

SAFETY DATA SHEET

(in accordance with Regulation (EU) 2020/878)

0020-pH PLUS

FLUIDRA
INDUSTRY
INQUIDE

Version 1 Date of compilation: 5/12/2018

Version 7 (replaces version 6)

Revision date: 09/03/2022

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

1.1 Product identifier.

Product Name: pH PLUS
Product Code: 0020
Chemical Name: sodio carbonato
Index No: 011-005-00-2
CAS No: 497-19-8
EC No: 207-838-8
Registration No: 01-2119485498-19-XXXX

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

Regolatore di pH

Uses advised against:

Usi differenti a quelli consigliati.

Gli scenari di esposizione relativi agli usi si possono trovare nell'Allegato

1.3 Details of the supplier of the safety data sheet.

Company's identification:

Company: **SIBO Fluidra Netherlands B.V.**
Address: Doornhoek 3950,
City: 5465 TC Veghel The Netherlands
Province: Barcelona
Telephone: Tel. +31 413 29 39 18
Fax: +34 93 713 41 11
E-mail: fds@inquide.com

Responsible for market placement:

Company: **SSA Fluidra Österreich GmbH**
Address: Untersbergster, 10
City: A-5082 GRÖDIG
Province: Österreich
Telephone: Tel: +43 6246 77 000

1.4 Emergency telephone number: (Disponibile 24 ore)

CAV accreditati: Roma +39 06 68 59 3726; Foggia +39 800 18 34 59; Napoli +39 081 54 53 333; Roma +39 06 49 97 80 00; Roma +39 06 30 54 343; Firenze +39 055 79 47 819; Pavia +39 0382 24 444; Milano +39 02 66 10 10 29; Bergamo +39 800 88 33 00; Verona +39 800 01 18 58.

SECTION 2: HAZARDS IDENTIFICATION.

2.1 Classification of the substance or mixture.

In accordance with Regulation (EU) No 1272/2008:

Eye Irrit. 2 : Provoca grave irritazione oculare.

2.2 Label elements.

Labelling in accordance with Regulation (EU) No 1272/2008:

Pictograms:



Signal Word:

Attenzione

Hazard statements:

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H319 Provoca grave irritazione oculare.

Precautionary statements:

P101 In caso di consultazione di un medico, tenere a disposizione il contenitore o l'etichetta del prodotto.
P102 Tenere fuori dalla portata dei bambini.
P103 Leggere attentamente e seguire tutte le istruzioni.
P264 Lavare accuratamente le mani dopo l'uso.
P280 Indossare guanti e maschera protettivi.
P305+P351+P338 IN CASO DI CONTATTO CON GLI OCCHI: sciacquare accuratamente per parecchi minuti. Togliere le eventuali lenti a contatto se è agevole farlo. Continuare a sciacquare.
P337+P313 Se l'irritazione degli occhi persiste, consultare un medico.

Contains:

sodio carbonato

2.3 Other hazards.

La sostanza non è PBT

La sostanza non è vPvB

La sostanza non ha proprietà che alterano il sistema endocrino.

Durante il normale uso e nella sua forma originale, il prodotto non ha altri effetti negativi sulla salute e sull'ambiente.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS.

3.1 Substances.

Identifiers	Name	Concentrate	(*)Classification - Regulation (EC) No 1272/2008	
			Classification	Specifics concentration limits and Acute toxicity estimate
Index No: 011-005-00-2 CAS No: 497-19-8 EC No: 207-838-8	sodio carbonato	10 - 100 %	Eye Irrit. 2, H319	-

3.2 Mixtures.

Not Applicable.

SECTION 4: FIRST AID MEASURES.

4.1 Description of first aid measures.

In caso di dubbio o quando i sintomi di malessere persistono, consultare un medico. Non dare mai niente per bocca a persone incoscienti.

Inalazione.

Mettere l'accidentato all'aria aperta, mantenerlo caldo e in riposo, se la respirazione è irregolare o si ferma, praticare respirazione artificiale.

Contatto con gli occhi.

Rimuovere le lenti a contatto se indossate, e se risulta semplice da fare. Lavare abbondantemente gli occhi con acqua pulita e fresca per almeno 10 minuti tenendo le palpebre aperte. Cercare assistenza medica. Non permettere alla persona di strofinare l'occhio colpito.

Contatto con la pelle.

Togliere gli indumenti contaminati. Lavare la pelle vigorosamente con acqua e sapone o un detergente adeguato alla pelle. MAI utilizzare solventi o diluenti.

Ingestione.

Se accidentalmente si è ingerito, chiedere immediatamente attenzione medica. Mantenerla a riposo. MAI provocare il vomito.

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

Prodotto Irritante, il contatto ripetuto o prolungato con la pelle e le mucose può provocare arrossamenti, bolle o dermatiti; l'inalazione di nebbia di spruzzo o particelle in sospensione può causare l'irritazione delle vie respiratorie. Alcuni sintomi possono non essere immediati.

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

In caso di dubbio o quando i sintomi di malessere persistono, consultare un medico. Non dare mai niente per bocca a persone incoscienti. Coprire la zona colpita con materiale da medicazione sterile asciutto. Proteggere dalla pressione o dalla frizione la zona colpita.

SECTION 5: FIREFIGHTING MEASURES.

Il prodotto NON è classificato come infiammabile, in caso di incendio dovrebbe seguire la procedura descritta di seguito:

5.1 Extinguishing media.

Mezzi di estinzione idonei:

Estintore a polvere o CO₂. In caso d'incendi più gravi anche schiuma resistente all'alcol e acqua polverizzata.

Mezzi di estinzione non idonei:

Non usare per l'estinzione spruzzo diretto d'acqua. In presenza di tensione elettrica non è accettabile l'utilizzo di acqua o spuma come mezzo di estinzione.

5.2 Special hazards arising from the substance or mixture.

Rischi speciali.

L'esposizione ai prodotti di combustione o decomposizione può essere pregiudiziale per la salute.

5.3 Advice for firefighters.

Raffreddare con acqua i depositi, cisterne o recipienti prossimi alla fonte di calore o fuoco. Tenere in conto la direzione del vento. Evitare che i prodotti utilizzati nella lotta contro l'incendio, passino a condotti, fognature o corsi d'acqua.

Equipaggiamento di protezione contro incendi.

Secondo la magnitudine dell'incendio, può essere necessario l'uso d'indumenti di protezione contro il calore, equipaggiamento respiratorio autonomo, guanti, occhiali protettori o maschere facciali e stivali.

