SAFETY DATA SHEET



according to regulation (EU) No 453/2010

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

1.1. Product identifier

Trade name or designation

of the mixture

Metal Adhesive H Component A

Registration number

Synonyms None. SDS number 5647

Product code Ford Internal Ref.: 193355

Issue date 09-July-2015

Version number 1.0

Revision date 09-July-2015 **Product use** Professional use

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

Identified uses Adhesive. Uses advised against None known.

1.3. Details of the supplier of the safety data sheet

Company name Ford Motor Company Ltd. **Address** Parts Distribution Centre Royal Oak Way South

NN11 8NT Daventry, Northants

United Kingdom

Telephone number +44 1327 305 198 **Address** Ford-Werke GmbH

Edsel-Ford-Str. 2-14

50769 Köln Germany

+49 221 90-33333 Telephone number E-mail HSE@rle.de

1.4 Emergency telephone

number

+49 (0) 6132-84463 (GBK GmbH - 24/7)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

The mixture has been assessed and/or tested for its physical, health and environmental hazards and the following classification applies.

Classification according to Regulation (EC) No 1272/2008 as amended

Health hazards

Skin corrosion/irritation H315 - Causes skin irritation. Category 2 Serious eye damage/eye irritation Category 1 H318 - Causes serious eye

damage.

Skin sensitisation H317 - May cause an allergic skin Category 1

reaction.

Environmental hazards

Material name: Metal Adhesive H Component A

Hazardous to the aquatic environment, Category 2 H411 - Toxic to aquatic life with

long-term aquatic hazard long lasting effects.

2.2. Label elements

Label according to Regulation (EC) No. 1272/2008 as amended

1,4-Bis(2,3-epoxypropoxy)butane, reaction product: bisphenol-A-(epichlorhydrin) epoxy resin Contains:

(number average molecularweight <= 700)

Hazard pictograms



Signal word Danger

Hazard statements

Causes skin irritation. H315

May cause an allergic skin reaction. H317 Causes serious eye damage. H318

Toxic to aquatic life with long lasting effects. H411

Precautionary statements

Prevention

Avoid breathing dust/fume/gas/mist/vapours/spray. P261

Avoid release to the environment. P273

Wear protective gloves and eye/face protection. P280

Response

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present P305 + P351 + P338

and easy to do. Continue rinsing

Immediately call a POISON CENTER/doctor. P310

Storage None. None. Disposal Supplemental label information None.

2.3. Other hazards The mixture contains no substance that fulfils the criteria of a PBT- or vPvB substance.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

General information

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	Index No.	Notes
reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average	40 - 60	25068-38-6 500-033-5	01-2119456619-26-XXXX	603-074-00-8	Skin Irrit. 2; H315: C ≥ 5%, Eye Irrit. 2;
molecularweight <= 700)					H319: C ≥ 5%

Classification: Skin Irrit. 2;H315, Skin Sens. 1;H317, Eye Irrit. 2;H319, Aquatic Chronic 2;H411

1,4-Bis(2,3-epoxypropoxy)butane 10 - < 202425-79-8 01-2119494060-45-XXXX 603-072-00-7

219-371-7

Classification: Acute Tox. 4;H302, Acute Tox. 4;H312, Skin Irrit. 2;H315, Skin Sens. 1;H317, Eye Dam. 1;H318,

Acute Tox. 4;H332, Aquatic Chronic 3;H412

The full text for all H-statements is displayed in section 16. **Composition comments**

SECTION 4: First aid measures

Ensure that medical personnel are aware of the material(s) involved, and take precautions to **General information**

protect themselves. Wash contaminated clothing before reuse.

4.1. Description of first aid measures

Move to fresh air. Call a physician if symptoms develop or persist. Inhalation

Remove contaminated clothing immediately and wash skin with soap and water. In case of Skin contact

eczema or other skin disorders: Seek medical attention and take along these instructions. Wash

contaminated clothing before reuse.

Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if Eye contact

present and easy to do. Continue rinsing. Get medical attention immediately.

Rinse mouth. Drink 1 or 2 glasses of water. Do not induce vomiting. Get medical attention if Ingestion

symptoms occur.

4.2. Most important symptoms and effects, both acute and

delayed

Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Skin irritation. May cause redness and pain. May cause an allergic skin reaction. Dermatitis. Rash.

4.3. Indication of any immediate medical attention and special treatment needed

Material name: Metal Adhesive H Component A

Provide general supportive measures and treat symptomatically. Keep victim under observation.

Symptoms may be delayed.

SECTION 5: Firefighting measures

General fire hazards No unusual fire or explosion hazards noted.

5.1. Extinguishing media

Suitable extinguishing

media

Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).

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 During fire, gases hazardous to health may be formed.

5.3. Advice for firefighters

Special protective equipment for firefighters Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Special fire fighting procedures

Move containers from fire area if you can do so without risk.

Specific methods Use standard firefighting procedures and consider the hazards of other involved materials.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8.

For emergency responders

Keep unnecessary personnel away. Use personal protection recommended in Section 8 of the

6.2. Environmental precautions

Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground. Inform appropriate managerial or supervisory personnel of all environmental releases.

6.3. Methods and material for containment and cleaning up

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use.

6.4. Reference to other sections

For personal protection, see section 8. For waste disposal, see section 13 of the SDS.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Do not get this material in contact with eyes. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. Avoid release to the environment. Observe good industrial hygiene practices.

7.2. Conditions for safe storage, including any incompatibilities

Store away from incompatible materials (see Section 10 of the SDS). Store in tightly closed original container in a dry and cool place. Storage temperature: between 15°C and 35°C.

7.3. Specific end use(s) Not available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits No exposure limits noted for ingredient(s).

Biological limit values No biological exposure limits noted for the ingredient(s).

Recommended monitoring

procedures

Follow standard monitoring procedures.

Derived no-effect level (DNEL)

Components		Туре	Route	Value	Form
1,4-Bis(2,3-epoxypropo 2425-79-8)	oxy)butane (CAS	Consumer	Dermal	3.33 mg/kg/BW/day	
Comments:	Long term expos	ure systemic effects	Inhalation	1.16 mg/m3	
Comments:	Long term expos	ure systemic effects		- 3	

Material name: Metal Adhesive H Component A Ford Internal Ref.: 193355 Version #: 1.0 Revision date: 09-July-2015 Issue date: 09-July-2015

Components	Ty	уре	Route	Value	Form
			Oral	0.33	
Comments:	Long term exposure s	evetamic affacts		mg/kg/BW/day	
Comments.	- ·	rofessional	Dermal	6 66	
	r	roiessionai	Dermai	6.66 mg/kg/BW/day	
Comments:	Long term exposure s	systemic effects		g,g, ,,	
			Inhalation	4.7 mg/m3	
Comments:	Long term exposure s	systemic effects		J	
reaction product:		onsumer	Dermal	3.571	
bisphenol-A-(epichlorl (number average mol (CAS 25068-38-6)				mg/kg/BW/day	
Comments:	Long term exposure s	systemic effects			
			Dermal	3.571	
_	Q1			mg/kg/BW/day	
Comments:	Short term exposure -	- systemic effects			
			Oral	0.75 mg/kg/BW/day	
Comments:	Long term exposure s	evetamic affacts		mg/kg/bvv/day	
Comments.	Long term exposure s	systemic enects	Oral	0.75	
			Orai	mg/kg/BW/day	
Comments:	Short term exposure -	- systemic effects		,	
	P	rofessional	Dermal	8.33	
				mg/kg/BW/day	
Comments:	Short term exposure -	- systemic effects			
			Dermal	8.33	
	Long term exposure s	vetemic offects		mg/kg/BW/day	
Commontos					
Comments:	Long term exposure s		Inhalation	12.25 ma/m2	
			Inhalation	12.25 mg/m3	
Comments:	Long term exposure s			J	
	Long term exposure s	systemic effects	Inhalation	12.25 mg/m3 12.25 mg/m3	
Comments:	Long term exposure s	systemic effects		J	
Comments: Comments: dicted no effect conc	Long term exposure s Short term exposure -	systemic effects - systemic effects		J	Form
Comments: Comments: dicted no effect conc Components	Long term exposure s Short term exposure - entrations (PNECs)	systemic effects - systemic effects ype	Inhalation Route	12.25 mg/m3 Value	Form
Comments: Comments: dicted no effect conc	Long term exposure s Short term exposure - entrations (PNECs)	systemic effects - systemic effects	Inhalation	12.25 mg/m3	Form
Comments: Comments: dicted no effect conc Components 1,4-Bis(2,3-epoxyprop	Long term exposure s Short term exposure - entrations (PNECs)	systemic effects - systemic effects ype	Inhalation Route	12.25 mg/m3 Value	Form
Comments: Comments: dicted no effect conc Components 1,4-Bis(2,3-epoxyprop	Long term exposure s Short term exposure - entrations (PNECs)	systemic effects - systemic effects ype	Inhalation Route Freshwater	12.25 mg/m3 Value 0.024 mg/l	Form
Comments: Comments: dicted no effect conc Components 1,4-Bis(2,3-epoxyprop	Long term exposure s Short term exposure - entrations (PNECs)	systemic effects - systemic effects ype	Inhalation Route Freshwater Oral	12.25 mg/m3 Value 0.024 mg/l 0.028 mg/kg	Form
Comments: Comments: dicted no effect conc Components 1,4-Bis(2,3-epoxyprop	Long term exposure s Short term exposure - entrations (PNECs)	systemic effects - systemic effects ype	Route Freshwater Oral Seawater Sediment	12.25 mg/m3 Value 0.024 mg/l 0.028 mg/kg 0.0024 mg/l 0.084 mg/kg	Form
Comments: Comments: dicted no effect conc Components 1,4-Bis(2,3-epoxyprop 2425-79-8) Comments:	Long term exposure s Short term exposure - entrations (PNECs) Ty poxy)butane (CAS N	systemic effects - systemic effects ype	Inhalation Route Freshwater Oral Seawater	12.25 mg/m3 Value 0.024 mg/l 0.028 mg/kg 0.0024 mg/l	Form
Comments: Comments: dicted no effect conc Components 1,4-Bis(2,3-epoxyprop 2425-79-8)	Long term exposure s Short term exposure - entrations (PNECs) Ty poxy)butane (CAS N	systemic effects - systemic effects ype	Route Freshwater Oral Seawater Sediment Sediment	12.25 mg/m3 Value 0.024 mg/l 0.028 mg/kg 0.0024 mg/l 0.084 mg/kg 0.0084 mg/kg	Form
Comments: Comments: dicted no effect conc Components 1,4-Bis(2,3-epoxyprop 2425-79-8) Comments:	Long term exposure s Short term exposure - entrations (PNECs) Ty poxy)butane (CAS N	systemic effects - systemic effects ype	Inhalation Route Freshwater Oral Seawater Sediment Sediment Soil	12.25 mg/m3 Value 0.024 mg/l 0.028 mg/kg 0.0024 mg/l 0.084 mg/kg 0.0084 mg/kg	Form
Comments: Comments: dicted no effect conc Components 1,4-Bis(2,3-epoxyprop 2425-79-8) Comments:	Long term exposure s Short term exposure - entrations (PNECs) Ty poxy)butane (CAS N	systemic effects - systemic effects ype	Route Freshwater Oral Seawater Sediment Sediment Soil STP	12.25 mg/m3 Value 0.024 mg/l 0.028 mg/kg 0.0024 mg/l 0.084 mg/kg 0.0084 mg/kg 0.0027 mg/kg 100 mg/l	Form
Comments: Comments: dicted no effect conc Components 1,4-Bis(2,3-epoxyprop 2425-79-8) Comments: Comments:	Long term exposure s Short term exposure - entrations (PNECs) Ty poxy)butane (CAS N Freshwater Seawater	systemic effects - systemic effects ype	Inhalation Route Freshwater Oral Seawater Sediment Sediment Soil	12.25 mg/m3 Value 0.024 mg/l 0.028 mg/kg 0.0024 mg/l 0.084 mg/kg 0.0084 mg/kg	Form
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Comments: Comments: dicted no effect conc Components 1,4-Bis(2,3-epoxyprop 2425-79-8) Comments: Comments: reaction product:	Long term exposure s Short term exposure - entrations (PNECs) Ty Doxy)butane (CAS N Freshwater Seawater Intermittent release	systemic effects - systemic effects ype	Route Freshwater Oral Seawater Sediment Sediment Soil STP	12.25 mg/m3 Value 0.024 mg/l 0.028 mg/kg 0.0024 mg/l 0.084 mg/kg 0.0084 mg/kg 0.0027 mg/kg 100 mg/l	Form
Comments: Comments: dicted no effect conc Components 1,4-Bis(2,3-epoxyprop 2425-79-8) Comments: Comments: reaction product: bisphenol-A-(epichlor)	Long term exposure s Short term exposure - entrations (PNECs) Ty poxy)butane (CAS N Freshwater Seawater Intermittent release N hydrin) epoxy resin	systemic effects - systemic effects ype lot applicable	Route Freshwater Oral Seawater Sediment Sediment Soil STP Water	12.25 mg/m3 Value 0.024 mg/l 0.028 mg/kg 0.0024 mg/l 0.084 mg/kg 0.0084 mg/kg 0.0027 mg/kg 100 mg/l 0.24 mg/l	Form
Comments: Comments: dicted no effect conc Components 1,4-Bis(2,3-epoxyprop 2425-79-8) Comments: Comments: reaction product:	Long term exposure s Short term exposure - entrations (PNECs) Ty poxy)butane (CAS N Freshwater Seawater Intermittent release N hydrin) epoxy resin	systemic effects - systemic effects ype lot applicable	Route Freshwater Oral Seawater Sediment Sediment Soil STP Water	12.25 mg/m3 Value 0.024 mg/l 0.028 mg/kg 0.0024 mg/l 0.084 mg/kg 0.0084 mg/kg 0.0027 mg/kg 100 mg/l 0.24 mg/l	Form
Comments: Comments: dicted no effect conc Components 1,4-Bis(2,3-epoxyprop 2425-79-8) Comments: Comments: reaction product: bisphenol-A-(epichlord (number average mole	Long term exposure s Short term exposure - entrations (PNECs) Ty poxy)butane (CAS N Freshwater Seawater Intermittent release N hydrin) epoxy resin	systemic effects - systemic effects ype lot applicable	Route Freshwater Oral Seawater Sediment Sediment Soil STP Water	12.25 mg/m3 Value 0.024 mg/l 0.028 mg/kg 0.0024 mg/l 0.084 mg/kg 0.0084 mg/kg 0.0027 mg/kg 100 mg/l 0.24 mg/l	Form
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Comments: Comments: dicted no effect conc Components 1,4-Bis(2,3-epoxyprop 2425-79-8) Comments: Comments: reaction product: bisphenol-A-(epichlor) (number average mole (CAS 25068-38-6)	Long term exposure s Short term exposure entrations (PNECs) Ty Doxy)butane (CAS N Freshwater Seawater Intermittent release N hydrin) epoxy resin ecularweight <= 700)	systemic effects - systemic effects ype lot applicable	Inhalation Route Freshwater Oral Seawater Sediment Soil STP Water Freshwater Oral Seawater	12.25 mg/m3 Value 0.024 mg/l 0.028 mg/kg 0.0024 mg/l 0.084 mg/kg 0.0027 mg/kg 100 mg/l 0.24 mg/l 0.006 mg/l	Form
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Comments: Comments: dicted no effect conc Components 1,4-Bis(2,3-epoxyprop 2425-79-8) Comments: Comments: reaction product: bisphenol-A-(epichlorl (number average mole (CAS 25068-38-6) Comments: Comments:	Long term exposure s Short term exposure entrations (PNECs) Typoxy)butane (CAS N Freshwater Seawater Intermittent release N hydrin) epoxy resin ecularweight <= 700) food, predators Freshwater	systemic effects - systemic effects ype lot applicable	Inhalation Route Freshwater Oral Seawater Sediment Soil STP Water Freshwater Oral Seawater	12.25 mg/m3 Value 0.024 mg/l 0.028 mg/kg 0.0024 mg/l 0.084 mg/kg 0.0027 mg/kg 100 mg/l 0.24 mg/l 0.006 mg/l	Form
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Comments: Comments: dicted no effect conc Components 1,4-Bis(2,3-epoxyprop 2425-79-8) Comments: Comments: reaction product: bisphenol-A-(epichlorl (number average mole (CAS 25068-38-6) Comments: Comments:	Long term exposure s Short term exposure entrations (PNECs) Typoxy)butane (CAS N Freshwater Seawater Intermittent release N hydrin) epoxy resin ecularweight <= 700) food, predators Freshwater	systemic effects - systemic effects ype lot applicable	Inhalation Route Freshwater Oral Seawater Sediment Soil STP Water Freshwater Oral Seawater Sediment Sediment Sediment	12.25 mg/m3 Value 0.024 mg/l 0.028 mg/kg 0.0024 mg/l 0.084 mg/kg 0.0027 mg/kg 100 mg/l 0.24 mg/l 0.006 mg/l 11 mg/kg 0.0006 mg/l 0.996 mg/kg 0.0996 mg/kg 0.196 mg/kg	Form

8.2. Exposure controls

Appropriate engineering controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

Individual protection measures, such as personal protective equipment

General informationUse personal protective equipment as required. Personal protection equipment should be chosen

according to the CEN standards and in discussion with the supplier of the personal protective

equipment.

Eye/face protection Wear safety glasses with side shields (or goggles) and a face shield.

Skin protection

- Hand protection Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove

supplier. Nitrile.

Glove thickness 0.4 mm. Break through time >= 480 min.

Glove recommendation: Camatril Velours® 730 (Kächele-Cama GmbH, source of supply see

www.kcl.de) or comparable product.

Hand protection in case of splash contact

Nitrile.

Glove thickness 0.4 mm. Break through time >= 480 min

Glove recommendation: Camatril Velours® 730 (Kächele-Cama GmbH, source of supply see

www.kcl.de) or comparable product.

The protective gloves to be used must comply with the specification of EU directive 89/686/EC and the resultant standard EN374. The above given information is based on laboratory test in line with EN374. The recommendation is only valid for the supplied product and the stated application. Special working conditions, like heat or mechanical strain, which deviate from the test conditions,

can reduce the protective effect provided by the recommended glove.

Other Wear appropriate chemical resistant clothing.

Respiratory protection In case of insufficient ventilation, wear suitable respiratory equipment.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

Hygiene measures

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective

equipment to remove contaminants. Contaminated work clothing should not be allowed out of the

workplace.

Environmental exposure

controls

Inform appropriate managerial or supervisory personnel of all environmental releases.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance

Physical statePaste.FormPaste.ColourBlack.

Odour Characteristic
Odour threshold Not available.

pH Not available.

Melting point/freezing point Not available.

Initial boiling point and boiling Not available.

range

Flash point

Evaporation rate

Flammability (solid, gas)

Upper/lower flammability or explosive limits

Flammability limit - lower Not available.

Material name: Metal Adhesive H Component A

(%)

Flammability limit - upper

(%)

Not available.

Not available. Vapour pressure Vapour density Not available. Not available. Relative density

Solubility(ies)

Not available. Solubility (water) Solubility (other) Not available. Not available. Partition coefficient

(n-octanol/water)

Not available. **Auto-ignition temperature Decomposition temperature** Not available.

18 - 23 mPa·s @ 20°C Viscosity

Not available. **Explosive properties** Not available. Oxidising properties

9.2. Other information

1.00 - 1.20 g/cm3 @ 20°C Density

VOC (EU) 15.1 % < 3 % VOC (CH)

SECTION 10: Stability and reactivity

The product is stable and non-reactive under normal conditions of use, storage and transport. 10.1. Reactivity

10.2. Chemical stability Material is stable under normal conditions.

10.3. Possibility of hazardous

reactions

No dangerous reaction known under conditions of normal use.

10.4. Conditions to avoid Contact with incompatible materials.

10.5. Incompatible materials Strong oxidising agents.

10.6. Hazardous

No hazardous decomposition products are known.

decomposition products

SECTION 11: Toxicological information

General information Occupational exposure to the substance or mixture may cause adverse effects.

Information on likely routes of exposure

Inhalation Prolonged inhalation may be harmful.

Skin contact Causes skin irritation. May cause an allergic skin reaction.

Eye contact Causes serious eye damage.

Ingestion May cause discomfort if swallowed. However, ingestion is not likely to be a primary route of

occupational exposure.

Symptoms Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred

vision. Permanent eye damage including blindness could result. Skin irritation. May cause

redness and pain. May cause an allergic skin reaction. Dermatitis. Rash.

11.1. Information on toxicological effects

Product	Species	Test results
Metal Adhesive H Compor	nent A	
<u>Acute</u>		
Dermal		
		> 2000 mg/kg (calcd. ATE)
Inhalation		
		> 20 mg/l/4h (calcd. ATE)
Oral		<u>-</u> , , , , , , , , , , , , , , , , , , ,

Test results Components **Species**

1,4-Bis(2,3-epoxypropoxy)butane (CAS 2425-79-8)

Acute

Dermal

1100 mg/kg (acc. CLP 3.1.2)

> 2000 mg/kg (calcd. ATE)

Components **Species Test results**

Inhalation

11 mg/l/4h (acc. CLP 3.1.2)

Oral

500 mg/kg (acc. CLP 3.1.2)

Skin corrosion/irritation

Serious eye damage/eye

Respiratory sensitisation

irritation

Causes serious eye damage.

Causes skin irritation.

Based on available data, the classification criteria are not met.

Skin sensitisation May cause an allergic skin reaction.

Germ cell mutagenicity Based on available data, the classification criteria are not met. Based on available data, the classification criteria are not met. Carcinogenicity Reproductive toxicity Based on available data, the classification criteria are not met. Based on available data, the classification criteria are not met.

Specific target organ toxicity -

single exposure

Specific target organ toxicity -

repeated exposure

Based on available data, the classification criteria are not met.

Aspiration hazard Not likely, due to the form of the product.

Mixture versus substance

information

No information available.

Other information Not available.

SECTION 12: Ecological information

12.1. Toxicity Toxic to aquatic life with long lasting effects.

Components **Species Test results**

1,4-Bis(2,3-epoxypropoxy)butane (CAS 2425-79-8)

Aquatic

Crustacea EC50 Daphnia magna 75 mg/l, 24 hours Fish LC50 Danio rerio 24 mg/l, 96 hours

reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecularweight <= 700) (CAS 25068-38-6)

EC50 Scenedesmus capricornutum 9.4 mg/l, 72 hours

Aquatic

NOEC Crustacea Daphnia magna 0.3 mg/l, 21 days Fish LC50 Oncorhynchus mykiss 1.75 mg/l, 96 hours

12.2. Persistence and

degradability

No data is available on the degradability of this product.

12.3. Bioaccumulative potential No data available.

Partition coefficient n-octanol

/water (log Kow)

Not available.

Bioconcentration factor (BCF) Not available. 12.4. Mobility in soil No data available.

12.5. Results of PBT

and vPvB assessment The mixture contains no substance that fulfils the criteria of a PBT- or vPvB substance.

No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

12.6. Other adverse effects

Residual waste Dispose of in accordance with local regulations. Empty containers or liners may retain some

product residues. This material and its container must be disposed of in a safe manner (see:

Disposal instructions).

Since emptied containers may retain product residue, follow label warnings even after container is Contaminated packaging

emptied. Empty containers should be taken to an approved waste handling site for recycling or

SDS LIK

disposal.

EU waste code The Waste code should be assigned in discussion between the user, the producer and the waste

disposal company.

08 04 09 15 01 10

Disposal methods/information Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow

this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches

with chemical or used container. Dispose of contents/container in accordance with

local/regional/national/international regulations.

Special precautions Dispose in accordance with all applicable regulations.

SECTION 14: Transport information

General IMDG Regulated Marine Pollutant.

ADR

UN3077 14.1. UN number

Environmentally hazardous substance, solid, n.o.s. (Reaction product: 14.2. UN proper shipping

bisphenol-a-(epichlorhydrin) epoxy resin (number average molecularweight <= 700)) name

14.3. Transport hazard class(es)

9 Class Subsidiary risk Label(s) 9 Hazard No. (ADR) 90 Ε **Tunnel restriction code** Ш 14.4. Packing group 14.5. Environmental hazards No.

14.6. Special precautions

for user

Read safety instructions, SDS and emergency procedures before handling.

274,335,601 Special provisions

M7 Classification code

IATA

UN3077 14.1. UN number

Environmentally hazardous substance, solid, n.o.s. (Reaction product: 14.2. UN proper shipping

bisphenol-a-(epichlorhydrin) epoxy resin (number average molecularweight <= 700)) name

14.3. Transport hazard class(es)

9 Class Subsidiary risk 14.4. Packing group Ш **Packaging instructions** 956 956 **Packaging instructions** cargo only

14.5. Environmental hazards No. 9L **ERG Code**

14.6. Special precautions

for user

Read safety instructions, SDS and emergency procedures before handling.

Other information

Allowed. Passenger and cargo aircraft

Allowed. Cargo aircraft only 400 kg Maximum net quantity packaging - Passenger

and cargo aircraft

Maximum net quantity 400 kg

packaging cargo only Maximum net quantity

30.00 kg

packaging - Limited

quantity Special provisions

A97,A158,A179

IMDG

14.1. UN number UN3077

14.2. UN proper shipping Environmentally hazardous substance, solid, n.o.s. (Reaction product:

bisphenol-a-(epichlorhydrin) epoxy resin (number average molecularweight <= 700)) name

14.3. Transport hazard class(es)

9 Class Subsidiary risk Ш 14.4. Packing group

Material name: Metal Adhesive H Component A

14.5. Environmental hazards

Marine pollutant Yes EmS F-A, S-F

14.6. Special precautions

for user

Read safety instructions, SDS and emergency procedures before handling.

Special provisions 274,335,966,967 **14.7. Transport in bulk** Not available.

according to Annex II of MARPOL 73/78 and the IBC

Code

SECTION 15: Regulatory information

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

EU regulations

Not applicable.

Restrictions on use

Not applicable.

Other regulations The product is classified and labelled in accordance with EC directives or respective national laws.

This Safety Data Sheet complies with the requirements of Regulation (EC) No 453/2010.

Other EU regulations

Directive 94/33/EC on the protection of young people at work, as amended

1,4-Bis(2,3-epoxypropoxy)butane (CAS 2425-79-8)

reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecularweight <= 700) (CAS 25068-38-6)

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

1,4-Bis(2,3-epoxypropoxy)butane (CAS 2425-79-8)

reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecularweight <= 700) (CAS 25068-38-6)

VOC (EU): 15.1 %

Directive 2012/18/EU on major accident hazards involving dangerous substances

Category: E2

National regulations Young people under 18 years old are not allowed to work with this product according to EU

Directive 94/33/EC on the protection of young people at work. Follow national regulation for work

with chemical agents.

15.2. Chemical safety

assessment

No Chemical Safety Assessment has been carried out.

SECTION 16: Other information

List of abbreviations

AC: Article category.

acc., acc.to: according, according to.

ACGIH: American Conference of Governmental Industrial Hygienists.

AFNOR: French Institute for Standards (Association Française de Normalisation).

ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways (Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures).

ADR: European agreement concerning the international carriage of dangerous goods by road

(Accord européen relatif transport des merchandises dangereuses par route). AGW: Occupational threshold limit value (Arbeitsplatzgrenzwert – Germany).

AICS: Australian Inventory of Chemical Substances.

ANSI: American National Standards Institute. AOEL: Acceptable Operator Exposure Level.

AOX: adsorbable organic halogen compounds.

approx.: approximately. ASTM: ASTM International.

ATE: Acute Toxicity Estimate according to REGULATION (EC) No 1272/2008 (CLP).

BAM: Federal Institute for Materials Research and Testing, Germany (Bundesanstalt für Materialforschung und -prüfung).

Maximum permissible concentration of biological working substances (BAT: Biologische Arbeitsstofftoleranzwerte).

BAuA: Federal Institute for Occupational Health and Safety, Germany (Bundesanstalt für Arbeitsschutz und Arbeitsmedizin).

BCF: Bio-concentration factor.
BET: Brunauer-Emmett-Teller.

BLV: Biological Limit Value.

BLV: Biological Limit Value (BGW: Biologischer Grenzwert, Austria).

BMGV: Biological Monitoring Guidance Value (EH40,UK).

BSI: British Standards Institution.

BS: British Standard.

BOD5: Biochemical oxygen demand within 5 days.

BOD: Biochemical oxygen demand.

bw: Body weight. calcd.: calculated.

CAS: Chemical Abstract Service.

CEN: European Committee for Standardization (Comité Européen de Normalisation).

CESIO: European Committee on Organic Surfactants and their Intermediates (Comité Européen des Agents de Surface et de leurs Intermédiaires Organiques).

ChemRRV: Ordinance on the risk reduction related to chemical products (ChemRRV:

Chemikalien-Risikoreduktions-verordnung, Switzerland).

CLP: Classification, Labeling and Packaging REGULATION (EC) No 1272/2008 on classification, labeling and packaging of substances and mixtures.

CMR: Substances classified as Carcinogenic, Mutagenic or toxic for Reproduction.

CNS: Central Nervous System.

CNT: Carbon nanotubes.

COD: Chemical Oxygen Demand.

CSA: Chemical Safety Assessment.

CSR: Chemical Safety Report.

DETEC: Swiss Federal Department of the Environment, Transport, Energy and Communications.

DIN: German Standards Institute / German industrial norm (Deutsches Institut für Normung /

Deutsche Industrienorm).

DMEL: Derived Minimum Effect Level.

DNEL: Derived No Effect Level.

DOC: Dissolved organic carbon.

DPD: Directive 1999-45-EC / Dangerous Preparations Directive.

DSD: Directive 67/548-EC / Dangerous Substances Directive.

DSL: Canada, Domestic Substances List.

DU: Downstream User.

dw: dry weight.

e.g.: For example, for instance.

EBW: Exposure Based Waiving.

EC: European Community.

EC50: Effective Concentration 50%.

ECHA: European Chemical Agency.

EINECS: European Inventory of Existing Commercial Chemical Substances.

ELINCS: European List of Notified Chemical Substances.

EN: European norm.

ENCS: Japan, Inventory of Existing and New Chemical Substances.

EPA: United States Environmental Protection Agency.

ERC: Environmental release category.

ES: Exposure scenario.

EUSES: European Union System for the Evaluation of Substances.

EWC/EWL: European Waste Catalogue.

GCL: General concentration limit.

gen.: general.

GHS: Globally Harmonized System of Classification and Labeling of Chemicals.

GLP: Good Laboratory Practice.

GW/VL: Occupational exposure limit value.

GW-kw: Occupational exposure limit value - short term.

GW-M/VL-M: Occupational exposure limit value - "Ceiling".

GWP: Global Warming Potential.

HPV: High Production Volume Chemicals.

HEPA: High Efficiency Particulate Air.

IARC: International Agency for Research on Cancer.

IATA: International Air Transport Association.

IBC: Intermediate Bulk Container.

IBC Code: International Bulk Chemical (Code) (International Code for the Construction and

Equipment of Ships carrying Dangerous Chemicals in Bulk).

ICAO: International Civil Aviation Organization.

IC50: Inhibition Concentration 50%.

IECSC: Inventory of Existing Chemical Substances in China.

IMDG Code: International Maritime Dangerous Goods Code.

IMO: International Maritime Organization.

incl.: including, inclusive.

ISO: International Standards Organization.

IUCLID: International Uniform Chemical Information Database.

IUPAC: International Union for Pure Applied Chemistry.

KECI: Korea Existing Chemicals Inventory.

LCA: Life Cycle Assessment. LC: Lethal Concentration.

LC50: Lethal Concentration 50%.

LCLo: Lowest published lethal concentration.

LD50: Lethal Dose 50%. LEV: Local exhaust ventilation.

LOAEL: Lowest observed adverse effect level. LOEC: Lowest observable effect concentration.

LOEL: Lowest observable effect level. LPV: Low Production Volume Chemicals.

LQ: Limited Quantities.

Air Quality Control Regulation (LRV: Luftreinhalteverordnung, Switzerland).

TLV-STEL: Threshold limit value - Short-term exposure limit / Technical reference concentration short-time value (TRK-Kzw = Technische Richtkonzentration - Kurzzeitwert).

Maximum allowable workplace concentration - instantaneous value (MAK-Mow: Maximale Arbeitsplatzkonzentration – Momentanwert, Austria)

Maximum allowable workplace concentration – daily mean value / Technical standard concentration - daily mean value (MAK-Tmw, TRK-Tmw : Maximale Arbeitsplatzkonzentration -Tagesmittelwert / TRK-Tmw = Technische Richtkonzentration - Tagesmittelwert, Austria).

MAK: Threshold limit values Germany (Maximale Arbeitsplatzkonzentration - DFG).

MARPOL: International Convention for the Prevention of Pollution From Ships.

MTD: Maximum tolerated dose.

MWCNT: Multi-walled carbon nanotubes.

n.a.: not applicable. N/A: Not available. n.d.: not determined. NLP: No Longer Polymers.

NDSL: Canada, Non-Domestic Substances List.

NF: French Norm (See AFNOR).

NFPA: National Fire Protection Association.

NIOSH: National Institute for Occupational Safety & Health.

NOAEC: No Observed Adverse Effect Concentration.

NOAEL: No observed adverse effect level. NOEC: No observed effect concentration.

NOEL: No observed effect level. NTP: National Toxicology Program.

NZIoC: New Zealand Inventory of Chemicals.

ODP: Ozone Depletion Potential.

OECD: Organization for Economic Cooperation and Development.

OEL: Occupational Exposure Limit.

org.: organic.

OSHA: Occupational Safety & Health Administration.

PAH: Polycyclic Aromatic Hydrocarbons. PBT: Persistent, bioaccumulative, toxic.

PC: Product category. PE: Polyethylene.

PEC: Predicted Environmental Concentration.

PEL: Permissible Exposure Limit. PIC: Prior Informed Consent.

PICCS: Philippines Inventory of Commercial Chemical Substances.

PNEC: Predicted No Effect Concentration.

POCP: Photochemical ozone creation potential (Photochemisches Ozonbildungspotenzial).

POP: Persistent Organic Pollutant.

PPORD: Product and Process Oriented Research and Development.

PPE: Personal Protective Equipment.

PROC: Process category. RA: Risk Assessment.

RAR: Risk Assessment Report.

RCRA: Resource Conservation Recovery Act.

REACH: Registration, Evaluation and Authorization of Chemicals (REGULATION (EC) No 1907/2006 concerning Registration, Evaluation Authorization and Restriction of Chemicals). RID: Regulations concerning the international carriage of dangerous goods by rail (Règlement International concernant le transport de marchandises dangereuses par chemin de fer).

RMM: Risk Management Measure.

RTECS: Registry of Toxic Effects of Chemical Substances.

QSAR: Quantitative Structure Activity Relation.

SARA: Superfund Amendments and Reauthorization Act. SADT: Self-Accelerating Decomposition Temperature.

SCL: Specific concentration limit. SEA: socio economic analysis. STEL: Short-term Exposure Limit. STP: Sewage treatment plant.

SU: Sector of use.

SVHC: Substance of Very High Concern. SWCNT: single-walled carbon nanotubes. ThOD: Theoretical oxygen demand.

TOC: Total Organic Carbon.
TLV: Threshold Limit Value.
TRA: Targeted Risk Assessment.
TSCA: Toxic Substance Control Act.

UC: Use category.

UDS: Use descriptor system. UEC: Use and exposure categories.

TWA: Time Weighted Average.

UN: United Nations.

UN RTDG: United Nations Recommendations on the Transport of Dangerous Goods.

UVCB: Unknown or Variable Composition, Complex Reaction Products, and Biological Materials. Regulation on combustible liquids (VbF: Verordnung über brennbare Flüssigkeiten, Austria). Regulation of the Austria Minister for Labor and Social Affairs regarding health surveillance at the workplace (VGÜ = Verordnung des Bundesministers für Arbeit und Soziales über die Gesundheitsüberwachung am Arbeitsplatz).

VOC: Volatile organic compounds.

vPvB: very Persistent, very Bioaccumulative.

WEL-TWA: Workplace Exposure Limit-Long term exposure limit (8-hour TWA(=time weighted average)reference period).

WEL-STEL: Workplace Exposure Limit-Short term exposure limit (15-minute reference period).

WoE: Weight of evidence.

WHMIS: Workplace Hazardous Materials Information System.

WHO: World Health Organization.

wwt: wet weight. Not available.

Information on evaluation method leading to the classification of mixture

References

Full text of any H-statements not written out in full under Sections 2 to 15 The classification for health and environmental hazards is derived by a combination of calculation methods and test data, if available.

H302 Harmful if swallowed.

H312 Harmful in contact with skin.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H318 Causes serious eye damage.

H319 Causes serious eye irritation.

H332 Harmful if inhaled.

None.

H411 Toxic to aquatic life with long lasting effects.

H412 Harmful to aquatic life with long lasting effects.

Revision information

Training information

Disclaimer

Follow training instructions when handling this material.

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

Material name: Metal Adhesive H Component A

Attachment to the Safety Data Sheet



Product Name:Metal Adhesive H Component APage:1/1Ford Int. Ref. No.:193355Print Date: 09.07.2015

Involved Products:

Finiscode Part number Container Size:

1. FU7J M2G400 AA 130 ml

Part of Kit:

1 947 915 FU7J M11P47 AA Metal Adhesive Kit H – 2 Components