CONSOLIDATED CHEMICAL CO.
ABN: 34 527 060 773 ACN: 005 056 502

52-62 Waterview Close, DANDENONG SOUTH, 3175
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FORMALDEHYDE SOLUTION 37% NON-FLAM

CONSOLIDATED CHEMICAL CO

Chemwatch Hazard Alert Code: **3**

Chemwatch: **24110**
Version No: **3.1.1.1**
Safety Data Sheet according to WHS and ADG requirements

Issue Date: **01/01/2013**
Print Date: **12/09/2016**
S.GHS.AUS.EN

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

Product Identifier

Product name	FORMALDEHYDE SOLUTION 37% NON-FLAM
Proper shipping name	FORMALDEHYDE SOLUTION with not less than 25% formaldehyde with not less than 25% formaldehyde
Other means of identification	10351

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

Relevant identified uses	Used as disinfectant, biocide and in manufacture of phenolic resins and adhesives. Renders casein, albumin and gelatin insoluble.

Details of the supplier of the safety data sheet

Registered company name	CONSOLIDATED CHEMICAL CO
Address	52-62 Waterview Close 3175 Australia
Telephone	03 9799 7555
Fax	03/9799 7666
Website	Not Available
Email	Not Available

Emergency telephone number

Association / Organisation	Not Available
Emergency telephone numbers	1800 839 984
Other emergency telephone numbers	Not Available

CHEMWATCH EMERGENCY RESPONSE

Primary Number	Alternative Number 1	Alternative Number 2
1800 039 008	1800 039 008	+612 9186 1132

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

SECTION 2 HAZARDS IDENTIFICATION

Classification of the substance or mixture

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

Continued...

COMBUSTIBLE LIQUID, regulated for storage purposes only

CHEMWATCH HAZARD RATINGS

	Min	Max
Flammability	0	
Toxicity	3	
Body Contact	3	
Reactivity	0	
Chronic	3	

0 = Minimum
1 = Low
2 = Moderate
3 = High
4 = Extreme

Poisons Schedule	AS6
Classification [1]	Flammable Liquid Category 4, Metal Corrosion Category 1, Acute Toxicity (Oral) Category 3, Acute Toxicity (Dermal) Category 3, Acute Toxicity (Inhalation) Category 2, Skin Corrosion/Irritation Category 1B, Serious Eye Damage Category 1, Skin Sensitizer Category 1, Carcinogenicity Category 1A, Specific target organ toxicity - single exposure Category 2, Acute Aquatic Hazard Category 3
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)

H227	Combustible liquid
H290	May be corrosive to metals.
H301	Toxic if swallowed.
H311	Toxic in contact with skin.
H330	Fatal if inhaled.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H317	May cause an allergic skin reaction.
H350	May cause cancer.
H371	May cause damage to organs.
H402	Harmful to aquatic life

Supplementary statement(s)

Not Applicable

Precautionary statement(s) Prevention

P201	Obtain special instructions before use.
P210	Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P281	Use personal protective equipment as required.
P234	Keep only in original container.
P273	Avoid release to the environment.
P284	Wear respiratory protection.
P272	Contaminated work clothing should not be allowed out of the workplace.

Precautionary statement(s) Response

P301+P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

Continued...

P303+P361+P353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P309+P311	IF exposed or if you feel unwell: Call a POISON CENTER or doctor/physician.
P363	Wash contaminated clothing before reuse.
P370+P378	In case of fire: Use water spray/fog for extinction.
P302+P352	IF ON SKIN: Wash with plenty of soap and water.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P390	Absorb spillage to prevent material damage.

Precautionary statement(s) Storage

P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P403+P235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.

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
50-00-0	37	formaldehyde
67-56-1	7	methanol
64-18-6	0.03 max.	formic acid
7732-18-5	Balance	water
		NOTE: Manufacturer has supplied full ingredient
		information for CHEMWATCH assessment.

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 or hair contact occurs: ▸ Immediately flush body and clothes with large amounts of water, using safety shower if available. ▸ Quickly remove all contaminated clothing, including footwear. ▸ Wash skin and hair with running water. Continue flushing with water until advised to stop by the Poisons Information Centre. ▸ Transport to hospital, or doctor.
Inhalation	▸ If fumes or combustion products are inhaled remove from contaminated area. ▸ Lay patient down. Keep warm and rested. ▸ Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures. ▸ Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary. ▸ Transport to hospital, or doctor, without delay.

Continued...

Ingestion	If poisoning occurs, contact a doctor or Poisons Information Centre. ▸ 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. ▸ Immediately give a glass of water.

Indication of any immediate medical attention and special treatment needed

For acute or short-term repeated exposures to formaldehyde:

INGESTION:

- Patients present early with severe corrosion of the gastro-intestinal tract and systemic effects.
- Inflammation and ulceration may progress to strictures.
- Severe acidosis results from rapid conversion of formaldehyde to formic acid. Coma, hypotension, renal failure and apnoea complicate ingestion.
- Decontaminate by dilution with milk or water containing ammonium acetate; vomiting should be induced. Follow with gastric lavage using a weak ammonia solution (converts formaldehyde to relatively inert pentamethylenetetramine)
- Gastric lavage is warranted only in first 15 minutes following ingestion.

SKIN:

- Formaldehyde can combine with epidermal protein to produce a hapten-protein couple capable of sensitising T-lymphocytes. Subsequent exposures cause a type IV hypersensitivity reaction (i.e allergic contact dermatitis). [*Ellenhorn & Barceloux: Medical Toxicology*]

SECTION 5 FIREFIGHTING MEASURES

Extinguishing media

- Water spray or fog.
- Foam.
- Dry chemical powder.
- BCF (where regulations permit).

Special hazards arising from the substrate or mixture

Fire Incompatibility	Avoid contact with strong oxidizing agents, acids and alkalis.|Acid catalysis can produce impurities: methylal, methyl formate.|Will polymerize with active organic material such as phenol.

Advice for firefighters

Fire Fighting	▸ Alert Fire Brigade and tell them location and nature of hazard. ▸ Wear breathing apparatus plus protective gloves. ▸ Prevent, by any means available, spillage from entering drains or water course. ▸ Use water delivered as a fine spray to control fire and cool adjacent area. Equipment should be thoroughly decontaminated after use.
Fire/Explosion Hazard	Combustible liquid and vapour.|May emit flammable vapour if involved in fire.|Heating may cause expansion or decomposition leading to violent rupture of|containers.|At elevated temperatures, oxidation of formaldehyde produces formic acid.|Decomposition products may include toxic fumes of carbon monoxide (CO) and|carbon dioxide (CO_2).
HAZCHEM	•2X

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. Wear protective clothing, impervious gloves and safety glasses. Avoid breathing vapours and contact with skin and eyes. Remove all ignition sources. Wipe up and absorb small quantities with vermiculite or other absorbent material. Place in suitable containers for disposal.
Major Spills	Clear area of all unprotected personnel and move upwind.|Alert Fire Brigade and tell them location and nature of hazard.|Wear breathing apparatus plus protective gloves. Prevent, by any means|available, spillage from entering drains or water course.|Shut off all possible sources of ignition and increase ventilation.|Stop leak if safe to do so.|Contain spill with earth, sand or vermiculite.|Neutralise spill with aqueous ammonia, or complex with sodium bisulphite.|Absorb spill with sand, earth, inert material or vermiculite.|Place in suitable containers for disposal.|Wash residue with dilute ammonia to eliminate vapour.|After clean up operations, decontaminate and launder all protective clothing|and equipment before storing and re-using.|If contamination of drains or waterways occurs, advise emergency services.

Continued...

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

SECTION 7 HANDLING AND STORAGE

Precautions for safe handling

Safe handling	Avoid all personal contact, including inhalation ▸ Wear personal protective equipment when handling Use in a well-ventilated area until atmosphere has been checked. ▸ Avoid smoking, naked lights, heat or ignition sources Vapour may travel a considerable distance to source of ignition. Avoid contact with incompatible materials. Avoid physical damage to containers. Keep containers securely sealed when not in use When handling, **DO NOT** eat, drink or smoke. Wash hands with soap and water after handling. Work clothes should be laundered separately: **NOT** at home. 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 are maintained.
Other information	▸ Store in original containers. ▸ Keep containers securely sealed. ▸ No smoking, naked lights or ignition sources. ▸ Store in a cool, dry, well-ventilated area. Store in a cool area and away from sunlight.

Conditions for safe storage, including any incompatibilities

Suitable container	▸ Glass container is suitable for laboratory quantities Plastic drum Polyethylene or polypropylene container Metal can Metal drum ▸ Check that containers are clearly labelled ▸ Packaging as recommended by manufacturer.
Storage incompatibility	Avoid storage with acids, oxidizing agents and alkalis.

X X + X + + +

X — Must not be stored together
0 — May be stored together with specific preventions
+ — May be stored together

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	formaldehyde	Formaldehyde	1.2 mg/m3 / 1 ppm	2.5 mg/m3 / 2 ppm	Not Available	Sen
Australia Exposure Standards	methanol	Methyl alcohol	262 mg/m3 / 200 ppm	328 mg/m3 / 250 ppm	Not Available	Sk
Australia Exposure Standards	formic acid	Formic acid	9.4 mg/m3 / 5 ppm	19 mg/m3 / 10 ppm	Not Available	Not Available

EMERGENCY LIMITS

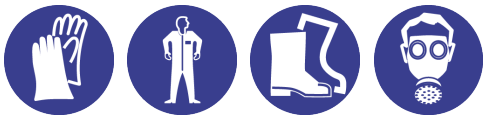
Ingredient	Material name	TEEL-1	TEEL-2	TEEL-3
formaldehyde	Formaldehyde	Not Available	Not Available	Not Available

Continued...

methanol	Methyl alcohol; (Methanol)	Not Available	Not Available	Not Available
formic acid	Formic acid	Not Available	Not Available	Not Available

Ingredient	Original IDLH	Revised IDLH
formaldehyde	30 ppm	20 ppm
methanol	25,000 ppm	6,000 ppm
formic acid	30 ppm	30 [Unch] ppm
water	Not Available	Not Available

Exposure controls

Appropriate engineering controls	If inhalation risk exists, wear SAA approved organic vapour respirator,|full-face or air-supplied breathing apparatus.|Local exhaust ventilation usually required.|Use in a completely enclosed system as much as possible.|If respirators are used, a program should be instituted to ensure compliance|with SAA guidelines.|Provide adequate ventilation in warehouse or closed storage areas.
Personal protection	
Eye and face protection	‣ Safety glasses with side shields ‣ Chemical goggles. ‣ Full face shield may be required for supplementary but never for primary protection of eyes. ‣ 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.
Skin protection	See Hand protection below
Hands/feet protection	‣ Plastic gloves ‣ PVC gloves ‣ Rubber gloves ‣ Rubber boots
Body protection	See Other protection below
Other protection	Overalls.|PVC apron.|Barrier cream.|Ensure there is ready access to a safety shower.|Eyewash unit.|* Preplacement and periodic medical examinations are recommended for workers|exposed to formalin. Examinations should give consideration to possible|irritant effects on the skin, eyes, lungs, especially if the person has a|history of allergies.|Personnel must be made aware of the hazards of handling formaldehyde|solutions and trained to deal with emergency situations involving the|material.
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:
FORMALDEHYDE SOLUTION 37% NON-FLAM

Material	CPI
BUTYL	A
##formic	acid
NEOPRENE	B
BUTYL/NEOPRENE	C
NAT+NEOPR+NITRILE	C
NATURAL RUBBER	C
NATURAL+NEOPRENE	C
NEOPRENE/NATURAL	C
NITRILE	C
PE	C
PE/EVAL/PE	C
PVA	C
PVC	C
PVDC/PE/PVDC	C

Respiratory protection

Type BAX-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	BAX-AUS P2	-	BAX-PAPR-AUS / Class 1 P2
up to 50 x ES	-	BAX-AUS / Class 1 P2	-
up to 100 x ES	-	BAX-2 P2	BAX-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)

Continued...

SARANEX-23	C
SARANEX-23 2-PLY	C
TEFLON	C
VITON	C
VITON/NEOPRENE	C

* 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	Clear, water-white liquid with pungent odour. On standing, especially when cold, may become cloudy. On exposure to low temperatures a precipitate of trioxymethylene is formed. Miscible with water, alcohol, acetone.

Physical state	Liquid	**Relative density (Water = 1)**	1.11 approx.
Odour	Not Available	**Partition coefficient n-octanol / water**	Not Available
Odour threshold	Not Available	**Auto-ignition temperature (°C)**	430
pH (as supplied)	2.4-4.0	**Decomposition temperature**	Not Available
Melting point / freezing point (°C)	Not available.	**Viscosity (cSt)**	Not Available
Initial boiling point and boiling range (°C)	<100	**Molecular weight (g/mol)**	Not Applicable
Flash point (°C)	85	**Taste**	Not Available
Evaporation rate	Not Available	**Explosive properties**	Not Available
Flammability	Combustible.	**Oxidising properties**	Not Available
Upper Explosive Limit (%)	73	**Surface Tension (dyn/cm or mN/m)**	Not Available
Lower Explosive Limit (%)	7	**Volatile Component (%vol)**	>44
Vapour pressure (kPa)	Not Available	**Gas group**	Not Available
Solubility in water (g/L)	Miscible	**pH as a solution (1%)**	Not Available
Vapour density (Air = 1)	Not available.	**VOC g/L**	Not Available

SECTION 10 STABILITY AND REACTIVITY

Reactivity	See section 7
Chemical stability	Presence of heat source and ignition source.|Presence of incompatible materials.|Undergoes non-hazardous self-polymerization to form paraformaldehyde.|(Methanol reduces precipitation.)|Will polymerize with active organic materials such as phenol.
Possibility of hazardous reactions	See section 7
Conditions to avoid	See section 7
Incompatible materials	See section 7

Continued...

Hazardous decomposition products	See section 5

SECTION 11 TOXICOLOGICAL INFORMATION

Information on toxicological effects

Inhaled	The vapour is highly discomforting to the upper respiratory tract and repeated exposure may cause sensitisation and/or allergic reactions Respiratory sensitisation may result in allergic/asthma like responses; from coughing and minor breathing difficulties to bronchitis with wheezing, gasping. Sensitisation reactions may appear suddenly after repeated symptom free exposures Inhalation of vapour may aggravate a pre-existing respiratory condition The material may produce respiratory tract irritation, and result in damage to the lung including reduced lung function. |Inhalation of vapour at relatively low concentrations may cause a tingling|sensation in the nose and upper respiratory tract.|Slightly higher concentrations may cause a burning sensation, headache.|High vapour concentrations are capable of causing chest constriction,|bronchio pneumonia, dysphagia, oedema, spasms of the larynx and dyspnoea.
Ingestion	Considered an unlikely route of entry in commercial/industrial environments The liquid is extremely discomforting and is toxic if swallowed |Ingestion may cause immediate severe abdominal pain, with vomiting, nausea,|diarrhoea, anuria, dizziness, followed by unconsciousness, convulsions|and may result in death.|The methanol stabiliser in solutions is a cause of visual impairment and|possible permanent blindness.
Skin Contact	The liquid is highly discomforting to the skin and may cause chemical burns if exposure is prolonged The material is capable of causing allergic skin reactions skin sensitisation Sensitisation may result in allergic dermatitis responses including rash, itching, hives or swelling of extremities. Toxic effects may result from skin absorption 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.
Eye	The liquid is extremely discomforting to the eyes 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 The vapour is highly discomforting and may cause lachrymation (tears) and burning sensation The material may produce severe irritation to the eye causing pronounced inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.
Chronic	Principal routes of exposure are usually by inhalation of vapour and skin contact/absorption Sensitisation may give severe responses to very low levels of exposure, i.e. hypersensitivity. As with any chemical product, contact with unprotected bare skin; inhalation of vapour, mist or dust in work place atmosphere; or ingestion in any form, should be avoided by observing good occupational work practice.

FORMALDEHYDE SOLUTION 37% NON-FLAM	**TOXICITY**	**IRRITATION**
	Not Available	Not Available
formaldehyde	**TOXICITY**	**IRRITATION**
	Dermal (rabbit) LD50: 270 mg/kg[2]	Eye (human): 4 ppm/5m
	Inhalation (rat) LC50: 250 ppm/4hr[2]	Eye (rabbit): 0.75 mg/24H SEVERE
	Oral (rat) LD50: 100 mg/kg[2]	Skin (human): 0.15 mg/3d-I mild
		Skin (rabbit): 2 mg/24H SEVERE

Continued...

Legend:	*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*

FORMALDEHYDE	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 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. **WARNING:** This substance has been classified by the IARC as Group 1: **CARCINOGENIC TO HUMANS**. Tenth Annual Report on Carcinogens: Substance anticipated to be Carcinogen [*National Toxicology Program: U.S. Dep. of Health & Human Services 2002*]
FORMIC ACID	for acid mists, aerosols, vapours Data from assays for genotoxic activity in vitro suggest that eukaryotic cells are susceptible to genetic damage when the pH falls to about 6.5. Cells from the respiratory tract have not been examined in this respect. Mucous secretion may protect the cells of the airways from direct exposure to inhaled acidic mists, just as mucous plays an important role in protecting the gastric epithelium from its auto-secreted hydrochloric acid. In considering whether pH itself induces genotoxic events in vivo in the respiratory system, comparison should be made with the human stomach, in which gastric juice may be at pH 1-2 under fasting or nocturnal conditions, and with the human urinary bladder, in which the pH of urine can range from <5 to > 7 and normally averages 6.2.
FORMALDEHYDE & FORMIC ACID & WATER	No significant acute toxicological data identified in literature search.
FORMALDEHYDE & FORMIC ACID	The material may produce severe irritation to the eye causing pronounced inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.
FORMALDEHYDE & FORMIC ACID	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.
METHANOL & FORMIC ACID	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	✔	**Carcinogenicity**	✔
Skin Irritation/Corrosion	✔	**Reproductivity**	⊘
Serious Eye Damage/Irritation	✔	**STOT - Single Exposure**	✔
Respiratory or Skin sensitisation	✔	**STOT - Repeated Exposure**	⊘
Mutagenicity	⊘	**Aspiration Hazard**	⊘

Legend: ✘ *– 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
formaldehyde	LC50	96	Fish	0.0024104mg/L	4
formaldehyde	EC50	48	Crustacea	0.3mg/L	4
formaldehyde	EC50	96	Algae or other aquatic plants	0.788mg/L	4
formaldehyde	EC50	48	Crustacea	0.47mg/L	4
formaldehyde	NOEC	96	Algae or other aquatic plants	<0.1mg/L	4
methanol	LC50	96	Fish	>100mg/L	4
methanol	EC50	48	Crustacea	>10000mg/L	4

Continued...

methanol	EC50	96	Algae or other aquatic plants	16.912mg/L	4
methanol	BCF	24	Algae or other aquatic plants	0.05mg/L	4
methanol	EC50	24	Algae or other aquatic plants	0.0246708mg/L	4
methanol	NOEC	72	Crustacea	0.1mg/L	4
formic acid	LC50	96	Fish	46mg/L	1
formic acid	EC50	48	Crustacea	=34.2mg/L	1
formic acid	EC50	96	Algae or other aquatic plants	=25mg/L	1
formic acid	EC20	96	Algae or other aquatic plants	=12.6mg/L	1
formic acid	NOEC	96	Fish	22mg/L	1
water	LC50	96	Fish	897.520mg/L	3
water	EC50	96	Algae or other aquatic plants	8768.874mg/L	3
water	EC50	384	Crustacea	199.179mg/L	3
Legend:	*Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 3. EPIWIN Suite V3.12 - Aquatic Toxicity Data (Estimated) 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*				

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Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
formaldehyde	LOW (Half-life = 14 days)	LOW (Half-life = 2.97 days)
methanol	LOW	LOW
formic acid	LOW (Half-life = 14 days)	LOW (Half-life = 55.46 days)
water	LOW	LOW

Bioaccumulative potential

Ingredient	Bioaccumulation
formaldehyde	LOW (LogKOW = 0.35)
methanol	LOW (BCF = 10)
formic acid	LOW (BCF = 0.22)
water	LOW (LogKOW = -1.38)

Mobility in soil

Ingredient	Mobility
formaldehyde	HIGH (KOC = 1)
methanol	HIGH (KOC = 1)
formic acid	HIGH (KOC = 1)
water	LOW (KOC = 14.3)

SECTION 13 DISPOSAL CONSIDERATIONS

Waste treatment methods

Product / Packaging disposal	▸ Recycle wherever possible or consult manufacturer for recycling options. ▸ Consult State Land Waste Authority for disposal. ▸ Bury or incinerate residue at an approved site. ▸ Recycle containers if possible, or dispose of in an authorised landfill.

SECTION 14 TRANSPORT INFORMATION

Labels Required

Continued...

Marine Pollutant	NO
HAZCHEM	•2X

Land transport (ADG)

UN number	2209
UN proper shipping name	FORMALDEHYDE SOLUTION with not less than 25% formaldehyde with not less than 25% formaldehyde
Transport hazard class(es)	Class: 8 Subrisk: Not Applicable
Packing group	III
Environmental hazard	Not Applicable
Special precautions for user	Special provisions: Not Applicable Limited quantity: 5 L

Air transport (ICAO-IATA / DGR)

UN number	2209
UN proper shipping name	Formaldehyde solution with not less than 25% formaldehyde with not less than 25% formaldehyde
Transport hazard class(es)	ICAO/IATA Class: 8 ICAO / IATA Subrisk: Not Applicable ERG Code: 8i
Packing group	III
Environmental hazard	Not Applicable
Special precautions for user	Special provisions: A803 Cargo Only Packing Instructions: 856 Cargo Only Maximum Qty / Pack: 60 L Passenger and Cargo Packing Instructions: 852 Passenger and Cargo Maximum Qty / Pack: 5 L Passenger and Cargo Limited Quantity Packing Instructions: Y841 Passenger and Cargo Limited Maximum Qty / Pack: 1 L

Sea transport (IMDG-Code / GGVSee)

UN number	2209
UN proper shipping name	FORMALDEHYDE SOLUTION with not less than 25% formaldehyde with not less than 25% formaldehyde
Transport hazard class(es)	IMDG Class: 8 IMDG Subrisk: Not Applicable
Packing group	III
Environmental hazard	Not Applicable
Special precautions for user	EMS Number: F-A, S-B Special provisions: Not Applicable Limited Quantities: 5 L

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

Not Applicable

Continued...

SECTION 15 REGULATORY INFORMATION

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

FORMALDEHYDE(50-00-0) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Exposure Standards | Australia Inventory of Chemical Substances (AICS)
Australia Hazardous Substances Information System - Consolidated Lists | International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

METHANOL(67-56-1) IS FOUND ON THE FOLLOWING REGULATORY LISTS

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

FORMIC ACID(64-18-6) IS FOUND ON THE FOLLOWING REGULATORY LISTS

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

WATER(7732-18-5) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Inventory of Chemical Substances (AICS)

National Inventory	Status
Australia - AICS	Y
Canada - DSL	Y
Canada - NDSL	N (methanol; water; formaldehyde; formic acid)
China - IECSC	Y
Europe - EINEC / ELINCS / NLP	Y
Japan - ENCS	N (water)
Korea - KECI	Y
New Zealand - NZIoC	Y
Philippines - PICCS	Y
USA - TSCA	Y
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

Ingredients with multiple cas numbers

Name	CAS No
formaldehyde	50-00-0, 8005-38-7, 8006-07-3, 8013-13-6, 112068-71-0

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

Continued...

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

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