SECTION 6: ACCIDENTAL RELEASE MEASURES.

6.1 Personal precautions, protective equipment and emergency procedures.

Per il controllo d'esposizione e misure di protezione individuale, vedere sezione 8.

6.2 Environmental precautions.

Non classificato come pericoloso per l'ambiente, evitare per quanto possibile, qualsiasi scarico.

6.3 Methods and material for containment and cleaning up.

Contenere e raccogliere il prodotto eventualmente fuoriuscito con materiale assorbente inerte (terra, sabbia, vermiculite, terra diatomacea...) e pulire immediatamente la zona con un adeguato decontaminante.

Smaltire i resti di prodotto in contenitori chiusi e adatti allo smaltimento in conformità con le normative locali e nazionali (vedi sezione 13).

6.4 Reference to other sections.

Per il controllo d'esposizione e misure di protezione individuale, vedere sezione 8.

Per la successiva eliminazione dei residui, seguire le raccomandazioni della sezione 13.

SECTION 7: HANDLING AND STORAGE.

7.1 Precautions for safe handling.

Per la protezione personale, vedere sezione 8.

Nella zona d'applicazione deve essere proibito fumare, mangiare e bere.

Rispettare la legislazione sulla sicurezza e l'igiene nel lavoro.

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Attenzione: i recipienti non sono resistenti alla pressione, non impiegare mai la pressione per svuotare i contenitori. Conservare il prodotto in recipienti di un materiale identico all'originale.

7.2 Conditions for safe storage, including any incompatibilities.

Immagazzinare secondo la legislazione locale. Osservare le indicazioni dell'etichetta. Immagazzinare i recipienti tra 5 e 25 °C, in un luogo secco e ben ventilato, lontano dal calore e dai raggi diretti del sole. Mantenere lontano da punti d'ignizione. Mantenere lontano da agenti ossidanti e da materiali fortemente acidi o alcalini. Non fumare. Evitare l'entrata a persone non autorizzate. Una volta aperti i recipienti, devono essere richiusi attentamente e collocati verticalmente per evitare spargimenti.

The product is not affected by Directive 2012/18/EU (SEVESO III).

7.3 Specific end use(s).

PH regulator for swimming pool water

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION.

8.1 Control parameters.

The product does NOT contain substances with Professional Exposure Environmental Limit Values. The product does NOT contain substances with Biological Limit Values.

8.2 Exposure controls.

Measures of a technical nature:

Provide adequate ventilation, which can be achieved by using good local exhaust-ventilation and a good general exhaust system.

Concentration:	100 %
Uses:	Regolatore di pH
Breathing protection:	
If the recommended technical measures are observed, no individual protection equipment is necessary.	
Hand protection:	
If the product is handled correctly, no individual protection equipment is necessary.	
Eye protection:	
If the product is handled correctly, no individual protection equipment is necessary.	
Skin protection:	
PPE:	Calzature di lavoro.
Characteristics:	Marchio «CE» Categoria II.
CEN standards:	EN ISO 13287, EN 20347
Maintenance:	Questi articoli si adattano alla forma del piede del primo utente. Per questo motivo, oltre ad una questione di igiene, è da evitare il riutilizzo da parte di altra persona.
Observations:	La calzatura di lavoro per uso professionale è quella che aggiunge elementi di protezione destinati a proteggere l'utente dalle lesioni che potessero provocare gli incidenti. Deve verificarsi per quali lavori queste calzature sono adeguate.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES.

9.1 Information on basic physical and chemical properties.

Physical state: Solid

Colour: Bianco

Odour: Inodore

Odour threshold: Non pertinente/Non disponibile a causa della natura/proprietà del prodotto.

Melting point: 851 °C

Freezing point: Non pertinente/Non disponibile a causa della natura/proprietà del prodotto.

Boiling point or initial boiling point and boiling range: Non pertinente/Non disponibile a causa della natura/proprietà del prodotto.

Flammability: Non pertinente/Non disponibile a causa della natura/proprietà del prodotto.

Lower explosion limit: Non pertinente/Non disponibile a causa della natura/proprietà del prodotto.

Upper explosion limit: Non pertinente/Non disponibile a causa della natura/proprietà del prodotto.

Flash point: Non pertinente/Non disponibile a causa della natura/proprietà del prodotto.

Auto-ignition temperature: Non pertinente/Non disponibile a causa della natura/proprietà del prodotto.

Decomposition temperature: Non pertinente/Non disponibile a causa della natura/proprietà del prodotto.

pH: 11,17 (0,4%)

Kinematic viscosity: Non pertinente/Non disponibile a causa della natura/proprietà del prodotto.

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Solubility: Non pertinente/Non disponibile a causa della natura/proprietà del prodotto.

Hydrosolubility: 215 g/l (20°C)

Liposolubility: Non pertinente/Non disponibile a causa della natura/proprietà del prodotto.

Partition coefficient n-octanol/water (log value): Non pertinente/Non disponibile a causa della natura/proprietà del prodotto.

Vapour pressure: Non pertinente/Non disponibile a causa della natura/proprietà del prodotto.

Absolute density: Non pertinente/Non disponibile a causa della natura/proprietà del prodotto.

Relative density: 2,52 (20 °C)

Relative vapour density: Non pertinente/Non disponibile a causa della natura/proprietà del prodotto.

Particle characteristics: Non pertinente/Non disponibile a causa della natura/proprietà del prodotto.

9.2 Other information

Viscosity: Non pertinente/Non disponibile a causa della natura/proprietà del prodotto.

Explosive properties: Non pertinente/Non disponibile a causa della natura/proprietà del prodotto.

Oxidizing properties: No

Dropping point: Non pertinente/Non disponibile a causa della natura/proprietà del prodotto.

Blink: Non pertinente/Non disponibile a causa della natura/proprietà del prodotto.

SECTION 10: STABILITY AND REACTIVITY.

10.1 Reactivity.

Il prodotto non comporta pericoli per la sua reattività.

10.2 Chemical stability.

Instabile in contatto con:

- Acidi.

10.3 Possibility of hazardous reactions.

Può prodursi una neutralizzazione in contatto con acidi.

10.4 Conditions to avoid.

- Evitare il contatto con acidi.

10.5 Incompatible materials.

Evitare i seguenti materiali:

- Acidi.

