Safety Data Sheet

HYRA-STIK EVO
Adhesive

Section 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Product name	HYRA-STIK EVO
Product number	HYRA 001

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

Identified uses	Adhesive.
Uses advised against	No specific uses advised against are identified.

1.3 Details of the supplier of the safety data sheet

Supplier

AXTER LTD
WEST ROAD
RANSOMES EUROPARK
IPSWICH, SUFFOLK IP3 9SX
t: +44 (0) 1473 724056
e: info@axterltd.co.uk
www.axter.co.uk

1.4 Emergency telephone number

+ 44 1473 724056 (8am-5.30pm Mon-Fri; not 24 hours).
In the event of a medical enquiry involving this product, contact your doctor or local hospital accident & emergency dept.

Section 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards	Not Classified
Health hazards	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
Environmental hazards	Not Classified
Human health	May cause sensitisation by inhalation.
Physicochemical	Vapours are heavier than air and may travel along the floor and accumulate in the bottom of containers.

2.2 Label elements

Pictogram

Signal word: Danger

Hazard statements	H315 Causes skin irritation. H317 May cause an allergic skin reaction. H319 Causes serious eye irritation. H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled. H335 May cause respiratory irritation. H351 Suspected of causing cancer. H373 May cause damage to organs through prolonged or repeated exposure.
Precautionary statements	P260 Do not breathe vapour/ spray. P280 Wear protective gloves/ protective clothing/ eye protection/ 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. P308+P313 If exposed or concerned: Get medical advice/ attention. P501 Dispose of contents/ container in accordance with national regulations.
Supplemental label information	EUH204 Contains isocyanates. May produce an allergic reaction.
Contains	DIPHENYLMETHANE-4,4'-DI-ISOCYANATE
Supplementary precautionary statements	P201 Obtain special instructions before use. P202 Do not handle until all safety precautions have been read and understood. P261 Avoid breathing vapour/ spray.

P264 Wash contaminated skin thoroughly after handling.
P271 Use only outdoors or in a well-ventilated area.
P272 Contaminated work clothing should not be allowed out of the workplace.
P284 [In case of inadequate ventilation] wear respiratory protection.
P302+P352 IF ON SKIN: Wash with plenty of water.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P312 Call a POISON CENTRE/ doctor if you feel unwell.
P314 Get medical advice/ attention if you feel unwell.
P321 Specific treatment (see medical advice on this label).
P332+P313 If skin irritation occurs: Get medical advice/ attention.
P333+P313 If skin irritation or rash occurs: Get medical advice/ attention.
P337+P313 If eye irritation persists: Get medical advice/ attention.
P342+P311 If experiencing respiratory symptoms: Call a POISON CENTRE/ doctor.
P362+P364 Remove contaminated clothing, wash it before re-use.
P403+P233 Store in a well-ventilated place. Keep container tightly closed.
P405 Store locked up.

2.3 Other hazards

This product does not contain any substances classified as PBT or vPvB.

Section 3: Composition/information on ingredients

3.2 Mixtures

DIPHENYLMETHANE-4,4'-DI-ISOCYANATE			**30-60%**
CAS number: 101-68-8	**EC number: 202-966-0**	**REACH registration number: 01-2119457014-47-0000**	
Classification Acute Tox. 4 - 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			

PHOSPHORIC ACID ...%			**<1%**
CAS number: 7664-38-2	**EC number: 231-633-2**	**REACH registration number: 01-2119485924-24-0070**	
Classification Met. Corr. 1 - H290 Acute Tox. 4 - H302 Skin Corr. 1B - H314			

The full text for all hazard statements is displayed in Section 16.

Section 4: First aid measures

4.1 Description of first aid measures

General information	Remove affected person from source of contamination.
Inhalation	Move affected person to fresh air at once. Get medical attention if any discomfort continues.
Ingestion	DO NOT induce vomiting. Get medical attention immediately.
Skin contact	Remove contaminated clothing immediately and wash skin with soap and water. Get medical attention if any discomfort continues.
Eye contact	Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Get medical attention if irritation persists after washing. Show this Safety Data Sheet to the medical personnel.
Protection of first aiders	First aid personnel should wear appropriate protective equipment during any rescue.

4.2 Most important symptoms and effects, both acute and delayed

General information	The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
Inhalation	Irritation of nose, throat and airway. Coughing, chest tightness, feeling of chest pressure.
Ingestion	May cause discomfort if swallowed.
Skin contact	Prolonged skin contact may cause redness and irritation.
Eye contact	Severe irritation, burning and tearing.

4.3 Indication of any immediate medical attention and special treatment needed

Notes for the doctor	No specific recommendations. If in doubt, get medical attention promptly.
Specific treatments	Treat symptomatically.

Section 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media	Extinguish with foam, carbon dioxide, dry powder or water fog.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.

5.2 Special hazards arising from the substance or mixture

Specific hazards	The product is non-combustible. Irritating gases or vapours. Not known.
Hazardous combustion products	Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours. Oxides of carbon. Oxides of nitrogen.

5.3 Advice for firefighters

Protective actions during firefighting	Containers close to fire should be removed or cooled with water. Do not allow water to contact any leaked material.
Special protective equipment for firefighters	Wear chemical protective suit. Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

Section 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions — Wear protective clothing as described in Section 8 of this safety data sheet.

6.2. Environmental precautions

Environmental precautions — Do not discharge into drains or watercourses or onto the ground.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up — Absorb spillage with non-combustible, absorbent material. Absorb spillage with non-combustible, absorbent material.
Collect and place in suitable waste disposal containers and seal securely. Provide adequate ventilation. Contain spillage with sand, earth or other suitable non-combustible material. Avoid the spillage or run-off entering drains, sewers or watercourses.

6.4. Reference to other sections

Reference to other sections — Wear protective clothing as described in Section 8 of this safety data sheet.

Section 7: Handling and storage

7.1 Precautions for safe handling

Usage precautions — Avoid inhalation of vapours and spray/mists. Avoid contact with skin and eyes. Do not use in confined spaces without adequate ventilation and/or respirator. Spraying is permitted only in closed systems, spray cabinets or spray boxes with adequate ventilation.

Advice on general occupational hygiene — Wash promptly with soap and water if skin becomes contaminated. Preventive industrial medical examinations should be carried out.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions — Store in closed original container at temperatures between 5°C and 25°C.

Storage class — Chemical storage.

7.3. Specific end use(s)

Specific end use(s) — The identified uses for this product are detailed in Section 1.2.

Section 8: Exposure Controls/personal protection

8.1 Control parameters

Occupational exposure limits

DIPHENYLMETHANE-4,4'-DI-ISOCYANATE

Long-term exposure limit (8-hour TWA): WEL 0.02 mg/m^3(Sen)
Short-term exposure limit (15-minute): WEL 0.07 mg/m^3(Sen)

PHOSPHORIC ACID ...%

Long-term exposure limit (8-hour TWA): WEL 1 mg/m^3
Short-term exposure limit (15-minute): WEL 2 mg/m^3
WEL = Workplace Exposure Limit

Ingredient comments	WEL = Workplace Exposure Limits

DIPHENYLMETHANE-4,4'-DI-ISOCYANATE (CAS: 101-68-8)

DNEL	Workers - Inhalation; Short term systemic effects: 0.1 mg/m³ Workers - Dermal; Short term local effects: 28.7 mg/cm² Workers - Inhalation; Short term local effects: 0.1 mg/m³ Workers - Inhalation; Long term systemic effects: 0.05 mg/m³ Workers - Inhalation; Long term local effects: 0.05 mg/m³ Consumer - Dermal; Short term systemic effects: 25 mg/kg bw/day Workers - Dermal; Short term systemic effects: 50 mg/kg bw/day Consumer - Oral; Short term systemic effects: 20 mg/kg bw/day Consumer - Dermal; Short term local effects: 17.2 mg/cm² Consumer - Inhalation; Short term local effects: 0.05 mg/m³ Consumer - Inhalation; Long term systemic effects: 0.025 mg/m³ Consumer - Inhalation; Long term local effects: 0.025 mg/m³ Consumer - Inhalation; Short term systemic effects: 0.05 mg/m³
PNEC	- Marine water; 0.1 mg/l - STP; 1 mg/l - Fresh water; 1 mg/l - Soil; 1 mg/kg

2,2'DIMORPHOLINYLDIETHYL ETHER (CAS: 6425-39-4)

DNEL	Workers - Inhalation; Long term systemic effects: 7.28 mg/m³ Workers - Dermal; Long term systemic effects: 1 mg/kg bw/day Consumer - Inhalation; Long term systemic effects: 1.8 mg/m³ Consumer - Dermal; Long term systemic effects: 0.5 mg/kg bw/day Consumer - Oral; Long term systemic effects: 0.5 mg/kg bw/day
PNEC	- Fresh water; 0.1 mg/l - Marine water; 0.01 mg/l - Intermittent release; 1 mg/l - Sediment (Freshwater); 8.2 mg/kg - Sediment (Marinewater); 0.82 mg/kg - STP; 100 mg/l - Soil; 1.58 mg/kg

8.2 Exposure controls

Protective equipment

Appropriate engineering controls	Provide adequate ventilation. Avoid inhalation of vapours. Observe any occupational exposure limits for the product or ingredients.
Eye/face protection	Wear chemical splash goggles.
Hand protection	It is recommended that gloves are made of the following material: Nitrile rubber. It should be noted that liquid may penetrate the gloves. Frequent changes are recommended. For exposure up to 8 hours, wear gloves made of the following material: Nitrile rubber.

Other skin and body protection	Wear suitable protective clothing as protection against splashing or contamination. Wear apron or protective clothing in case of contact.
Hygiene measures	Use engineering controls to reduce air contamination to permissible exposure level. Wash hands after handling. When using do not eat, drink or smoke.
Respiratory protection	If ventilation is inadequate, suitable respiratory protection must be worn. If ventilation is inadequate, suitable respiratory protection must be worn. Wear a respirator fitted with the following cartridge: Combination filter, type A2/P3.
Environmental exposure controls	Keep container tightly sealed when not in use.

Section 9: Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

Appearance	Coloured liquid.
Colour	Various colours.
Odour	Musty (mouldy).
Odour threshold	Not available.
pH	Estimated value. pH (concentrated solution): 7-8
Melting point	<10°C
Initial boiling point and range	330°C @ mbar
Flash point	>200°C CC (Closed cup).
Evaporation rate	slow
Evaporation factor	Not available.
Flammability (solid, gas)	Not available.
Other flammability	Not available.
Vapour pressure	0.01 Pa @ °C
Vapour density	8.5
Relative density	1.12 @ 20°C
Bulk density	Not available.
Solubility(ies)	Insoluble in water. Hardens in contact with water.
Partition coefficient	Not available.
Auto-ignition temperature	>600°C
Decomposition Temperature	Not available.
Viscosity	>2000 cP @ 25°C
Explosive properties	Not available.
Explosive under the influence of a flame	Not considered to be explosive.

	Oxidising properties	Not available.
	Comments	Information given is applicable to the product as supplied.
9.2.	**Other information**	
	Other information	No information required.
	Refractive index	Not available.
	Particle size	Not available.
	Molecular weight	Not available.
	Volatility	Not available.
	Saturation concentration	Not available.
	Critical temperature	Not available.
	Volatile organic compound	No information available.

Section 10: Stability and reactivity

10.1	**Reactivity**	
	Reactivity	The product will harden into a solid mass in contact with water and moisture.
10.2.	**Chemical stability**	
	Stability	Stable at normal ambient temperatures and when used as recommended.
10.3.	**Possibility of hazardous reactions**	
	Possibility of hazardous reactions	Not applicable. May polymerise.
10.4.	**Conditions to avoid**	
	Conditions to avoid	Avoid contact with water.
10.5.	**Incompatible materials**	
	Materials to avoid	Strong oxidising agents.
10.6.	**Hazardous decomposition products**	
	Hazardous decomposition products	Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours. Oxides of carbon. Oxides of nitrogen.

SECTION 11: Toxicological information

11.1.	**Information on toxicological effects**	
	Toxicological effects	No information available.
	Other health effects	There is no evidence that the product can cause cancer.
	Acute toxicity - inhalation **ATE inhalation (vapours mg/l)**	25.0
	Skin corrosion/irritation **Animal data**	Irritating.

Serious eye damage/irritation	
Serious eye damage/irritation	Moderately irritating.
Respiratory sensitisation	
Respiratory sensitisation	Sensitising.
Skin sensitisation	
Skin sensitisation	Not determined.
Carcinogenicity	
Carcinogenicity	Suspected carcinogen based on limited evidence.
Target organ for carcinogenicity	No specific target organs known.
Reproductive toxicity	
Reproductive toxicity - fertility	Not available.
Reproductive toxicity - development	This substance has no evidence of toxicity to reproduction.
Specific target organ toxicity - repeated exposure	
STOT - repeated exposure	Morphological changes that are potentially reversible but provide clear evidence of marked organ dysfunction.
Aspiration hazard	
Aspiration hazard	Not anticipated to present an aspiration hazard, based on chemical structure.
General information	No specific health hazards known.
Inhalation	Irritating to respiratory system. May cause sensitisation by inhalation.
Ingestion	May cause stomach pain or vomiting.
Skin contact	Irritating to skin. May cause sensitisation by skin contact.
Eye contact	Irritation of eyes and mucous membranes.
Acute and chronic health hazards	May cause sensitisation by skin contact. The product contains small quantities of isocyanate. May cause respiratory allergy. May cause respiratory system irritation. May cause respiratory system irritation. Frequent inhalation of vapours may cause respiratory allergy.
Route of entry	Inhalation Skin and/or eye contact
Medical symptoms	Irritation of eyes and mucous membranes. Coughing, chest tightness, feeling of chest pressure.
Medical considerations	Chronic respiratory and obstructive airway diseases.

Toxicological information on ingredients.

DIPHENYLMETHANE-4,4'-DI-ISOCYANATE

Acute toxicity - oral	
Acute toxicity oral (LD_{50} mg/kg)	10,000.0
Species	Rat
ATE oral (mg/kg)	10,000.0
Acute toxicity - dermal	
Acute toxicity dermal (LD_{50} mg/kg)	9,400.0
Species	Rabbit
ATE dermal (mg/kg)	9,400.0

Acute toxicity - inhalation	
Acute toxicity inhalation (LC_{50} vapours mg/l)	0.31
Species	Rat
ATE inhalation (vapours mg/l)	11.0
Carcinogenicity	
IARC carcinogenicity	IARC Group 3 Not classifiable as to its carcinogenicity to humans.

2,2'DIMORPHOLINYLDIETHYL ETHER

Acute toxicity - oral	
Acute toxicity oral (LD_{50} mg/kg)	2,025.0
Species	Rat
Notes (oral LD_{50})	No information available.
Acute toxicity - dermal	
Acute toxicity dermal (LD_{50} mg/kg)	3,038.0
Species	Rabbit
Notes (dermal LD_{50})	No information available.
Acute toxicity - inhalation	
Notes (inhalation LC_{50})	No information available.
Skin corrosion/irritation	
Skin corrosion/irritation	No information available.
Serious eye damage/irritation	
Serious eye damage/irritation	No information available.
Respiratory sensitisation	
Respiratory sensitisation	No information available.
Skin sensitisation	
Skin sensitisation	No information available.
Carcinogenicity	
IARC carcinogenicity	No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
Inhalation	May be harmful if inhaled. Spray/mists may cause respiratory tract irritation.
Ingestion	May be harmful if swallowed.
Skin contact	May be absorbed through the skin. May be harmful in contact with skin. May cause skin irritation.
Eye contact	May cause eye irritation.

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Acute toxicity - oral	
ATE oral (mg/kg)	500.0
Acute toxicity - dermal	
ATE dermal (mg/kg)	1,100.0

Acute toxicity - inhalation	
Acute toxicity inhalation (LC_{50} vapours mg/l)	3.7
Species	Rat
ATE inhalation (vapours mg/l)	3.7
Carcinogenicity	
IARC carcinogenicity	IARC Group 2A Probably carcinogenic to humans.

PHOSPHORIC ACID ...%

Acute toxicity - oral	
ATE oral (mg/kg)	500.0

SECTION 12: Ecological Information

Ecotoxicity The product is not expected to be hazardous to the environment.

12.1. Toxicity

Acute toxicity - fish	LC50, 96 hours: > 1000 mg/l, Freshwater fish
Acute toxicity - aquatic invertebrates	EC50, 48 hours: >500 mg/l, Daphnia magna
Acute toxicity - aquatic plants	EC_{50}, 72 hours: ~ 1640 mg/l, Scenedesmus subspicatus

Ecological information on ingredients.

DIPHENYLMETHANE-4,4'-DI-ISOCYANATE

Acute toxicity - fish	LC_{50}, 96 hours: >1000 mg/l, Marinewater fish
Acute toxicity - aquatic invertebrates	EC_{50}, 24 hours: >1000 mg/l, Daphnia magna
Chronic toxicity - aquatic invertebrates	NOEC, 21 days: >10 mg/l, Daphnia magna

2,2'DIMORPHOLINYLDIETHYL ETHER

Acute toxicity - fish	LC_{50}, 96 hours: 2150 mg/l,
Acute toxicity - aquatic invertebrates	EC_{50}, 48 hours: >100 mg/l, Daphnia magna
Acute toxicity - microorganisms	EC_{50}, 3 hours: >1000 mg/l, Bacteria

12.2. Persistence and degradability

Persistence and degradability	The product is not readily biodegradable.
Stability (hydrolysis)	Reacts with water.
Biological oxygen demand	< 10 g O_2/g substance

12.3. Bioaccumulative potential

Bioaccumulative potential	The product does not contain any substances expected to be bioaccumulating.
Partition coefficient	Not available.

Ecological information on ingredients.

DIPHENYLMETHANE-4,4'-DI-ISOCYANATE

Partition coefficient	log Pow: 4.51

12.4. Mobility in soil

Mobility	The product is non-volatile.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment This product does not contain any substances classified as PBT or vPvB.

12.6. Other adverse effects

Other adverse effects None known.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information Waste should be treated as controlled waste. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

Disposal methods Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

SECTION 14: Transport information

General The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, ADR/RID).

14.1. UN number

Not applicable.

14.2. UN proper shipping name

Not applicable.

14.3. Transport hazard class(es)

No transport warning sign required.

Transport labels

No transport warning sign required.

14.4. Packing group

Not applicable.

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant

No.

14.6. Special precautions for user

Not applicable.

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

SECTION 15: Regulatory information

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

National regulations Health and Safety at Work etc. Act 1974 (as amended).
The Control of Substances Hazardous to Health Regulations 2002 (SI 2002 No. 2677) (as amended).
The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (SI 2009 No. 716).

	Control of Substances Hazardous to Health Regulations 2002 (as amended).
EU legislation	Commission Directive 91/322/EEC of 29 May 1991 on establishing indicative limit values by implementing Council Directive 80/1107/EEC on the protection of workers from the risks related to exposure to chemical, physical and biological agents at work. Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended).

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

SECTION 16: Other information

Issued by	Compliance
Revision date	01/10/2017
Revision	22
Supersedes date	01/10/2015
SDS number	HYRA001-1
Hazard statements in full	H290 May be corrosive to metals. H302 Harmful if swallowed. H314 Causes severe skin burns and eye damage. H315 Causes skin irritation. H317 May cause an allergic skin reaction. H319 Causes serious eye irritation. H332 Harmful if inhaled. H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled. H335 May cause respiratory irritation. H351 Suspected of causing cancer. H373 May cause damage to organs through prolonged or repeated exposure.
Store Between	Store Between 5°c - 25°c
Contains SVHC	NO

This 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. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.