

# SAFETY DATA SHEET

## NEO 800

Revision Date 01-Sept-2021

Revision Number 3

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

#### 1.1. Product identifier

Product Description: **NEO 800**

**Synonyms** Bleach 1 - 5%. Chlorine.  
**CAS-No** 7681-52-9  
**EC-No.** 231-668-3  
**Molecular Formula** Cl Na O

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

<b><u>Identified uses Disinfectant.</u></b>	For professional use only. Disinfectants must be used responsibly in line with manufacturer's instructions.
<b><u>Uses advised against.</u></b>	Must not be used where acid based chemicals are present. Not for direct contact with Food or Beverage stuffs. Not for oral consumption.

#### 1.3. Details of the supplier of the safety data sheet

**Company** Flowplant Group Limited  
Gemini House, Brunel Road,  
Churchfields Ind Estate,  
Salisbury.  
SP2 7PU  
Tel. +(44) 1722 325424  
Fax +(44) 1722 411329

**E-mail address** chemicals@flowplant.com

#### 1.4. Emergency telephone number

Tel. 07889 745930.

### SECTION 2: HAZARDS IDENTIFICATION

#### 2.1. Classification of the substance or mixture

##### **CLP Classification - Regulation (EC) No 1272/2008**

##### **Physical hazards**

Substances/mixtures corrosive to metal

Category 1 (H290)

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### Health hazards

Skin Corrosion/Irritation  
Serious Eye Damage/Eye Irritation

Category 1 B (H314)  
Category 1 (H318)

### Environmental hazards

Acute aquatic toxicity  
Chronic aquatic toxicity

Category 1 (H400)  
Category 2 (H411)

Full text of Hazard Statements: see section 16

### 2.2. Label elements



Signal Word

Danger

### Hazard Statements

H290 - May be corrosive to metals  
H315 - Causes skin irritation  
H318 - Causes serious eye damage  
H400 - Very toxic to aquatic life  
H411 - Toxic to aquatic life with long lasting effects

### Precautionary Statements

P280 - Wear protective gloves/protective clothing/eye protection/face protection  
P301 + P330 + P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting  
P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower  
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
P310 - Immediately call a POISON CENTER or doctor/physician

### 2.3. Other hazards

Substance is not considered persistent, bioaccumulative and toxic (PBT) / very persistent and very bioaccumulative (vPvB)

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

### 3.2. Mixtures

Component	CAS-No	EC-No.	Weight %	CLP Classification - Regulation (EC) No 1272/2008
Sodium hypochlorite	7681-52-9	231-668-3	> 1 - < 5	Met. Corr. 1 (H290)

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				Skin Corr. 1B (H314) Eye Dam. 1 (H318) STOT SE 3 (H335) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410) EUH031
Water	7732-18-5	231-791-2	> 84 - < 95	-
Component	Specific concentration limits (SCL's)		M-Factor	Component notes
Sodium hypochlorite	EUH031: C >=5%		10 (acute) 1 (chronic)	-

Components	Reach Registration Number	
Sodium hypochlorite	01-2119488154-34	

Full text of Hazard Statements: see section 16

### SECTION 4: FIRST AID MEASURES

#### 4.1. Description of first aid measures

<b>General Advice</b>	Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.
<b>Eye Contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required.
<b>Skin Contact</b>	Wash off immediately with plenty of water for at least 15 minutes. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Call a physician immediately.
<b>Ingestion</b>	Do NOT induce vomiting. Clean mouth with water. Never give anything by mouth to an unconscious person. Call a physician immediately.
<b>Inhalation</b>	If not breathing, give artificial respiration. Remove from exposure, lie down. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Call a physician immediately.
<b>Self-Protection of the First Aider</b>	Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.

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

Causes burns by all exposure routes. Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation

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

<b>Notes to Physician</b>	Treat symptomatically.
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### SECTION 5: FIREFIGHTING MEASURES

#### **5.1. Extinguishing media**

##### **Suitable Extinguishing Media**

CO<sub>2</sub>, dry chemical, dry sand, alcohol-resistant foam.

##### **Extinguishing media which must not be used for safety reasons**

No information available.

#### **5.2. Special hazards arising from the substance or mixture**

Thermal decomposition can lead to release of irritating gases and vapors. The product causes burns of eyes, skin and mucous membranes. Do not allow run-off from fire-fighting to enter drains or water courses.

##### **Hazardous Combustion Products**

Chlorine, Oxygen.

#### **5.3. Advice for firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

### SECTION 6: ACCIDENTAL RELEASE MEASURES

#### **6.1. Personal precautions, protective equipment and emergency procedures**

Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

#### **6.2. Environmental precautions**

Do not flush into surface water or sanitary sewer system. Do not allow material to contaminate ground water system. Prevent product from entering drains. Local authorities should be advised if significant spillages cannot be contained.

#### **6.3. Methods and material for containment and cleaning up**

Soak up with inert absorbent material. Keep in suitable, closed containers for disposal.

#### **6.4. Reference to other sections**

Refer to protective measures listed in Sections 8 and 13.

### SECTION 7: HANDLING AND STORAGE

#### **7.1. Precautions for safe handling**

Wear personal protective equipment/face protection. Do not get in eyes, on skin, or on clothing. Use only under a chemical fume hood. Do not breathe mist/vapors/spray. Do not ingest. If swallowed then seek immediate medical assistance.

##### **Hygiene Measures**

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Handle in accordance with good industrial hygiene and safety practice.

### 7.2. Conditions for safe storage, including any incompatibilities

Corrosives area. Protect from direct sunlight. Do not store in metal containers. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep at temperatures below 30°C.

Technical Rules for Hazardous Substances (TRGS) 510 Storage Class (LGK)

Class 8B (Germany)

### 7.3. Specific end use(s)

Use in laboratories

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1. Control parameters

#### Exposure limits

This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies

#### Biological limit values

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies

#### Derived No Effect Level (DNEL) / Derived Minimum Effect Level (DMEL)

See table for values; SODIUM HYPOCHLORITE SOLUTION, 5 - 16% CI ACTIVE

Component	Acute effects local (Dermal)	Acute effects systemic (Dermal)	Chronic effects local (Dermal)	Chronic effects systemic (Dermal)
Sodium hypochlorite 7681-52-9 ( > 5 - < 16 )			DNEL = 0.5% in mixture (weight basis)	

Component	Acute effects local (Inhalation)	Acute effects systemic (Inhalation)	Chronic effects local (Inhalation)	Chronic effects systemic (Inhalation)
Sodium hypochlorite 7681-52-9 ( > 5 - < 16 )	DNEL = 3.1mg/m <sup>3</sup>	DNEL = 3.1mg/m <sup>3</sup>	DNEL = 1.55mg/m <sup>3</sup>	DNEL = 1.55mg/m <sup>3</sup>

#### Predicted No Effect Concentration (PNEC)

See values below. SODIUM HYPOCHLORITE SOLUTION, 2 - 5% CI ACTIVE.

Component	Fresh water	Fresh water sediment	Water Intermittent	Microorganisms in sewage treatment	Soil (Agriculture)
Sodium hypochlorite 7681-52-9 ( > 5 - < 16 )	PNEC = 0.21µg/L		PNEC = 0.26µg/L	PNEC = 4.69mg/L	
Component	Marine water	Marine water sediment	Marine water intermittent	Food chain	Air
Sodium hypochlorite 7681-52-9 ( > 5 - < 16 )	PNEC = 0.042µg/L			PNEC = 11.1mg/kg food	

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### 8.2. Exposure controls

#### Engineering Measures

Use only under a chemical fume hood. Ensure that eyewash stations and safety showers are close to the workstation location. Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source

#### Personal protective equipment

##### Eye Protection

Goggles (European standard - EN 166)

##### Hand Protection

Protective gloves

Glove material	Breakthrough time	Glove thickness	EU standard	Glove comments
Butyl rubber	See manufacturers	-	EN 374	(minimum requirement)
PVC	recommendations			

##### Skin and body protection

Long sleeved clothing.

Inspect gloves before use.

Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information)

Ensure gloves are suitable for the task: Chemical compatibility, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion.

Remove gloves with care avoiding skin contamination.

##### Respiratory Protection

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained properly

##### Large scale/emergency use

Use a NIOSH/MSHA or European Standard EN 136 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced **Recommended Filter type:** Particulates filter conforming to EN 143

##### Small scale/Laboratory use

Use a NIOSH/MSHA or European Standard EN 149:2001 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

**Recommended half mask:-** Particle filtering: EN149:2001

When RPE is used a face piece Fit Test should be conducted

##### Environmental exposure controls

Prevent product from entering drains. Do not allow material to contaminate ground water system. Local authorities should be advised if significant spillages cannot be contained.

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### SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

#### 9.1. Information on basic physical and chemical properties

Physical State	Liquid	
Appearance	Yellow pungent	
Odor	Chlorine	No data available
Odor Threshold	available	
Melting Point/Range	-16 °C / 3.2 °F	
Softening Point	No data available	
Boiling Point/Range	No information available	
Flammability (liquid)	No data available	
Flammability (solid,gas)	Not applicable	
Explosion Limits	No data available	Liquid
Flash Point	No information available	
Autoignition Temperature	No data available	
Decomposition Temperature	No data available	Method - No information available
pH	11-13	
Viscosity	No data available	
Water Solubility	Soluble	
Solubility in other solvents	No information available	
Partition Coefficient (n-octanol/water)		
Vapor Pressure	No data available	
Density / Specific Gravity	1.05 - 1.10	
Bulk Density	Not applicable	
Vapor Density	No data available	Liquid
Particle characteristics	Not applicable (liquid)	(Air = 1.0)
<b>9.2. Other information</b>		
Molecular Formula	Cl Na O	
Molecular Weight	74.44	

### SECTION 10: STABILITY AND REACTIVITY

<b>10.1. Reactivity</b>	Yes - Contact with acids liberates toxic gas
<b>10.2. Chemical stability</b>	Stable under normal conditions, Sensitivity to light.
<b>10.3. Possibility of hazardous reactions</b>	
Hazardous Polymerization	Hazardous polymerization does not occur.
Hazardous Reactions	None under normal processing.
<b>10.4. Conditions to avoid</b>	Incompatible products. Excess heat.
<b>10.5. Incompatible materials</b>	Acids. Strong oxidizing agents. Metals. Amines.
<b>10.6. Hazardous decomposition products</b>	Chlorine. Oxygen.

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### SECTION 11: TOXICOLOGICAL INFORMATION

#### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

##### Product Information

##### (a) acute toxicity;

**Oral** Based on available data, the classification criteria are not met  
**Dermal** Based on available data, the classification criteria are not met  
**Inhalation** Based on available data, the classification criteria are not met

##### Toxicology data for the components

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Sodium hypochlorite	LD50 = 8.91 g/kg ( Rat )	LD50 > 20000 mg/kg ( Rabbit )	> 10500 mg/l (Rat) 1h
Water	-	-	-

(b) skin corrosion/irritation; Category 1 B  
Bridging principle "Dilution"

(c) serious eye damage/irritation; Category 1  
Bridging principle "Dilution"

##### (d) respiratory or skin sensitization;

**Respiratory** No data available **Skin** No data available

Component	Test method	Test species	Study result
Sodium hypochlorite 7681-52-9 ( > 5 - < 16 )	OECD Test Guideline 406	guinea pig	non-sensitising

(e) germ cell mutagenicity; No data available

(f) carcinogenicity; No data available

There are no known carcinogenic chemicals in this product

(g) reproductive toxicity; No data available

(h) STOT-single exposure; No data available

(i) STOT-repeated exposure; No data available

**Target Organs** No information available.

(j) aspiration hazard; No data available

**Symptoms / effects, both acute and delayed** Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation.



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### 11.2. Information on other hazards

**Endocrine Disrupting Properties** Assess endocrine disrupting properties for human health. This product does not contain any known or suspected endocrine disruptors.

## SECTION 12: ECOLOGICAL INFORMATION

### 12.1. Toxicity

#### Ecotoxicity effects

The product contains following substances which are hazardous for the environment. Very toxic to aquatic organisms.

Component	Freshwater Fish	Water Flea	Freshwater Algae
Sodium hypochlorite	Clupea pallasii: LC50=0.065 mg/L 96h	0.032 mg/L LC50 = 48 h	EC50: = 0.05 mg/L, 72h (Pseudokirchnerella subcapitata)
Component	Microtox		M-Factor
Sodium hypochlorite	-		10 (acute) 1 (chronic)

### 12.2. Persistence and degradability

#### Persistence

Soluble in water, Persistence is unlikely, based on information available, Miscible with water.

#### Degradation in sewage treatment plant

Contains substances known to be hazardous to the environment or not degradable in waste water treatment plants.

### 12.3. Bioaccumulative potential

Bioaccumulation is unlikely

### 12.4. Mobility in soil

The product is water soluble, and may spread in water systems. Will likely be mobile in the environment due to its water solubility. Highly mobile in soils

### 12.5. Results of PBT and vPvB assessment

Substance is not considered persistent, bioaccumulative and toxic (PBT) / very persistent and very bioaccumulative (vPvB).

### 12.6. Endocrine disrupting properties

#### Endocrine Disruptor Information

This product does not contain any known or suspected endocrine disruptors

### 12.7. Other adverse effects

#### Persistent Organic Pollutant

This product does not contain any known or suspected substance

#### Ozone Depletion Potential

This product does not contain any known or suspected substance

## SECTION 13: DISPOSAL CONSIDERATIONS

### 13.1. Waste treatment methods

#### Waste from Residues/Unused Products

Should not be released into the environment. Waste is classified as hazardous. Dispose of in accordance with the European Directives on waste and hazardous waste. Dispose of in accordance with local regulations.

#### Contaminated Packaging

Dispose of this container to hazardous or special waste collection point.

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**European Waste Catalogue (EWC)** According to the European Waste Catalog, Waste Codes are not product specific, but application specific.

**Other Information** Do not flush to sewer. Waste codes should be assigned by the user based on the application for which the product was used. Do not empty into drains. Large amounts will affect pH and harm aquatic organisms. Do not let this chemical enter the environment.

### SECTION 14: TRANSPORT INFORMATION

#### IMDG/IMO

**14.1. UN number** UN1791  
**14.2. UN proper shipping name** HYPOCHLORITE SOLUTION  
**14.3. Transport hazard class(es)** 8  
**14.4. Packing group** III

#### ADR

**14.1. UN number** UN1791  
**14.2. UN proper shipping name** HYPOCHLORITE SOLUTION  
**14.3. Transport hazard class(es)** 8  
**14.4. Packing group** III

#### IATA

**14.1. UN number** UN1791  
**14.2. UN proper shipping name** HYPOCHLORITE SOLUTION  
**14.3. Transport hazard class(es)** 8  
**14.4. Packing group** III

**14.5. Environmental hazards** Dangerous for the environment  
Product is a marine pollutant according to the criteria set by IMDG/IMO

**14.6. Special precautions for user** No special precautions required

**14.7. Maritime transport in bulk to IMO instruments** Not applicable, packaged goods according

### SECTION 15: REGULATORY INFORMATION

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

##### International Inventories

X = listed, Europe (EINECS/ELINCS/NLP), U.S.A. (TSCA), Canada (DSL/NDSL), Philippines (PICCS), China (IECSC), Japan (ENCS), Australia (AICS), Korea (ECL).

Component	EINECS	ELINCS	NLP	TSCA	DSL	NDSL	PICCS	ENCS	IECSC	AICS	KECL
Sodium hypochlorite	231-668-3	-		X	X	-	X	X	X	X	KE-3150 6
Water	231-791-2	-		X	X	-	X	X	X	X	KE-3540 0

**Regulation (EC) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of dangerous chemicals** Not applicable

##### National Regulations

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### WGK Classification

Water endangering class = 2 (self classification)

Component	Germany - Water Classification (VwVwS)	Germany - TA-Luft Class
Sodium hypochlorite	WGK2	

Component	France - INRS (Tables of occupational diseases)
Sodium hypochlorite	Tableaux des maladies professionnelles (TMP) - RG 65

**UK** - Take note of Control of Substances Hazardous to Health Regulations (COSHH) 2002 and 2005 Amendment

### 15.2. Chemical safety assessment

No Chemical Safety Assessment/Report has been conducted

## SECTION 16: OTHER INFORMATION

### Full text of H-Statements referred to under sections 2 and 3

H290 - May be corrosive to metals  
H314 - Causes severe skin burns and eye damage  
H318 - Causes serious eye damage  
H400 - Very toxic to aquatic life  
H411 - Toxic to aquatic life with long lasting effects  
EUH031 - Contact with acids liberates toxic gas  
H335 - May cause respiratory irritation  
H410 - Very toxic to aquatic life with long lasting effects

### Legend

**CAS** - Chemical Abstracts Service

**EINECS/ELINCS** - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

**IECSC** - Chinese Inventory of Existing Chemical Substances

**KECL** - Korean Existing and Evaluated Chemical Substances

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**DSL/NDL** - Canadian Domestic Substances List/Non-Domestic Substances List

**ENCS** - Japanese Existing and New Chemical Substances

**AICS** - Australian Inventory of Chemical Substances

**NZIoC** - New Zealand Inventory of Chemicals

**WEL** - Workplace Exposure Limit

**ACGIH** - American Conference of Governmental Industrial Hygienists

**DNEL** - Derived No Effect Level

**RPE** - Respiratory Protective Equipment

**LC50** - Lethal Concentration 50%

**NOEC** - No Observed Effect Concentration

**PBT** - Persistent, Bioaccumulative, Toxic

**TWA** - Time Weighted Average

**IARC** - International Agency for Research on Cancer  
Predicted No Effect Concentration (PNEC)

**LD50** - Lethal Dose 50%

**EC50** - Effective Concentration 50%

**POW** - Partition coefficient Octanol:Water

**vPvB** - very Persistent, very Bioaccumulative

**ADR** - European Agreement Concerning the International Carriage of Dangerous Goods by Road

**IMO/IMDG** - International Maritime Organization/International Maritime Dangerous Goods Code

**OECD** - Organisation for Economic Co-operation and Development

**BCF** - Bioconcentration factor

**ICAO/IATA** - International Civil Aviation Organization/International Air Transport Association

**MARPOL** - International Convention for the Prevention of Pollution from Ships

**ATE** - Acute Toxicity Estimate

**VOC** - (Volatile Organic Compound)

**Key literature references and sources for data** <https://echa.europa.eu/information-on-chemicals>

Suppliers safety data sheet, Chemadviser - LOLI, Merck index, RTECS

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**Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:**

<b>Physical hazards</b>	On basis of test data
<b>Health Hazards</b>	Calculation method
<b>Environmental hazards</b>	Calculation method

### Training Advice

Chemical incident response training.

**Creation Date** 25-Aug-2010 **Revision Date** 01-Apr-2021 **Revision Summary** SDS sections updated, 7.

**This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006  
COMMISSION REGULATION (EU) 2020/878 amending Annex II to Regulation (EC) No  
1907/2006**

### Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

**End of Safety Data Sheet**