dispersion from source towards the worker					
Local Exhaust Ventilation	Yes [Inhalation: 97%; Dermal: 90%]		L		L
Organisational measures to prevent /limit releases, dispersion and exposure					
Conditions and measures related to personal protection, hygiene and health evaluation					
Respiratory protection	Respiratory protection capable offering a 90% reduction in inhaled concentrations of the substance		L		
gloves	chemically resistant gloves with specific activity training [Dermal: 95%]				L
wear chemically resistant gloves (tested to EN374) in combination with specific activity training (PPE17)					
Additional good practice advice beyond the REACH CSA					
The substance is corrosive, therefore the following Personal Protective Equipment is recommended as good industrial practice advice: • Avoid contact with contaminated tools and objects • Train staff on good standard of personal hygiene. • Wash skin after contact with substance/product containing the substance. • Immediate removal/dry cleaning and disposal of spills.					
3.- Exposure estimation					
See: http://www.ercros.es/esp/internas.asp?arxiu=sl_1					
4.- Guidance to DU to evaluate whether he works inside the boundaries set by the ES					
The DU works inside the boundaries set by the ES if either the proposed risk management measures as described above are met or the downstream user can demonstrate on his own that his operational conditions and implemented risk management measures are					

adequate. This has to be done by showing that they limit the inhalation and dermal exposure to a level below the respective DNEL (given that the processes and activities in question are covered by the PROCs listed above) as given below. If measured data are not available, the DU may make use of an appropriate scaling tool such as
Dermal exposure: ECETOC TRA v2 (with modifications)
Important note: By demonstrating a safe use when comparing exposure estimates with the long-term DNEL, the acute DNEL is therefore also covered (according to R.14 guidance, acute exposure levels can be derived by multiplying long-term exposure estimates by a factor of 2).

1.- Title	
Water treatment. Sodium chlorite/chlorine dioxide	
Market sector:	
PC 37 - Water treatment chemicals	
Sector of use:	
SU 23 - Electricity, steam, gas water supply and sewage treatment	
Environment:	ERC 7/6b. (No releases)
Worker	
Use in closed system	PROC 2
2.- Operational conditions and risk management measures	
Closed system. PPE when sampling	
2.1.- Control of environmental exposure: Water treatment	
Product characteristics	
Amounts used	
Daily use at a site	<= 27.16 tonnes/day
Annual use at a site	<= 8.148E3 tonnes/year
Percentage of tonnage used at regional scale	= 100 %
Frequency and duration of use	
300 days	
Environment factors not influenced by risk management	
Receiving surface water flow rate	>= 1.8E4 m3/d
Other given operational conditions affecting environmental exposure	
Technical conditions and measures at process level (source) to prevent release	
Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil	
No releases	no releases [Water: 100%; Air: 100%; Soil: 100%]
Organizational measures to prevent/limit release from site	
Conditions and measures related to municipal sewage treatment plant	
Municipal STP	Yes [Water: 100%]
Discharge rate of STP	>= 2E3 m3/d
Application of the STP sludge on agricultural soil	Yes
Conditions and measures related to external treatment of waste for disposal	
Conditions and measures related to external recovery of waste	
Additional good practice advice beyond the REACH CSA	

SODIUM CHLORITE (SOLUTION)

2.2.- Control of workers exposure					
Control of workers exposure for "Use in closed system" [PROC 2]					
		Inhal*)		Derm*)	
		Loc	Sys	Loc	Sys
Product characteristics					
Substance in preparation	Yes		L		
Concentration of substance in product	> 25%		L		
Amounts used					
Frequency and duration of use/exposure					
Duration of activity	>4 hours		L		
Human factors not influenced by risk management					
Other given operational conditions affecting workers exposure					
Place of use	Indoors		L		
Surface of skin exposed	Two hands face (480 cm2)				L
Technical conditions and measures at process level (source) to prevent release					
Level of containment	Use in closed, continuous process with occasional controlled exposure		L		
Technical conditions and measures to control dispersion from source towards the worker					
Local Exhaust Ventilation	Yes [Inhalation: 90%; Dermal: 90%]		L		L
Organisational measures to prevent /limit releases, dispersion and exposure					
Conditions and measures related to personal protection, hygiene and health evaluation					
Respiratory protection	Respiratory protection capable offering a 90% reduction in inhaled concentrations of the substance		L		
gloves	chemically resistant gloves with specific activity training [Dermal: 95%]				L
wear chemically resistant gloves (tested to EN374) in combination with specific activity training (PPE17)					
Additional good practice advice beyond the REACH CSA					
The substance is corrosive, therefore the following Personal Protective Equipment is recommended as good industrial practice advice: • Avoid contact with contaminated tools and objects • Train staff on good standard of personal hygiene. • Wash skin after contact with substance/product containing the substance. • Immediate removal/dry cleaning and disposal of spills.					
3.- Exposure estimation					
See: http://www.ercros.es/esp/internas.asp?arxiu=sl_1					
4.- Guidance to DU to evaluate whether he works inside the boundaries set by the ES					
The DU works inside the boundaries set by the ES if either the proposed risk management measures as described above are met or the downstream user can demonstrate on his own that his operational conditions and implemented risk management measures are adequate. This has to be done by showing that they limit the inhalation and dermal exposure to a level below the respective DNEL (given that the processes and activities in question are covered by the PROCs listed above) as given below. If measured data are not available, the DU may make use of an appropriate scaling tool such as					

SODIUM CHLORITE (SOLUTION)

Dermal exposure: ECETOC TRA v2 (with modifications)
Important note: By demonstrating a safe use when comparing exposure estimates with the long-term DNEL, the acute DNEL is therefore also covered (according to R.14 guidance, acute exposure levels can be derived by multiplying long-term exposure estimates by a factor of 2).

1.- Title	
Paper pulp bleaching	
Market sector:	
PC 26 - Paper and board dye, finishing and impregnation products: including bleaches and other processing aids;	
Paper pulp bleaching	
Sector of use:	
SU 6b - Manufacture of pulp, paper and paper products	
Environment:	ERC 6b
Worker	
Closed system	PROC 1
Closed continous with occasional contact	PROC 2
Formulation or syntesis	PROC 3
Use in batch with possible exposure	PROC 4
Mixing in batch	PROC 5
Transfer at non-dedicated facilities	PROC 8a
Transfer at dedicated facilities	PROC 8b
Trasfer in small containers	PROC 9
Laboratory reagent	PROC 15
2.- Operational conditions and risk management measures	
2.1.- Control of environmental exposure: Paper pulp bleaching	
Product characteristics	
Amounts used	
Daily use at a site	<= 2.85 tonnes/day
Annual use at a site	<= 628.6 tonnes/year
Percentage of tonnage used at regional scale	= 100 %
Frequency and duration of use	
	= 220 days
Environment factors not influenced by risk management	
Receiving surface water flow rate	>= 1.8E4 m3/d
Other given operational conditions affecting environmental exposure	
Technical conditions and measures at process level (source) to prevent release	
Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil	
No releases	no releases [Water: 100%; Air: 100%; Soil: 100%]
Organizational measures to prevent/limit release from site	

SODIUM CHLORITE (SOLUTION)