10.6 Hazardous decomposition products.

Dipendendo dalle condizioni di impiego, possono generarsi i seguenti prodotti:

- Vapori o gas corrosivi.

SECTION 11: TOXICOLOGICAL INFORMATION.

MISCELA IRRITANTE. Schizzi negli occhi possono causare irritazione degli stessi.

11.1 Information on hazard classes as defined in Regulation (EC) N° 1272/2008.

Repeated or prolonged contact with the product can cause the elimination of oil from the skin, giving rise to non-allergic contact dermatitis and absorption of the product through the skin.

Toxicological information.

Name	Acute toxicity			
	Type	Test	Kind	Value
sodio carbonato	Oral	LD50	Rat	2800 mg/kg bw [1]
		[1] Rinehart, WE, Acute Oral Toxicity Study in Rats, Toxicological Resources Unit, Bio/dynamics Inc., May 15, 1978.		
	Dermal	LD50	Rabbit	2000 mg/kg bw [1]
		[1] Rinehart, WE, Acute Dermal Toxicity Study in Rabbits, Toxicological Resources Unit, Bio/dynamics Inc., 1978.		
	Inhalation	LC50	Mouse	1.2 mg/l (2 h)

N. CAS: 497-19-8 N. CE: 207-838-8

a) tossicità acuta;

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Dati non concludenti per la classificazione.

b) corrosione/irritazione cutanea;

Dati non concludenti per la classificazione.

c) lesioni oculari gravi/irritazioni oculari gravi;

Prodotto classificato:

Irritazione oculare, Categoria 2: Provoca grave irritazione oculare.

d) sensibilizzazione respiratoria o cutanea;

Dati non concludenti per la classificazione.

e) mutagenicità delle cellule germinali;

Dati non concludenti per la classificazione.

f) cancerogenicità;

Dati non concludenti per la classificazione.

g) tossicità per la riproduzione;

Test: Tossicità per la riproduzione - Via: Orale = 179 mg/kg

Sodio carbonato - CAS: 497-19-8

h) tossicità specifica per organi bersaglio (STOT) - esposizione singola;

Dati non concludenti per la classificazione.

i) tossicità specifica per organi bersaglio (STOT) - esposizione ripetuta;

Dati non concludenti per la classificazione.

j) pericolo in caso di aspirazione.

Dati non concludenti per la classificazione.

11.2 Information on other hazards.

Proprietà di interferenza con il sistema endocrino

Questo prodotto non contiene componenti con proprietà che alterano il sistema endocrino e hanno un effetto sulla salute umana.

Altre informazioni

Non esistono informazioni disponibili su altri effetti avversi per la salute.

SECTION 12: ECOLOGICAL INFORMATION.

12.1 Toxicity.

Name	Ecotoxicity			
	Type	Test	Kind	Value
sodio carbonato	Fish	LC50	Lepomis macrochirus	300 mg/L (96 h) [1] [2]
				[1] Cairns J, Scheier A (1959). The relationship of bluegill sunfish body size to tolerance for some common chemicals. Proc. 13th Ind. Work. Conf., Purdue Univ., Engineering Bull., 43, 242-253. [2] McKee & Wolf (1963). Water quality criteria. California State Water Resources Control Board. Publication 3-A.
	Aquatic invertebrates	EC50	Ceriodaphnia sp.	200 mg/L (48 h) [1]
		EC50	Culex sp.	600 mg/L (48 h) [2]

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N. CAS: 497-19-8 N. CE: 207-838-8		[1] Warne MS, Schifko AD (1999). Toxicity of laundry detergent components to a freshwater cladoceran and their contribution to detergent toxicity. Ecotoxicol. Environ. Saf., 44, 196-206. [2] Dowden BF, Bennett HJ (1965). Toxicity of selected chemicals to certain animals. Journal WPCF, 37, 1308-1316.
	Aquatic plants	

12.2 Persistence and degradability.

Non si hanno a disposizione informazioni relative alla biodegradabilità.

Non si hanno a disposizione informazioni relative alla degradabilità.

Non sono disponibili informazioni sulla persistenza e degradabilità del prodotto.

12.3 Bioaccumulative potential.

Non si dispone d'informazione sul Bioaccumulo.

12.4 Mobility in soil.

Non sono disponibili informazioni sulla mobilità nel suolo

È vietato lo smaltimento in fognature o corsi d'acqua.

Evitare la penetrazione nel terreno.

12.5 Results of PBT and vPvB assessment.

Non sono disponibili informazioni sul prodotto PBT e vPvB.

12.6 Endocrine disrupting properties.

Questo prodotto non contiene componenti con proprietà che alterano il sistema endocrino e hanno un effetto sull'ambiente.

12.7 Other adverse effects.

Non ci sono informazioni su altri effetti negativi per l'ambiente.

SECTION 13: DISPOSAL CONSIDERATIONS.

13.1 Waste treatment methods.

Do not dump into sewers or waterways. Waste and empty containers must be handled and eliminated according to current, local/national legislation.

Follow the provisions of Directive 2008/98/EC regarding waste management.

SECTION 14: TRANSPORT INFORMATION.

Transportation is not dangerous. In case of road accident causing the product's spillage, proceed in accordance with point 6.

14.1 UN number or ID number.

Transportation is not dangerous.

14.2 UN proper shipping name.

Description:

ADR/RID: Non pericoloso ai fini del trasporto.

IMDG: Non pericoloso ai fini del trasporto.

ICAO/IATA: Non pericoloso ai fini del trasporto.

14.3 Transport hazard class(es).

Transportation is not dangerous.

14.4 Packing group.

Transportation is not dangerous.

14.5 Environmental hazards.

Transportation is not dangerous.

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Transport by ship, FEm – Emergency sheets (F – Fire, S - Spills): Non Applicabile.

14.6 Special precautions for user.

Transportation is not dangerous.

14.7 Maritime transport in bulk according to IMO instruments.

Transportation is not dangerous.

SECTION 15: REGULATORY INFORMATION.

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

The product is not affected by the Regulation (EC) No 1005/2009 of the European Parliament and of the Council of 16 September 2009 on substances that deplete the ozone layer.

Volatile organic compound (VOC)

VOC content (p/p): 0 %

VOC content: 0 g/l

Product classification according to Annex I of Directive 2012/18/EU (SEVESO III): N/A

The product is not affected by Regulation (EU) No 528/2012 concerning the making available on the market and use of biocidal products.

