

## Gardner-Gibson, Inc.

Version No: 2.3

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

Issue Date: **12/20/2023** Print Date: **12/20/2023** L.GHS.USA.EN

## **SECTION 1 Identification**

## Product Identifier

Product name	DYCO BONDING PRIMER WATERPROOF EPOXY - CLEAR
Synonyms	DYCO Tuff Grip; TUFF GRIP - WATERBORNE BONDING PRIMER; Waterborne Epoxy Ester Tie Coat
Other means of identification	Not Available

## Recommended use of the chemical and restrictions on use

Relevant identified uses	Waterborne Bonding Primer; Deck Coating Bonding Primer
--------------------------	--

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

Registered company name	Gardner-Gibson, Inc.
Address	4161 East 7th Avenue Tampa FL 33605 United States
Telephone	1-813-248-2101
Fax	1-813-248-6768
Website	www.icpgroup.com
Email	sds@icpgroup.com

### Emergency phone number

Association / Organisation	ChemTel
Emergency telephone numbers	1-800-255-3924
Other emergency telephone numbers	1-813-248-0585

## SECTION 2 Hazard(s) identification

## Classification of the substance or mixture



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)

### Label elements

Hazard pictogram(s)		
Hazard pictogram(s)		

Signal word Warning

## Hazard statement(s)

H227	Combustible liquid.
H315	Causes skin irritation.
H319	Causes serious eye irritation.

3

H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.

## 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.
P271	Use only outdoors or in a well-ventilated area.
P261	Avoid breathing mist/vapours/spray.
P280	Wear protective gloves, protective clothing, eye protection and face protection.
P264	Wash all exposed external body areas thoroughly after handling.

## Precautionary statement(s) Response

P370+P378	In case of fire: Use water spray/fog to extinguish.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312	Call a POISON CENTER/doctor/physician/first aider/if you feel unwell.
P337+P313	If eye irritation persists: Get medical advice/attention.
P302+P352	IF ON SKIN: Wash with plenty of water.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P332+P313	If skin irritation occurs: Get medical advice/attention.
P362+P364	Take off contaminated clothing and wash it before reuse.

## 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

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

## Substances

See section below for composition of Mixtures

## Mixtures

CAS No	%[weight]	Name
111-76-2*	1-10	ethylene glycol monobutyl ether

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	If skin contact occurs: <ul> <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 or combustion products are inhaled remove from contaminated area.</li> <li>Lay patient down. Keep warm and rested.</li> <li>Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.</li> <li>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.</li> <li>Transport to hospital, or doctor, without delay.</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> </ul>

See Section 11

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

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

## Extinguishing media

#### 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 None known.

## 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>Wear full body protective clothing with breathing apparatus.</li> <li>Prevent, by any means available, spillage from entering drains or water course.</li> <li>Use water delivered as a fine spray to control 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>Combustible.</li> <li>Slight fire hazard when exposed to heat or flame.</li> <li>Heating may cause expansion or decomposition leading to violent rupture of containers.</li> <li>On combustion, may emit irritating/ toxic fumes.</li> <li>May emit acrid smoke.</li> <li>Mists containing combustible materials may be explosive.</li> <li>May emit poisonous fumes.</li> <li>May emit corrosive fumes.</li> </ul>

## **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 spill with sand, earth, inert material or vermiculite.</li> <li>Wipe up.</li> <li>Place in a suitable, labelled container for waste disposal.</li> </ul>
Major Spills	<ul> <li>Moderate hazard.</li> <li>Clear area of personnel and move upwind.</li> <li>Alert Fire Brigade and tell them location and nature of hazard.</li> <li>Wear breathing apparatus plus protective gloves.</li> <li>Prevent, by any means available, spillage from entering drains or water course.</li> <li>No smoking, naked lights or ignition sources.</li> <li>Increase ventilation.</li> <li>Stop leak if safe to do so.</li> <li>Contain spill with sand, earth or vermiculite.</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	
Safe handling	<ul> <li>Avoid all personal contact, including inhalation.</li> <li>Wear protective clothing when risk of exposure occurs.</li> <li>Use in a well-ventilated area.</li> </ul>

