

Chemeco Auto Dishwashing Powder

Chemwatch Hazard Alert Code: 3

Issue Date: **27/06/2022**Print Date: **05/03/2023**S.GHS.AUS.EN

Chemwatch: 23-5747 Version No: 2.1.1.1

Safety Data Sheet according to WHS and ADG requirements

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

Product Identifier

Product name	Auto Dishwashing Powder	
Synonyms	Autodish Auto Dishwashing Powder	
Other means of identification	Not Available	

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

Details of the supplier of the safety data sheet

Registered company name	Chemeco (Aust)
Address	17 Yale Drive Epping VIC 3076
Telephone	+61 3 9408 8699
Fax	+61 3 9408 8399
Website	https://www.chemeco.com.au/
Email	info@chemeco.com.au

Emergency telephone number

Association / Organisation	Not Available
Emergency telephone numbers	Not Available
Other emergency telephone numbers	Not Available

SECTION 2 HAZARDS IDENTIFICATION

Classification of the substance or mixture

HAZARDOUS CHEMICAL. NON-DANGEROUS GOODS. According to the WHS Regulations and the ADG Code.

Poisons Schedule	S5
Classification [1]	Acute Toxicity (Inhalation) Category 4, Skin Corrosion/Irritation Category 2, Serious Eye Damage Category 1, Specific target organ toxicity - single exposure Category 3 (respiratory tract irritation)
Legend:	1. Classified by Chemwatch; 2. Classification drawn from HSIS; 3. Classification drawn from EC Directive 1272/2008 - Annex VI

Label elements

GHS label elements





SIGNAL WORD DANGER

Hazard statement(s)

H332	Harmful if inhaled.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H335	May cause respiratory irritation.

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P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P261	Avoid breathing dust/fumes.

Precautionary statement(s) Response

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.
P362	Take off contaminated clothing and wash before reuse.
P302+P352	IF ON SKIN: Wash with plenty of soap and water.

rrecautionary statement(s) storage	
P405	Store locked up.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.

Precautionary statement(s) Disposal

P501 Dispose of contents/container in accordance with local regulations.

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

Substances

See section below for composition of Mixtures

Mixtures

CAS No	%[weight]	Name	
497-19-8	>60		sodium carbonate
10213-79-3	1-10		sodium metasilicate, pentahydrate
2893-78-9	0-1		sodium dichloroisocyanurate
			decomposes when wet and releases
7782-50-5			chlorine
	balance		nonhazardous ingredients

SECTION 4 FIRST AID MEASURES

Description of first aid measures

Eye Contact	If this product comes in contact with the eyes: Immediately hold eyelids apart and flush the eye continuously with running water. Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids. Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes. Transport to hospital or doctor without delay. Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.
Skin Contact	If skin contact occurs: Immediately remove all contaminated clothing, including footwear. Flush skin and hair with running water (and soap if available). Seek medical attention in event of irritation.
Inhalation	 If dust is inhaled, remove from contaminated area. Encourage patient to blow nose to ensure clear passage of breathing. If irritation or discomfort persists seek medical attention.
Ingestion	 If swallowed do NOT induce vomiting. If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration. Observe the patient carefully. Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious. Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink. Seek medical advice.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5 FIREFIGHTING MEASURES

Extinguishing media

- ▶ There is no restriction on the type of extinguisher which may be used.
- Use extinguishing media suitable for surrounding area.

Special hazards arising from the substrate or mixture

Fire Incompatibility Reacts with aluminium / zinc producing flammable, explosive hydrogen gas

Advice for firefighters

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Fire Fighting

- Alert Fire Brigade and tell them location and nature of hazard.
- Wear breathing apparatus plus protective gloves in the event of a fire.
- Prevent, by any means available, spillage from entering drains or water courses.
- Use fire fighting procedures suitable for surrounding area.

Fire/Explosion Hazard

Non combustible.
 Not considered a significant fire risk, however containers may burn.

Decomposes on heating and produces toxic fumes of:carbon dioxide (CO2), chlorine, phosgene

SECTION 6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

See section 8

Environmental precautions

See section 12

Methods and material for containment and cleaning up

Minor Spills

- Clean up all spills immediately.
- Avoid contact with skin and eyes.
- Wear impervious gloves and safety glasses.
- ► Use dry clean up procedures and avoid generating dust.

Major Spills

- Clear area of personnel and move upwind.
- Alert Fire Brigade and tell them location and nature of hazard.
 Control personal contact with the substance, by using protective equipment and dust respirator.
- Prevent spillage from entering drains, sewers or water courses.

Personal Protective Equipment advice is contained in Section 8 of the SDS.

SECTION 7 HANDLING AND STORAGE

Precautions for safe handling

Safe handling	 Limit all unnecessary personal contact. Wear protective clothing when risk of exposure occurs. Use in a well-ventilated area. Avoid contact with incompatible materials.
Other information	Store in original containers. Keep containers securely sealed. Store in a cool, dry, well-ventilated area. Store away from incompatible materials and foodstuff containers.

Conditions for safe storage, including any incompatibilities

Suitable container

- Lined metal can, lined metal pail/ can.
- Plastic pail.
- Polyliner drum.
- ► Packing as recommended by manufacturer.

Storage incompatibility

Avoid strong acids, acid chlorides, acid anhydrides and chloroformates.

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters

OCCUPATIONAL EXPOSURE LIMITS (OEL)

INGREDIENT DATA

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
Australia Exposure Standards	chlorine	Chlorine	Not Available	Not Available	3 mg/m3 / 1 ppm	Not Available

EMERGENCY LIMITS

Ingredient	Material name	TEEL-1	TEEL-2	TEEL-3
sodium carbonate	Sodium carbonate	12 mg/m3	130 mg/m3	780 mg/m3
sodium metasilicate, pentahydrate	Sodium metasilicate pentahydrate	45 mg/m3	45 mg/m3	170 mg/m3
sodium metasilicate, pentahydrate	Sodium silicate; (Sodium metasilicate)	18 mg/m3	230 mg/m3	230 mg/m3
chlorine	Chlorine	Not Available	Not Available	Not Available
chlorine	Chlorine Hi dry granular (as CI)	1 ppm	2.52 ppm	30 ppm

Ingredient	Original IDLH	Revised IDLH
sodium carbonate	Not Available	Not Available
sodium metasilicate, pentahydrate	Not Available	Not Available
sodium dichloroisocyanurate	Not Available	Not Available

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chlorine 30 ppm 10 ppm

Exposure controls

Appropriate engineering controls

Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection. The basic types of engineering controls are:

Process controls which involve changing the way a job activity or process is done to reduce the risk.

Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment.

Personal protection









- Safety glasses with side shields; or as required,
- Chemical goggles.
- Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience.

	and adsorption for the class of chemicals in use and an account of injury experience.
Skin protection	See Hand protection below
Hands/feet protection	Wear protective gloves, e.g. PVC.
Body protection	See Other protection below
Other protection	Overalls. Eyewash unit.
Thermal hazards	Not Available

Recommended material(s)

GLOVE SELECTION INDEX

Glove selection is based on a modified presentation of the:

"Forsberg Clothing Performance Index".

The effect(s) of the following substance(s) are taken into account in the *computer-generated* selection:

NV Chemicals Automatic Dishwashing Powder

Material	CPI
NATURAL RUBBER	Α
NITRILE	Α

^{*} CPI - Chemwatch Performance Index

A: Best Selection

B: Satisfactory; may degrade after 4 hours continuous immersion

C: Poor to Dangerous Choice for other than short term immersion

NOTE: As a series of factors will influence the actual performance of the glove,

a final selection must be based on detailed observation. -

Respiratory protection

Type AB-P Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

Where the concentration of gas/particulates in the breathing zone, approaches or exceeds the "Exposure Standard" (or ES), respiratory protection is required. Degree of protection varies with both face-piece and Class of filter; the nature of protection varies with Type of filter.

Required Minimum Protection Factor	Half-Face Respirator	Full-Face Respirator	Powered Air Respirator
up to 10 x ES	AB-AUS P2	-	AB-PAPR-AUS / Class 1 P2
up to 50 x ES	-	AB-AUS / Class 1 P2	-
up to 100 x ES	-	AB-2 P2	AB-PAPR-2 P2 ^

^{^ -} Full-face

A(All classes) = Organic vapours, B AUS or B1 = Acid gasses, B2 = Acid gas or hydrogen cyanide(HCN), B3 = Acid gas or hydrogen cyanide(HCN), E = Sulfur dioxide(SO2), G = Agricultural chemicals, K = Ammonia(NH3), Hg = Mercury, NO = Oxides of nitrogen, MB = Methyl bromide, AX = Low boiling point organic compounds(below 65 degC)

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	White free flowing alkaline powder; mixes with water.		
Physical state	Divided Solid	Relative density (Water = 1)	2.4
Odour	Not Available	Partition coefficient n-octanol / water	Not Available
Odour threshold	Not Available	Auto-ignition temperature (°C)	Not Applicable
pH (as supplied)	Not Applicable	Decomposition temperature	Not Available
Melting point / freezing point (°C)	500	Viscosity (cSt)	Not Applicable
Initial boiling point and boiling range (°C)	Not Available	Molecular weight (g/mol)	Not Applicable
Flash point (°C)	Not Available	Taste	Not Available
Evaporation rate	Not Applicable	Explosive properties	Not Available
Flammability	Not Available	Oxidising properties	Not Available
Upper Explosive Limit (%)	Not Applicable	Surface Tension (dyn/cm or mN/m)	Not Applicable
Lower Explosive Limit (%)	Not Applicable	Volatile Component (%vol)	Negligible
Vapour pressure (kPa)	Not Applicable	Gas group	Not Available

^{*} Where the glove is to be used on a short term, casual or infrequent basis, factors such as "feel" or convenience (e.g. disposability), may dictate a choice of gloves which might otherwise be unsuitable following long-term or frequent use. A qualified practitioner should be consulted.

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pH as a solution (1%)	11.8	

Solubility in water (g/L) Miscible Vapour density (Air = 1) Not Applicable VOC g/L Not Available

SECTION 10 STABILITY AND REACTIVITY

Reactivity	See section 7
Chemical stability	Unstable in the presence of incompatible materials. Product is considered stable. Hazardous polymerisation will not occur.
Possibility of hazardous reactions	See section 7
Conditions to avoid	See section 7
Incompatible materials	See section 7
Hazardous decomposition products	See section 5

SECTION 11 TOXICOLOGICAL INFORMATION

Information on toxicological effects

Inhaled	The material can cause respiratory irritation in some persons. The body's response to such irritation can cause further lung damage. Inhalation of sodium carbonate may cause coughing, sore throat, difficulty breathing. Fluid accumulation in the lungs can occur with exposure to high doses or over a long period of time.
Ingestion	Generated dust may be discomforting Ingestion may result in nausea, abdominal irritation, pain and vomiting
Skin Contact	The material may cause severe skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin. Repeated exposures may produce severe ulceration. The material may accentuate any pre-existing skin condition Solution of material in moisture on the skin, or perspiration, may markedly increase skin corrosion and accelerate tissue destruction Contact with concentrated solutions of sodium carbonate may cause tissue damage - "soda ulcers
Eye	The material may produce severe irritation to the eye causing pronounced inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.
Chronic	Long term inhalation of sodium carbonate may result in nose damage and lung disease. Long-term exposure to respiratory irritants may result in disease of the airways involving difficult breathing and related systemic problems.

/ Chemicals Automatic	TOXICITY	IRRITATION		
Dishwashing Powder	Not Available	Not Available		
	TOXICITY	IRRITATION		
	dermal (rat) LD50: >2000 mg/kg ^[2]	Eye (rabbit): 100 mg/24h moderate		
sodium carbonate	Inhalation (guinea pig) LC50: 0.8 mg/L/2hr	Eye (rabbit): 100 mg/30s mild		
Sourani Sai Bonato	Inhalation (mouse) LC50: 1.2 mg/L/2hr ^[2]	Eye (rabbit): 50 mg SEVERE		
	Inhalation (rat) LC50: 2.3 mg/L/2hr ^[2]	Skin (rabbit): 500 mg/24h mild		
	Oral (rat) LD50: 2800 mg/kg ^[2]			
	TOXICITY	IRRITATION		
sodium metasilicate, pentahydrate	Oral (rat) LD50: 847 mg/kg ^[2]	Skin (human): 250 mg/24h SEVERE		
, ,		Skin (rabbit): 250 mg/24h SEVERE		
	TOXICITY	IRRITATION		
sodium	dermal (rat) LD50: >5000 mg/kg ^[1]	Eye (rabbit): 10 mg/24hr-moderate		
dichloroisocyanurate	Inhalation (rat) LC50: 293 ppm/1 hour ^[2]	Skin (rabbit) : Severe *		
	Oral (rat) LD50: 700 mg/kg ^[2]			
	TOXICITY	IRRITATION		
chlorine	Dermal (rabbit) LD50: >10000 mg/kg	Not Available		
	Inhalation (rat) LC50: 293 ppm/1hr [2]			

1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2.* Value obtained from manufacturer's SDS. Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances

for sodium carbonate:

SODIUM CARBONATE

Legend:

Sodium carbonate has no or a low skin irritation potential but it is considered irritating to the eyes. Due to the alkaline properties an irritation of the respiratory tract is also possible.

No valid animal data are available on repeated dose toxicity studies by oral, dermal, inhalation or by other routes for sodium carbonate. A repeated dose inhalation study, which was not reported in sufficient detail, revealed local effects on the lungs which could be expected based on the alkaline nature of the compound.

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SODIUM METASILICATE
PENTAHYDRATE

The material may be irritating to the eye, with prolonged contact causing inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis. The material may produce respiratory tract irritation, and result in damage to the lung including reduced lung function. sodium metasilicate anhydrous:

SODIUM DICHLOROISOCYANURATE

The material may produce moderate eye irritation leading to inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis. The material may cause severe skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin. Repeated exposures may produce severe ulceration. Dermal (rabbit) LD50: 3160-5100 mg/kg * Manufacturer

SODIUM CARBONATE & SODIUM METASILICATE, PENTAHYDRATE & SODIUM DICHLOROISOCYANURATE & CHLORINE

Asthma-like symptoms may continue for months or even years after exposure to the material ceases. This may be due to a non-allergenic condition known as reactive airways dysfunction syndrome (RADS) which can occur following exposure to high levels of highly irritating compound. Key criteria for the diagnosis of RADS include the absence of preceding respiratory disease, in a non-atopic individual, with abrupt onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant. A reversible airflow pattern, on spirometry, with the presence of moderate to severe bronchial hyperreactivity on methacholine challenge testing and the lack of minimal lymphocytic inflammation, without eosinophilia, have also been included in the criteria for diagnosis of RADS.

SODIUM CARBONATE & SODIUM METASILICATE, PENTAHYDRATE

The material may cause skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin.

Acute Toxicity	v	Carcinogenicity	0
Skin Irritation/Corrosion	~	Reproductivity	0
Serious Eye Damage/Irritation	~	STOT - Single Exposure	~
Respiratory or Skin sensitisation	0	STOT - Repeated Exposure	0
Mutagenicity	0	Aspiration Hazard	0

X - Data available but does not fill the criteria for classification

Data required to make classification available

Data Not Available to make classification

SECTION 12 ECOLOGICAL INFORMATION

Toxicity

Ingredient	Endpoint	Test Duration (hr)	Species	Value	Source
sodium carbonate	EC50	48	Crustacea	=176mg/L	1
sodium carbonate	EC50	96	Algae or other aquatic plants	242mg/L	4
sodium carbonate	NOEC	16	Crustacea	424mg/L	4
sodium carbonate	LC50	96	Fish	300mg/L	2
sodium carbonate	EC50	96	Crustacea	67mg/L	2
sodium metasilicate, pentahydrate	EC50	96	Crustacea	160mg/L	1
sodium metasilicate, pentahydrate	LC50	96	Fish	180mg/L	1
sodium metasilicate, pentahydrate	EC50	48	Crustacea	1700mg/L	2
sodium metasilicate, pentahydrate	EC50	72	Algae or other aquatic plants	207mg/L	2
sodium dichloroisocyanurate	EC50	48	Crustacea	0.11mg/L	4
sodium dichloroisocyanurate	EC50	48	Crustacea	0.15mg/L	4
sodium dichloroisocyanurate	LC50	96	Fish	0.217mg/L	4
sodium dichloroisocyanurate	NOEC	96	Fish	0.056mg/L	2
sodium dichloroisocyanurate	EC50	72	Algae or other aquatic plants	>100mg/L	2
chlorine	EC50	24	Crustacea	0.0186mg/L	4
chlorine	LC50	96	Fish	0.014mg/L	4
chlorine	EC50	48	Crustacea	0.026mg/L	2
chlorine	NOEC	504	Crustacea	0.01mg/L	2
chlorine	EC50	96	Algae or other aquatic plants	ca.0.1- ca.0.4mg/L	2

DO NOT discharge into sewer or waterways

Persistence and degradability

Legend:

Ingredient	Persistence: Water/Soil	Persistence: Air
sodium carbonate	LOW	LOW

Data 6. NITE (Japan) - Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data

Suite V3.12 - Aquatic Toxicity Data (Estimated) 4. US EPA, Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment

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Bioaccumulative potential

Ingredient	Bioaccumulation
sodium carbonate	LOW (LogKOW = -0.4605)

Mobility in soil

Ingredient	Mobility
sodium carbonate	HIGH (KOC = 1)

SECTION 13 DISPOSAL CONSIDERATIONS

Waste treatment methods

Product / Packaging disposal

- Recycle wherever possible or consult manufacturer for recycling options.
- Consult State Land Waste Management Authority for disposal.
- Treat and neutralise with dilute acid at an effluent treatment plant.
- Recycle containers, otherwise dispose of in an authorised landfill.

SECTION 14 TRANSPORT INFORMATION

Labels Required

Marine Pollutant	NO
HAZCHEM	Not Applicable

Land transport (ADG): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Air transport (ICAO-IATA / DGR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Sea transport (IMDG-Code / GGVSee): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Transport in bulk according to Annex II of MARPOL and the IBC code

Not Applicable

SECTION 15 REGULATORY INFORMATION

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

SODIUM CARBONATE(497-19-8) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Hazardous Substances Information System - Consolidated Lists Australia Inventory of Chemical Substances (AICS)

SODIUM METASILICATE, PENTAHYDRATE(10213-79-3) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Hazardous Substances Information System - Consolidated Lists Australia Inventory of Chemical Substances (AICS)

SODIUM DICHLOROISOCYANURATE(2893-78-9) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Hazardous Substances Information System - Consolidated Lists Australia Inventory of Chemical Substances (AICS)

CHLORINE(7782-50-5) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Inventory of Chemical Substances (AICS) Australia Exposure Standards

Australia Hazardous Substances Information System - Consolidated Lists International Air Transport Association (IATA) Dangerous Goods Regulations - Prohibited List

Passenger and Cargo Aircraft

	g
National Inventory	Status
Australia - AICS	Υ
Canada - DSL	Y
Canada - NDSL	N (sodium metasilicate, pentahydrate; chlorine; sodium carbonate; sodium dichloroisocyanurate)
China - IECSC	Υ
Europe - EINEC / ELINCS / NLP	Y
Japan - ENCS	N (chlorine)
Korea - KECI	Υ
New Zealand - NZIoC	Υ
Philippines - PICCS	Y
USA - TSCA	Υ
Legend:	Y = All ingredients are on the inventory N = Not determined or one or more ingredients are not on the inventory and are not exempt from listing(see specific ingredients in brackets)

SECTION 16 OTHER INFORMATION

Other information

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Ingredients with multiple cas numbers

Name	CAS No
sodium carbonate	497-19-8, 7542-12-3, 1314087-39-2, 1332-57-6

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

A list of reference resources used to assist the committee may be found at:

www.chemwatch.net

The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

Definitions and abbreviations

PC-TWA: Permissible Concentration-Time Weighted Average PC-STEL: Permissible Concentration-Short Term Exposure Limit

IARC: International Agency for Research on Cancer

ACGIH: American Conference of Governmental Industrial Hygienists

STEL: Short Term Exposure Limit

TEEL: Temporary Emergency Exposure Limit。

IDLH: Immediately Dangerous to Life or Health Concentrations

OSF: Odour Safety Factor

NOAEL :No Observed Adverse Effect Level LOAEL: Lowest Observed Adverse Effect Level

TLV: Threshold Limit Value LOD: Limit Of Detection OTV: Odour Threshold Value BCF: BioConcentration Factors BEI: Biological Exposure Index