The product is not affected by the procedure established Regulation (EU) No 649/2012, concerning the export and import of dangerous chemicals.

Categoria di inquinante per l'acqua (Germania): WGK 1: Poco pericoloso per l'acqua. (Autoclassificato in base al regolamento AwSV)

15.2 Chemical safety assessment.

No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

Available Product Exposure Scenario.

SECTION 16: OTHER INFORMATION.

Classification codes:

Eye Irrit. 2 : Irritazione oculare, Categoria 2

Cambiare riguardanti la versione precedente:

- Modifica di pericoli speciali (SEZIONE 2.3).
- Modifica delle misure antincendio (SEZIONE 5.2).
- Modifica delle misure in caso di rilascio accidentale (SEZIONE 6.1).
- Modifica degli informazioni sulle proprietà fisiche e chimiche (SEZIONE 9).
- Cambiare degli indicazioni di pericolo (SEZIONE 11.1).
- Modifica della classificazione ADR/IMDG/ICAO/IATA/RID (SEZIONE 14).
- Modifiche delle leggi nazionali (SEZIONE 15.1).

Classification and procedure used to derive the classification for mixtures according to Regulation (EC)

1272/2008 [CLP]:

Physical hazards	On basis of test data
Health hazards	Calculation method
Environmental hazards	Calculation method

It is advisable to carry out basic training with regard to health and safety at work in order to handle this product correctly.

Available Product Exposure Scenario.

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Abbreviature ed acronimi utilizzati:

AwSV: Regolamento relativo agli Impianti per la manipolazione di sostanze pericolose per l'acqua.
CEN: Comitato Europeo di Normalizzazione.
EC50: Concentrazione media effettiva.
DPI: Squadra di protezione personale.
LC50: Concentrazione letale, 50%.
LD50: Dose letale, 50%.
WGK: Classi di pericolo per l'ambiente acquatico.

Key literature references and sources for data:

<http://eur-lex.europa.eu/homepage.html>

<http://echa.europa.eu/>

Regulation (EU) 2020/878.

Regulation (EC) No 1907/2006.

Regulation (EU) No 1272/2008.

The information given in this Safety Data Sheet has been drafted in accordance with COMMISSION REGULATION (EU) 2020/878 of 18 June 2020 amending Annex II to Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemical substances and mixtures (REACH).

The information in this Safety Data Sheet on the Preparation is based on current knowledge and on current EC and national laws, as far as the working conditions of the users is beyond our knowledge and control. The product must not be used for purposes other than those that are specified without first having written instructions on how to handle. It is always the responsibility of the user to take the appropriate measures in order to comply with the requirements established by current legislation. The information contained in this Safety Sheet only states a description of the safety requirements for the preparation, and it must not be considered as a guarantee of its properties.

**Exposure Scenario for communication:
ES 1: Manufacturing of sodium carbonate**

0. General information

ES identifier	ES 1
Version no	01
Revision date	28.10.2010
EC #	207-838-8
CAS #	497-19-8

1. Use descriptors

Manufacturing of sodium carbonate

Market sector: SU 3 (Industrial uses)
Sector of use: SU 8 (Manufacture of bulk, large scale chemicals)

Environment: (Environmental Release Category) Manufacture of substances ERC 1

Worker (Process Category -Phrase)

Use in closed process, no likelihood of exposure	PROC 1
Use in closed, continuous process with occasional controlled exposure	PROC 2
Use in closed batch process (synthesis or formulation)	PROC 3
Use in batch and other process (synthesis) where opportunity for exposure arises	PROC 4
Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities	PROC 8a
Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities	PROC 8b
Transfer of substance or preparation into small containers (dedicated filling line, including weighing)	PROC 9
Potentially closed processing operations with minerals/metals at elevated temperature	PROC 22

Processes, tasks, activities covered

Manufacturing, maintenance, loading, packaging, sampling and monitoring.

2. Conditions of use affecting exposure

2.0 Default Product Characteristics

Physical form of product/article	Solid
Volatility	Not relevant
Dustiness	Medium (PROCs 1, 2, 3, 4, 8a, 8b, 9) Low (PROC 22)

2.1. Control of environmental exposure:

Manufacture of substances – ERC 1

Amounts used		
Annual site tonnage (tonnes/year): up to 1 500 000.		
Frequency and duration of use		
Continuous		
Other given operational conditions affecting environmental exposure		
Not applicable.		
Technical and organizational conditions and measures		
See section 8 of Safety data sheet.		
Conditions and measures related to municipal sewage treatment plant		
Wastewater streams from sodium carbonate production sites contain inorganic substances and are therefore not treated in sewage treatment plants.		
Conditions and measures related to external treatment of waste		
In Chapter 2.3.5 of the Reference Document on Best Available Techniques for the Manufacture of Large Volume Inorganic Chemicals - Solids and Others Industry (EC, 2007) two types of solid waste, generated during the manufacturing of sodium carbonate, are discussed. Both types of solid waste originate from raw materials and the concentration of sodium carbonate in the solid waste is negligible. For this reason specific waste related measures are not needed.		
Additional good practice advice beyond the REACH CSR (Chemical Safety Report)		
See sections 6 and 13 of Safety Data Sheet		
2.2. Control of workers exposure		
Valid for PROCs 1, 2, 3, 4, 8a, 8b, 9, 22.		
Amounts used, frequency and duration of use		
Amounts used	Not Relevant Parameter does not influence exposure estimations for this ES	
Frequency and duration of use	Daily 8h/day	
Technical and organizational conditions and measures		
See section 8 of Safety Data Sheet. Ensure workers are trained to minimize exposures.		
Additional good practice advice beyond the REACH CSR (Chemical Safety Report)		
See sections 7 and 8 of Safety Data Sheet		
3. Exposure estimation and reference to its source		
3.1 Environment exposure estimation and reference to its source		
The table below gives the summary of the environment exposure estimation made in the Chemical Safety Report, referring to Document on Best Available Techniques for the Manufacture of Large Volume Inorganic Chemicals - Solids and Others Industry.		
Compartments	Measured release (kg/d)	Explanation / source of measured data
Aquatic	Negligible	Reference Document on Best Available Techniques (EC, 2007)
Air (direct)	2.2 - 118	
Soil (direct only)	Negligible	Reference Document on Best Available Techniques (EC, 2007)

3.2 Workers exposure estimation and reference to its source

The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

Production of sodium carbonate: long-term exposure concentrations to workers

Routes of exposure	Exposure concentrations (mg/m ³)	Explanation / source of measured data (Characteristics, Duration, Frequency, OC and RMM described above)
Modeled exposure data		
Dermal exposure	Not relevant	No assessment for dermal exposure because of no local skin effects and no systemic availability after dermal contact.
Inhalation exposure	0.01	ECETOC TRA V2. PROC 1
	0.5	ECETOC TRA V2. PROC 2
	1	ECETOC TRA V2. PROC 3
	5	ECETOC TRA V2. PROC 4
	5	ECETOC TRA V2. PROC 8a
	5	ECETOC TRA V2. PROC 8b
	5	ECETOC TRA V2. PROC 9
	1	ECETOC TRA V2. PROC 22
Measured exposure data		
Inhalation exposure	7.9	An extensive set (in total: 698 observations) of worker exposure data from 4 sites that manufacture sodium carbonate. Measurements are representative for a workday of 8 hours.

