

EVO-STIK RESIN-W POLYURETHANE WOOD ADHESIVE
Supersedes Date: 30-Jun-2016

Revision Date 16-Nov-2017
Version 1.01

Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product Identifier

Product Name EVO-STIK RESIN-W POLYURETHANE WOOD ADHESIVE
Pure substance/mixture Mixture

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

Recommended use Adhesives.
Uses advised against None known

1.3. Details of the supplier of the safety data sheet

Company Name

Bostik Limited
Common Rd
ST16 3EH
Stafford UK
Tel: +44 (1785) 27 26 25
Fax: +44 (1785) 25 72 36

E-mail address SDS.box-EU@bostik.com

1.4. Emergency telephone number

Emergency Telephone

United Kingdom	+44 (1785) 272650
Ireland	+353 (1) 8624900 (Monday- Friday 9am-5pm)

Section 2: HAZARD IDENTIFICATION

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Acute toxicity - Inhalation (Dusts/Mists)	Category 4 - (H332)
Skin Corrosion/Irritation	Category 2 - (H315)
Serious eye damage/eye irritation	Category 2 - (H319)
Respiratory sensitisation	Category 1 - (H334)
Skin sensitisation	Category 1 - (H317)
Carcinogenicity	Category 2 - (H351)
Specific target organ toxicity (single exposure)	Category 3 - (H335)
Specific target organ toxicity (repeated exposure)	Category 2 - (H373)

2.2. Label Elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Contains 4,4'-Methylenediphenyl diisocyanate

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Signal Word
DANGER

Hazard statements

H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled
H373 - May cause damage to organs through prolonged or repeated exposure
H315 - Causes skin irritation
H351 - Suspected of causing cancer
H332 - Harmful if inhaled
H335 - May cause respiratory irritation
H319 - Causes serious eye irritation
H317 - May cause an allergic skin reaction

Special provisions concerning the labelling of certain mixtures

EUH204 - Contains isocyanates. May produce an allergic reaction

Precautionary Statements - EU (§28, 1272/2008)

P101 - If medical advice is needed, have product container or label at hand
P102 - Keep out of reach of children
P261 - Avoid breathing vapours
P271 - Use only outdoors or in a well-ventilated area
P280 - Wear protective gloves and eye/face protection
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 or doctor/physician if you feel unwell
P337 + P313 - If eye irritation persists: Get medical advice/attention
P403 + P233 - Store in a well-ventilated place. Keep container tightly closed
P501 - Dispose of contents/ container to an approved waste disposal plant

Additional information

This product requires tactile warnings if supplied to the general public

2.3. Other Hazards

General Hazards

No information available.

PBT and vPvB assessment

The components in this formulation do not meet the criteria for classification as PBT or vPvB

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Mixture

3.2 Mixtures

Chemical Name	EC No	CAS No	Weight-%	Classification according to Regulation (EC) No. 1272/2008 [CLP]	Specific concentration limit (SCL)	REACH Registration Number
4,4'-Methylenediphenyl	202-966-0	101-68-8	40 - <80	Acute Tox. 4	STOT SE 3 :: C>=5%	01-2119457014-47

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diisocyanate				(H332) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) Resp. Sens. 1 (H334) Skin Sens. 1 (H317) Carc. 2 (H351) STOT SE 3 (H335) STOT RE 2 (H373)	Skin Irrit. 2 :: C>=5% Eye Irrit. 2 :: C>=5% Resp. Sens. 1 :: C>=0.1%	-XXXX
Morpholine, 4,4'-(oxydi-2,1-ethanediy)bi s-	229-194-7	6425-39-4	1 - <5	Eye Irrit. 2 (H319)		01-2119969278-20 -XXXX

Full text of H- and EUH-phrases: see section 16

This product does not contain candidate substances of very high concern at a concentration $\geq 0.1\%$ (Regulation (EC) No. 1907/2006 (REACH), Article 59)

Section 4: FIRST AID MEASURES

4.1. Description of first aid measures

General Advice	If symptoms persist, call a doctor. Do not breathe dust/fume/gas/mist/vapours/spray. Do not get in eyes, on skin, or on clothing.
Inhalation	Remove to fresh air. If breathing is irregular or stopped, administer artificial respiration. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Call a doctor. Immediate medical attention is required. Move victim to fresh air. Administer oxygen if breathing is difficult. If breathing is irregular or stopped, administer artificial respiration. Artificial respiration and/or oxygen may be necessary. Oxygen or artificial respiration if needed. Immediate medical attention is not required. Move to fresh air in case of accidental inhalation of vapours. If symptoms persist, call a doctor.
Skin Contact	Consult a doctor if necessary. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Wash contaminated clothing before reuse. Wash off immediately with plenty of water. If symptoms persist, call a doctor. If skin irritation persists, call a doctor. Wash off immediately with soap and plenty of water. Immediate medical attention is not required.
Eye contact	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing. If symptoms persist, call a doctor. Call a doctor immediately.
Ingestion	Do NOT induce vomiting. Drink plenty of water. If symptoms persist, call a doctor. Rinse mouth. Call a doctor or poison control centre immediately. Never give anything by mouth to an unconscious person. Clean mouth with water and drink afterwards plenty of water. Call a doctor.
Self-Protection of the First Aider	Use personal protective equipment as required. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms	May cause skin and eye irritation. Based on the properties of the isocyanate components and considering toxicological data on similar mixtures, this mixture may cause acute irritation and/or sensitisation of the respiratory system leading to an asthmatic condition, wheeziness and a tightness of the chest.
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4.3. Indication of any immediate medical attention and special treatment needed

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Note to doctors May cause sensitisation of susceptible persons. May cause sensitisation by inhalation and skin contact. Treat symptomatically.

Section 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing media

Suitable Extinguishing Media

Dry chemical, CO₂, water spray or alcohol-resistant foam.

Unsuitable Extinguishing Media

Strong water jet

5.2. Special hazards arising from the substance or mixture

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

Hazardous Combustion Products Carbon oxides. Nitrogen oxides (NO_x).

5.3. Advice for firefighters

Cool container with water spray. Do not let spilled or leaking material enter waterways. Wear self contained breathing apparatus for fire fighting if necessary.

Section 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Personal Precautions

Avoid contact with skin, eyes or clothing. Use personal protective equipment as required. Evacuate personnel to safe areas. Do not touch or walk through spilled material. Keep people away from and upwind of spill/leak.

For emergency responders

Use personal protection recommended in Section 8.

6.2. Environmental precautions

Prevent entry into waterways, sewers, basements or confined areas. Do not flush into surface water or sanitary sewer system. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. See Section 12 for additional Ecological Information.

6.3. Methods and material for containment and cleaning up

Methods for Containment

Absorb spill with inert material (e.g. dry sand or earth), then place in a chemical waste container. Keep from any possible contact with water. Reacts with water. If possible, turn leaking containers so that gas escapes rather than liquid. Transport to well ventilated area and treat with neutralizing solution: mixture of 80% water and 20% non-ionic surfactant Tergitol TMN-10; or 90% water, 3-8% concentrated ammonia and 2% detergent. Add about 10 parts of neutraliser per part of isocyanate, with mixing. Allow substance to evaporate.

Methods for cleaning up

Cover liquid spill with sand, earth or other non-combustible absorbent material. Use personal protective equipment as required. Dam up. Take up mechanically, placing in appropriate containers for disposal. Clean contaminated surface thoroughly. Soak up with inert absorbent material. Pick up and transfer to properly labelled containers.

6.4. Reference to other sections

Reference to other sections

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION
Section 13: DISPOSAL CONSIDERATIONS

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Section 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Advice on safe handling

Avoid contact with skin, eyes or clothing. Use personal protective equipment as required. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Do not breathe dust/fume/gas/mist/vapours/spray. Ensure adequate ventilation, especially in confined areas. Avoid breathing vapours or mists. Use with local exhaust ventilation.

General Hygiene Considerations

When using do not eat, drink or smoke. Regular cleaning of equipment, work area and clothing is recommended.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions

Keep container tightly closed in a dry and well-ventilated place. Keep out of the reach of children. Keep containers tightly closed in a cool, well-ventilated place. Keep in properly labelled containers. Protect from direct contact with water or excessive moisture. Reacts with water.

7.3. Specific end use(s)

Specific Use(s)

Adhesives.

OTHER INFORMATION

Recommendation(s). Observe technical data sheet.

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Chemical Name	European Union	Ireland	United Kingdom
4,4'-Methylenediphenyl diisocyanate 101-68-8	-	TWA: 0.02 mg/m ³ STEL: 0.07 mg/m ³ Sen**	TWA: 0.02 mg/m ³ STEL: 0.07 mg/m ³

Derived No Effect Level (DNEL) No information available

Predicted No Effect Concentration (PNEC) No information available.

8.2. Exposure controls

Engineering Controls Ensure adequate ventilation, especially in confined areas.

Personal Protective Equipment

Eye/Face Protection	Tight sealing safety goggles. Wear safety glasses with side shields (or goggles). Face protection shield.
Hand Protection	Gloves are provided with this product. Wear protective gloves. Council Directive 89/686/EEC: Council Directive 89/686/EEC of 21 December 1989 on the approximation of the laws of the Member States relating to personal protective equipment.
Skin and Body Protection	Suitable protective clothing. Suitable protective clothing.
Respiratory Protection	Provide adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment.
Recommended filter type:	Recommended filter type: A2/P3 .

Environmental Exposure Controls Do not allow into any sewer, on the ground or into any body of water.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

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Physical State Liquid
Appearance Gel
Colour Cream
Odour Musty
Odour Threshold No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	No information available	
Melting point / freezing point	No information available	
Boiling Point	> 330 °C / 626 °F	
Flash Point	> 200 °C / > 392 °F	CC (closed cup)
Evaporation Rate	Slow No information available	
Flammability (solid, gas)	No information available	Not applicable for liquids
Flammability Limit in Air		
Upper Flammability Limit	No information available	
Lower Flammability Limit	No information available	
Vapour Pressure	0.01	Pa
Vapour Density	8.5	
Relative Density	1.10	
Water Solubility	Insoluble in water	
	Product cures with moisture	
Solubility in Other Solvents	No information available	
Partition Coefficient	No information available	
Autoignition Temperature	>600 °C / °F	
Decomposition Temperature	No information available	
Explosive Properties	Not an explosive	
Explosive Limits	No information available	
Upper	No information available	
Lower	No information available	
Oxidising Properties	No information available	
Kinematic Viscosity	> 21 mm ² /s	@ 40°C
Dynamic Viscosity	No information available	

9.2. Other information

Softening Point No information available
Molecular Weight No information available
Solvent content (%) No information available
Solid content (%) No information available
Density No data available
Bulk Density No data available
VOC content (%)

Section 10: STABILITY AND REACTIVITY

10.1. Reactivity

Product cures with moisture.

10.2. Chemical stability

Stable under normal conditions.

Explosion Data

Sensitivity to Mechanical Impact None.
Sensitivity to Static Discharge None.

10.3. Possibility of hazardous reactions

Hazardous Polymerisation

Hazardous polymerisation may occur.

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Possibility of Hazardous Reactions

None under normal processing.

10.4. Conditions to avoid

Keep from any possible contact with water. Product cures with moisture. Extremes of temperature and direct sunlight. Storage near to reactive materials. Reacts with water.

10.5. Incompatible materials

Water. Alcohols. Strong bases. Strong oxidising agents. Finely powdered metals.

10.6. Hazardous decomposition products

Carbon monoxide. Carbon dioxide (CO₂). Nitrogen oxides (NO_x). Thermal decomposition can lead to release of irritating and toxic gases and vapours. Hydrogen cyanide.

Section 11: TOXICOLOGY INFORMATION

11.1. Information on toxicological effects

Information on likely routes of exposure

Product Information

No information or data specific to the product on this toxicological (health) effect is available.

Inhalation	No data available.
Eye contact	No data available.
Skin Contact	No data available.
Ingestion	No data available.
Sensitisation	No data available.

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

Skin Corrosion/Irritation	Irritating to skin.
Serious eye damage/eye irritation	Irritating to eyes.
Sensitisation	May cause sensitisation by inhalation and skin contact.
Germ Cell Mutagenicity	Not applicable.
Carcinogenicity	The following substance(s) are classified in Annex VI CLP (1272/2008) as carcinogenic.

Chemical Name	European Union
4,4'-Methylenediphenyl diisocyanate 101-68-8	Carc. 2

Reproductive Toxicity	No information available.
STOT - Single Exposure	No information available.
STOT - Repeated Exposure	No information available.
Target Organ Effects	Eyes, Skin, Respiratory system, Central nervous system.
Aspiration hazard	Not applicable.

Numerical measures of toxicity

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Acute Toxicity

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral) 41,327.00 mg/kg
ATEmix (dermal) 62,000.00 mg/kg
ATEmix (inhalation-dust/mist) 3.40 mg/l

Component Information

Toxicity Data

Data obtained on the component(s) include

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
4,4'-Methylenediphenyl diisocyanate 101-68-8	= 31600 mg/kg (Rat) = 9200 mg/kg (Rat)	LD 50 > 9400 mg/kg (Rabbit) OECD 402	= 1.5 mg/L (Rat) 4 h
Morpholine, 4,4'-(oxydi-2,1-ethanediyl)bis- 6425-39-4	LD50 =2025 mg/Kg (Rat)	LD50 >3000 mg/Kg (Rabbit)	-

Section 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Ecotoxicity

No information available

Component Information

Data obtained on the component(s) include

Chemical Name	Algae/aquatic plants	Fish	Crustacea	M-Factor
4,4'-Methylenediphenyl diisocyanate 101-68-8	-	>1000 mg/l (Danio rerio)	-	
Morpholine, 4,4'-(oxydi-2,1-ethanediyl)bis- s- 6425-39-4	EC50 (72h) >100 mg/L Algae (Pseudokirchnerella subcapitata) Static	LC50 (96h) >2150 mg/L Fish (Danio rerio) Static	EC50 (48h) >100 mg/L Waterflea (Daphnia magna) Static	

12.2. Persistence and degradability

Not readily biodegradable. Product cures with moisture.

12.3. Bioaccumulative potential

Not expected.

Partition coefficient

No information available

12.4. Mobility in soil

Mobility in soil

No information available.

12.5. Results of PBT and vPvB assessment

The components in this formulation do not meet the criteria for classification as PBT or vPvB.

12.6. Other adverse effects

No information available

Endocrine Disruptor Information

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This product does not contain any known or suspected endocrine disruptors.

Section 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste from Residues/Unused Products	Disposal should be in accordance with applicable regional, national and local laws and regulations.
Contaminated Packaging	Improper disposal or reuse of this container may be dangerous and illegal.
European Waste Catalogue	07 02 08 other still bottoms and reaction residues 08 04 09* waste adhesives and sealants containing organic solvents or other dangerous substances
OTHER INFORMATION	Waste codes should be assigned by the user based on the application for which the product was used.

Section 14: TRANSPORTATION INFORMATION

ADR

14.1 UN/ID no	Not regulated
14.2 Proper Shipping Name	Not regulated
14.3 Hazard Class	Not regulated
14.4 Packing Group	Not regulated
14.5 Environmental Hazard	Not applicable
14.6 Special Provisions	None

IMDG

14.1 UN/ID no	Not regulated
14.2 Proper Shipping Name	Not regulated
14.3 Hazard Class	Not regulated
14.4 Packing Group	Not regulated
14.5 Marine Pollutant	Np
14.6 Special Provisions	None
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	No information available

RID

14.1 UN/ID no	Not regulated
14.2 Proper Shipping Name	Not regulated
14.3 Hazard Class	Not regulated
14.4 Packing Group	Not regulated
14.5 Environmental Hazard	Not applicable
14.6 Special Provisions	None

ICAO (air)

14.1 UN/ID no	Not regulated
14.2 Proper Shipping Name	Not regulated
14.3 Hazard Class	Not regulated
14.4 Packing Group	Not regulated
14.5 Environmental Hazard	Not applicable
14.6 Special Provisions	None

IATA

14.1 UN/ID no	Not regulated
14.2 Proper Shipping Name	Not regulated
14.3 Hazard Class	Not regulated
14.4 Packing Group	Not regulated
14.5 Environmental Hazard	Not applicable
14.6 Special Provisions	None

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Section 15: REGULATORY INFORMATION

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

European Union

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

Check whether measures in accordance with Directive 94/33/EC for the protection of young people at work must be taken.

Take note of Directive 92/85/EC on the protection of pregnant and breastfeeding women at work

Registration, Evaluation, Authorization, and Restriction of Chemicals (REACH) Regulation (EC 1907/2006)

EU-REACH (1907/2006) - Candidate List of Substances of Very High Concern (SVHC) for Authorization in accordance with Article 59

This product does not contain candidate substances of very high concern at a concentration $\geq 0.1\%$ (Regulation (EC) No. 1907/2006 (REACH), Article 59)

EU-REACH (1907/2006) - Annex XVII - Substances subject to Restriction

This product contains one or more substance(s) subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII).

Chemical Name	CAS No	Restrictions on use
4,4'-Methylenediphenyl diisocyanate	101-68-8	56[a].

56 . If product supplied to the general public with substance above at a level greater than 0.1%, then gloves must be provided with the product.

EU-REACH (1907/2006) - Annex XIV - List of substances subject to Authorization

This product does not contain substances subject to authorisation (Regulation (EC) No. 1907/2006 (REACH), Annex XIV)

Ozone-depleting substances (ODS) regulation (EC) 1005/2009

Not applicable

Persistent Organic Pollutants

Not applicable

15.2. Chemical safety assessment

None

Section 16: OTHER INFORMATION

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

Full text of H-Statements referred to under section 3

H332 - Harmful if inhaled

H315 - Causes skin irritation

H319 - Causes serious eye irritation

H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled

H317 - May cause an allergic skin reaction

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H351 - Suspected of causing cancer
H335 - May cause respiratory irritation
H373 - May cause damage to organs through prolonged or repeated exposure

Legend

SVHC: Substances of Very High Concern for Authorisation:

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

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

PBT Persistent, Bioaccumulative, and Toxic (PBT) Chemicals
STOT (RE): Specific target organ toxicity - Repeated exposure
STOT (SE): Specific target organ toxicity - Single exposure
EWC: European Waste Catalogue

Key literature references and sources for data

Classification and labeling data calculated from data received from raw material suppliers

Prepared By Product Safety & Regulatory Affairs

Revision Date 16-Nov-2017

Indication of changes

Revision Note Not applicable.

Training Advice No information available

Additional information No information available

This safety data sheet complies with the requirements of: Regulation (EC) No. 1907/2006

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet