SAFETY DATA SHEET

Issue Date 14-Aug-2017 **Revision Date** 14-Aug-2017 **Version** 2.01

Section 1: PRODUCT IDENTIFIER AND CHEMICAL IDENTITY

Product identifier
Product Name WEST G-FLEX 650 EPOXY HARDENER

Other means of identification

Recommended use of the chemical and restrictions on use
Recommended Use Recommended for Industrial and/or Professional use only

Details of manufacturer or importer
Manufacturer
Allnex Composites
(a division of Allnex Resins Australia Pty Ltd)
49-61 Stephen Road
Botany
NSW 2019

For further information, please contact
Contact Point +61 (02) 9666 0331
E-mail address complianceANZ@allnex.com

Emergency telephone number
Emergency telephone number +61 1800 022 037

Section 2: HAZARD(S) IDENTIFICATION

Not classified as dangerous goods in accordance with the Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG)
Classified as a hazardous substance in accordance with the criteria of Safe Work Australia - Globally Harmonised System (GHS)

GHS Classification

Flammable liquids	Category 4 - (H227)
Acute toxicity - Oral	Category 4 - (H302)
Acute toxicity - Dermal	Category 4 - (H312)
Skin corrosion/irritation	Category 1 B - (H314)
Serious eye damage/eye irritation	Category 1 - (H318)
Skin sensitisation	Category 1B - (H317)

Label elements

Signal word Danger

Hazard statements
H227 - Combustible liquid
H302 - Harmful if swallowed
H312 - Harmful in contact with skin
H314 - Causes severe skin burns and eye damage
H317 - May cause an allergic skin reaction

Precautionary Statements - Prevention
Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Wear protective gloves/protective clothing/eye protection/face protection
Do not breathe dust/fume/gas/mist/vapours/spray
Contaminated work clothing should not be allowed out of the workplace
Precautionary Statements - Response
Specific treatment (see supplemental first aid instructions on this label)
Immediately call a POISONS INFORMATION CENTRE or doctor
Specific treatment (see supplemental first aid instructions on this label)
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
Immediately call a POISONS INFORMATION CENTRE or doctor
Call a POISONS INFORMATION CENTRE or doctor if you feel unwell
Wash contaminated clothing before re-use
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
If skin irritation or rash occurs: Get medical advice/attention
IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing
Immediately call a POISONS INFORMATION CENTRE or doctor
"
Rinse mouth
Do NOT induce vomiting
Precautionary Statements - Storage
Store locked up
Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

Other hazards
Harmful to aquatic life with long lasting effects

Section 3: COMPOSITION AND INFORMATION ON INGREDIENTS

Substance

Not applicable

Mixture

Chemical Name	CAS No	Weight-%
Ingredients determined not to be hazardous	9999-999-9	100
2-Propenenitrile, polymer with 1,3-butadiene, 1-cyano-1-methyl-4-oxo-4-[[2-(1-piperazinyl)ethyl]amino]butyl-terminated	68683-29-4	30-<60
Triethylenetetramine	112-24-3	10-<20
2,4,6-Tri(dimethylaminomethyl) phenol	90-72-2	10-<20
1-Piperazineethanamine	140-31-8	10-<20
1,3-Benzenedimethanamine	1477-55-0	10-<20

Section 4: FIRST AID MEASURES

Description of first aid measures

General advice	Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.
Emergency telephone number	Poisons Information Centre, Australia: 13 11 26
Inhalation	Remove to fresh air. If breathing has stopped, give artificial respiration. Get medical attention immediately. If not breathing, give artificial respiration. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary oedema may occur. Get immediate medical advice/attention. Get medical attention immediately if symptoms occur.
Skin contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get immediate medical advice/attention. Wash off immediately with soap and plenty of water for at least 15 minutes. Get medical attention if irritation develops and persists. Wash with soap and water. May cause an allergic skin reaction. In the case of skin irritation or allergic reactions see a doctor. Wash off immediately with plenty of water for at least 15 minutes. If symptoms persist, call a doctor.
Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area. Remove contact lenses, if present and easy to do. Continue rinsing. Get immediate medical advice/attention.
Ingestion	Do NOT induce vomiting. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Immediate medical attention is required. Call a doctor.
Self-protection of the first aider	Remove all sources of ignition. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Wear personal protective clothing (see section 8). Avoid contact with skin, eyes or clothing. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation.

Most important symptoms and effects, both acute and delayed

Symptoms Burning sensation. Itching. Rashes. Hives.

Indication of any immediate medical attention and special treatment needed

Note to doctors Product is a corrosive material. Use of gastric lavage or emesis is contra-indicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal oedema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure. May cause sensitisation in susceptible persons. Treat symptomatically.

Section 5: FIREFIGHTING MEASURES

Suitable Extinguishing Media

Suitable extinguishing media
Dry chemical. Carbon dioxide (CO2). Water spray. Alcohol-resistant foam.

Unsuitable extinguishing media
Do not use water jetstream

Specific hazards arising from the chemical

In the event of fire and/or explosion do not breathe fumes. May cause sensitisation by inhalation and skin contact. Thermal decomposition can lead to release of irritating and toxic gases and vapours. Keep product and empty container away from heat and sources of ignition. Risk of ignition. Thermal decomposition can lead to release of irritating and toxic gases and vapours. In the event of fire, cool tanks with water spray. The product causes irritation of eyes, skin and mucous membranes. Product is or

contains a sensitiser. May cause sensitisation by skin contact.

Special protective actions for fire-fighters

Wear self-contained breathing apparatus and protective suit. Use personal protective equipment as required.

Section 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions
Evacuate personnel to safe areas. Use personal protective equipment as required. See section 8 for more information. Take action to prevent static discharges. Do not touch or walk through spilled material. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Attention! Corrosive material. Keep people away from and upwind of spill/leak.

Refer to protective measures listed in Sections 7 and 8.

For emergency responders
Use personal protection recommended in Section 8.

Environmental precautions

Refer to protective measures listed in Sections 7 and 8. Prevent further leakage or spillage if safe to do so. Should not be released into the environment. Do not allow to enter into soil/subsoil. Prevent product from entering drains.

Methods and material for containment and cleaning up

Methods for containment
Stop leak if you can do it without risk. Do not touch or walk through spilled material. Dam far ahead of liquid spill for later disposal.

Methods for cleaning up
Take action to prevent static discharges. Dam up. Soak up with inert absorbent material. Pick up and transfer to properly labelled containers.

Precautions to prevent secondary hazards

Prevention of secondary hazards
Clean contaminated objects and areas thoroughly observing environmental regulations.

Reference to other sections
See section 8 for more information. See section 13 for more information.

Section 7: HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling
Use personal protection equipment. Do not breathe vapour or mist. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take action to prevent static discharges. Use with local exhaust ventilation. Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Handle product only in closed system or provide appropriate exhaust ventilation. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash it before reuse.

General Hygiene Considerations
When using do not eat, drink or smoke. Wash contaminated clothing before re-use. Regular cleaning of equipment, work area and clothing is recommended. Keep away from food, drink and animal feeding stuffs. Contaminated work clothing should not be allowed out of the workplace. Avoid contact with skin, eyes or clothing. Take off all contaminated clothing and wash it before reuse. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash hands before breaks and after work.

Conditions for safe storage, including any incompatibilities

Storage Conditions
Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat, sparks, flame and other sources of ignition (i.e. pilot lights, electric motors and static electricity). Keep in properly labelled containers. Store in accordance with the particular national regulations. Store in accordance with local regulations. Keep out of the reach of children. Store locked up. Protect from moisture. Store separately.

Incompatible materials
Strong acids. Strong bases. Strong oxidising agents.

Section 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION

Control parameters

Exposure Limits . This product, as supplied, contains hazardous materials with occupational exposure limits.

Chemical Name	Australia
1,3-Benzenedimethanamine 1477-55-0	0.1 mg/m³ Peak Skin*

Appropriate engineering controls

Engineering Controls Ensure adequate ventilation, especially in confined areas.

Individual protection measures, such as personal protective equipment

Eye/face protection Tight sealing safety goggles. Face protection shield.

Skin and body protection Gloves made of plastic or rubber. Rubber boots. Suitable protective clothing. Wear chemical resistant clothing such as gloves, apron, boots or whole bodysuits made from neoprene, as appropriate. Antistatic footwear. Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Hand Protection Wear suitable gloves.

Respiratory protection Where respiratory protection is required, use a respirator selected and in accordance with AS/NZS 1715 and AS/NZS 1716.

Environmental exposure controls No information available.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state liquid
Appearance clear
Colour amber
Odour ammoniacal
Odour threshold No information available

Property	Values	Remarks • Method
pH		No information available
Melting point / freezing point		No information available
Boiling point/boiling range	> 200 °C	
Flash point	> 90 °C	Pensky-Martens Closed Cup (PMCC)
Evaporation rate		No information available

Flammability (solid, gas)		No information available
Flammability Limit in Air		
Upper flammability limit:	No information available	
Lower flammability limit:	No information available	
Vapour pressure	< 1.33324	hPa, 20°C
Vapour density		No information available
Relative density	0.97	
Water solubility		Miscible
Solubility(ies)	-	No information available
Partition coefficient		No information available
Auto-ignition temperature		No information available
Decomposition temperature		No information available
Kinematic viscosity		No information available
Dynamic viscosity		No information available
Explosive properties	No information available	
Oxidising properties	No information available	

Other Information

VOC Content (%)	No information available
Density	No information available

Section 10: STABILITY AND REACTIVITY

Reactivity
No Data Available.

Chemical stability

Stable under normal conditions.

Explosion data

Sensitivity to Mechanical Impact	None.
Sensitivity to Static Discharge	May be ignited by heat, sparks or flames.

Possibility of Hazardous Reactions

Possibility of Hazardous Reactions
None under normal processing.

Conditions to avoid

Heat, flames and sparks. Exposure to air or moisture over prolonged periods.

Incompatible materials

Strong acids. Strong bases. Strong oxidising agents.

Hazardous Decomposition Products

Thermal decomposition can lead to release of irritating and toxic gases and vapours.

Section 11: TOXICOLOGICAL INFORMATION

Acute toxicity

Information on likely routes of exposure

Product Information .

Inhalation Specific test data for the substance or mixture is not available. Corrosive by inhalation. (based on components). Inhalation of corrosive fumes/gases may cause coughing, choking,

headache, dizziness, and weakness for several hours. Pulmonary oedema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure, and increased heart rate. Inhaled corrosive substances can lead to a toxic oedema of the lungs. Pulmonary oedema can be fatal.

Eye contact Specific test data for the substance or mixture is not available. Causes burns. (based on components). Corrosive to the eyes and may cause severe damage including blindness. Risk of serious damage to eyes.

Skin contact May cause sensitisation by skin contact. Specific test data for the substance or mixture is not available. Repeated or prolonged contact may cause allergic reactions in very susceptible persons. (based on components). Corrosive. Causes burns. May be absorbed through the skin in harmful amounts. Harmful in contact with skin.

Ingestion Specific test data for the substance or mixture is not available. Causes burns. (based on components). Ingestion causes burns of the upper digestive and respiratory tracts. May cause severe burning pain in the mouth and stomach with vomiting and diarrhoea of dark blood. Blood pressure may decrease. Brownish or yellowish stains may be seen around the mouth. Swelling of the throat may cause shortness of breath and choking. May cause lung damage if swallowed.

Numerical measures of toxicity - Product Information

The following values are calculated based on chapter 3.1 of the GHS document
Converted acute toxicity point estimates may have been used when only acute toxicity hazard classification is available.

ATEmix (oral) 955.00
ATEmix (dermal) 1,667.00
ATEmix (inhalation-vapour) 55.00
ATEmix (inhalation-dust/mist) 7.50
50% of the mixture consists of ingredient(s) of unknown toxicity
50 % of the mixture consists of ingredient(s) of unknown acute oral toxicity
50 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity
50 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)
50 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapour)
50 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Triethylenetetramine	= 2500 mg/kg (Rat)	= 550 mg/kg (Rabbit)	-
2,4,6-Tri(dimethylaminomethyl) phenol	= 1200 mg/kg (Rat)	= 1280 mg/kg (Rat)	-
1-Piperazineethanamine	= 2140 µL/kg (Rat)	= 880 µL/kg (Rabbit)	-
1,3-Benzenedimethanamine	= 660 mg/kg (Rat)	= 2 g/kg (Rabbit)	= 700 ppm (Rat) 1 h

See section 16 for terms and abbreviations

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation
Classification based on data available for ingredients. Causes burns.

Serious eye damage/eye irritation
Classification based on individual ingredients of the mixture. Risk of serious damage to eyes. Causes burns.

Sensitisation
May cause sensitisation by skin contact.

Germ cell mutagenicity
No information available.

Carcinogenicity
No information available.

Reproductive toxicity

No information available.

STOT - single exposure
No information available.

STOT - repeated exposure
No information available.

Aspiration hazard
No information available.

Section 12: ECOLOGICAL INFORMATION

Ecotoxicity

Unknown Aquatic Toxicity 10% of the mixture consists of components(s) of unknown hazards to the aquatic environment

Chemical Name	Fish
Triethylenetetramine	495 mg/L LC50 96 h Pimephales promelas 570 mg/L LC50 96 h Poecilia reticulata semi-static
1-Piperazineethanamine	1000 mg/L LC50 96 h Poecilia reticulata semi-static 1950 - 2460 mg/L LC50 96 h Pimephales promelas flow-through 100 mg/L LC50 96 h Oncorhynchus mykiss semi-static

Chemical Name	Crustacea
Triethylenetetramine	31.1 mg/L EC50 48 h Daphnia magna
1-Piperazineethanamine	32 mg/L EC50 48 h Daphnia magna

Chemical Name	Algae/aquatic plants
Triethylenetetramine	2.5 mg/L EC50 72 h Desmodesmus subspicatus 20 mg/L EC50 72 h Pseudokirchneriella subcapitata 3.7 mg/L EC50 96 h Pseudokirchneriella subcapitata
1-Piperazineethanamine	495 mg/L EC50 72 h Pseudokirchneriella subcapitata

Persistence and degradability
No information available.

Bioaccumulative potential
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Chemical Name	Partition coefficient
Triethylenetetramine	*-1.4*
1-Piperazineethanamine	*-1.48*

Mobility

Mobility in soil
No information available.

Mobility
No information available.

Other adverse effects

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Endocrine Disruptor Information .

Chemical Name	EU - Endocrine Disrupters Candidate List	EU - Endocrine Disruptors - Evaluated Substances	Endocrine disrupting potential
Triethylenetetramine	Group III Chemical	-	-

Section 13: DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste from residues/unused products Disposal should be in accordance with applicable regional, national and local laws and regulations. Since empty containers retain product residue, follow label warnings even after container is emptied.

Contaminated packaging Do not re-use container.

Section 14: TRANSPORT INFORMATION

ADG Not regulated

IMDG Not regulated

Transport in Bulk According to Annex II of MARPOL and the IBC CODE
No information available

IATA Not regulated

Section 15: REGULATORY INFORMATION

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

National regulations

Australia
Not classified as dangerous goods in accordance with the Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG). Classified as a hazardous substance in accordance with the criteria of Safe Work Australia - Globally Harmonised System (GHS)

See section 8 for national exposure control parameters

Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP)
Classified as a scheduled poison according to the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP)

Poison Schedule Number
S5

International Inventories

AICS - Australian Inventory of Chemical Substances	Not listed
DSL - Canadian Domestic Substances List	No information available
IECSC - China Inventory of Existing Chemical Substances	No information available
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances	No information available
ENCS - Japan Existing and New Chemical Substances	No information available

KECL - Korean Existing and Evaluated Chemical Substances	No information available
NZIoC - New Zealand Inventory of Chemicals	Listed or exempt
PICCS - Philippines Inventory of Chemicals and Chemical Substances	No information available
CICR - Turkey Chemical Inventory Control Regulation	No information available
NCSR - Taiwan National Chemical Substance Registry	No information available
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory	No information available

For confirmation on the European REACh status contact the Allnex Compliance group at PSRA-Customer-Requests@allnex.com

International Regulations

Ozone-depleting substances (ODS) Not applicable

Persistent Organic Pollutants Not applicable

Export Notification requirements Not applicable

Section 16: ANY OTHER RELEVANT INFORMATION

Revision Date 14-Aug-2017

Revision Note SDS sections updated

Key or legend to abbreviations and acronyms used in the safety data sheet

Legend Section 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation
C	Carcinogen		

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End of Safety Data Sheet