Conditions and measures related to municipal sewage treatment plant					
Municipal STP	Yes [Water: 100%]				
Discharge rate of STP	>= 2E3 m3/d				
Application of the STP sludge on agricultural soil	Yes				
Conditions and measures related to external treatment of waste for disposal					
Conditions and measures related to external recovery of waste					
Additional good practice advice beyond the REACH CSA					
2.2.- Control of workers exposure					
Control of workers exposure for "Closed system " [PROC 1]					
		Inhal*)		Derm*)	
		Loc	Sys	Loc	Sys
Product characteristics					
Substance in preparation	Yes		L		
Concentration of substance in product	> 25%		L		
Amounts used					
Frequency and duration of use/exposure					
Duration of activity	>4 hours		L		
Human factors not influenced by risk management					
Other given operational conditions affecting workers exposure					
Place of use	Indoors		L		
Surface of skin exposed	One hand face only (240 cm2)				L
Technical conditions and measures at process level (source) to prevent release					
Level of containment	Use in batch and other process (synthesis) where opportunity for exposure arises		L		
Technical conditions and measures to control dispersion from source towards the worker					
Local Exhaust Ventilation	No		L		L
Organisational measures to prevent /limit releases, dispersion and exposure					
Conditions and measures related to personal protection, hygiene and health evaluation					
Respiratory protection	Respiratory protection capable offering a 90% reduction in inhaled concentrations of the substance		L		
gloves	chemically resistant gloves with specific activity training [Dermal: 95%]				L
wear chemically resistant gloves (tested to EN374) in combination with specific activity training (PPE17)					
Additional good practice advice beyond the REACH CSA					
The substance is corrosive, therefore the following Personal Protective Equipment is recommended as good industrial practice advice: • Avoid contact with contaminated tools and objects • Train staff on good standard of personal hygiene. • Wash skin after contact with substance/product containing the substance. • Immediate removal/dry cleaning and disposal of spills.					
Control of workers exposure for "Closed continuous with occasional contact" [PROC 2]					

SODIUM CHLORITE (SOLUTION)

		Inhal*)		Derm*)	
		Loc	Sys	Loc	Sys
Product characteristics					
Substance in preparation	Yes		L		
Concentration of substance in product	> 25%		L		
Amounts used					
Frequency and duration of use/exposure					
Duration of activity	>4 hours		L		
Human factors not influenced by risk management					
Other given operational conditions affecting workers exposure					
Place of use	Indoors		L		
Surface of skin exposed	Two hands face (480 cm2)				L
Technical conditions and measures at process level (source) to prevent release					
Level of containment	Use in closed, continuous process with occasional controlled exposure		L		
Technical conditions and measures to control dispersion from source towards the worker					
Local Exhaust Ventilation	Yes [Inhalation: 90%; Dermal: 90%]		L		L
Organisational measures to prevent /limit releases, dispersion and exposure					
Conditions and measures related to personal protection, hygiene and health evaluation					
Respiratory protection	Respiratory protection capable offering a 90% reduction in inhaled concentrations of the substance		L		
gloves	chemically resistant gloves with specific activity training [Dermal: 95%]				L
wear chemically resistant gloves (tested to EN374) in combination with specific activity training (PPE17)					
Additional good practice advice beyond the REACH CSA					
The substance is corrosive, therefore the following Personal Protective Equipment is recommended as good industrial practice advice: • Avoid contact with contaminated tools and objects • Train staff on good standard of personal hygiene. • Wash skin after contact with substance/product containing the substance. • Immediate removal/dry cleaning and disposal of spills.					

Control of workers exposure for "Formulation or synthesis" [PROC 3]

		Inhal*)		Derm*)	
		Loc	Sys	Loc	Sys
Product characteristics					
Substance in preparation	Yes		L		
Concentration of substance in product	> 25%		L		
Amounts used					
Frequency and duration of use/exposure					
Duration of activity	>4 hours		L		
Human factors not influenced by risk management					

SODIUM CHLORITE (SOLUTION)

Other given operational conditions affecting workers exposure					
Place of use	Indoors		L		
Surface of skin exposed	One hand face only (240 cm2)				L
Technical conditions and measures at process level (source) to prevent release					
Level of containment	Use in closed batch process (synthesis or formulation)		L		
Technical conditions and measures to control dispersion from source towards the worker					
Local Exhaust Ventilation	Yes [Inhalation: 90%; Dermal: 90%]		L		L
Organisational measures to prevent /limit releases, dispersion and exposure					
Conditions and measures related to personal protection, hygiene and health evaluation					
Respiratory protection	Respiratory protection capable offering a 90% reduction in inhaled concentrations of the substance		L		
gloves	chemically resistant gloves with specific activity training [Dermal: 95%]				L
wear chemically resistant gloves (tested to EN374) in combination with specific activity training (PPE17)					
Additional good practice advice beyond the REACH CSA					
The substance is corrosive, therefore the following Personal Protective Equipment is recommended as good industrial practice advice: • Avoid contact with contaminated tools and objects • Train staff on good standard of personal hygiene. • Wash skin after contact with substance/product containing the substance. • Immediate removal/dry cleaning and disposal of spills.					
Control of workers exposure for "Use in batch with possible exposure" [PROC 4]					
		Inhal*)		Derm*)	
		Loc	Sys	Loc	Sys
Product characteristics					
Substance in preparation	Yes		L		
Concentration of substance in product	> 25%		L		
Amounts used					
Frequency and duration of use/exposure					
Duration of activity	>4 hours		L		
Human factors not influenced by risk management					
Other given operational conditions affecting workers exposure					
Place of use	Indoors		L		
Surface of skin exposed	Two hands face (480 cm2)				L
Technical conditions and measures at process level (source) to prevent release					
Level of containment	Use in batch and other process (synthesis) where opportunity for exposure arises		L		
Technical conditions and measures to control dispersion from source towards the worker					
Local Exhaust Ventilation	Yes [Inhalation: 90%; Dermal: 90%]		L		L
Organisational measures to prevent /limit releases, dispersion and exposure					
Conditions and measures related to personal protection, hygiene and health evaluation					

Respiratory protection	Respiratory protection capable offering a 90% reduction in inhaled concentrations of the substance		L		
gloves	chemically resistant gloves with specific activity training [Dermal: 95%]				L
wear chemically resistant gloves (tested to EN374) in combination with specific activity training (PPE17)					
Additional good practice advice beyond the REACH CSA					
The substance is corrosive, therefore the following Personal Protective Equipment is recommended as good industrial practice advice: • Avoid contact with contaminated tools and objects • Train staff on good standard of personal hygiene. • Wash skin after contact with substance/product containing the substance. • Immediate removal/dry cleaning and disposal of spills.					
Control of workers exposure for "Mixing in batch" [PROC 5]					
		Inhal*)		Derm*)	
		Loc	Sys	Loc	Sys
Product characteristics					
Substance in preparation	Yes		L		
Concentration of substance in product	> 25%		L		
Amounts used					
Frequency and duration of use/exposure					
Duration of activity	>4 hours		L		
Human factors not influenced by risk management					
Other given operational conditions affecting workers exposure					
Place of use	Indoors		L		
Surface of skin exposed	Two hands face (480 cm2)				L
Technical conditions and measures at process level (source) to prevent release					
Technical conditions and measures to control dispersion from source towards the worker					
Local Exhaust Ventilation	Yes [Inhalation: 90%; Dermal: 99.5%]		L		L
Organisational measures to prevent /limit releases, dispersion and exposure					
Conditions and measures related to personal protection, hygiene and health evaluation					
Respiratory protection	Respiratory protection capable offering a 90% reduction in inhaled concentrations of the substance		L		
gloves	chemically resistant gloves with specific activity training [Dermal: 95%]				L
wear chemically resistant gloves (tested to EN374) in combination with specific activity training (PPE17)					
Additional good practice advice beyond the REACH CSA					
The substance is corrosive, therefore the following Personal Protective Equipment is recommended as good industrial practice advice: • Avoid contact with contaminated tools and objects • Train staff on good standard of personal hygiene. • Wash skin after contact with substance/product containing the substance. • Immediate removal/dry cleaning and disposal of spills.					

SODIUM CHLORITE (SOLUTION)

Control of workers exposure for "Transfer at non-dedicated facilities" [PROC 8a]					
		Inhal*)		Derm*)	
		Loc	Sys	Loc	Sys
Product characteristics					
Substance in preparation	Yes		L		
Concentration of substance in product	> 25%		L		
Amounts used					
Frequency and duration of use/exposure					
Duration of activity	15 mins - 1 hour		L		
Human factors not influenced by risk management					
Other given operational conditions affecting workers exposure					
Place of use	Indoors		L		
Surface of skin exposed	Two hands (960 cm2)				L
Technical conditions and measures at process level (source) to prevent release					
Technical conditions and measures to control dispersion from source towards the worker					
Local Exhaust Ventilation	No		L		L
Organisational measures to prevent /limit releases, dispersion and exposure					
Conditions and measures related to personal protection, hygiene and health evaluation					
Respiratory protection	Respiratory protection capable offering a 90% reduction in inhaled concentrations of the substance		L		
respirator masks	half mask respirator [Inhalation: 90%]		L		
wear a respirator conforming to EN140 with type A filter or better					
gloves	chemically resistant gloves with specific activity training and intensive management supervision controls [Dermal: 98%]				L
Wear chemically resistant gloves (tested to EN374) in combination with intensive management supervision controls (PPE18)					
Additional good practice advice beyond the REACH CSA					
The substance is corrosive, therefore the following Personal Protective Equipment is recommended as good industrial practice advice: • Avoid contact with contaminated tools and objects • Train staff on good standard of personal hygiene. • Wash skin after contact with substance/product containing the substance. • Immediate removal/dry cleaning and disposal of spills.					

Control of workers exposure for "Transfer at dedicated facilities" [PROC 8b]					
		Inhal*)		Derm*)	
		Loc	Sys	Loc	Sys
Product characteristics					
Substance in preparation	Yes		L		
Concentration of substance in product	> 25%		L		
Amounts used					
Frequency and duration of use/exposure					

SODIUM CHLORITE (SOLUTION)

Duration of activity	15 mins - 1 hour		L		
Human factors not influenced by risk management					
Other given operational conditions affecting workers exposure					
Place of use	Indoors		L		
Surface of skin exposed	Two hands face (480 cm2)				L
Technical conditions and measures at process level (source) to prevent release					
Technical conditions and measures to control dispersion from source towards the worker					
Local Exhaust Ventilation	Yes [Inhalation: 97%; Dermal: 90%]		L		L
Organisational measures to prevent /limit releases, dispersion and exposure					
Conditions and measures related to personal protection, hygiene and health evaluation					
Respiratory protection	Respiratory protection capable offering a 90% reduction in inhaled concentrations of the substance		L		
gloves	chemically resistant gloves with specific activity training [Dermal: 95%]				L
wear chemically resistant gloves (tested to EN374) in combination with specific activity training (PPE17)					
Additional good practice advice beyond the REACH CSA					
The substance is corrosive, therefore the following Personal Protective Equipment is recommended as good industrial practice advice: • Avoid contact with contaminated tools and objects • Train staff on good standard of personal hygiene. • Wash skin after contact with substance/product containing the substance. • Immediate removal/dry cleaning and disposal of spills.					
Control of workers exposure for "Transfer in small containers" [PROC 9]					
		Inhal*)		Derm*)	
		Loc	Sys	Loc	Sys
Product characteristics					
Substance in preparation	Yes		L		
Concentration of substance in product	> 25%		L		
Amounts used					
Frequency and duration of use/exposure					
Duration of activity	>4 hours		L		
Human factors not influenced by risk management					
Other given operational conditions affecting workers exposure					
Place of use	Indoors		L		
Surface of skin exposed	Two hands face (480 cm2)				L
Technical conditions and measures at process level (source) to prevent release					
Technical conditions and measures to control dispersion from source towards the worker					
Local Exhaust Ventilation	Yes [Inhalation: 90%; Dermal: 90%]		L		L
Organisational measures to prevent /limit releases, dispersion and exposure					
Conditions and measures related to personal protection, hygiene and health evaluation					

SODIUM CHLORITE (SOLUTION)

Respiratory protection	Respiratory protection capable offering a 90% reduction in inhaled concentrations of the substance		L		
gloves	chemically resistant gloves with specific activity training [Dermal: 95%]				L
wear chemically resistant gloves (tested to EN374) in combination with specific activity training (PPE17)					
Additional good practice advice beyond the REACH CSA					
The substance is corrosive, therefore the following Personal Protective Equipment is recommended as good industrial practice advice: • Avoid contact with contaminated tools and objects • Train staff on good standard of personal hygiene. • Wash skin after contact with substance/product containing the substance. • Immediate removal/dry cleaning and disposal of spills.					
Control of workers exposure for "Laboratory reagent" [PROC 15]					
		Inhal*)		Derm*)	
		Loc	Sys	Loc	Sys
Product characteristics					
Substance in preparation	Yes		L		
Concentration of substance in product	> 25%		L		
Amounts used					
Frequency and duration of use/exposure					
Duration of activity	1 - 4 hours		L		
Human factors not influenced by risk management					
Other given operational conditions affecting workers exposure					
Place of use	Indoors		L		
Surface of skin exposed	One hand face only (240 cm2)				L
Technical conditions and measures at process level (source) to prevent release					
Technical conditions and measures to control dispersion from source towards the worker					
Local Exhaust Ventilation	Yes [Inhalation: 90%; Dermal: 90%]		L		L
Organisational measures to prevent /limit releases, dispersion and exposure					
Conditions and measures related to personal protection, hygiene and health evaluation					
Respiratory protection	Respiratory protection is not used		L		
gloves	chemically resistant gloves with basic training [Dermal: 90%]				L
wear chemically resistant gloves (tested to EN374) in combination with basic employee training					
Additional good practice advice beyond the REACH CSA					
The substance is corrosive, therefore the following Personal Protective Equipment is recommended as good industrial practice advice: • Avoid contact with contaminated tools and objects • Train staff on good standard of personal hygiene. • Wash skin after contact with substance/product containing the substance. • Immediate removal/dry cleaning and disposal of spills.					
3.- Exposure estimation					

SODIUM CHLORITE (SOLUTION)

See: http://www.ercros.es/esp/internas.asp?arxiu=sl_1
4.- Guidance to DU to evaluate whether he works inside the boundaries set by the ES
The DU works inside the boundaries set by the ES if either the proposed risk management measures as described above are met or the downstream user can demonstrate on his own that his operational conditions and implemented risk management measures are adequate. This has to be done by showing that they limit the inhalation and dermal exposure to a level below the respective DNEL (given that the processes and activities in question are covered by the PROCs listed above) as given below. If measured data are not available, the DU may make use of an appropriate scaling tool such as Dermal exposure: ECETOC TRA v2 (with modifications) Important note: By demonstrating a safe use when comparing exposure estimates with the long-term DNEL, the acute DNEL is therefore also covered (according to R.14 guidance, acute exposure levels can be derived by multiplying long-term exposure estimates by a factor of 2).

1.- Title. Laboratory reagent	
Market sector:	
PC 21 - Laboratory Chemicals	
Sector of use:	
SU 24 - Scientific research and development	
Laboratory reagent	
Environment:	ERC 6b
Worker	
Laboratory reagent	PROC 15
2- Operational conditions and risk management measures	
2. 1.- Control of environmental exposure: Laboratory reagent	
Product characteristics	
Amounts used	
Daily use at a site	<= 1.4E-6 tonnes/day
Annual use at a site	<= 5E-4 tonnes/year
Percentage of tonnage used at regional scale	= 10 %
Frequency and duration of use	
ESVOC 39 duration	= 365 days
Environment factors not influenced by risk management	
Receiving surface water flow rate	>= 1.8E4 m3/d
Other given operational conditions affecting environmental exposure	
Technical conditions and measures at process level (source) to prevent release	
Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil	
ESVOC39	Lab reagent [Water: 50%; Air: 50%; Soil: 100%]
laboratory reagent	
Organizational measures to prevent/limit release from site	
Conditions and measures related to municipal sewage treatment plant	
Municipal STP	Yes [Water: 87.3%]

SODIUM CHLORITE (SOLUTION)

Discharge rate of STP	>= 2E3 m3/d				
Application of the STP sludge on agricultural soil	Yes				
Conditions and measures related to external treatment of waste for disposal					
Conditions and measures related to external recovery of waste					
Additional good practice advice beyond the REACH CSA					
Control of workers exposure for "Laboratory reagent" [PROC 15]					
		Inhal*)		Derm*)	
		Loc	Sys	Loc	Sys
Product characteristics					
Substance in preparation	Yes		L		
Concentration of substance in product	> 25%		L		
Amounts used					
Frequency and duration of use/exposure					
Duration of activity	1 - 4 hours		L		
Human factors not influenced by risk management					
Other given operational conditions affecting workers exposure					
Place of use	Indoors		L		
Surface of skin exposed	One hand face only (240 cm2)				L
Technical conditions and measures at process level (source) to prevent release					
Technical conditions and measures to control dispersion from source towards the worker					
Local Exhaust Ventilation	Yes [Inhalation: 90%; Dermal: 90%]		L		L
Organisational measures to prevent /limit releases, dispersion and exposure					
Conditions and measures related to personal protection, hygiene and health evaluation					
Respiratory protection	Respiratory protection is not used		L		
gloves	chemically resistant gloves with basic training [Dermal: 90%]				L
wear chemically resistant gloves (tested to EN374) in combination with basic employee training					
Additional good practice advice beyond the REACH CSA					
3.- Exposure estimation					
See: http://www.ercros.es/esp/internas.asp?arxiu=sl_1					
4.- Guidance to DU to evaluate whether he works inside the boundaries set by the ES					
The DU works inside the boundaries set by the ES if either the proposed risk management measures as described above are met or the downstream user can demonstrate on his own that his operational conditions and implemented risk management measures are adequate. This has to be done by showing that they limit the inhalation and dermal exposure to a level below the respective DNEL (given that the processes and activities in question are covered by the PROCs listed above) as given below. If measured data are not available, the DU may make use of an appropriate scaling tool such as Dermal exposure: ECETOC TRA v2 (with modifications) Important note: By demonstrating a safe use when comparing exposure estimates with the long-term DNEL, the acute DNEL is therefore also covered (according to R.14 guidance, acute exposure levels can be derived by multiplying long-term exposure estimates by a factor of 2).					

1.- Title. Bleaching for textile

SODIUM CHLORITE (SOLUTION)

Market sector:			
PC 34 - Textile dyes, finishing and impregnating products; including bleaches and other processing aids;			
Sector of use:			
SU 5 - Manufacture of textiles, leather, fur			
Textile treatment			
Environment:		ERC 6b	
Worker			
Closed use. No exposure		PROC 1	
Closed continous, ocasional exposure		PROC 2	
Closed batch process		PROC 3	
Mixing for formulations		PROC 5	
Transfer at non-dedicated facilities		PROC 8a	
Trasfer at dedicated facilities		PROC 8b	
2.- Operational conditions and risk management measures			
2.1.- Control of environmental exposure: Bleaching for textile			
Product characteristics			
Amounts used			
Daily use at a site	<= 3.16 tonnes/day		
Annual use at a site	<= 695.6 tonnes/year		
Percentage of tonnage used at regional scale	= 100 %		
Frequency and duration of use			
Frequency and duration of use. AISE formulation	= 220 days		
Environment factors not influenced by risk management			
Receiving surface water flow rate	>= 1.8E4 m3/d		
Other given operational conditions affecting environmental exposure			
Technical conditions and measures at process level (source) to prevent release			
Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil			
No releases	no releases [Water: 100%; Air: 100%; Soil: 100%]		
Organizational measures to prevent/limit release from site			
Conditions and measures related to municipal sewage treatment plant			
Municipal STP	Yes [Water: 100%]		
Discharge rate of STP	>= 2E3 m3/d		
Application of the STP sludge on agricultural soil	Yes		
Conditions and measures related to external treatment of waste for disposal			
Conditions and measures related to external recovery of waste			
Additional good practice advice beyond the REACH CSA			
2.2.- Control of workers exposure for "Closed use. No exposure" [PROC 1]			
		Inhal*)	Derm*)

SODIUM CHLORITE (SOLUTION)

		Loc	Sys	Loc	Sys
Product characteristics					
Substance in preparation	Yes		L		
Concentration of substance in product	> 25%		L		
Amounts used					
Frequency and duration of use/exposure					
Duration of activity	>4 hours		L		
Human factors not influenced by risk management					
Other given operational conditions affecting workers exposure					
Place of use	Indoors		L		
Surface of skin exposed	One hand face only (240 cm2)				L
Technical conditions and measures at process level (source) to prevent release					
Level of containment	Use in batch and other process (synthesis) where opportunity for exposure arises		L		
Technical conditions and measures to control dispersion from source towards the worker					
Local Exhaust Ventilation	No		L		L
Organisational measures to prevent /limit releases, dispersion and exposure					
Conditions and measures related to personal protection, hygiene and health evaluation					
Respiratory protection	Respiratory protection capable offering a 90% reduction in inhaled concentrations of the substance		L		
gloves	chemically resistant gloves with specific activity training [Dermal: 95%]				L
wear chemically resistant gloves (tested to EN374) in combination with specific activity training (PPE17)					
Additional good practice advice beyond the REACH CSA					
Control of workers exposure for "Closed continuous, occasional exposure" [PROC 2]					
		Inhal*)		Derm*)	
		Loc	Sys	Loc	Sys
Product characteristics					
Substance in preparation	Yes		L		
Concentration of substance in product	> 25%		L		
Amounts used					
Frequency and duration of use/exposure					
Duration of activity	>4 hours		L		
Human factors not influenced by risk management					
Other given operational conditions affecting workers exposure					
Place of use	Indoors		L		
Surface of skin exposed	Two hands face (480 cm2)				L
Technical conditions and measures at process level (source) to prevent release					
Level of containment	Use in closed, continuous process with occasional controlled exposure		L		

SODIUM CHLORITE (SOLUTION)

Technical conditions and measures to control dispersion from source towards the worker					
Local Exhaust Ventilation	Yes [Inhalation: 90%; Dermal: 90%]		L		L
Organisational measures to prevent /limit releases, dispersion and exposure					
Conditions and measures related to personal protection, hygiene and health evaluation					
Respiratory protection	Respiratory protection capable offering a 90% reduction in inhaled concentrations of the substance		L		
gloves	chemically resistant gloves with specific activity training [Dermal: 95%]				L
wear chemically resistant gloves (tested to EN374) in combination with specific activity training (PPE17)					
Additional good practice advice beyond the REACH CSA					
Control of workers exposure for "Closed batch process" [PROC 3]					
		Inhal*)		Derm*)	
		Loc	Sys	Loc	Sys
Product characteristics					
Substance in preparation	Yes		L		
Concentration of substance in product	> 25%		L		
Amounts used					
Frequency and duration of use/exposure					
Duration of activity	>4 hours		L		
Human factors not influenced by risk management					
Other given operational conditions affecting workers exposure					
Place of use	Indoors		L		
Surface of skin exposed	One hand face only (240 cm2)				L
Technical conditions and measures at process level (source) to prevent release					
Level of containment	Use in closed batch process (synthesis or formulation)		L		
Technical conditions and measures to control dispersion from source towards the worker					
Local Exhaust Ventilation	Yes [Inhalation: 90%; Dermal: 90%]		L		L
Organisational measures to prevent /limit releases, dispersion and exposure					
Conditions and measures related to personal protection, hygiene and health evaluation					
Respiratory protection	Respiratory protection capable offering a 90% reduction in inhaled concentrations of the substance		L		
gloves	chemically resistant gloves with specific activity training [Dermal: 95%]				L
wear chemically resistant gloves (tested to EN374) in combination with specific activity training (PPE17)					
Additional good practice advice beyond the REACH CSA					
Control of workers exposure for "Mixing for formulations" [PROC 5]					
		Inhal*)		Derm*)	
		Loc	Sys	Loc	Sys
Product characteristics					
Substance in preparation	Yes		L		

SODIUM CHLORITE (SOLUTION)

Concentration of substance in product	> 25%		L		
Amounts used					
Frequency and duration of use/exposure					
Duration of activity	>4 hours		L		
Human factors not influenced by risk management					
Other given operational conditions affecting workers exposure					
Place of use	Indoors		L		
Surface of skin exposed	Two hands face (480 cm2)				L
Technical conditions and measures at process level (source) to prevent release					
Technical conditions and measures to control dispersion from source towards the worker					
Local Exhaust Ventilation	Yes [Inhalation: 90%; Dermal: 99.5%]		L		L
Organisational measures to prevent /limit releases, dispersion and exposure					
Conditions and measures related to personal protection, hygiene and health evaluation					
Respiratory protection	Respiratory protection capable offering a 90% reduction in inhaled concentrations of the substance		L		
gloves	chemically resistant gloves with specific activity training [Dermal: 95%]				L
wear chemically resistant gloves (tested to EN374) in combination with specific activity training (PPE17)					
Additional good practice advice beyond the REACH CSA					
Control of workers exposure for "Transfer at non-dedicated facilities" [PROC 8a]					
		Inhal*)		Derm*)	
		Loc	Sys	Loc	Sys
Product characteristics					
Substance in preparation	Yes		L		
Concentration of substance in product	> 25%		L		
Amounts used					
Frequency and duration of use/exposure					
Duration of activity	15 mins - 1 hour		L		
Human factors not influenced by risk management					
Other given operational conditions affecting workers exposure					
Place of use	Indoors		L		
Surface of skin exposed	Two hands (960 cm2)				L
Technical conditions and measures at process level (source) to prevent release					
Technical conditions and measures to control dispersion from source towards the worker					
Local Exhaust Ventilation	No		L		L
Organisational measures to prevent /limit releases, dispersion and exposure					
Conditions and measures related to personal protection, hygiene and health evaluation					
Respiratory protection	Respiratory protection capable offering a 90% reduction in inhaled concentrations of the substance		L		
respirator masks	half mask respirator [Inhalation: 90%]		L		

wear a respirator conforming to EN140 with type A filter or better					
gloves	chemically resistant gloves with specific activity training and intensive management supervision controls [Dermal: 98%]				L
Wear chemically resistant gloves (tested to EN374) in combination with intensive management supervision controls (PPE18)					
Additional good practice advice beyond the REACH CSA					
Control of workers exposure for "Transfer at dedicated facilities" [PROC 8b]					
		Inhal*)		Derm*)	
		Loc	Sys	Loc	Sys
Product characteristics					
Substance in preparation	Yes		L		
Concentration of substance in product	> 25%		L		
Amounts used					
Frequency and duration of use/exposure					
Duration of activity	15 mins - 1 hour		L		
Human factors not influenced by risk management					
Other given operational conditions affecting workers exposure					
Place of use	Indoors		L		
Surface of skin exposed	Two hands face (480 cm2)				L
Technical conditions and measures at process level (source) to prevent release					
Technical conditions and measures to control dispersion from source towards the worker					
Local Exhaust Ventilation	Yes [Inhalation: 97%; Dermal: 90%]		L		L
Organisational measures to prevent /limit releases, dispersion and exposure					
Conditions and measures related to personal protection, hygiene and health evaluation					
Respiratory protection	Respiratory protection capable offering a 90% reduction in inhaled concentrations of the substance		L		
gloves	chemically resistant gloves with specific activity training [Dermal: 95%]				L
wear chemically resistant gloves (tested to EN374) in combination with specific activity training (PPE17)					
Additional good practice advice beyond the REACH CSA					

3.- Exposure estimation

See: http://www.ercros.es/esp/internas.asp?arxiu=sl_1

4.- Guidance to DU to evaluate whether he works inside the boundaries set by the ES

The DU works inside the boundaries set by the ES if either the proposed risk management measures as described above are met or the downstream user can demonstrate on his own that his operational conditions and implemented risk management measures are adequate. This has to be done by showing that they limit the inhalation and dermal exposure to a level below the respective DNEL (given that the processes and activities in question are covered by the PROCs listed above) as given below. If measured data are not available, the DU may make use of an appropriate scaling tool such as
Dermal exposure: ECETOC TRA v2 (with modifications)
Important note: By demonstrating a safe use when comparing exposure estimates with the long-term DNEL, the acute DNEL is therefore also covered (according to R.14 guidance, acute exposure levels can be derived by multiplying long-term exposure estimates by a factor of 2).

SODIUM CHLORITE (SOLUTION)

1.- Title. Professional bleaching					
Market sector:					
PC 34 - Textile dyes, finishing and impregnating products; including bleaches and other processing aids;					
Sector of use:					
SU 5 - Manufacture of textiles, leather, fur					
Environment:	ERC 8b				
Worker					
2.- Operational conditions and risk management measures					
2.2.- Control of environmental exposure: Professional bleaching					
Product characteristics					
Amounts used					
Daily wide dispersive use	= 5.5E-5 tonnes/day				
Frequency and duration of use					
Environment factors not influenced by risk management					
Receiving surface water flow rate	>= 1.8E4 m3/d				
Other given operational conditions affecting environmental exposure					
Technical conditions and measures at process level (source) to prevent release					
Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil					
Organizational measures to prevent/limit release from site					
Conditions and measures related to municipal sewage treatment plant					
Municipal STP	Yes [Water: 87.3%]				
Discharge rate of STP	>= 2E3 m3/d				
Application of the STP sludge on agricultural soil	Yes				
Conditions and measures related to external treatment of waste for disposal					
Conditions and measures related to external recovery of waste					
Additional good practice advice beyond the REACH CSA					
2.2.- Control of workers exposure for "Dipping articles" [PROC 13]					
		Inhal*)		Derm*)	
		Loc	Sys	Loc	Sys
Product characteristics					
Substance in preparation	yes				
Amounts used					
Frequency and duration of use/exposure					
Duration of activity	>4 hours				
Human factors not influenced by risk management					
Other given operational conditions affecting workers exposure					
Place of use	Indoors				

Surface of skin exposed	Two hands on face (2082.5 cm2)			L	L
Technical conditions and measures at process level (source) to prevent release					
Technical conditions and measures to control dispersion from source towards the worker					
Local Exhaust Ventilation	No			L	L
Organisational measures to prevent /limit releases, dispersion and exposure					
Conditions and measures related to personal protection, hygiene and health evaluation					
Respiratory protection	Respiratory protection is not used				
Additional good practice advice beyond the REACH CSA					

3.- Exposure estimation

See: http://www.ercros.es/esp/internas.asp?arxiu=sl_1

4.- Guidance to DU to evaluate whether he works inside the boundaries set by the ES

The DU works inside the boundaries set by the ES if either the proposed risk management measures as described above are met or the downstream user can demonstrate on his own that his operational conditions and implemented risk management measures are adequate. This has to be done by showing that they limit the inhalation and dermal exposure to a level below the respective DNEL (given that the processes and activities in question are covered by the PROCs listed above) as given below. If measured data are not available, the DU may make use of an appropriate scaling tool such as
Dermal exposure: ECETOC TRA v2 (with modifications)
Important note: By demonstrating a safe use when comparing exposure estimates with the long-term DNEL, the acute DNEL is therefore also covered (according to R.14 guidance, acute exposure levels can be derived by multiplying long-term exposure estimates by a factor of 2).

1.- Title. Professional end-use stage. Cleaners	
Market sector:	
PC 35 - Washing and Cleaning Products (including solvent based products)	
Sector of use:	
SU 22- Professional uses: Public domain	
Environment:	ERC 8b
Worker	
Brushing application	PROC 10
Hand-mixing	PROC 19
2.- Operational conditions and risk management measures	
Use of gloves	
2.1.- Control of environmental exposure: Professional end-use stage. Cleaners with bleaching	
Product characteristics	
Amounts used	
Daily wide dispersive use	= 8.2E-6 tonnes/day
Frequency and duration of use	
Environment factors not influenced by risk management	
Receiving surface water flow rate	>= 1.8E4 m3/d
Other given operational conditions affecting environmental exposure	
Technical conditions and measures at process level (source) to prevent release	

SODIUM CHLORITE (SOLUTION)

Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil					
Organizational measures to prevent/limit release from site					
Conditions and measures related to municipal sewage treatment plant					
Municipal STP	Yes [Water: 87.3%]				
Discharge rate of STP	>= 2E3 m3/d				
Application of the STP sludge on agricultural soil	Yes				
Conditions and measures related to external treatment of waste for disposal					
Conditions and measures related to external recovery of waste					
Additional good practice advice beyond the REACH CSA					
2.2.- Control of workers exposure					
Control of workers exposure for "Brushing application" [PROC 10]					
		Inhal*)		Derm*)	
		Loc	Sys	Loc	Sys
Product characteristics					
Substance in preparation	Yes		L		
Concentration of substance in product	> 25%		L		
Amounts used					
Frequency and duration of use/exposure					
Duration of activity	>4 hours		L		
Human factors not influenced by risk management					
Other given operational conditions affecting workers exposure					
Place of use	Indoors		L		
Surface of skin exposed	Two hands (960 cm2)				L
Technical conditions and measures at process level (source) to prevent release					
Technical conditions and measures to control dispersion from source towards the worker					
Local Exhaust Ventilation	No		L		L
Organisational measures to prevent /limit releases, dispersion and exposure					
Conditions and measures related to personal protection, hygiene and health evaluation					
Respiratory protection	Respiratory protection is not used		L		
gloves	wear suitable gloves [Dermal: 90%]				L
wear suitable gloves tested to EN374 (PPE15)					
Additional good practice advice beyond the REACH CSA					
3.- Exposure estimation					
See: http://www.ercros.es/esp/internas.asp?arxiu=sl_1					
4.- Guidance to DU to evaluate whether he works inside the boundaries set by the ES					
The DU works inside the boundaries set by the ES if either the proposed risk management measures as described above are met or the downstream user can demonstrate on his own that his operational conditions and implemented risk management measures are adequate. This has to be done by showing that they limit the inhalation and dermal exposure to a level below the respective DNEL (given that the processes and activities in question are covered by the PROCs listed above) as given below. If measured data are not available, the DU may make use of an appropriate scaling tool such as					

SODIUM CHLORITE (SOLUTION)

Dermal exposure: ECETOC TRA v2 (with modifications)
Important note: By demonstrating a safe use when comparing exposure estimates with the long-term DNEL, the acute DNEL is therefore also covered (according to R.14 guidance, acute exposure levels can be derived by multiplying long-term exposure estimates by a factor of 2).

1.- Title. Professional end-use stage. Cleaning outdoors	
Market sector:	
PC 35 - Washing and Cleaning Products (including solvent based products)	
Sector of use:	
SU 22- Professional uses: Public domain	ERC 8e
Worker	
Cleaning Outdoors	PROC 10
Hand-mixing	PROC 19
2.- Operational conditions and risk management measures	
2.1.- Control of environmental exposure: Professional end-use stage. Cleaning outdoors	
Product characteristics	
Amounts used	
Daily wide dispersive use	= 1.64E-5 tonnes/day
Frequency and duration of use	
Environment factors not influenced by risk management	
Receiving surface water flow rate	>= 1.8E4 m3/d
Other given operational conditions affecting environmental exposure	
Technical conditions and measures at process level (source) to prevent release	
Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil	
Organizational measures to prevent/limit release from site	
Conditions and measures related to municipal sewage treatment plant	
Municipal STP	Yes [Water: 87.3%]
Discharge rate of STP	>= 2E3 m3/d
Application of the STP sludge on agricultural soil	Yes
Conditions and measures related to external treatment of waste for disposal	
Conditions and measures related to external recovery of waste	
Additional good practice advice beyond the REACH CSA	
2.2.- Control of workers exposure	
Control of workers exposure for "Cleaning Outdoors" [PROC 10]	

		Inhal*)		Derm*)	
		Loc	Sys	Loc	Sys
Product characteristics					
Substance in preparation	Yes		L		
Concentration of substance in product	> 25%		L		
Amounts used					

SODIUM CHLORITE (SOLUTION)

Frequency and duration of use/exposure					
Duration of activity	>4 hours		L		
Human factors not influenced by risk management					
Other given operational conditions affecting workers exposure					
Place of use	Indoors		L		
Surface of skin exposed	Two hands (960 cm2)				L
Technical conditions and measures at process level (source) to prevent release					
Technical conditions and measures to control dispersion from source towards the worker					
Local Exhaust Ventilation	No		L		L
Organisational measures to prevent /limit releases, dispersion and exposure					
Conditions and measures related to personal protection, hygiene and health evaluation					
Respiratory protection	Respiratory protection is not used		L		
gloves	wear suitable gloves [Dermal: 90%]				L
wear suitable gloves tested to EN374 (PPE15)					
Additional good practice advice beyond the REACH CSA					

3.- Exposure estimation

See: http://www.ercros.es/esp/internas.asp?arxiu=sl_1

4.- Guidance to DU to evaluate whether he works inside the boundaries set by the ES

The DU works inside the boundaries set by the ES if either the proposed risk management measures as described above are met or the downstream user can demonstrate on his own that his operational conditions and implemented risk management measures are adequate. This has to be done by showing that they limit the inhalation and dermal exposure to a level below the respective DNEL (given that the processes and activities in question are covered by the PROCs listed above) as given below. If measured data are not available, the DU may make use of an appropriate scaling tool such as
Dermal exposure: ECETOC TRA v2 (with modifications)
Important note: By demonstrating a safe use when comparing exposure estimates with the long-term DNEL, the acute DNEL is therefore also covered (according to R.14 guidance, acute exposure levels can be derived by multiplying long-term exposure estimates by a factor of 2).

1.- Title. Consumer end-use stage. Cleaners with bleaching	
Market sector:	
PC 35 - Washing and Cleaning Products (including solvent based products)	
Environment:	ERC 8b
Consumer	
Consumer. Cleaning Indoors	PC 35
Cleaning Outdoors	PROC 10
Hand-mixing	PROC 19
2.- Operational conditions and risk management measures	
2.1.- Control of environmental exposure: Consumer end-use stage. Cleaners with bleaching	
Product characteristics	
Amounts used*	
Daily wide dispersive use	= 8.2E-6 tonnes/day

SODIUM CHLORITE (SOLUTION)

Frequency and duration of use	
Environment factors not influenced by risk management	
Receiving surface water flow rate	>= 1.8E4 m3/d
Other given operational conditions affecting environmental exposure	
Conditions and measures related to municipal sewage treatment plant	
Municipal STP	Yes [Water: 87.3%]
Discharge rate of STP	>= 2E3 m3/d
Application of the STP sludge on agricultural soil	Yes
Conditions and measures related to external treatment of waste for disposal	
Conditions and measures related to external recovery of waste	
Additional good practice advice beyond the REACH CSA	
2.2.- Control of consumers exposure	
Control of consumer's exposure for "Consumer. Cleaning Indoors" [PC 35]	
Product characteristics	
Preparation	
Amounts used	
Frequency and duration of use/exposure	
Daily	
3.- Exposure estimation: Cleaning Indoors	
See: http://www.ercros.es/esp/internas.asp?arxiu=sl_1	
4.- Guidance to DU to evaluate whether he works inside the boundaries set by the ES	
The DU works inside the boundaries set by the ES if either the proposed risk management measures as described above are met or the downstream user can demonstrate on his own that his operational conditions and implemented risk management measures are adequate. This has to be done by showing that they limit the inhalation and dermal exposure to a level below the respective DNEL (given that the processes and activities in question are covered by the PROCs listed above) as given below. If measured data are not available, the DU may make use of an appropriate scaling tool such as Dermal exposure: ECETOC TRA v2 (with modifications) Important note: By demonstrating a safe use when comparing exposure estimates with the long-term DNEL, the acute DNEL is therefore also covered (according to R.14 guidance, acute exposure levels can be derived by multiplying long-term exposure estimates by a factor of 2).	

1.- Title. Consumer end-use stage. Cleaning outdoors.	
Market sector:	
PC 35 - Washing and Cleaning Products (including solvent based products)	
Environment:	ERC 8e
Consumer	
Consumer cleaning Outdoors	PC 35
Cleaning Outdoors	PROC 10
Hand-mixing	PROC 19
2.- Operational conditions and risk management measures	

SODIUM CHLORITE (SOLUTION)

2.1.- Control of environmental exposure: Consumer end-use stage. Cleaning outdoors.	
Product characteristics	
Amounts used*	
Daily wide dispersive use	= 8.2E-6 tonnes/day
Frequency and duration of use	
Environment factors not influenced by risk management	
Receiving surface water flow rate	>= 1.8E4 m3/d
Other given operational conditions affecting environmental exposure	
Conditions and measures related to municipal sewage treatment plant	
Municipal STP	Yes [Water: 87.3%]
Discharge rate of STP	>= 2E3 m3/d
Application of the STP sludge on agricultural soil	Yes
Conditions and measures related to external treatment of waste for disposal	
Conditions and measures related to external recovery of waste	
Additional good practice advice beyond the REACH CSA	
2.2.- Control of consumers exposure	
Control of consumers exposure for "Consumer cleaning Outdoors" [PC 35]	
Product characteristics	
preparation	
Amounts used	
Frequency and duration of use/exposure	
daily	
3.- Exposure estimation	
See: http://www.ercros.es/esp/internas.asp?arxiu=sl_1	
4.- Guidance to DU to evaluate whether he works inside the boundaries set by the ES	
The DU works inside the boundaries set by the ES if either the proposed risk management measures as described above are met or the downstream user can demonstrate on his own that his operational conditions and implemented risk management measures are adequate. This has to be done by showing that they limit the inhalation and dermal exposure to a level below the respective DNEL (given that the processes and activities in question are covered by the PROCs listed above) as given below. If measured data are not available, the DU may make use of an appropriate scaling tool such as Dermal exposure: ECETOC TRA v2 (with modifications) Important note: By demonstrating a safe use when comparing exposure estimates with the long-term DNEL, the acute DNEL is therefore also covered (according to R.14 guidance, acute exposure levels can be derived by multiplying long-term exposure estimates by a factor of 2).	

1.- Title. Starch Industry. Oxidant	
Market sector:	
PC 19 - Intermediate	
Sector of use:	
SU 4 – Manufacture of food products	

SODIUM CHLORITE (SOLUTION)

Environment:			ERC 6a		
Worker					
used in closed system. No exposure			PROC 1		
Used in closed system. Occasional exposure			PROC 2		
Used in closed system. Formulation			PROC 3		
Used in batch			PROC 4		
2.- Operational conditions and risk management measures					
2.1.- Control of environmental exposure: Oxidant					
Product characteristics					
Amounts used					
Daily use at a site	<= 0.45 tonnes/day				
Annual use at a site	<= 100 tonnes/year				
Percentage of tonnage used at regional scale	= 100 %				
Frequency and duration of use					
Frequency and duration of use. AISE formulation	= 220 days				
Environment factors not influenced by risk management					
Receiving surface water flow rate	>= 1.8E4 m3/d				
Other given operational conditions affecting environmental exposure					
Technical conditions and measures at process level (source) to prevent release					
Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil					
No releases	no releases [Water: 100%; Air: 100%; Soil: 100%]				
no releases. Wastes are incinerate.					
Organizational measures to prevent/limit release from site					
Conditions and measures related to municipal sewage treatment plant					
Municipal STP	Yes [Water: 100%]				
Discharge rate of STP	>= 2E3 m3/d				
Application of the STP sludge on agricultural soil	Yes				
Conditions and measures related to external treatment of waste for disposal					
Conditions and measures related to external recovery of waste					
Additional good practice advice beyond the REACH CSA					
2.2.- Control of workers exposure					
Control of workers exposure for "used in closed system. No exposure" [PROC 1]					
			Inhal*)		Derm*)	
			Loc	Sys	Loc	Sys
Product characteristics						
Substance in preparation	Yes			L		
Concentration of substance in product	> 25%			L		
Amounts used						
Frequency and duration of use/exposure						

SODIUM CHLORITE (SOLUTION)

Duration of activity	>4 hours		L		
Human factors not influenced by risk management					
Other given operational conditions affecting workers exposure					
Place of use	Indoors		L		
Surface of skin exposed	One hand face only (240 cm2)				L
Technical conditions and measures at process level (source) to prevent release					
Level of containment	Use in batch and other process (synthesis) where opportunity for exposure arises		L		
Technical conditions and measures to control dispersion from source towards the worker					
Local Exhaust Ventilation	No		L		L
Organisational measures to prevent /limit releases, dispersion and exposure					
Conditions and measures related to personal protection, hygiene and health evaluation					
Respiratory protection	Respiratory protection capable offering a 90% reduction in inhaled concentrations of the substance		L		
gloves	chemically resistant gloves with specific activity training [Dermal: 95%]				L
wear chemically resistant gloves (tested to EN374) in combination with specific activity training (PPE17)					
Additional good practice advice beyond the REACH CSA					
Control of workers exposure for "Used in closed system. Occasional exposure" [PROC 2]					
		Inhal*)		Derm*)	
		Loc	Sys	Loc	Sys
Product characteristics					
Substance in preparation	Yes		L		
Concentration of substance in product	> 25%		L		
Amounts used					
Frequency and duration of use/exposure					
Duration of activity	>4 hours		L		
Human factors not influenced by risk management					
Other given operational conditions affecting workers exposure					
Place of use	Indoors		L		
Surface of skin exposed	Two hands face (480 cm2)				L
Technical conditions and measures at process level (source) to prevent release					
Level of containment	Use in closed, continuous process with occasional controlled exposure		L		
Technical conditions and measures to control dispersion from source towards the worker					
Local Exhaust Ventilation	Yes [Inhalation: 90%; Dermal: 90%]		L		L
Organisational measures to prevent /limit releases, dispersion and exposure					
Conditions and measures related to personal protection, hygiene and health evaluation					
Respiratory protection	Respiratory protection capable offering a 90% reduction in inhaled concentrations of the substance		L		

SODIUM CHLORITE (SOLUTION)

gloves	chemically resistant gloves with specific activity training [Dermal: 95%]				L
wear chemically resistant gloves (tested to EN374) in combination with specific activity training (PPE17)					
Additional good practice advice beyond the REACH CSA					
Control of workers exposure for "Used in closed system. Formulation" [PROC 3]					
		Inhal*)		Derm*)	
		Loc	Sys	Loc	Sys
Product characteristics					
Substance in preparation	Yes		L		
Concentration of substance in product	> 25%		L		
Amounts used					
Frequency and duration of use/exposure					
Duration of activity	>4 hours		L		
Human factors not influenced by risk management					
Other given operational conditions affecting workers exposure					
Place of use	Indoors		L		
Surface of skin exposed	One hand face only (240 cm2)				L
Technical conditions and measures at process level (source) to prevent release					
Level of containment	Use in closed batch process (synthesis or formulation)		L		
Technical conditions and measures to control dispersion from source towards the worker					
Local Exhaust Ventilation	Yes [Inhalation: 90%; Dermal: 90%]		L		L
Organisational measures to prevent /limit releases, dispersion and exposure					
Conditions and measures related to personal protection, hygiene and health evaluation					
Respiratory protection	Respiratory protection capable offering a 90% reduction in inhaled concentrations of the substance		L		
gloves	chemically resistant gloves with specific activity training [Dermal: 95%]				L
wear chemically resistant gloves (tested to EN374) in combination with specific activity training (PPE17)					
Additional good practice advice beyond the REACH CSA					

SODIUM CHLORITE (SOLUTION)

Control of workers exposure for "Used in batch" [PROC 4]					
		Inhal*)		Derm*)	
		Loc	Sys	Loc	Sys
Product characteristics					
Substance in preparation	Yes		L		
Concentration of substance in product	> 25%		L		
Amounts used					
Frequency and duration of use/exposure					
Duration of activity	>4 hours		L		
Human factors not influenced by risk management					
Other given operational conditions affecting workers exposure					
Place of use	Indoors		L		
Surface of skin exposed	Two hands face (480 cm2)				L
Technical conditions and measures at process level (source) to prevent release					
Level of containment	Use in batch and other process (synthesis) where opportunity for exposure arises		L		
Technical conditions and measures to control dispersion from source towards the worker					
Local Exhaust Ventilation	Yes [Inhalation: 90%; Dermal: 90%]		L		L
Organisational measures to prevent /limit releases, dispersion and exposure					
Conditions and measures related to personal protection, hygiene and health evaluation					
Respiratory protection	Respiratory protection capable offering a 90% reduction in inhaled concentrations of the substance		L		
gloves	chemically resistant gloves with specific activity training [Dermal: 95%]				L
wear chemically resistant gloves (tested to EN374) in combination with specific activity training (PPE17)					
Additional good practice advice beyond the REACH CSA					

3.- Exposure estimation

See: http://www.ercros.es/esp/internas.asp?arxiu=sl_1

4.- Guidance to DU to evaluate whether he works inside the boundaries set by the ES

The DU works inside the boundaries set by the ES if either the proposed risk management measures as described above are met or the downstream user can demonstrate on his own that his operational conditions and implemented risk management measures are adequate. This has to be done by showing that they limit the inhalation and dermal exposure to a level below the respective DNEL (given that the processes and activities in question are covered by the PROCs listed above) as given below. If measured data are not available, the DU may make use of an appropriate scaling tool such as
Dermal exposure: ECETOC TRA v2 (with modifications)
Important note: By demonstrating a safe use when comparing exposure estimates with the long-term DNEL, the acute DNEL is therefore also covered (according to R.14 guidance, acute exposure levels can be derived by multiplying long-term exposure estimates by a factor of 2).