	Prevent concentration in hollows and sumps.
	DO NOT enter confined spaces until atmosphere has been checked.
	Avoid smoking, naked lights or ignition sources.
	Avoid contact with incompatible materials.
	When handling, DO NOT eat, drink or smoke.
	Keep containers securely sealed when not in use.
	Avoid physical damage to containers.
	Always wash hands with soap and water after handling.
	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.
	Keep containers securely sealed.
	<ul> <li>No smoking, naked lights or ignition sources.</li> </ul>
Other information	<ul> <li>Store in a cool, dry, well-ventilated area.</li> </ul>
	<ul> <li>Store away from incompatible materials and foodstuff containers.</li> </ul>
	<ul> <li>Protect containers against physical damage and check regularly for leaks.</li> </ul>
	<ul> <li>Observe manufacturer's storage and handling recommendations contained within this SDS.</li> </ul>

## Conditions for safe storage, including any incompatibilities

	Suitable container	<ul> <li>Metal can or drum</li> <li>Packaging as recommended by manufacturer.</li> <li>Check all containers are clearly labelled and free from leaks.</li> </ul>
S	torage incompatibility	None known

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

### **Control parameters**

#### Occupational Exposure Limits (OEL)

### INGREDIENT DATA

ngredient	Material name	TWA	STEL	Peak	Notes
ethylene glycol monobutyl ether	2-Butoxyethanol	50 ppm / 240 mg/m3	Not Available	Not Available	Skin designation
ethylene glycol monobutyl ether	2-Butoxyethanol	5 ppm / 24 mg/m3	Not Available	Not Available	[skin]

Ingredient	TEEL-1	TEEL-2		TEEL-3
ethylene glycol monobutyl ether	60 ppm	120 ppm		700 ppm
Ingredient	Original IDLH		Revised IDLH	
ethylene glycol monobutyl ether	700 ppm		Not Available	

### MATERIAL DATA

Sensory irritants are chemicals that produce temporary and undesirable side-effects on the eyes, nose or throat. Historically occupational exposure standards for these irritants have been based on observation of workers' responses to various airborne concentrations. Present day expectations require that nearly every individual should be protected against even minor sensory irritation and exposure standards are established using uncertainty factors or safety factors of 5 to 10 or more. On occasion animal no-observable-effect-levels (NOEL) are used to determine these limits where human results are unavailable. An additional approach, typically used by the TLV committee (USA) in determining respiratory standards for this group of chemicals, has been to assign ceiling values (TLV C) to rapidly acting irritants and to assign short-term exposure limits (TLV STELs) when the weight of evidence from irritation, bioaccumulation and other endpoints combine to warrant such a limit. In contrast the MAK Commission (Germany) uses a five-category system based on intensive odour, local irritation, and elimination half-life. However this system is being replaced to be consistent with the European Union (EU) Scientific Committee for Occupational Exposure Limits (SCOEL); this is more closely allied to that of the USA.

OSHA (USA) concluded that exposure to sensory irritants can:

cause inflammation

cause increased susceptibility to other irritants and infectious agents

lead to permanent injury or dysfunction

permit greater absorption of hazardous substances and

acclimate the worker to the irritant warning properties of these substances thus increasing the risk of overexposure.

## 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. Ventilation can remove or dilute an air contaminant if designed properly. The design of a ventilation system must match the particular process and chemical or contaminant in use. Employers may need to use multiple types of controls to prevent employee overexposure.
	Local exhaust ventilation usually required. If risk of overexposure exists, wear approved respirator. Correct fit is essential to obtain adequate protection. Supplied-air type respirator may be required in special circumstances. Correct fit is essential to ensure adequate protection. An approved self contained breathing apparatus (SCBA) may be required in some situations. Provide adequate ventilation in warehouse or closed storage area. Air contaminants generated in the workplace possess varying 'escape'

	velocities which, in turn, determine the 'capture velocities' o	of fresh circulating air required to e	ffectively remove the contan	ninant.
	Type of Contaminant:			Air Speed:
	solvent, vapours, degreasing etc., evaporating from tank (	(in still air).		0.25-0.5 m/s (50-100 f/min.)
	aerosols, fumes from pouring operations, intermittent cont drift, plating acid fumes, pickling (released at low velocity i		ransfers, welding, spray	0.5-1 m/s (100-200 f/min.)
				1-2.5 m/s (200-500 f/min.)
	grinding, abrasive blasting, tumbling, high speed wheel ge very high rapid air motion).	enerated dusts (released at high in	itial velocity into zone of	2.5-10 m/s (500-2000 f/min.)
	Within each range the appropriate value depends on:			(000 2000 #///////
			1	
	Lower end of the range 1: Room air currents minimal or favourable to capture	Upper end of the range 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 distar with the square of distance from the extraction point (in sim accordingly, after reference to distance from the contamina 1-2 m/s (200-400 f/min) for extraction of solvents generated producing performance deficits within the extraction appara more when extraction systems are installed or used.	aple cases). Therefore the air spee ting source. The air velocity at the d in a tank 2 meters distant from th	ed at the extraction point sho extraction fan, for example, ne extraction point. Other me	uld be adjusted, should be a minimum of chanical considerations,
Individual protection measures, such as personal protective equipment				
Eye and face protection	<ul> <li>Safety glasses with side shields.</li> <li>Chemical goggles. [AS/NZS 1337.1, EN166 or national</li> <li>Contact lenses may pose a special hazard; soft contact the wearing of lenses or restrictions on use, should be and adsorption for the class of chemicals in use and ar their removal and suitable equipment should be readily remove contact lens as soon as practicable. Lens shou a clean environment only after workers have washed h</li> </ul>	t lenses may absorb and concentr created for each workplace or task a account of injury experience. Me available. In the event of chemica Id be removed at the first signs of	k. This should include a revi dical and first-aid personnel al exposure, begin eye irriga eye redness or irritation - le	ew of lens absorption should be trained in tion immediately and ns should be removed in
Skin protection	See Hand protection below			
Hands/feet protection	<ul> <li>Wear chemical protective gloves, e.g. PVC.</li> <li>Wear safety footwear or safety gumboots, e.g. Rubber The selection of suitable gloves does not only depend on th manufacturer. Where the chemical is a preparation of seven and has therefore to be checked prior to the application. The exact break through time for substances has to be obtat making a final choice.</li> <li>Personal hygiene is a key element of effective hand care. Of washed and dried thoroughly. Application of a non-perfume Suitability and durability of glove type is dependent on usage frequency and duration of contact,</li> <li>chemical resistance of glove material,</li> <li>glove thickness and</li> <li>dexterity</li> <li>Select gloves tested to a relevant standard (e.g. Europe EN When prolonged or frequently repeated contact may occuminutes according to EN 374, AS/NZS 2161.10.1 or national When only brief contact is expected, a glove with a protect 374, AS/NZS 2161.10.1 or national equivalent) is recomme . Some glove polymer types are less affected by movement . Contaminated gloves should be replaced.</li> <li>As defined in ASTM F-739-96 in any application, gloves are . Excellent when breakthrough time &gt; 20 min</li> <li>Fair when breakthrough time &lt; 20 min</li> <li>Foor when glove ematerial degrades</li> <li>For general applications, gloves with a thickness typically g It should be emphasised that glove thickness is not necess efficiency of the glove will be dependent on the exact comp consideration of the task requirements and knowledge of bi Glove thickness may also vary depending on the glove mare</li> </ul>	ne material, but also on further ma ral substances, the resistance of the ained from the manufacturer of the Gloves must only be worn on clear ad moisturiser is recommended. ge. Important factors in the selection of a glove with a protection class of a equivalent) is recommended. the class of 3 or higher (breakthro- ended. t and this should be taken into acco e rated as: preater than 0.35 mm, are recommen- arily a good predictor of glove resi- position of the glove material. There-	he glove material can not be e protective gloves and has t in hands. After using gloves, on of gloves include: or national equivalent). of 5 or higher (breakthrough i bough time greater than 60 m count when considering glov eended. istance to a specific chemica efore, glove selection should	calculated in advance o be observed when hands should be time greater than 240 inutes according to EN es for long-term use.

Body protection See Other protection below
--

Other protection	Dveralls. P.V.C apron. Barrier cream. Skin cleansing cream. Eye wash unit.

## 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:

DYCO BONDING PRIMER WATERPROOF EPOXY - CLEAR

Material	CPI
BUTYL	С
YPALON	С
AT+NEOPR+NITRILE	С
ATURAL RUBBER	С
ATURAL+NEOPRENE	С
EOPRENE	С
EOPRENE/NATURAL	С
ITRILE	С
TRILE+PVC	С
E/EVAL/PE	С
/Α	С
/C	С
ARANEX-23	С
EFLON	С
TON	С

### **Respiratory protection**

Type AK-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 5 x ES	AK-AUS / Class 1 P2	-	AK-PAPR-AUS / Class 1 P2
up to 25 x ES	Air-line*	AK-2 P2	AK-PAPR-2 P2
up to 50 x ES	-	AK-3 P2	-
50+ x ES	-	Air-line**	-

#### ^ - 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)

\* 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	Not Available		
Physical state	Liquid	Relative density (Water = 1)	1.043
Odour	Not Available	Partition coefficient n-octanol / water	Not Available
Odour threshold	Not Available	Auto-ignition temperature (°C)	Not Available
pH (as supplied)	Not Available	Decomposition temperature (°C)	Not Available
Melting point / freezing point (°C)	Not Available	Viscosity (cSt)	Not Available
Initial boiling point and boiling range (°C)	Not Available	Molecular weight (g/mol)	Not Available
Flash point (°C)	>60	Taste	Not Available
Evaporation rate	Not Available	Explosive properties	Not Available
Flammability	Combustible.	Oxidising properties	Not Available
Upper Explosive Limit (%)	Not Available	Surface Tension (dyn/cm or mN/m)	Not Available
Lower Explosive Limit (%)	Not Available	Volatile Component (%vol)	76.01

Vapour pressure (kPa)	Not Available	Gas group	Not Available
Solubility in water	Not Applicable	pH as a solution (1%)	Not Available
Vapour density (Air = 1)	Not Available	VOC g/L	<350

## **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	irritant and then repairing the damage. The repair process, which initial may however, produce further lung damage resulting in the impairment irritation often results in an inflammatory response involving the recruit system. Inhalation of vapours may cause drowsiness and dizziness. This may be coordination and vertigo.	able to respond to a chemical insult by first removing or neutralising the ly evolved to protect mammalian lungs from foreign matter and antigens, of gas exchange, the primary function of the lungs. Respiratory tract ment and activation of many cell types, mainly derived from the vascular be accompanied by narcosis, reduced alertness, loss of reflexes, lack of ication systems as 'harmful by inhalation'. This is because of the lack of nce, care should be taken nevertheless to ensure exposure is kept to a	
Ingestion	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	Evidence exists, or practical experience predicts, that the material either produces inflammation of the skin in a substantial number of individuals following direct contact, and/or produces significant inflammation when applied to the healthy intact skin of animals, for up to four hours, such inflammation being present twenty-four hours or more after the end of the exposure period. Skin irritation may also be present after prolonged or repeated exposure; this may result in a form of contact dermatitis (nonallergic). The dermatitis is often characterised by skin redness (erythema) and swelling (oedema) which may progress to blistering (vesiculation), scaling and thickening of the epidermis. At the microscopic level there may be intercellular oedema of the spongy layer of the skin (spongiosis) and intracellular oedema of the epidermis. The material may accentuate any pre-existing dermatitis condition Skin contact is not thought to have harmful health effects (as classified under EC Directives); the material may still produce health damage following entry through wounds, lesions or abrasions. Open cuts, abraded or irritated skin should not be exposed to this material Entry into the blood-stream through, for example, cuts, abrasions, puncture wounds or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.		
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.		
Chronic	greater frequency than would be expected from the response of a norm	ducing a sensitisation reaction in a substantial number of individuals at a nal population. d pulmonary allergy may be accompanied by fatigue, malaise and aching. ren after exposure ceases. Symptoms can be activated by a variety of es and passive smoking.	
DYCO BONDING PRIMER	TOXICITY Not Available	IRRITATION Not Available	
WATERPROOF EPOXY - CLEAR	Not Available		
		RRITATION	

Derm	nal (rabbit) LD50: 220 mg/kg <sup>[2]</sup>	Eye (rabbit): 100 mg/24h-moderate
Inhal	ation (Human) TCLo: 100 ppm <sup>[2]</sup>	Eye: adverse effect observed (irritating) <sup>[1]</sup>
Inhal	ation (Human) TCLo: 195 ppm/8h <sup>[2]</sup>	Skin (rabbit): 500 mg, open; mild
Inhal	ation(Rat) LC50: 2210 mg/m3 **[2]	Skin: adverse effect observed (irritating) <sup>[1]</sup>
Inhal	ation(Rat) LC50: 450 ppm * <sup>[2]</sup>	Skin: no adverse effect observed (not irritating) <sup>[1]</sup>
Inhal	ation(Rat) LC50: 450 ppm/4h <sup>[2]</sup>	
Intra	peritoneal (Mouse) LD50: 536 mg/kg <sup>[2]</sup>	
Intra	peritoneal (Rabbit) LD50: 220 mg/kg <sup>[2]</sup>	
Intra	peritoneal (Rat) LD50: 220 mg/kg <sup>[2]</sup>	
Intra	venous (Mouse) LD50: 1130 mg/kg <sup>[2]</sup>	
Intra	venous (Rabbit) LD50: 252 mg/kg <sup>[2]</sup>	
Intra	venous (Rat) LD50: 307 mg/kg <sup>[2]</sup>	
Oral	(Guinea) LD50; 1200 mg/kg <sup>[2]</sup>	
Oral	(Human)LDLo: 143 mg/kg <sup>[2]</sup>	
Oral	(Human)TDLo: 132 mg/kg <sup>[2]</sup>	
Oral	(Human)TDLo: 600 mg/kg <sup>[2]</sup>	
Oral	(Mouse) LD50; 1167 mg/kg <sup>[2]</sup>	
Oral	(Mouse) LD50; 1230 mg/kg <sup>[2]</sup>	
Oral	(Rabbit) LD50: 300 mg/kg <sup>[2]</sup>	
Oral	(Rabbit) LD50: 320 mg/kg <sup>[2]</sup>	
Oral	(Rat)LD: 1500 mg/kg <sup>[2]</sup>	
Oral	(Rat)LD50: 250 mg/kg <sup>[2]</sup>	
Oral	(Rat)LD50: 300 mg/kg **[2]	
Oral	(Rat)LD50: 470 mg/kg <sup>[2]</sup>	
Oral	(Rat)LD50: 917 mg/kg <sup>[2]</sup>	
Oral	(Rat)LDLo: 1500 mg/kg <sup>[2]</sup>	
Oral	(Rat)TDLo: 500 mg/kg <sup>[2]</sup>	
Subc	sutaneous (Mouse) LDLo: 500 mg/kg <sup>[2]</sup>	

specified data extracted from RTECS - Register of Toxic Effect of chemical Substances

ethylene glycol monbuly thermoscience       Astma-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 ainways dystunction syndrome (RADS) which can occur after exposure to high levels of highly initating compound. Main criteria for diagnosing RADS include the absence of previous aliverys disease in a non-atopic individual, with syndrom ender Depresistent astma-like symptoms within minutes to hours of a documented exposure to the irritant. Other criteria for diagnosis of RADS include a reversible airlow pattern on lung function tests, moderate to severe bronchial hyperreactivity on methacholine challenge testing, and the lack of minimal hymphocytic inflammation, without eosimophila. RADS (or astma) 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 bronchis is a disorder that occurs as a result of exposure due to high concentrations of irritating substance (other hand, industria) bronchis is a disorder that occurs as a result of exposure due to high concentrations of irritating substance (other hand, industria) bronchis is a disorder that occurs as a result of exposure due to high concentrations of irritating substance. On the other hand, industria bronchis is a disorder that occurs as a result of exposure due to high concentrations of irritating substance. On the other hand, industria bronchis is a disorder that occurs as a result of exposure due to high concentrations of initiating substance. The manifestation of the immediate type. In addition to the allergen-specific potential for causing respiratory sensitisation, the annual file allergen, septem in the genetically determined of approximation and antiper the substance by an increased susceptibility to allerger thintis, allergic bronchial speresto allergic aliveolitis is induced essentia
ethylene glycol monobutyl ether       ASCC (NZ) SDS         The material may produce severe irritation to the eye causing pronounced 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. For ethylene glycol monoalkyl ethers and their acetates (EGMAEs): Typical members of this category are ethylene glycol propylene ether (EGPE), ethylene glycol butyl ether (EGBE) and ethylene glycol hexyl ether (EGHE) and their acetates. EGMAEs are substrates for alcohol dehydrogenase isozyme ADH-3, which catalyzes the conversion of their terminal alcohols to aldehydes (which are transient metabolites). Further, rapid conversion of the aldehydes by aldehyde dehydrogenase produces alkoxyacetic acids, which are the predominant urinary metabolites of mono substituted glycol ethers.
with decreasing molecular weight. Four to six hour acute inhalation toxicity studies were conducted for these chemicals in rats at the highest

Acute Toxicity			
	×	Carcinogenicity	×
	1: NTP Toxicology Program Technical report Series	484, March 2000.	
	concentration -dependent increase in the incidence		le mice and hepatocellular carcinoma.
	forestomach and that the neoplasia were associated		
	gland. In mice, 2-butoxyethanol exposure resulted in a concentration dependent increase in the incidence of squamous cell papilloma or carcinoma of the forestomach. It was hypothesised that exposure-induced irritation produced inflammatory and hyperplastic effects in the		
	responsive anaemia. Rats showed a marginal incre	ase in the incidence of benign or malign	ant pheochromocytomas (combined) of the adrenal
	in male and female rats as a result of severe acute endothelial cells that compromise blood flow. In two		
	it was proposed that 2-butoxyethanol at concentration		
	nonneoplastic lesions (1). The occurrence of the an		
	Exposure of male and female rats and mice for 14 w haemopoietic system in rats and mice. In addition, 2		
	Chronic exposure may cause anaemia, macrocytos		
	At least one researcher has stated that the reproduc	ctive effects were less than that of other	monoalkyl ethers of ethylene glycol.
	in maternal toxicity and embryotoxicity including a d ossified or unossified skeletal elements was also ap		
	Exposure of pregnant rats to ethylene glycol monob		
	241 mg/m3 (rat EGBE) and 100 ppm or 483 mg/m3		
	category are not teratogenic. The NOAELs for developmental toxicity are greater	than 500 ppm or 2125 mg/m3 (rabbit-F)	GPE), 100 ppm or 425 mg/m3 (rat-EGPE), 50 ppm (
	or 121, 241, 483, or 966 mg/m3), and EGHE (rat an	d rabbit - 20.8, 41.4, 79.2 ppm or 124, 2	48, or 474 mg/m3) indicate that the members of the
	or 531, 1062, or 2125 mg/m3 and rats - 100, 200, 3		
	Results of the developmental toxicity studies condu		tation periods on EGPE (rabbits -125, 250, 500 ppr
	repeated dose toxicity studies in which reproductive toxicity to reproductive organs (including the testes)		e members of this category are not associated with
	category are not selectively toxic to the reproductive		
	Reproductive and developmental toxicity. The re-	sults of reproductive and developmenta	
	incidence of liver haemangiosarcomas was seen in of action data available, there was no significant ha		ientale mice. It was decided that based off the mod
	Carcinogenicity: In a 2-year inhalation chronic toxi		
	activation and in vivo micronucleus tests with EGBE	in rats and mice were negative, indicat	ng that these glycol ethers are not genotoxic.
	In vitro cytogenicity and sister chromatid exchange	8	
	<b>Mutagenicity:</b> In the absence and presence of met <i>typhimurium</i> strains TA97, TA98, TA100, TA1535 ar	-	
	hemolysis. Blood from humans, pigs, dogs, cats, an		
	displayed similar responses, which included erythro		
	Repeat dose toxicity: The fact that the NOAEL for being more sensitive to EGBE than EGPE. Blood for		
	toxicity from EGPE and EGBE <i>in vitro</i> than those of <b>Papart dose toxicity:</b> The fact that the NOAEL for		han that of ECPE is consistent with red blood cells
	haemolysis or haemodilution as a result of administ		od cells of humans are many-fold more resistant to
	Although decreased blood haemoglobin and/or hae	-	
	toxicity in humans deliberately ingesting cleaning flu		
	and rabbits are consistent with haemolysis (with the Alkoxyacetic acid metabolites, propoxyacetic acid (I	, , ,	1 51 6
	than the other category members. EGPE and EGBE		
	, , ,		, with EGBEA less irritating and EGHE more irritation
	EGBEA to LC50 > 2132 ppm (9061 mg/m3) for EGF values in rabbits range from 435 mg/kg bw (EGBE)	to 1500 mg/kg bw (EGBEA). Overall the	

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: X – Data either not available or does not fill the criteria for classification - Data available to make classification

## **SECTION 12 Ecological information**

XIC	:Itv

DYCO BONDING PRIMER	Endpoint	Test Duration (hr)		Species	Value		Source
WATERPROOF EPOXY - CLEAR	Not Available	Not Available		Not Available	Not Available		Not Available
	Endpoint	Test Duration (hr)	Species	3	Valu	ue	Source
ethylene glycol monobutyl ether	EC50	72h	Algae o	r other aquatic plants	623	mg/l	2
	EC50	48h	Crustac	ea	164	mg/l	2
	EC50	96h	Algae o	r other aquatic plants	720	mg/l	2
	LC50	96h	Fish		170	0mg/l	Not Available
	EC10(ECx)	48h	Crustac	ea	7.2n	mg/l	2
Legend:		IUCLID Toxicity Data 2. Europ - Aquatic Toxicity Data 5. ECE					

### Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
ethylene glycol monobutyl ether	LOW (Half-life = 56 days)	LOW (Half-life = 1.37 days)
Bioaccumulative potential		
Ingredient	Bioaccumulation	

## Mobility in soil

lumon diané	Mach 200
Ingredient	Mobility
ethylene glycol monobutyl ether	HIGH (KOC = 1)

## **SECTION 13 Disposal considerations**

Waste treatment methods	
Product / Packaging disposal	<ul> <li>Containers may still present a chemical hazard/ danger when empty.</li> <li>Return to supplier for reuse/ recycling if possible.</li> <li>Otherwise:</li> <li>If container can not be cleaned sufficiently well to ensure that residuals do not remain or if the container cannot be used to store the same product, then puncture containers, to prevent re-use, and bury at an authorised landfill.</li> <li>Where possible retain label warnings and SDS and observe all notices pertaining to the product.</li> <li>Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area. In some areas, certain wastes must be tracked.</li> <li>A Hierarchy of Controls seems to be common - the user should investigate: <ul> <li>Reduction</li> <li>Recycling</li> <li>Disposal (if all else fails)</li> </ul> </li> <li>This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use. If it has been contaminated, it may be possible to reclaim the product by filtration, distillation or some other means. Shelf life considerations should also be applied in making decisions of this type. Note that properties of a material may change in use, and recycling or reuse may not always be appropriate.</li> <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> <li>It may be necessary to collect all wash water for recycling options.</li> <li>Consult State Land Waste Management Authority for disposal.</li> <li>Bury residue in an authorised landfill.</li> </ul> <li>Recycle wherever possible or consult manufacturer for recycling options.</li> <li>Consult State Land Waste Management Authority for disposal.</li> <li>Bury residue in an authorised landfill.</li>

## **SECTION 14 Transport information**

Labels Required	
Marine Pollutant	NO

Land transport (DOT): 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

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

Not Applicable

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

Product name	Group
ethylene glycol monobutyl ether	Not Available

## 14.7.3. Transport in bulk in accordance with the IGC Code

Product name	Ship Type
ethylene glycol monobutyl ether	Not Available

## **SECTION 15 Regulatory information**

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

## ethylene glycol monobutyl ether is found on the following regulatory lists

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs - Not Classified as Carcinogenic

US - California Hazardous Air Pollutants Identified as Toxic Air Contaminants

US - Massachusetts - Right To Know Listed Chemicals

US ATSDR Minimal Risk Levels for Hazardous Substances (MRLs)

US DOE Temporary Emergency Exposure Limits (TEELs)

US EPA Integrated Risk Information System (IRIS)

US EPCRA Section 313 Chemical List

US NIOSH Recommended Exposure Limits (RELs)

US OSHA Permissible Exposure Limits (PELs) Table Z-1

US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

## Additional Regulatory Information

Not Applicable

## **Federal Regulations**

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

## Section 311/312 hazard categories

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	Yes
Respiratory or Skin Sensitization	No
Serious eye damage or eye irritation	Yes
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)

None Reported

### US. EPCRA Section 313 Toxic Release Inventory (TRI) (40 CFR 372)

This product contains the following EPCRA section 313 chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know-Act of 1986 (40 CFR 372):

CAS No	%[weight]	Name	
111-76-2*	1-10	ethylene glycol monobutyl ether	
This information must be included in all SDSs that are copied and distributed for this material.			

### **Additional Federal Regulatory Information**

Not Applicable

## State Regulations

## US. California Proposition 65

MARNING: This product can expose you to chemicals including silica crystalline - quartz, ethylbenzene, which are known to the State of California to cause cancer, and ethylene glycol, which is known to the State of California to cause birth defects or other reproductive harm. For more information, go to www.P65Warnings.ca.gov

## Additional State Regulatory Information

Not Applicable

### National Inventory Status

National Inventory	Status	
Australia - AIIC / Australia Non-Industrial Use	Yes	
Canada - DSL	Yes	
Canada - NDSL	No (ethylene glycol monobutyl ether)	
China - IECSC	Yes	

National Inventory	Status
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	12/20/2023
Initial Date	08/24/2023

## CONTACT POINT

\*\*PLEASE NOTE THAT TITANIUM DIOXIDE IS NOT PRESENT IN CLEAR OR NEUTRAL BASES\*\*

### **SDS Version Summary**

Version	Date of Update	Sections Updated
1.3	12/20/2023	Hazards identification - Classification, Composition / information on ingredients - Ingredients

### Other information

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chernwatch 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
- DNEL: Derived No-Effect Level
- PNEC: Predicted no-effect concentration
- 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
   NZIAC: New Zealand Inventory of Chemical
- NZIoC: New Zealand Inventory of Chemicals
- PICCS: Philippine Inventory of Chemicals and Chemical Substances
   TSCA: Toxic Substances Control Act
- 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.