## SAFETY DATA SHEETS

# This SDS packet was issued with item: 077181266

N/A

# **COLTENE**

## Adhesive AC

## **Coltène/Whaledent AG**

#### Version No: 1.1

Safety Data Sheet according to OSHA HazCom Standard (2012) requirements

Issue Date: **15/03/2022** Print Date: **26/05/2022** L.GHS.USA.EN

## **SECTION 1 Identification**

## **Product Identifier**

Product name	Adhesive AC
Chemical Name	Not Applicable
Synonyms	Not Available
Proper shipping name	Adhesives, containing a flammable liquid
Chemical formula	Not Applicable
Other means of identification	Not Available

## Recommended use of the chemical and restrictions on use

Relevant identified uses Medical device, for dental use only

## Name, address, and telephone number of the chemical manufacturer, importer, or other responsible party

Registered company name	Coltène/Whaledent AG
Address	Feldwiesenstrasse 20 Altstätten CH-9450 Switzerland
Telephone	+41 (71) 75 75 300
Fax	+41 (71) 75 75 301
Website	www.coltene.com
Email	msds@coltene.com

#### **Emergency phone number**

Association / Organisation	CHEMWATCH EMERGENCY RESPONSE
Emergency telephone numbers	+1 855-237-5573
Other emergency telephone numbers	+61 3 9573 3188

Once connected and if the message is not in your prefered language then please dial 01

Una vez conectado y si el mensaje no está en su idioma preferido, por favor marque 02

## SECTION 2 Hazard(s) identification

## Classification of the substance or mixture

#### NFPA 704 diamond



Note: The hazard category numbers found in GHS classification in section 2 of this SDSs are NOT to be used to fill in the NFPA 704 diamond. Blue = Health Red = Fire Yellow = Reactivity White = Special (Oxidizer or water reactive substances)

Classification

Specific Target Organ Toxicity - Single Exposure (Narcotic Effects) Category 3, Flammable Liquids Category 2, Sensitisation (Skin) Category 1

## Label elements



## Hazard statement(s)

H336	May cause drowsiness or dizziness.
H225	Highly flammable liquid and vapour.
H317	May cause an allergic skin reaction.

## Hazard(s) not otherwise classified

Not Applicable

## Precautionary statement(s) Prevention

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233	Keep container tightly closed.
P271	Use only outdoors or in a well-ventilated area.
P240	Ground/bond container and receiving equipment.
P241	Use explosion-proof electrical/ventilating/lighting/intrinsically safe equipment.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P261	Avoid breathing mist/vapours/spray.
P272	Contaminated work clothing must not be allowed out of the workplace.
P280	Wear protective gloves and protective clothing.

## Precautionary statement(s) Response

P370+P378	In case of fire: Use alcohol resistant foam or normal protein foam to extinguish.
P302+P352	IF ON SKIN: Wash with plenty of water.
P312	Call a POISON CENTER/doctor/physician/first aider/if you feel unwell.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P362+P364	Take off contaminated clothing and wash it before reuse.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.

## Precautionary statement(s) Storage

P403+P235	Store in a well-ventilated place. Keep cool.
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 to authorised hazardous or special waste collection point in accordance with any local regulation.

Not Applicable

## **SECTION 3 Composition / information on ingredients**

#### Substances

See section below for composition of Mixtures

## Mixtures

CAS No	%[weight]	Name
141-78-6	>70	ethyl acetate
94-36-0	<1	dibenzoyl peroxide

The specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

## **SECTION 4 First-aid measures**

## Description of first aid measures

Eye Contact	<ul> <li>If this product comes in contact with the eyes:</li> <li>Wash out immediately with fresh running water.</li> <li>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.</li> <li>Seek medical attention without delay; if pain persists or recurs seek medical attention.</li> <li>Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.</li> </ul>
Skin Contact	<ul> <li>If skin contact occurs:</li> <li>Immediately remove all contaminated clothing, including footwear.</li> <li>Flush skin and hair with running water (and soap if available).</li> <li>Seek medical attention in event of irritation.</li> </ul>
Inhalation	<ul> <li>If fumes, aerosols or combustion products are inhaled remove from contaminated area.</li> <li>Other measures are usually unnecessary.</li> </ul>
Ingestion	<ul> <li>Immediately give a glass of water.</li> <li>First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.</li> <li>If spontaneous vomiting appears imminent or occurs, hold patient's head down, lower than their hips to help avoid possible aspiration of vomitus.</li> </ul>

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

See Section 11

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

Any material aspirated during vomiting may produce lung injury. Therefore emesis should not be induced mechanically or pharmacologically. Mechanical means should be used if it is considered necessary to evacuate the stomach contents; these include gastric lavage after endotracheal intubation. If spontaneous vomiting has occurred after ingestion, the patient should be monitored for difficult breathing, as adverse effects of aspiration into the lungs may be delayed up to 48 hours. for simple esters:

-----

## BASIC TREATMENT

- Establish a patent airway with suction where necessary.
- Watch for signs of respiratory insufficiency and assist ventilation as necessary.
- Administer oxygen by non-rebreather mask at 10 to 15 l/min.
- Monitor and treat, where necessary, for pulmonary oedema.
- Monitor and treat, where necessary, for shock.
- DO NOT use emetics. Where ingestion is suspected rinse mouth and give up to 200 ml water (5 ml/kg recommended) for dilution where patient is able to swallow, has a strong gag reflex and does not drool.
- Give activated charcoal.

-----

## ADVANCED TREATMENT

-----

- Consider orotracheal or nasotracheal intubation for airway control in unconscious patient or where respiratory arrest has occurred.
- Positive-pressure ventilation using a bag-valve mask might be of use.
- Monitor and treat, where necessary, for arrhythmias.
- Start an IV D5W TKO. If signs of hypovolaemia are present use lactated Ringers solution. Fluid overload might create complications.
- Drug therapy should be considered for pulmonary oedema.
- + Hypotension with signs of hypovolaemia requires the cautious administration of fluids. Fluid overload might create complications.
- Treat seizures with diazepam.
- Proparacaine hydrochloride should be used to assist eye irrigation.

## EMERGENCY DEPARTMENT

\_\_\_\_\_

- Laboratory analysis of complete blood count, serum electrolytes, BUN, creatinine, glucose, urinalysis, baseline for serum aminotransferases (ALT and AST), calcium, phosphorus and magnesium, may assist in establishing a treatment regime. Other useful analyses include anion and osmolar gaps, arterial blood gases (ABGs), chest radiographs and electrocardiograph.
- + Positive end-expiratory pressure (PEEP)-assisted ventilation may be required for acute parenchymal injury or adult respiratory distress syndrome.

Consult a toxicologist as necessary.

BRONSTEIN, A.C. and CURRANCE, P.L. EMERGENCY CARE FOR HAZARDOUS MATERIALS EXPOSURE: 2nd Ed. 1994

#### **SECTION 5 Fire-fighting measures**

#### Extinguishing media

- Alcohol stable foam.
- Dry chemical powder.
- BCF (where regulations permit).
- Carbon dioxide.
- Water spray or fog Large fires only.

#### Special hazards arising from the substrate or mixture

Fire Incompatibility Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result

#### Special protective equipment and precautions for fire-fighters

Fire Fighting	<ul> <li>Alert Fire Brigade and tell them location and nature of hazard.</li> <li>May be violently or explosively reactive.</li> <li>Wear breathing apparatus plus protective gloves in the event of a fire.</li> <li>Prevent, by any means available, spillage from entering drains or water course.</li> <li>Consider evacuation (or protect in place).</li> <li>Fight fire from a safe distance, with adequate cover.</li> <li>If safe, switch off electrical equipment until vapour fire hazard removed.</li> <li>Use water delivered as a fine spray to control the fire and cool adjacent area.</li> <li>Avoid spraying water onto liquid pools.</li> <li>Do not approach containers suspected to be hot.</li> <li>Cool fire exposed containers with water spray from a protected location.</li> <li>If safe to do so, remove containers from path of fire.</li> </ul>
Fire/Explosion Hazard	<ul> <li>Liquid and vapour are highly flammable.</li> <li>Severe fire hazard when exposed to heat, flame and/or oxidisers.</li> <li>Vapour may travel a considerable distance to source of ignition.</li> <li>Heating may cause expansion or decomposition leading to violent rupture of containers.</li> </ul>

Page 5 of 17

<ul> <li>On combustion, may emit toxic fumes of carbon monoxide (CO).</li> <li>Combustion products include:</li> </ul>
, carbon dioxide (CO2)
, other pyrolysis products typical of burning organic material. <b>Contains low boiling substance:</b> Closed containers may rupture due to pressure buildup under fire conditions.

## **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	<ul> <li>Remove all ignition sources.</li> <li>Clean up all spills immediately.</li> <li>Avoid breathing vapours and contact with skin and eyes.</li> <li>Control personal contact with the substance, by using protective equipment.</li> <li>Contain and absorb small quantities with vermiculite or other absorbent material.</li> <li>Wipe up.</li> <li>Collect residues in a flammable waste container.</li> </ul>
Major Spills	<ul> <li>Clear area of personnel and move upwind.</li> <li>Alert Fire Brigade and tell them location and nature of hazard.</li> <li>May be violently or explosively reactive.</li> <li>Wear breathing apparatus plus protective gloves.</li> <li>Prevent, by any means available, spillage from entering drains or water course.</li> <li>Consider evacuation (or protect in place).</li> <li>No smoking, naked lights or ignition sources.</li> <li>Increase ventilation.</li> <li>Stop leak if safe to do so.</li> <li>Water spray or fog may be used to disperse /absorb vapour.</li> <li>Contain spill with sand, earth or vermiculite.</li> <li>Use only spark-free shovels and explosion proof equipment.</li> <li>Collect recoverable product into labelled containers for recycling.</li> <li>Absorb remaining product with sand, earth or vermiculite.</li> <li>Collect solid residues and seal in labelled drums for disposal.</li> <li>Wash area and prevent runoff into drains.</li> <li>If contamination of drains or waterways occurs, advise emergency services.</li> </ul>

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

## **SECTION 7 Handling and storage**

## Precautions for safe handling

	<ul> <li>Containers, even those that have been emptied, may contain explosive vapours.</li> <li>Do NOT cut drill grind weld or perform similar operations on or pear containers.</li> </ul>
	Contains low boiling substance
	Storage in sealed containers may result in pressure buildun causing violent runture of containers not rated appropriately
	<ul> <li>Chark for hulding containers may result in pressure buildap causing which reptare of containers not rated appropriately.</li> </ul>
	Voot pariodically
	<ul> <li>Always release cans or seals slowly to ensure slow dissination of yapours</li> </ul>
	Wege protective clothing when risk of exposure occurs
	Ise in a well-ventilated area
	Prevent concentration in hollows and sums
Safe handling	Avoid smoking naked lights beat or ignition sources
3	When banding not on the drink or smoke
	Vien namen in the non-induction of a static electricity
	E DO NOT use plastic buckets
	E Farth and secure metal containers when dispensing or pouring product
	<ul> <li>Last and secure incur on the appending of pound product.</li> <li>Last and secure tools when handling</li> </ul>
	A void contact with incompatible materials
	Keen containers securely sealed
	Avoid physical damage to containers
	<ul> <li>Always wash hands with soap and water after handling.</li> </ul>

Page 6 of 17

Adhesive AC

	Work clothes should be laundered separately.
	Use good occupational work practice.
	Observe manufacturer's storage and handling recommendations contained within this SDS.
	Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions.
	DO NOT allow clothing wet with material to stay in contact with skin
	Store in original containers in approved flame-proof area.
	No smoking, naked lights, heat or ignition sources.
	DO NOT store in pits, depressions, basements or areas where vapours may be trapped.
Other information	Keep containers securely sealed.
	Store away from incompatible materials in a cool, dry well ventilated area.
	Protect containers against physical damage and check regularly for leaks.
	Observe manufacturer's storage and handling recommendations contained within this SDS.

## Conditions for safe storage, including any incompatibilities

Suitable container	<ul> <li>Packing as supplied by manufacturer.</li> <li>Plastic containers may only be used if approved for flammable liquid.</li> <li>Check that containers are clearly labelled and free from leaks.</li> </ul>
Storage incompatibility	<ul> <li>Esters react with acids to liberate heat along with alcohols and acids.</li> <li>Strong oxidising acids may cause a vigorous reaction with esters that is sufficiently exothermic to ignite the reaction products.</li> <li>Heat is also generated by the interaction of esters with caustic solutions.</li> <li>Flammable hydrogen is generated by mixing esters with alkali metals and hydrides.</li> <li>Esters may be incompatible with aliphatic amines and nitrates.</li> </ul>

## **SECTION 8 Exposure controls / personal protection**

## **Control parameters**

## Occupational Exposure Limits (OEL)

## INGREDIENT DATA

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
US OSHA Permissible Exposure Limits (PELs) Table Z-1	ethyl acetate	Ethyl acetate	400 ppm / 1400 mg/m3	Not Available	Not Available	Not Available
US NIOSH Recommended Exposure Limits (RELs)	ethyl acetate	Ethyl acetate	400 ppm / 1400 mg/m3	Not Available	Not Available	Not Available
US ACGIH Threshold Limit Values (TLV)	ethyl acetate	Ethyl acetate	400 ppm	Not Available	Not Available	Not Available
US OSHA Permissible Exposure Limits (PELs) Table Z-3	dibenzoyl peroxide	Inert or Nuisance Dust: Total Dust	15 mg/m3 / 50 mppcf	Not Available	Not Available	Not Available
US OSHA Permissible Exposure Limits (PELs) Table Z-3	dibenzoyl peroxide	Inert or Nuisance Dust: Respirable fraction	5 mg/m3 / 15 mppcf	Not Available	Not Available	Not Available
US OSHA Permissible Exposure Limits (PELs) Table Z-1	dibenzoyl peroxide	Benzoyl peroxide	5 mg/m3	Not Available	Not Available	Not Available
US NIOSH Recommended Exposure Limits (RELs)	dibenzoyl peroxide	Benzoyl peroxide	5 mg/m3	Not Available	Not Available	Not Available
US ACGIH Threshold Limit Values (TLV)	dibenzoyl peroxide	Benzoyl peroxide	5 mg/m3	Not Available	Not Available	A4

## Emergency Limits

Ingredient	TEEL-1	TEEL-2		TEEL-3
ethyl acetate	1,200 ppm	1,700 ppm		10000** ppm
dibenzoyl peroxide	15 mg/m3	1,200 mg/m3		7,000 mg/m3
Ingredient	Original IDLH		Revised IDLH	
ethyl acetate	2,000 ppm		Not Available	
dibenzoyl peroxide	1,500 mg/m3		Not Available	

For ethyl acetate:

Odour Threshold Value: 6.4-50 ppm (detection), 13.3-75 ppm (recognition)

The TLV-TWA provides a significant margin of safety from the standpoint of adverse health effects. Unacclimated subjects found the odour objectionably strong at 200 ppm. Mild nose, eye and throat irritation was experienced at 400 ppm. Workers exposed regularly at concentrations ranging from 375 ppm to 1500 ppm for several months showed no unusual

signs or symptoms.

Odour Safety Factor(OSF)

OSF=51 (ETHYL ACETATE)

For benzoyl peroxide:

**Exposure controls** 

The recommendation for the TLV-TWA is based on the absence of subjective symptoms of irritation of the nose and throat in humans exposed to 5.25 mg/m3. Whether this is sufficiently low to prevent cumulative effects in man is not known.

	Engineering controls are used to remove a hazard or place a engineering controls can be highly effective in protecting wor provide this high level of protection. The basic types of engineering controls are: Process controls which involve changing the way a job activi Enclosure and/or isolation of emission source which keeps a that strategically "adds" and "removes" air in the work enviro designed properly. The design of a ventilation system must r Employers may need to use multiple types of controls to pree For flammable liquids and flammable gases, local exhaust ve Ventilation equipment should be explosion-resistant. Air contaminants generated in the workplace possess varyin velocities" of fresh circulating air required to effectively remo	a barrier between the worker and the hazard. Well-de kers and will typically be independent of worker inter ty or process is done to reduce the risk. selected hazard "physically" away from the worker a nment. Ventilation can remove or dilute an air contar natch the particular process and chemical or contarm vent employee overexposure. entilation or a process enclosure ventilation system r g "escape" velocities which, in turn, determine the "c ve the contaminant.	esigned ractions to and ventilation minant if inant in use. may be required. apture	
	Type of Contaminant:		Air Speed:	
	solvent, vapours, degreasing etc., evaporating from tank (in still air).			
	aerosols, fumes from pouring operations, intermittent container filling, low speed conveyer transfers, welding, spray drift, plating acid fumes, pickling (released at low velocity into zone of active generation)		0.5-1 m/s (100-200 f/min.)	
	direct spray, spray painting in shallow booths, drum filling, conveyer loading, crusher dusts, gas discharge (active generation into zone of rapid air motion)			
Appropriate engineering	Within each range the appropriate value depends on:			
controls	Lower end of the range	Upper end of the range		
	1: Room air currents minimal or favourable to capture	1: Disturbing room air currents		
	2: Contaminants of low toxicity or of nuisance value only.	2: Contaminants of high toxicity		
	3: Intermittent, low production.	3: High production, heavy use		
	4: Large hood or large air mass in motion	4: Small hood-local control only		
	Simple theory shows that air velocity falls rapidly with distance away from the opening of a simple extraction pipe. Velocity generally decreases with the square of distance from the extraction point (in simple cases). Therefore the air speed at the extraction point should be adjusted, accordingly, after reference to distance from the contaminating source. The air velocity at the extraction fan, for example, should be a minimum of 1-2 m/s (200-400 f/min.) for extraction of solvents generated in a tank 2 meters distant from the extraction point. Other mechanical considerations, producing performance deficits within the extraction apparatus, make it essential that theoretical air velocities are multiplied by factors of 10 or more when extraction systems are installed or used.			
	Adequate ventilation is typically taken to be that which limits the average concentration to no more than 25% of the LEL			
	within the building, room or enclosure containing the dangerous substance.			
	substance that might potentially be present to no more than 25% of the LEL. However, an increase up to a maximum 50% LEL can be acceptable where additional safeguards are provided to prevent the formation of a hazardous explosive atmosphere. For			
	example, gas detectors linked to emergency shutdown of the process might be used together with maintaining or increasing the			
	exhaust ventilation on solvent evaporating ovens and gas turbine enclosures.			
	maintenance in tanks or other confined spaces or in an emergency after a release. The work procedures for such activities			
	should be carefully considered The atmosphere should be area remains safe. Where workers will enter the space, the	continuously monitored to ensure that ventilation is a ventilation should ensure that the concentration of the	dequate and the a dangerous	

substance does not exceed 10% of the LEL (irrespective of the provision of suitable breathing apparatus)

Page 8 of 17

## Adhesive AC

Personal protection	
Eye and face protection	<ul> <li>Safety glasses with side shields.</li> <li>Chemical goggles.</li> <li>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. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59], [AS/NZS 1336 or national equivalent]</li> </ul>
Skin protection	See Hand protection below
Hands/feet protection	<ul> <li>Wear chemical protective gloves, e.g. P.VC.</li> <li>Wear safety footwear or safety gumboots, e.g. Rubber</li> <li>NOTE:</li> <li>The material may produce skin sensitisation in predisposed individuals. Care must be taken, when removing gloves and other protective equipment, to avoid all possible skin contact.</li> <li>Contaminated leather items, such as shoes, betts and watch-bands should be removed and destroyed.</li> <li>For esters:</li> <li>Do NOT use natural rubber, butyl rubber, EPDM or polystyrene-containing materials.</li> <li>The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.</li> <li>The exact break through time for substances has to be obtained from the manufacturer of the protective gloves and has to be observed when making a final choice.</li> <li>Personal hygiene is a key element of effective hand care. Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfured moisturier is recommended.</li> <li>Suitability and durability of glove type is dependent on usage. Important factors in the selection of gloves include:         <ul> <li>energy and durability of glove type is dependent on usage. Important factors in the selection class of 5 or higher (breakthrough time greater than 240 minutes according to EN 374, LIS F739, AS/NZS 2161.1 or national equivalent).</li> <li>When prolonged or frequently repeated contact may occur, a glove with a protection class of 5 or higher (breakthrough time greater than 240 minutes according to EN 374, AS/NZS 2161.1 or national equivalent).</li> <li>When only bief contact is expected, a glove with a protection class of 3 or h</li></ul></li></ul>
Body protection	See Other protection below
Other protection	<ul> <li>Overalls.</li> <li>PVC Apron.</li> <li>PVC protective suit may be required if exposure severe.</li> <li>Eyewash unit.</li> <li>Ensure there is ready access to a safety shower.</li> <li>Some plastic personal protective equipment (PPE) (e.g. gloves, aprons, overshoes) are not recommended as they may produce static electricity.</li> <li>For large scale or continuous use wear tight-weave non-static clothing (no metallic fasteners, cuffs or pockets).</li> <li>Non sparking safety or conductive footwear should be considered. Conductive footwear describes a boot or shoe with a sole</li> </ul>

made from a conductive compound chemically bound to the bottom components, for permanent control to electrically ground the foot an shall dissipate static electricity from the body to reduce the possibility of ignition of volatile compounds. Electrical resistance must range between 0 to 500,000 ohms. Conductive shoes should be stored in lockers close to the room in which they are worn. Personnel who have been issued conductive footwear should not wear them from their place of work to their homes and return.

## 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:

Adhesive AC

Material	CPI
PE/EVAL/PE	А
PVA	A
SARANEX-23 2-PLY	А
BUTYL	В
TEFLON	В
VITON/CHLOROBUTYL	В
BUTYL/NEOPRENE	С
CPE	С
HYPALON	С
NATURAL RUBBER	С
NATURAL+NEOPRENE	С
NEOPRENE	С
NEOPRENE/NATURAL	С
NITRILE	С
NITRILE+PVC	С
PVC	С
SARANEX-23	С

\* 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. -

\* 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.

#### **SECTION 9** Physical and chemical properties

#### Information on basic physical and chemical properties

#### Appearance Yellow Relative density (Water = Liquid 0.9 Physical state 1) Partition coefficient Odour Not Available Not Available n-octanol / water Auto-ignition temperature Odour threshold Not Available >460 (°C) Decomposition pH (as supplied) Not Available Not Available temperature Melting point / freezing Not Available Not Available Viscosity (cSt) point (°C)

#### Respiratory protection

Type A 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	A-AUS	-	A-PAPR-AUS / Class 1
up to 50 x ES	-	A-AUS / Class 1	-
up to 100 x ES	-	A-2	A-PAPR-2 ^

#### ^ - 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)

- Cartridge respirators should never be used for emergency ingress or in areas of unknown vapour concentrations or oxygen content.
- The wearer must be warned to leave the contaminated area immediately on detecting any odours through the respirator. The odour may indicate that the mask is not functioning properly, that the vapour concentration is too high, or that the mask is not properly fitted. Because of these limitations, only restricted use of cartridge respirators is considered appropriate.
- Cartridge performance is affected by humidity. Cartridges should be changed after 2 hr of continuous use unless it is determined that the humidity is less than 75%, in which case, cartridges can be used for 4 hr. Used cartridges should be discarded daily, regardless of the length of time used

Initial boiling point and boiling range (°C)	77-80	Molecular weight (g/mol)	Not Available
Flash point (°C)	-4	Taste	Not Available
Evaporation rate	Not Available	Explosive properties	Not Available
Flammability	HIGHLY FLAMMABLE.	Oxidising properties	Not Available
Upper Explosive Limit (%)	11.5	Surface Tension (dyn/cm or mN/m)	Not Available
Lower Explosive Limit (%)	2.0	Volatile Component (%vol)	Not Available
Vapour pressure (kPa)	10.00	Gas group	Not Available
Solubility in water	Partly miscible	pH as a solution (Not Available%)	Not Available
Vapour density (Air = 1)	Not Available	VOC g/L	Not Available

## **SECTION 10 Stability and reactivity**

Reactivity	See section 7
Chemical stability	<ul> <li>Unstable in the presence of incompatible materials.</li> <li>Product is considered stable.</li> <li>Hazardous polymerisation will not occur.</li> </ul>
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 is not thought to produce adverse health effects or irritation of the respiratory tract (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting. Inhalation of vapours may cause drowsiness and dizziness. This may be accompanied by narcosis, reduced alertness, loss of reflexes, lack of coordination and vertigo. The main effects of simple aliphatic esters are narcosis and irritation and anaesthesia at higher concentrations. These effects become greater as the molecular weights and boiling points increase. Central nervous system depression , headache, drowsiness, dizziness, coma and neurobehavioral changes may also be symptomatic of overexposure. Respiratory tract involvement may produce mucous membrane irritation, dyspnea, and tachypnea, pharyngitis, bronchitis, pneumonitis and, in massive exposures, pulmonary oedema (which may be delayed). Gastrointestinal effects include nausea, vomiting, diarrhoea and abdominal cramps. Liver and kidney damage may result from massive exposures. Mild eye, nose and throat irritation occurs at 400 ppm ethyl acetate with unacclimated persons. Production workers with regular exposure may intermittently tolerate 1500 ppm for periods up to 3 months without adverse symptoms. Inhalation hazard is increased at higher temperatures.
Ingestion	Acute intoxication by ethyl acetate causes impaired coordination, exhilaration, slurred speech, vertigo, flushed face, nausea, vomiting, and may progress to stupor, coma and death may result from respiratory or circulation failure. The material has <b>NOT</b> been classified by EC Directives or other classification systems as "harmful by ingestion". This is because of the lack of corroborating animal or human evidence. The material may still be damaging to the health of the individual, following ingestion, especially where pre-existing organ (e.g liver, kidney) damage is evident. Present definitions of harmful or toxic substances are generally based on doses producing mortality rather than those producing morbidity (disease, ill-health). Gastrointestinal tract discomfort may produce nausea and vomiting. In an occupational setting however, ingestion of insignificant quantities is not thought to be cause for concern.
Skin Contact	The material is not thought to produce adverse health effects or skin irritation following contact (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable gloves be used in an occupational setting. Repeated exposure may cause skin cracking, flaking or drying following normal handling and use. Open cuts, abraded or irritated skin should not be exposed to this material
Eye	Evidence exists, or practical experience predicts, that the material may cause eye irritation in a substantial number of individuals and/or may produce significant ocular lesions which are present twenty-four hours or more after instillation into the eye(s) of experimental animals. Repeated or prolonged eye contact may cause inflammation characterised by temporary redness (similar to windburn) of the conjunctiva (conjunctivitis); temporary impairment of vision and/or other transient eye damage/ulceration may occur. The liquid produces a high level of eye discomfort and is capable of causing pain and severe conjunctivitis. Corneal injury may

	develop, with possible permanent impairment of vision, if not promptly and adequately treated.
Chronic	Practical experience shows that skin contact with the material is capable either of inducing a sensitisation reaction in a substantial number of individuals, and/or of producing a positive response in experimental animals. Substances that can cause occupational asthma (also known as asthmagens and respiratory sensitisers) can induce a state of specific airway hyper-responsiveness via an immunological, irritant or other mechanism. Once the airways have become hyper-responsive, further exposure to the substance, sometimes even to tiny quantities, may cause respiratory symptoms. These symptoms can range in severity from a runny nose to asthma. Not all workers who are exposed to a sensitiser will become hyper-responsive and it is impossible to identify in advance who are likely to become hyper-responsive. Substances than can cuase occupational asthma should be distinguished from substances which may trigger the symptoms of asthma in people with pre-existing air-way hyper-responsiveness. The latter substances are not classified as asthmagens or respiratory sensitisers Wherever it is reasonably practicable, exposure to substances that can cuase occupational asthma should be prevented. Where this is not possible the primary aim is to apply adequate standards of control to prevent workers from becoming hyper-responsive. Activities giving rise to short-term peak concentrations should receive particular attention when risk management is being considered. Health surveillance is appropriate for all employees exposed or liable to be exposed to a substance which may cause occupational asthma and there should be appropriate consultation with an occupational health professional over the degree of risk and level of surveillance. Prolonged or repeated skin contact may cause drying with cracking, irritation and possible dermatitis following.

Adhesive AC	ΤΟΧΙΟΙΤΥ	IRRITATION		
	Not Available	Not Available		
	тохісіту	IRRITATION		
	Dermal (rabbit) LD50: >18000 mg/kg <sup>[2]</sup>	Eye (human): 400 ppm		
ethyl acetate	Inhalation(Mouse) LC50; >18 mg/l4h <sup>[1]</sup>	Eye: no adverse effect observed (not irritating) <sup>[1]</sup>		
	Oral (Mouse) LD50; 4100 mg/kg <sup>[2]</sup>	Skin: no adverse effect observed (not irritating) <sup>[1]</sup>		
dibenzoyl peroxide	тохісіту	IRRITATION		
	dermal (mammal) LD50: >1000 mg/kg <sup>[2]</sup>	Eye (rabbit): 500 mg/24h - mild		
	Oral (Rat) LD50; 7710 mg/kg <sup>[2]</sup> Skin effects (MAK): very weak			
Legend:	<ol> <li>Value obtained from Europe ECHA Registered Substances - Acute toxicity 2.* Value obtained from manufacturer's SDS.</li> <li>Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances</li> </ol>			

Adhesive AC	Generally,linear and branched-chain alkyl esters are hydrolysed to their component alcohols and carboxylic acids in the intestinal tract, blood and most tissues throughout the body. Following hydrolysis the component alcohols and carboxylic acids are metabolized Oral acute toxicity studies have been reported for 51 of the 67 esters of aliphatic acyclic primary alcohols and aliphatic linear saturated carboxylic acids. The very low oral acute toxicity of this group of esters is demonstrated by oral LD50 values greater than 1850 mg/kg bw Genotoxicity studies have been performed in vitro using the following esters of aliphatic acyclic primary alcohols and aliphatic linear saturated carboxylic acids: methyl acetate, butyl acetate, butyl stearate and the structurally related isoamyl formate and demonstrates that these substances are not genotoxic. The JEFCA Committee concluded that the substances in this group would not present safety concerns at the current levels of intake the esters of aliphatic acyclic primary alcohols and aliphatic linear saturated carboxylic acids are generally used as flavouring substances up to average maximum levels of 200 mg/kg. Higher levels of use (up to 3000 mg/kg) are permitted in food categories such as chewing gum and hard candy. In Europe the upper use levels for these flavouring substances are generally 1 to 30 mg/kg foods and in special food categories like candy and alcoholic beverages up to 300 mg/kg foods Internationl Program on Chemical Safety: the Joint FAO/WHO Expert Committee on Food Additives (JECFA) Esters of Aliphatic acyclic primary alcohols with aliphatic linear saturated carboxylic acids.; 1998
ETHYL ACETATE	Asthma-like symptoms may continue for months or even years after exposure to the material ends. This may be due to a non-allergic condition known as reactive airways dysfunction syndrome (RADS) which can occur after exposure to high levels of highly irritating compound. Main criteria for diagnosing RADS include the absence of previous airways disease in a non-atopic individual, with sudden onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant. Other criteria for diagnosis of RADS include a reversible airflow pattern on lung function tests, moderate to severe bronchial hyperreactivity on methacholine challenge testing, and the lack of minimal lymphocytic inflammation, without eosinophilia. RADS (or asthma) following an irritating inhalation is an infrequent disorder with rates related to the concentration of and duration of exposure to the irritating substance. On the other hand, industrial bronchitis is a disorder that occurs as a result of exposure due to high concentrations of irritating substance (often particles) and is completely reversible after exposure ceases. The disorder is characterized by difficulty breathing, cough and mucus production.
DIBENZOYL PEROXIDE	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 cause skin irritation after prolonged or repeated exposure and may produce a contact dermatitis (nonallergic). This form of dermatitis is often characterised by skin redness (erythema) and swelling epidermis. Histologically there may be intercellular oedema of the spongy layer (spongiosis) and intracellular oedema of the epidermis.

	The acute oral toxicity of benzoyl peroxide is very low: LD50 >2,000 mg/kg bw in mice, and 5,000 mg/kg bw in rats. No deaths occurred in male rats following inhalation of 24.3 mg/L. Visible effects included eye squint, dyspnea, salivation, lacrimation, erythema and changes of respiratory rates and motor activity. Benzoyl peroxide was slightly irritating to skins in 24 hr-patch tests. Benzoyl peroxide was not irritating to the eyes of rabbits if washed out within 5 minutes after instillation, however, if the chemical was not washed out until 24 hours later, it proved to be irritating. Positive results from sensitisation tests in guinea pigs and mice, and from a maximization test in human volunteers, indicate that benzoyl peroxide is a skin sensitiser. In the combined repeated dose and reproduction/developmental toxicity study (OECD TG 422), benzoyl peroxide did not produce hematological or biochemical adverse effects. Repeated administration by oral gavage up to 1,000 mg/kg bw/day for 29 days resulted in decreased weights of testes and epididymis in male rats. The NOAEL for repeated dose toxicity was 500 mg/kg bw/day. This substance did not cause gene mutation in bacteria (OECD TG 471 & 472) and <i>in vitro</i> chromosomal aberration in CHL (Chinese Hamster Lung) cells. An <i>in vivo</i> mammalian erythrocytes micronucleus test (OECD TG 474) produced negative result. The available evidence supports the conclusion that benzoyl peroxide is not a mutagen. There is no evidence to suggest that benzoyl peroxide is a carcinogen. However, there is some evidence from nonguidelines studies that benzoyl peroxide is a skin tumour promoter. In the combined repeated dose and reproduction/developmental toxicity study [OECD TG 422], no treatment-related changes in precoital time, rate of copulation, fertility and gestation were noted in any treated group. Adverse effects were shown at the highest dose of 1,000 mg/kg bw/day in parental male rats with the reduction of reproductive organ weight and slight testes degeneration. In parental fe			
Adhesive AC & DIBENZOYL PEROXIDE	The following information refers to contact allergens as a group and may not be specific to this product. Contact allergies quickly manifest themselves as contact eczema, more rarely as urticaria or Quincke's oedema. The pathogenesis of contact eczema involves a cell-mediated (T lymphocytes) immune reaction of the delayed type. Other allergic skin reactions, e.g. contact urticaria, involve antibody-mediated immune reactions. The significance of the contact allergen is not simply determined by its sensitisation potential: the distribution of the substance and the opportunities for contact with it are equally important. A weakly sensitising substance which is widely distributed can be a more important allergen than one with stronger sensitising potential with which few individuals come into contact. From a clinical point of view, substances are noteworthy if they produce an allergic test reaction in more than 1% of the persons tested.			
A suite Taulaitu				
Skin Irritation/Corrosion	Carcinogenicity	<u>×</u>		
Serious Eve	C Reproductivity	<u> </u>		
Damage/Irritation	X STOT - Single Exposure	✓		
Respiratory or Skin sensitisation	✓ STOT - Repeated Exposure	×		

Legend:

Aspiration Hazard

Z – Data either not available or does not fill the criteria for classification
 ✓ – Data available to make classification

×

## **SECTION 12 Ecological information**

Mutagenicity

X

Toxicity

	Endpoint	Test Duration (hr)	Species	Value	Source
Adhesive AC	Not Available	Not Available	Not Available	Not Available	Not Available
	Endpoint	Test Duration (hr)	Species	Value	Source
athul anatata	NOEC(ECx)	72h	Algae or other aquatic plants	>100mg/l	1
ethyl acetate	LC50	96h	Fish	>75.6mg/l	2
	EC50	48h	Crustacea	164mg/l	1
	Endpoint	Test Duration (hr)	Species	Value	Source
dibenzoyl peroxide	EC10(ECx)	504h	Crustacea	0.001mg/l	2
	LC50	96h	Fish	0.06mg/l	2
	EC50	72h	Algae or other aquatic plants	0.042mg/l	2
	EC50	48h	Crustacea	0.11mg/l	2

Legend: Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 4. US EPA, Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) -Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data

#### DO NOT discharge into sewer or waterways.

## Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air	
ethyl acetate	LOW (Half-life = 14 days)	LOW (Half-life = 14.71 days)	
dibenzoyl peroxide	LOW (Half-life = 14 days)	LOW (Half-life = 21.25 days)	

## **Bioaccumulative potential**

Ingredient	Bioaccumulation
ethyl acetate	HIGH (BCF = 3300)
dibenzoyl peroxide	LOW (LogKOW = 3.46)

## Mobility in soil

Ingredient	Mobility
ethyl acetate	LOW (KOC = 6.131)
dibenzoyl peroxide	LOW (KOC = 771)

## **SECTION 13 Disposal considerations**

### Waste treatment methods

	Dispose of waste according to applicable legislation. Special country-specific regulations may apply. Can be disposed together with household waste in compliance with official regulations in contact with approved waste disposal companies and with authorities in charge. (Only dispose of completely emptied packages.)
Product / Packaging	<ul> <li>DO NOT allow wash water from cleaning or process equipment to enter drains.</li> <li>It may be necessary to collect all wash water for treatment before disposal.</li> </ul>
dianaaal	k la construction de la construc
disposai	• In all cases disposal to sever may be subject to local laws and regulations and these should be considered list.
	Where in doubt contact the responsible authority.
	Recycle wherever possible.
	<ul> <li>Dispose of by: burial in a land-fill specifically licensed to accept chemical and / or pharmaceutical wastes or Incineration in a licensed apparatus (after admixture with suitable combustible material).</li> </ul>
	Decontaminate empty containers. Observe all label safeguards until containers are cleaned and destroyed.

## **SECTION 14 Transport information**

## Labels Required

Marine Pollutant	NO

## Land transport (DOT)

UN number	1133				
UN proper shipping name	Adhesives, containing	Adhesives, containing a flammable liquid			
Transport hazard class(es)	Class 3 Subrisk Not Appli	cable			
Packing group	II				
Environmental hazard	Not Applicable				
Special precautions for user	Hazard Label	3			

Version No: 1.1

Page 14 of 17

#### Adhesive AC

Special provisions 149, B52, IB2, T4, TP1, TP8

## Air transport (ICAO-IATA / DGR)

UN number	1133				
UN proper shipping name	Adhesives containing fla	Adhesives containing flammable liquid			
Transport hazard class(es)	ICAO/IATA Class	3 Not Applicable			
	ERG Code	3L			
Packing group	Ш	II			
Environmental hazard	Not Applicable				
Special precautions for user	Special provisions		A3		
	Cargo Only Packing Instructions		364		
	Cargo Only Maximum Qty / Pack		60 L		
	Passenger and Cargo Packing Instructions		353		
	Passenger and Cargo Maximum Qty / Pack		5 L		
	Passenger and Cargo Limited Quantity Packing Instructions		Y341		
	Passenger and Cargo Limited Maximum Qty / Pack		1 L		

## Sea transport (IMDG-Code / GGVSee)

UN number	1133		
UN proper shipping name	ADHESIVES containir	ADHESIVES containing flammable liquid	
Transport hazard class(es)	IMDG Class 3 IMDG Subrisk No	ot Applicable	
Packing group	II		
Environmental hazard	Not Applicable		
Special precautions for user	EMS Number Special provisions Limited Quantities	F-E, S-D Not Applicable 5 L	

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

Not Applicable

## Transport in bulk in accordance with MARPOL Annex V and the IMSBC Code

Product name	Group
ethyl acetate	Not Available
dibenzoyl peroxide	Not Available

## Transport in bulk in accordance with the ICG Code

Product name	Ship Type
ethyl acetate	Not Available
dibenzoyl peroxide	Not Available

## **SECTION 15 Regulatory information**

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

ethyl acetate is found on the following regulatory lists

Page 15 of 17

US - Massachusetts - Right To Know Listed Chemicals	US OSHA Permissible Exposure Limits (PELs) Table Z-1
US DOE Temporary Emergency Exposure Limits (TEELs)	US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory
US EPA Integrated Risk Information System (IRIS)	US TSCA Chemical Substance Inventory - Interim List of Active Substances
US NIOSH Recommended Exposure Limits (RELs)	US TSCA Section 4/12 (b) - Sunset Dates/Status
dibenzoyl peroxide is found on the following regulatory lists	
International Agency for Research on Cancer (IARC) - Agents Classified by	US NIOSH Recommended Exposure Limits (RELs)
the IARC Monographs	US OSHA Permissible Exposure Limits (PELs) Table Z-1
International WHO List of Proposed Occupational Exposure Limit (OEL)	US OSHA Permissible Exposure Limits (PELs) Table Z-3
Values for Manufactured Nanomaterials (MNMS)	US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory
US - Alaska Air Quality Control - Concentrations Triggering an Air Quality	US TSCA Chemical Substance Inventory - Interim List of Active Substances
Episode for Air Pollutants Other Than PM-2.5	
US - Massachusetts - Right To Know Listed Chemicals	

## **Federal Regulations**

## Superfund Amendments and Reauthorization Act of 1986 (SARA)

## Section 311/312 hazard categories

US EPCRA Section 313 Chemical List

US DOE Temporary Emergency Exposure Limits (TEELs)

Flammable (Gases, Aerosols, Liquids, or Solids)	Yes
Gas under pressure	No
Explosive	No
Self-heating	No
Pyrophoric (Liquid or Solid)	No
Pyrophoric Gas	No
Corrosive to metal	No
Oxidizer (Liquid, Solid or Gas)	No
Organic Peroxide	No
Self-reactive	No
In contact with water emits flammable gas	No
Combustible Dust	No
Carcinogenicity	No
Acute toxicity (any route of exposure)	No
Reproductive toxicity	No
Skin Corrosion or Irritation	No
Respiratory or Skin Sensitization	Yes
Serious eye damage or eye irritation	No
Specific target organ toxicity (single or repeated exposure)	Yes
Aspiration Hazard	No
Germ cell mutagenicity	No
Simple Asphyxiant	No
Hazards Not Otherwise Classified	No

## US. EPA CERCLA Hazardous Substances and Reportable Quantities (40 CFR 302.4)

Name	Reportable Quantity in Pounds (Ib)	Reportable Quantity in kg
ethyl acetate	5000	2270

## **State Regulations**

## US. California Proposition 65

None Reported

## **National Inventory Status**

National Inventory	Status
Australia - AIIC / Australia Non-Industrial Use	Yes

National Inventory	Status
Canada - DSL	Yes
Canada - NDSL	No (ethyl acetate; dibenzoyl peroxide)
China - IECSC	Yes
Europe - EINEC / ELINCS / NLP	Yes
Japan - ENCS	Yes
Korea - KECI	Yes
New Zealand - NZIoC	Yes
Philippines - PICCS	Yes
USA - TSCA	Yes
Taiwan - TCSI	Yes
Mexico - INSQ	Yes
Vietnam - NCI	Yes
Russia - FBEPH	Yes
Legend:	Yes = All CAS declared ingredients are on the inventory No = One or more of the CAS listed ingredients are not on the inventory. These ingredients may be exempt or will require registration.

## **SECTION 16 Other information**

Revision Date	15/03/2022
Initial Date	13/01/2022

#### Other information

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.

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 ES: Exposure Standard 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** AIIC: Australian Inventory of Industrial Chemicals DSL: Domestic Substances List NDSL: Non-Domestic Substances List IECSC: Inventory of Existing Chemical Substance in China EINECS: European INventory of Existing Commercial chemical Substances ELINCS: European List of Notified Chemical Substances NLP: No-Longer Polymers ENCS: Existing and New Chemical Substances Inventory KECI: Korea Existing Chemicals Inventory NZIoC: New Zealand Inventory of Chemicals PICCS: Philippine Inventory of Chemicals and Chemical Substances TSCA: Toxic Substances Control Act

TCSI: Taiwan Chemical Substance Inventory

INSQ: Inventario Nacional de Sustancias Químicas NCI: National Chemical Inventory

FBEPH: Russian Register of Potentially Hazardous Chemical and Biological Substances

Powered by AuthorITe, from Chemwatch.