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

4.1 Environment.

Not Applicable: this scenario does not concern DU.

4.2 Health.

Not Applicable: this scenario does not concern DU.

Substance: Sodium Carbonate ; EC : 207-838-8 ; CAS : 497-19-8

Exposure Scenario for communication:
ES 2: Glass production

0. General information

ES identifier	ES 2
Version no	01
Revision date	28.10.2010
EC #	207-838-8
CAS #	497-19-8

1. Use descriptors

Glass Production

Market sector: SU 3 (Industrial uses)
Sector of use: SU 3 (Industrial uses)

Environment: (Environmental Release Category) Industrial use resulting in manufacture of another substance (use of intermediates) ERC 6a

Worker (Process Category -Phrase)

Use in closed process, no likelihood of exposure	PROC 1
Use in closed, continuous process with occasional controlled exposure	PROC 2
Use in closed batch process (synthesis or formulation)	PROC 3
Use in batch and other process (synthesis) where opportunity for exposure arises	PROC 4
Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities	PROC 8a
Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities	PROC 8b
Potentially closed processing operations with minerals/metals at elevated temperature	PROC 22
Open processing and transfer operations with minerals/metals at elevated temperature	PROC 23
Handling of solid inorganic substances at ambient temperature.	PROC 26

Processes, tasks, activities covered

Manufacturing, maintenance, loading, packaging, sampling and monitoring.

2. Conditions of use affecting exposure

2.0 Default Product Characteristics

Physical form of product/article	Solid
Volatility	Not relevant

Dustiness	Medium (PROCs 1, 2, 3, 4, 8a, 8b, 26) High (PROCs 22 and 23)
Mixture Article Concentration	
For PROCs 1, 2, 3, 4, 8a, 8b and 26 the neat substance is taken into account, because the neat substance is transferred to the process. Percentage of 5-25% sodium carbonate in the mixture during the melting process is assumed.	
2.1. Control of environmental exposure:	
Use as intermediate: industrial use resulting in manufacture of another substance.	
Amounts used	
Up to 200 000 tonnes/year.	
Frequency and duration of use	
Continuous.	
Other given operational conditions affecting environmental exposure	
The impact of glass manufacturing on the environment has been described extensively in the Reference Document on Best Available Techniques in the Glass Manufacturing Industry (EC, 2001). The document was established in the context of the EU Directive on Integrated Pollution Prevention and Control (Directive 96/61/EC).	
Technical and organizational conditions and measures	
See section 8 of Safety Data Sheet. In case of dust formation, use filter to reduce atmospheric emissions.	
Conditions and measures related to municipal sewage treatment plant	
Wastewater streams of the glass industry do not contain sodium carbonate as it is stored in covered silos and not linked to internal sewage systems. For this reason an emission assessment for the sewage treatment plant is not needed for the industrial end use of sodium carbonate in the glass industry.	
Conditions and measures related to external treatment of waste	
No specific waste related measures are to be defined.	
Additional good practice advice beyond the REACH CSA	
See sections 6 and 13 of Safety Data Sheet	
2.2. Control of workers exposure	
Valid for PROCs 1, 2, 3, 4, 8a, 8b, 9, 22, 26.	
Amounts used, frequency and duration of use	
Amounts used	Not Relevant Parameter does not influence exposure estimations for this ES
Frequency and duration of use	Daily 8h/day
Technical and organisational conditions and measures	
See section 8 of Safety Data Sheet	
Additional good practice advice beyond the REACH CSR (Chemical Safety Report)	
See sections 7 and 8 of Safety Data Sheet	
3. Exposure estimation and reference to its source	
3.1 Environment exposure estimation and reference to its source	

The table below gives the summary of the environment exposure estimation made in the Chemical Safety Report, referring to Document on Best Available Techniques in the Glass Manufacturing Industry (EC, 2001).

Compartments	Measured release (kg/d)	Explanation / source of measured data
Aquatic	Negligible	Reference Document on Best Available Techniques (EC, 2001)
Air (direct)	Negligible	Reference Document on Best Available Techniques (EC, 2001)
Soil (direct only)	Negligible	Reference Document on Best Available Techniques (EC, 2001)

3.2 Workers exposure estimation and reference to its source

The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

Glass production: long-term exposure concentrations to workers

Routes of exposure	Estimated exposure concentrations (mg/m ³)	Explanation / source of measured data (Characteristics, Duration, Frequency, OC and RMM described above)
Dermal exposure	Not relevant	No assessment for dermal exposure because of no local skin effects and no systemic availability after dermal contact.
Inhalation exposure	0.01	ECETOC TRA V2. PROC 1
	0.5	ECETOC TRA V2. PROC 2
	1	ECETOC TRA V2. PROC 3
	5	ECETOC TRA V2. PROC 4
	5	ECETOC TRA V2. PROC 8a
	5	ECETOC TRA V2. PROC 8b
	1	ECETOC TRA V2. PROC 22a
	1	ECETOC TRA V2. PROC 23a

PROC26 is not foreseen in ECETOC TRA but it involves activities which are described by PROC 8a and 8b. Therefore the calculation with PROC 8a and 8b covers PROC 26.

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

4.1 Environment.

Predicted exposures are not expected to exceed the DNEL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented.

4.2 Health.

Predicted exposures are not expected to exceed the DNEL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented.

Substance: Sodium Carbonate ; EC : 207-838-8 ; CAS : 497-19-8	
Exposure Scenario for communication: ES 3: Formulation	
0. General information	
ES identifier	ES 3
Version no	01
Revision date	28.10.2010
EC #	207-838-8
CAS #	497-19-8
1. Use descriptors	
Formulation	
Market sector: SU 3 (Industrial uses) Sector of use: SU 10 (Formulation [mixing] of preparations and/or re-packaging (excluding alloys))	
Environment: (Environmental Release Category) Formulation of preparations	ERC 2
Worker (Process Category -Phrase)	
Use in closed process, no likelihood of exposure	PROC 1
Use in closed, continuous process with occasional controlled exposure	PROC 2
Use in closed batch process (synthesis or formulation)	PROC 3
Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact)	PROC 5
Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities	PROC 8a
Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities	PROC 8b
Transfer of substance or preparation into small containers (dedicated filling line, including weighing)	PROC 9
Production of preparations or articles by tableting, compression, extrusion, pelletisation	PROC 14
Use as laboratory reagent	PROC 15
Processes, tasks, activities covered storage, materials transfers, mixing, maintenance, sampling and associated laboratory activities.	
2. Conditions of use affecting exposure	
2.0 Default Product Characteristics	
Physical form of product/article	Solid
Volatility	Not relevant
Dustiness	Medium
Mixture Article Concentration Not relevant: for exposure estimation the neat substance is taken into account, because the neat substance is added to the formulation process.	

2.1. Control of environmental exposure:		
Formulation of preparations – ERC 2 SPERC (AISE, 2010E) are also used (http://www.aise.eu/reach/exposureass_sub4.htm).		
Amounts used		
Up to 5 000 tonnes/year		
Frequency and duration of use		
Continuous		
Other given operational conditions affecting environmental exposure		
See sections 8 and 13 of Safety Data Sheet		
Technical and organizational conditions and measures		
In case of dust formation, use filter to reduce atmospheric emissions.		
Conditions and measures related to municipal sewage treatment plant		
Control the pH of the liquid effluent if the effluent is sent to STP.		
Conditions and measures related to external treatment of waste		
No specific waste related measures are to be defined.		
Additional good practice advice beyond the REACH CSA		
See sections 6 and 13 of Safety Data Sheet		
2.2. Control of workers exposure		
Valid for PROCs 1, 2, 3, 5, 4, 8a, 8b, 9, 14, 15.		
Amounts used, frequency and duration of use		
Amounts used	Not Relevant Parameter does not influence exposure estimations for this ES	
Frequency and duration of use	Daily 8h/day	
Technical and organisational conditions and measures		
See section 8 of Safety Data Sheet		
Additional good practice advice beyond the REACH CSR (Chemical Safety Report)		
See sections 7 and 8 of Safety Data Sheet		
3. Exposure estimation and reference to its source		
3.1 Environment exposure estimation and reference to its source		
The table below gives the summary of the environment exposure estimation made in the Chemical Safety Report and in Specific Environmental Release Categories (SPERC) (AISE, 2010):		
Compartments	Measured release (kg/d)	Explanation / source of data
Aquatic	Negligible	
Air (direct)	2.7	Specific Environmental Release Categories (SPERC) (AISE, 2010)
Soil (direct only)	Negligible	Specific Environmental Release Categories (SPERC) (AISE, 2010)

3.2 Workers exposure estimation and reference to its source

The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

Formulation: long-term exposure concentrations to worker

Routes of exposure	Estimated exposure concentrations (mg/m ³)	Explanation / source of measured data (Characteristics, Duration, Frequency, OC and RMM described above)
Dermal exposure	Not relevant	No assessment for dermal exposure because of no local skin effects and no systemic availability after dermal contact.
Inhalation exposure	0.01	ECETOC TRA V2. PROC 1
	0.5	ECETOC TRA V2. PROC 2
	1	ECETOC TRA V2. PROC 3
	5	ECETOC TRA V2. PROC 4
	5	ECETOC TRA V2. PROC 5
	5	ECETOC TRA V2. PROC 8a
	5	ECETOC TRA V2. PROC 8b
	5	ECETOC TRA V2. PROC 9
	1	ECETOC TRA V2. PROC 14
	0.5	ECETOC TRA V2. PROC 15

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

4.1 Environment.

Predicted exposures are not expected to exceed the DNEL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented.

4.2 Health.

Predicted exposures are not expected to exceed the DNEL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented.

Substance: Sodium Carbonate ; EC : 207-838-8 ; CAS : 497-19-8

Exposure Scenario for communication:
ES 4: Other industrial and professional uses

0. General information

ES identifier	ES 4
Version no	01
Revision date	28.10.2010
EC #	207-838-8
CAS #	497-19-8

1. Use descriptors

1.1 Industrial end uses

Market sector: SU 3 (Industrial uses)
Sector of use: No restriction (SUs 0-20, 23, 24)

Environment: (Environmental Release Category)

Formulation of preparations	ERC 4
Industrial use resulting in inclusion into or onto a matrix	ERC 5
Industrial use resulting in manufacture of another substance (use of intermediates)	ERC 6a
Industrial use of reactive processing aids	ERC 6b
Industrial use of process regulators for polymerisation processes in production of resins, rubbers, polymers	ERC 6d
Industrial use of sub-stances in closed systems	ERC 7

Worker (Process Category -Phrase)

Use in closed process, no likelihood of exposure	PROC 1
Use in closed, continuous process with occasional controlled exposure	PROC 2
Use in closed batch process (synthesis or formulation)	PROC 3
Use in batch and other process (synthesis) where opportunity for exposure arises	PROC 4
Spraying in industrial settings and applications	PROC 7
Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities	PROC 8a
Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities	PROC 8b
Transfer of substance or preparation into small containers (dedicated filling line, including weighing)	PROC 9

Roller application or brushing of adhesive and other coating	PROC 10
Treatment of articles by dipping and pouring	PROC 13
Use as laboratory reagent	PROC 15
Lubrication at high energy conditions and in partly open process	PROC 17
Greasing at high energy conditions	PROC 18
Hand-mixing with intimate contact and only PPE available	PROC 19
Potentially closed processing operations with minerals/metals at elevated temperature. The process temperature is higher than the melting point (High fugacity)	PROC 22
Open processing and transfer operations with minerals/metals at elevated temperature. The process temperature is higher than the melting point (High fugacity)	PROC 23
Handling of solid inorganic substances at ambient temperature	PROC 26
Processes, tasks, activities covered: Manufacturing, mixing, maintenance, loading, packaging, sampling and monitoring.	
1.2 Professional end uses	
Market sector: SU 22 (Professional uses) Sector of use: SU 22 (Professional uses)	
Environment: (Environmental Release Category)	
Wide dispersive indoor use of processing aids in open systems	ERC 8a
Wide dispersive indoor use of reactive substances in open systems	ERC 8b
Wide dispersive indoor use resulting in inclusion into or onto a matrix	ERC 8c
Wide dispersive outdoor use of processing aids in open systems	ERC 8d
Wide dispersive outdoor use of reactive substances in open systems	ERC 8e
Wide dispersive outdoor use resulting in inclusion into or onto a matrix	ERC 8f
Wide dispersive indoor use of substances in closed systems	ERC 9a
Wide dispersive outdoor use of substances in closed systems	ERC 9b
Worker (Process Category -Phrase)	
Use in closed process, no likelihood of exposure	PROC 1
Use in closed, continuous process with occasional controlled exposure	PROC 2

Use in batch and other process (synthesis) where opportunity for exposure arises	PROC 4
Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities	PROC 8a
Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities	PROC 8b
Transfer of substance or preparation into small containers (dedicated filling line, including weighing)	PROC 9
Roller application or brushing of adhesive and other coating	PROC 10
Non industrial spraying	PROC 11
Treatment of articles by dipping and pouring	PROC 13
Use as laboratory reagent	PROC 15
Hand-mixing with intimate contact and only PPE available	PROC 19
Processes, tasks, activities covered Manufacturing, mixing, maintenance, loading, packaging, sampling and monitoring.	
2. Conditions of use affecting exposure	
2.0 Default Product Characteristics	
Physical form of product/article	Solid
Volatility	Not relevant
Dustiness	Medium (PROCs 1, 2, 3, 4, 8a, 8b, 9, 15, 19) High (PROCs 22 and 23)
2.1. Control of environmental exposure:	
Industrial end uses: ERC4, ERC5, ERC 6a/6b/6d, ERC 7. Professional end uses: ERC 8a/8b/8c/8d/8e/8f; ERC 9a/9b.	
Amounts used	
Industrial use up to 100 000 tonnes/year. Professional use much lower	
Frequency and duration of use	
Up to continuous.	
Other given operational conditions affecting environmental exposure	
See sections 8 and 13 of Safety Data Sheet	
Technical and organizational conditions and measures	
In case of dust formation, use filter to reduce atmospheric emissions.	
Conditions and measures related to municipal sewage treatment plant	
Control the pH of the liquid effluent if the effluent is sent to STP.	
Conditions and measures related to external treatment of waste	
No specific waste related measures are to be defined.	
Additional good practice advice beyond the REACH CSR (Chemical Safety Report)	

See sections 6 and 13 of Safety Data Sheet

2.2. Control of workers exposure

Valid for PROC 1-4, 7, 8a, 8b, 9, 10, 11, 13, 15, 17, 18, 19, 22, 23, 26.

Amounts used, frequency and duration of use

Amounts used	Not Relevant Parameter does not influence exposure estimations for this ES
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Frequency and duration of use (Exposure Frequency Duration)

Operational conditions related to the duration of use	Process Category	Industrial (Data Field)	Professional (Data Field)
Duration of exposure per day at workplace [for one worker]	PROC 1		Less than 15 min/day
	PROC 2		Less than 15 min/day
	PROC 3	> 4 hours/day (liquid mixture)	
	PROC 4		> 4 hours/day
	PROC 7	> 4 hours/day (liquid mixture)	
	PROC 8a		15 min/day to 1 hour/day
	PROC 8b		15 min/day to 1 hour/day
	PROC 9	> 4 hours/day (liquid mixture)	
	PROC 10		> 4 hours/day
	PROC 11		> 4 hours/day
	PROC 13		15 min/day to 1 hour/day
	PROC 15		15 min/day to 1 hour/day
	PROC 17	> 4 hours/day (liquid mixture)	
	PROC 18	> 4 hours/day (liquid mixture)	
PROC 19		15 min/day to 1 hour/day	

PROC26 is not foreseen in ECETOC TRA but it involves activities which are described by PROC 8a and 8b. Therefore the calculation with PROC 8a and 8b covers PROC 26.

Technical and organisational conditions and measures

See section 8 of Safety Data Sheet.

Additional good practice advice beyond the REACH CSR (Chemical Safety Report)

See sections 7 and 8 of Safety Data Sheet

3. Exposure estimation and reference to its source

3.1 Environment exposure estimation and reference to its source

The table below gives the summary of the environment exposure estimation made in the Chemical Safety Report:

Compartments	Measured release (kg/d)
Aquatic	Negligible
Air (direct)	Small releases might be possible
Soil (direct only)	Negligible in all cases except agricultural use Max application use rates of soda ash as co-formulant in plant protection products: Professional agricultural: 0.0126 kg/ ha (tier 1 default use rate: 1 kg/ ha)

3.2 Workers exposure estimation and reference to its source

The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

Routes of exposure	Explanation / source of measured data (Characteristics, Duration Frequency, OC and RMM described above)	Industrial estimated exposure concentrations (mg/m ³)	Professional estimated Exposure concentrations (mg/m ³)
Dermal exposure	No local effects and no systemic availability after dermal contact	Not relevant	Not relevant
Inhalation exposure	PROC 1	0.01	0.0044 (liquid) 0.001 (solid)
	PROC 2	0.5 (solid)	0.044 (liquid) 0.1 (solid)
	PROC 3	1 (solid)	0.044 (liquid)
	PROC 4	5	0.044 (liquid) 5 (solid)
	PROC 7	0.022	
	PROC 8a	5	0.088 (liquid) 1 (solid)
	PROC 8b	5 (solid)	0.088 (liquid)
	PROC 9	5 (solid)	0.044 (liquid)
	PROC 10		0.44 (liquid mixture only)
	PROC 11		0.44 (liquid mixture only)
	PROC 13		0.088 (liquid mixture only)
	PROC 15	5 (solid)	0.088 (liquid mixture only)
	PROC 17	0.022 (liquid mixture only)	
	PROC 18	0.022 (liquid mixture)	
	PROC 19	5	0.088 (liquid) 1 (solid)
	PROC 22	1	
	PROC 23	1	
	Professional agricultural with solid mixture, outdoor, no PPE (ECPA OWB Tier 1: default use rate)		0.142 (solid)

PROC 26 is not foreseen in ECETOC TRA but it involves activities which are described by PROC 8a and 8b. Therefore the calculation with PROC 8a and 8b covers PROC 26.

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

4.1 Environment.
Predicted exposures are not expected to exceed the DNEL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented.
4.2 Health.
Predicted exposures are not expected to exceed the DNEL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented.

Substance: Sodium Carbonate ; EC : 207-838-8 ; CAS : 497-19-8	
Exposure Scenario for communication: ES 5: Consumer use	
0. General information	
ES identifier	ES 5
Version no	01
Revision date	28.10.2010
EC #	207-838-8
CAS #	497-19-8
1. Use descriptor	
Consumer use	
Market sector: SU 21 Consumer uses: Private households (= general public = consumers) Sector of use: SU 21 Consumer uses: Private households (= general public = consumers)	
Environment: Environmental Release Category: ERC 8 a/b/c/d/e/f; ERC 9 a/b.	
Product Category (PC): No restriction (from PC 0 to PC 40)	
Process Category: Not applicable	
Processes, tasks, activities covered Cleaning activities	
2. Conditions of use affecting exposure	
2.0 Default Product Characteristics	
Physical form of product/article	Solid or dissolved in water
Volatility	Not relevant
Dustiness	Medium for powdered detergents, low for household soda
Mixture Article Concentration Laundry detergents and surface cleaners: 30% Machine dish washing tablets: 45% Household soda (pure sodium carbonate decahydrate) : 37% content of sodium carbonate Surface cleaning sprays: 10% Air care products: 5% (PC 3) Furniture, floor and leather care: 10% (PC 31)	
2.1. Control of environmental exposure:	
Consumer use – ERC 8 a/b/c/d/e/f; ERC 9 a/b.	
Amounts used	
Not relevant as the exposure is estimated to be negligible	
Frequency and duration of use	
Not relevant as the exposure is estimated to be negligible	
Other given operational conditions affecting environmental exposure	

See sections 8 and 13 of Safety Data Sheet													
Technical and organizational conditions and measures													
See section 8 of Safety Data Sheet													
Conditions and measures related to municipal sewage treatment plant													
See section 13 of Safety Data Sheet													
Conditions and measures related to external treatment of waste													
See section 13 of Safety Data Sheet													
Additional good practice advice beyond the REACH CSR (Chemical Safety Report)													
See sections 6 and 13 of Safety Data Sheet													
2.2. Control of consumers exposure													
Amounts used, frequency and duration of use													
Amounts used	Household soda: 37 g/l (worst case)												
Frequency and duration of use	Household soda: one time per week (frequency) and 5 min (duration) (worst case)												
Technical and organisational conditions and measures													
<i>Keep out of reach of children and avoid contact with eyes. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.</i>													
Additional good practice advice beyond the REACH CSR (Chemical Safety Report)													
See sections 7 and 8 of Safety Data Sheet													
3. Exposure estimation and reference to its source													
3.1 Environment exposure estimation and reference to its source													
<p>The table below gives the summary of the environment exposure estimation made in the Chemical Safety Report, referring to HERA (2005a) and to Specific Environmental Release Categories (SPERC) (AISE, 2010).</p> <table border="1"> <thead> <tr> <th>Compartments</th> <th>Measured release (kg/d)</th> <th>Explanation / source of measured data</th> </tr> </thead> <tbody> <tr> <td>Aquatic</td> <td>Negligible</td> <td>HERA (2005a); see section 9.5.2.3.2</td> </tr> <tr> <td>Air (direct)</td> <td>Negligible</td> <td>Specific Environmental Release Categories (SPERC) (AISE, 2010)</td> </tr> <tr> <td>Soil (direct only)</td> <td>Negligible</td> <td>Specific Environmental Release Categories (SPERC) (AISE, 2010)</td> </tr> </tbody> </table>		Compartments	Measured release (kg/d)	Explanation / source of measured data	Aquatic	Negligible	HERA (2005a); see section 9.5.2.3.2	Air (direct)	Negligible	Specific Environmental Release Categories (SPERC) (AISE, 2010)	Soil (direct only)	Negligible	Specific Environmental Release Categories (SPERC) (AISE, 2010)
Compartments	Measured release (kg/d)	Explanation / source of measured data											
Aquatic	Negligible	HERA (2005a); see section 9.5.2.3.2											
Air (direct)	Negligible	Specific Environmental Release Categories (SPERC) (AISE, 2010)											
Soil (direct only)	Negligible	Specific Environmental Release Categories (SPERC) (AISE, 2010)											
3.2 Consumers exposure estimation and reference to its source													
<p>Exposures have been calculated with the software tool REACT (Reach Exposure Assessment Consumer Tool) Long-term dermal exposure to consumers:</p> <table border="1"> <thead> <tr> <th>Product category</th> <th>Ingredient fraction by weight</th> <th>Estimated uptake value (mg/kg bw per day)</th> </tr> </thead> <tbody> <tr> <td>Laundry regular (AISE C1, PC35), Powder</td> <td>0.3</td> <td>1.56E-02</td> </tr> <tr> <td>Laundry regular (AISE C1, PC35), Liquid</td> <td>0.3</td> <td>2.29E-02</td> </tr> </tbody> </table>		Product category	Ingredient fraction by weight	Estimated uptake value (mg/kg bw per day)	Laundry regular (AISE C1, PC35), Powder	0.3	1.56E-02	Laundry regular (AISE C1, PC35), Liquid	0.3	2.29E-02			
Product category	Ingredient fraction by weight	Estimated uptake value (mg/kg bw per day)											
Laundry regular (AISE C1, PC35), Powder	0.3	1.56E-02											
Laundry regular (AISE C1, PC35), Liquid	0.3	2.29E-02											

Laundry compact (AISE C2, PC35), Powder	0.3	1.60E-02
Laundry compact (AISE C2, PC35), Liquid/Gel	0.3	2.29E-02
Laundry additives (AISE C4, PC35), Liquid Bleach	0.3	2.21E-02
Hand Dishwashing (AISE C5, PC35)	0.3	3.12E-04
Surface cleaners (AISE C7, PC35), Gel	0.3	4.29E-02

The negligible inhalation has been confirmed for the laundry washing scenario reported by HERA (2005a).

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

4.1 Environment.

Predicted exposures are not expected to exceed the DNEL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented.

4.2 Health.

Predicted exposures are not expected to exceed the DNEL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented.