



## ZENITH 4B SALAD WASH

Revision: 2020-12-20

Version: 01.0

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

#### 1.1 Product identifier

**Trade name:** ZENITH 4B SALAD WASH

Product identifier: sodium hypochlorite, REACH number: 01-2119488154-34, EC number: 231-668-3, CAS number: 7681-52-9

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

**Identified uses:**

For professional use only.

Food processing aid

**Uses advised against:** Uses other than those identified are not recommended

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

Diversey Ltd, Weston Favell Centre, Northampton NN3 8PD, United Kingdom

#### Contact details

Zenith Hygiene Group  
A1M Business Centre Dixons Hill Road Welham Green  
Herts AL9 7JE  
www.zhgplc.com  
01707 270260  
helpdesk@zhgplc.com

#### 1.4 Emergency telephone number

Seek medical advice (show the label or safety data sheet where possible)

For medical or environmental emergency only:

call 0800 052 0185

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

Aquatic Chronic 3 (H412)

#### 2.2 Label elements

**Hazard statements:**

H412 - Harmful to aquatic life with long lasting effects.

#### 2.3 Other hazards

No other hazards known. The product does not meet the criteria for PBT or vPvB in accordance with Regulation (EC) No 1907/2006, Annex XIII.

### SECTION 3: Composition/information on ingredients

#### 3.1 Substances

Ingredient(s)	EC number	CAS number	REACH number	Classification	Notes	Weight percent
sodium hypochlorite	231-668-3	7681-52-9	01-2119488154-34	EUH031 Skin Corr. 1B (H314) STOT SE 3 (H335) Eye Dam. 1 (H318) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410) Met. Corr. 1 (H290)		0.1-1

Workplace exposure limit(s), if available, are listed in subsection 8.1.

For the full text of the H and EUH phrases mentioned in this Section, see Section 16.

ATE, if available, are listed in section 11.

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**SECTION 4: First aid measures****4.1 Description of first aid measures**

<b>Inhalation:</b>	Get medical attention or advice if you feel unwell.
<b>Skin contact:</b>	Wash skin with plenty of lukewarm, gently flowing water. If skin irritation occurs: Get medical advice or attention.
<b>Eye contact:</b>	Rinse cautiously with water for several minutes. If irritation occurs and persists, get medical attention.
<b>Ingestion:</b>	Rinse mouth. Immediately drink 1 glass of water. Never give anything by mouth to an unconscious person. Get medical attention or advice if you feel unwell.
<b>Self-protection of first aider:</b>	Consider personal protective equipment as indicated in subsection 8.2.

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

<b>Inhalation:</b>	No known effects or symptoms in normal use.
<b>Skin contact:</b>	No known effects or symptoms in normal use.
<b>Eye contact:</b>	No known effects or symptoms in normal use.
<b>Ingestion:</b>	No known effects or symptoms in normal use.

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

No information available on clinical testing and medical monitoring. Specific toxicological information on substances, if available, can be found in section 11.

**SECTION 5: Firefighting measures****5.1 Extinguishing media**

Carbon dioxide. Dry powder. Water spray jet. Fight larger fires with water spray jet or alcohol-resistant foam.

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

No special hazards known.

**5.3 Advice for firefighters**

As in any fire, wear self contained breathing apparatus and suitable protective clothing including gloves and eye/face protection.

**SECTION 6: Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures**

No special measures required.

**6.2 Environmental precautions**

Do not allow to enter drainage system, surface or ground water. Do not allow to enter the ground/soil. Dilute with plenty of water. Inform responsible authorities in case undiluted product reaches drainage system, surface or ground water or the ground/soil.

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

Dyke to collect large liquid spills. Absorb with liquid-binding material (sand, diatomite, universal binders, sawdust). Do not place spilled materials back into the original container. Collect in closed and suitable containers for disposal.

**6.4 Reference to other sections**

For personal protective equipment see subsection 8.2. For disposal considerations see section 13.

**SECTION 7: Handling and storage****7.1 Precautions for safe handling****Measures to prevent fire and explosions:**

No special precautions required.

**Measures required to protect the environment:**

For environmental exposure controls see subsection 8.2.

**Advices on general occupational hygiene:**

Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Wash hands before breaks and at the end of workday. Use only with adequate ventilation. Do not mix with other products. See chapter 8.2, Exposure controls / Personal protection.

**7.2 Conditions for safe storage, including any incompatibilities**

Store in accordance with local and national regulations. Store in a closed container. Keep only in original packaging. For conditions to avoid see subsection 10.4. For incompatible materials see subsection 10.5.

**7.3 Specific end use(s)**

No specific advice for end use available.

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**SECTION 8: Exposure controls/personal protection****8.1 Control parameters****Workplace exposure limits**

Air limit values, if available:

Biological limit values, if available:

**Recommended monitoring procedures, if available:**

Additional exposure limits under the conditions of use, if available:

**DNEL/DMEL and PNEC values****Human exposure**

DNEL oral exposure - Consumer (mg/kg bw)

Ingredient(s)	Short term - Local effects	Short term - Systemic effects	Long term - Local effects	Long term - Systemic effects
sodium hypochlorite	-	-	-	0.26

DNEL dermal exposure - Worker

Ingredient(s)	Short term - Local effects	Short term - Systemic effects (mg/kg bw)	Long term - Local effects	Long term - Systemic effects (mg/kg bw)
sodium hypochlorite	-	-	0.5 %	-

DNEL dermal exposure - Consumer

Ingredient(s)	Short term - Local effects	Short term - Systemic effects (mg/kg bw)	Long term - Local effects	Long term - Systemic effects (mg/kg bw)
sodium hypochlorite	-	-	0.5 %	-

DNEL inhalatory exposure - Worker (mg/m<sup>3</sup>)

Ingredient(s)	Short term - Local effects	Short term - Systemic effects	Long term - Local effects	Long term - Systemic effects
sodium hypochlorite	3.1	3.1	1.55	1.55

DNEL inhalatory exposure - Consumer (mg/m<sup>3</sup>)

Ingredient(s)	Short term - Local effects	Short term - Systemic effects	Long term - Local effects	Long term - Systemic effects
sodium hypochlorite	3.1	3.1	1.55	1.55

**Environmental exposure**

Environmental exposure - PNEC

Ingredient(s)	Surface water, fresh (mg/l)	Surface water, marine (mg/l)	Intermittent (mg/l)	Sewage treatment plant (mg/l)
sodium hypochlorite	0.00021	0.000042	0.00026	0.03

Environmental exposure - PNEC, continued

Ingredient(s)	Sediment, freshwater (mg/kg)	Sediment, marine (mg/kg)	Soil (mg/kg)	Air (mg/m <sup>3</sup> )
sodium hypochlorite	-	-	-	No data available

**8.2 Exposure controls**

The following information applies for the uses indicated in subsection 1.2 of the Safety Data Sheet. If available, please refer to the product information sheet for application and handling instructions. Normal use conditions are assumed for this section.

Recommended safety measures for handling the undiluted product:

Covering activities such as filling and transfer of product to application equipment, flasks or buckets

**Appropriate engineering controls:** No special requirements under normal use conditions.

**Appropriate organisational controls:** No special requirements under normal use conditions.

**Personal protective equipment****Eye / face protection:**

Safety glasses are not normally required. However, their use is recommended in those cases where splashes may occur when handling the product (EN 166).

**Hand protection:**

No special requirements under normal use conditions.

**Body protection:**

No special requirements under normal use conditions.

**Respiratory protection:**

No special requirements under normal use conditions.

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**Environmental exposure controls:** No special requirements under normal use conditions.

*Recommended safety measures for handling the diluted product:*

**Recommended maximum concentration (% w/w):** 3

**Appropriate engineering controls:** No special requirements under normal use conditions.

**Appropriate organisational controls:** No special requirements under normal use conditions.

**Personal protective equipment**

**Eye / face protection:** No special requirements under normal use conditions.

**Hand protection:** No special requirements under normal use conditions.

**Body protection:** No special requirements under normal use conditions.

**Respiratory protection:** No special requirements under normal use conditions.

**Environmental exposure controls:** No special requirements under normal use conditions.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Information in this section refers to the product, unless it is specifically stated that substance data is listed

	Method / remark
<b>Physical State:</b> Liquid	
<b>Colour:</b> Clear , Light , Yellow	
<b>Odour:</b> Product specific	
<b>Odour threshold:</b> Not applicable	
<b>pH &gt; 11</b> (neat)	ISO 4316
<b>Dilution pH:</b> $\approx 10$ (3 %)	ISO 4316
<b>Melting point/freezing point (°C):</b> Not determined	Not relevant to classification of this product
<b>Initial boiling point and boiling range (°C):</b> Not determined	See substance data

Substance data, boiling point

Ingredient(s)	Value (°C)	Method	Atmospheric pressure (hPa)
sodium hypochlorite	Product decomposes before boiling	Method not given	1013

	Method / remark
<b>Flammability (liquid):</b> Not flammable.	
<b>Flash point (°C):</b> Not applicable.	
<b>Sustained combustion:</b> The product does not sustain combustion ( UN Manual of Tests and Criteria, section 32, L.2 )	
<b>Evaporation rate:</b> Not determined	
<b>Flammability (solid, gas):</b> Not applicable to liquids	
<b>Lower and upper explosion limit/flammability limit (%)</b> Not determined	See substance data

Substance data, flammability or explosive limits, if available:

Ingredient(s)	Lower limit (% vol)	Upper limit (% vol)
sodium hypochlorite	-	-

	Method / remark
<b>Vapour pressure:</b> Not determined	See substance data

Substance data, vapour pressure

Ingredient(s)	Value (Pa)	Method	Temperature (°C)
sodium hypochlorite	Negligible .?		

	Method / remark
<b>Vapour density:</b> Not determined	Not relevant to classification of this product
<b>Relative density:</b> $\approx 1.02$ (20 °C)	OECD 109 (EU A.3)
<b>Solubility in / Miscibility with Water:</b> Fully miscible	

Substance data, solubility in water

Ingredient(s)	Value (g/l)	Method	Temperature (°C)
sodium hypochlorite	Soluble		

Substance data, partition coefficient n-octanol/water (log Kow): see subsection 12.3

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## Method / remark

**Autoignition temperature:** Not determined  
**Decomposition temperature:** Not applicable.  
**Viscosity:** Not determined  
**Explosive properties:** Not explosive.  
**Oxidising properties:** Not oxidising.

**9.2 Other information**

**Surface tension (N/m):** Not determined  
**Corrosion to metals:** Not corrosive

Not relevant to classification of this product

Substance data, dissociation constant, if available:

Ingredient(s)	Value	Method	Temperature (°C)
sodium hypochlorite	7.53 (pKa)	Method not given	

**SECTION 10: Stability and reactivity****10.1 Reactivity**

No reactivity hazards known under normal storage and use conditions.

**10.2 Chemical stability**

Stable under normal storage and use conditions.

**10.3 Possibility of hazardous reactions**

No hazardous reactions known under normal storage and use conditions.

**10.4 Conditions to avoid**

None known under normal storage and use conditions.

**10.5 Incompatible materials**

Reacts with acids.

**10.6 Hazardous decomposition products**

None known under normal storage and use conditions.

**SECTION 11: Toxicological information****11.1 Information on toxicological effects**

Mixture data:.

**Relevant calculated ATE(s):**

ATE - Oral (mg/kg): &gt;2000

Substance data, where relevant and available, are listed below:.

**Acute toxicity**

Acute oral toxicity

Ingredient(s)	Endpoint	Value (mg/kg)	Species	Method	Exposure time (h)	ATE (mg/kg)
sodium hypochlorite	LD <sub>50</sub>	1100	Rat	OECD 401 (EU B.1)	90	Not established

Acute dermal toxicity

Ingredient(s)	Endpoint	Value (mg/kg)	Species	Method	Exposure time (h)	ATE (mg/kg)
sodium hypochlorite	LD <sub>50</sub>	> 20000	Rabbit	OECD 402 (EU B.3)		Not established

Acute inhalative toxicity

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (h)
sodium hypochlorite	LC <sub>50</sub>	> 10.5 (vapour)	Rat	OECD 403 (EU B.2)	1

Acute inhalative toxicity, continued

Ingredient(s)	ATE - inhalation, dust (mg/l)	ATE - inhalation, mist (mg/l)	ATE - inhalation, vapour (mg/l)	ATE - inhalation, gas (mg/l)
sodium hypochlorite	Not established	Not established	Not established	Not established

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**Irritation and corrosivity**

## Skin irritation and corrosivity

Ingredient(s)	Result	Species	Method	Exposure time
sodium hypochlorite	Corrosive	Rabbit	OECD 404 (EU B.4)	

## Eye irritation and corrosivity

Ingredient(s)	Result	Species	Method	Exposure time
sodium hypochlorite	Severe damage	Rabbit	OECD 405 (EU B.5)	

## Respiratory tract irritation and corrosivity

Ingredient(s)	Result	Species	Method	Exposure time
sodium hypochlorite	Irritating to respiratory tract			

**Sensitisation**

## Sensitisation by skin contact

Ingredient(s)	Result	Species	Method	Exposure time (h)
sodium hypochlorite	Not sensitising	Guinea pig	OECD 406 (EU B.6) / Buehler test	

## Sensitisation by inhalation

Ingredient(s)	Result	Species	Method	Exposure time
sodium hypochlorite	Not sensitising			

**CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**

## Mutagenicity

Ingredient(s)	Result (in-vitro)	Method (in-vitro)	Result (in-vivo)	Method (in-vivo)
sodium hypochlorite	No evidence for mutagenicity	OECD 471 (EU B.12/13)	No evidence for mutagenicity, negative test results	OECD 474 (EU B.12)

## Carcinogenicity

Ingredient(s)	Effect
sodium hypochlorite	No evidence for carcinogenicity, negative test results

## Toxicity for reproduction

Ingredient(s)	Endpoint	Specific effect	Value (mg/kg bw/d)	Species	Method	Exposure time	Remarks and other effects reported
sodium hypochlorite	NOAEL	Developmental toxicity Impaired fertility	5 (Cl)	Rat	OECD 414 (EU B.31), oral OECD 415 (EU B.34), oral		No evidence for reproductive toxicity

**Repeated dose toxicity**

## Sub-acute or sub-chronic oral toxicity

Ingredient(s)	Endpoint	Value (mg/kg bw/d)	Species	Method	Exposure time (days)	Specific effects and organs affected
sodium hypochlorite	NOAEL	50	Rat	OECD 408 (EU B.26)	90	

## Sub-chronic dermal toxicity

Ingredient(s)	Endpoint	Value (mg/kg bw/d)	Species	Method	Exposure time (days)	Specific effects and organs affected
sodium hypochlorite		No data available				

## Sub-chronic inhalation toxicity

Ingredient(s)	Endpoint	Value (mg/kg bw/d)	Species	Method	Exposure time (days)	Specific effects and organs affected
sodium hypochlorite		No data available				

## Chronic toxicity

Ingredient(s)	Exposure route	Endpoint	Value (mg/kg bw/d)	Species	Method	Exposure time	Specific effects and organs affected	Remark
sodium hypochlorite			No data available					

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STOT-single exposure

Ingredient(s)	Affected organ(s)
sodium hypochlorite	Not applicable

STOT-repeated exposure

Ingredient(s)	Affected organ(s)
sodium hypochlorite	Not applicable

**Aspiration hazard**

Substances with an aspiration hazard (H304), if any, are listed in section 3.

**Potential adverse health effects and symptoms**

Effects and symptoms related to the product, if any, are listed in subsection 4.2.

**SECTION 12: Ecological information****12.1 Toxicity**

Substance data, where relevant and available, are listed below:

**Aquatic short-term toxicity**

Aquatic short-term toxicity - fish

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (h)
sodium hypochlorite	LC <sub>50</sub>	0.06	<i>Oncorhynchus mykiss</i>	Method not given	96

Aquatic short-term toxicity - crustacea

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (h)
sodium hypochlorite	EC <sub>50</sub>	0.035	<i>Ceriodaphnia dubia</i>	OECD 202 (EU C.2)	48

Aquatic short-term toxicity - algae

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (h)
sodium hypochlorite	NOEC	0.0021	<i>Not specified</i>	Method not given	168

Aquatic short-term toxicity - marine species

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (days)
sodium hypochlorite	EC <sub>50</sub>	0.026	<i>Crassostrea virginica</i>	Method not given	2

Impact on sewage plants - toxicity to bacteria

Ingredient(s)	Endpoint	Value (mg/l)	Inoculum	Method	Exposure time
sodium hypochlorite		0.375	<i>Activated sludge</i>	Method not given	

**Aquatic long-term toxicity**

Aquatic long-term toxicity - fish

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time	Effects observed
sodium hypochlorite	NOEC	0.04	<i>Menidia pelinsulae</i>	Method not given	96 hour(s)	

Aquatic long-term toxicity - crustacea

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time	Effects observed
sodium hypochlorite	NOEC	0.007	<i>Crassostrea virginica</i>	Method not given	15 day(s)	

Aquatic toxicity to other aquatic benthic organisms, including sediment-dwelling organisms, if available:

Ingredient(s)	Endpoint	Value (mg/kg dw sediment)	Species	Method	Exposure time (days)	Effects observed
sodium hypochlorite		No data available			-	

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**Terrestrial toxicity**

Terrestrial toxicity - soil invertebrates, including earthworms, if available:

Ingredient(s)	Endpoint	Value (mg/kg dw soil)	Species	Method	Exposure time (days)	Effects observed
sodium hypochlorite		No data available			-	

Terrestrial toxicity - plants, if available:

Ingredient(s)	Endpoint	Value (mg/kg dw soil)	Species	Method	Exposure time (days)	Effects observed
sodium hypochlorite		No data available			-	

Terrestrial toxicity - birds, if available:

Ingredient(s)	Endpoint	Value	Species	Method	Exposure time (days)	Effects observed
sodium hypochlorite		No data available			-	

Terrestrial toxicity - beneficial insects, if available:

Ingredient(s)	Endpoint	Value (mg/kg dw soil)	Species	Method	Exposure time (days)	Effects observed
sodium hypochlorite		No data available			-	

Terrestrial toxicity - soil bacteria, if available:

Ingredient(s)	Endpoint	Value (mg/kg dw soil)	Species	Method	Exposure time (days)	Effects observed
sodium hypochlorite		No data available			-	

**12.2 Persistence and degradability****Abiotic degradation**

Abiotic degradation - photodegradation in air, if available:

Ingredient(s)	Half-life time	Method	Evaluation	Remark
sodium hypochlorite	115 day(s)	Indirect photo-oxidation		

Abiotic degradation - hydrolysis, if available:

Abiotic degradation - other processes, if available:

**Biodegradation**

Ready biodegradability - aerobic conditions

Ingredient(s)	Inoculum	Analytical method	DT <sub>50</sub>	Method	Evaluation
sodium hypochlorite					Not applicable (inorganic substance)

Ready biodegradability - anaerobic and marine conditions, if available:

Degradation in relevant environmental compartments, if available:

**12.3 Bioaccumulative potential**Partition coefficient n-octanol/water (log K<sub>ow</sub>)

Ingredient(s)	Value	Method	Evaluation	Remark
sodium hypochlorite	-3.42	Method not given	No bioaccumulation expected	

Bioconcentration factor (BCF)

Ingredient(s)	Value	Species	Method	Evaluation	Remark
sodium hypochlorite	No data available				

**12.4 Mobility in soil**

Adsorption/Desorption to soil or sediment

Ingredient(s)	Adsorption coefficient Log K <sub>oc</sub>	Desorption coefficient Log K <sub>oc</sub> (des)	Method	Soil/sediment type	Evaluation
sodium hypochlorite	1.12				High potential for mobility in



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					soil
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**12.5 Results of PBT and vPvB assessment**

Substances that fulfill the criteria for PBT/vPvB, if any, are listed in section 3.

**12.6 Other adverse effects**

No other adverse effects known.

**SECTION 13: Disposal considerations****13.1 Waste treatment methods****Waste from residues / unused products:**

The concentrated contents or contaminated packaging should be disposed of by a certified handler or according to the site permit. Release of waste to sewers is discouraged. The cleaned packaging material is suitable for energy recovery or recycling in line with local legislation.

**European Waste Catalogue:**

20 01 29\* - detergents containing dangerous substances.

**Empty packaging****Recommendation:**

Dispose of observing national or local regulations.

**Suitable cleaning agents:**

Water, if necessary with cleaning agent.

**SECTION 14: Transport information****Land transport (ADR/RID), Sea transport (IMDG), Air transport (ICAO-TI / IATA-DGR)**

**14.1 UN number:** Non-dangerous goods

**14.2 UN proper shipping name:** Non-dangerous goods

**14.3 Transport hazard class(es):** Non-dangerous goods

**14.4 Packing group:** Non-dangerous goods

**14.5 Environmental hazards:** Non-dangerous goods

**14.6 Special precautions for user:** Non-dangerous goods

**14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code:** Non-dangerous goods

**SECTION 15: Regulatory information****15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****EU regulations:**

- Regulation (EC) No. 1907/2006 - REACH
- Regulation (EC) No 1272/2008 - CLP
- Regulation (EC) No. 1333/2008

**Authorisations or restrictions (Regulation (EC) No 1907/2006, Title VII respectively Title VIII):** Not applicable.

UFI: 281E-C1HS-500H-PYYQ

**Seveso - Classification:** Not classified

**15.2 Chemical safety assessment**

A chemical safety assessment has not been carried out on the substance

**SECTION 16: Other information**

*The information in this document is based on our best present knowledge. However, it does not constitute a guarantee for any specific product features and does not establish a legally binding contract*

**SDS code:** MS1004883

**Version:** 01.0

**Revision:** 2020-12-20

**Full text of the H and EUH phrases mentioned in section 3:**

- H290 - May be corrosive to metals.
- H314 - Causes severe skin burns and eye damage.
- H318 - Causes serious eye damage.
- H335 - May cause respiratory irritation.

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- H400 - Very toxic to aquatic life.
- H410 - Very toxic to aquatic life with long lasting effects.
- EUH031 - Contact with acids liberates toxic gas.

**Abbreviations and acronyms:**

- AISE - The international Association for Soaps, Detergents and Maintenance Products
- DNEL - Derived No Effect Limit
- EUH - CLP Specific hazard statement
- PBT - Persistent, Bioaccumulative and Toxic
- PNEC - Predicted No Effect Concentration
- REACH number - REACH registration number, without supplier specific part
- vPvB - very Persistent and very Bioaccumulative
- ATE - Acute Toxicity Estimate
- LD50 - Lethal Dose, 50% / Median Lethal dose
- LC50 - Lethal Concentration, 50% / Median Lethal Concentration
- EC50 - effective concentration, 50%
- NOEL - No observed effect level
- NOAEL - No observed adverse effect level
- OECD - Organization for Economic Cooperation and Development

**End of Safety Data Sheet**