

**Section 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier****Product name:** DELTA QUICK STEEL TWIN CARTRIDGE- PART A**Product code:** D320**1.2. Relevant identified uses of the substance or mixture and uses advised against****Use of substance / mixture:** Epoxy resin preparation**1.3. Details of the supplier of the safety data sheet****Company name:** Delta Adhesives Limited  
Units 39-40  
Claycliffe Business Park  
Cannon Way  
Barugh Green  
Barnsley, South Yorkshire  
S75 1JU**Tel:** +44 (0) 1226 381 571**Fax:** +44 (0) 1226 381 722**Email:** info@delta-adhesives.co.uk**1.4. Emergency telephone number****Section 2: Hazards identification****2.1. Classification of the substance or mixture****Classification under CHIP:** Xi: R36/38; Sens.: R43; N: R51/53**Most important adverse effects:** Irritating to eyes and skin. May cause sensitisation by skin contact. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.**2.2. Label elements****Label elements under CHIP:****Hazard symbols:** Dangerous for the environment.

Irritant.

**Risk phrases:** R36/38: Irritating to eyes and skin.

R43: May cause sensitisation by skin contact.

R51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**SAFETY DATA SHEET**  
**DELTA QUICK STEEL TWIN CARTRIDGE - PART A**

Page: 2

**Safety phrases:** S2: Keep out of the reach of children.  
S24: Avoid contact with skin.  
S29: Do not empty into drains.  
S37: Wear suitable gloves.  
S61: Avoid release to the environment. Refer to special instructions / safety data sheets.

**Precautionary phrases:** Contains epoxy constituents. See information supplied by the manufacturer.

**2.3. Other hazards**

**PBT:** This substance is not identified as a PBT substance.

**Section 3: Composition/information on ingredients**

**3.2. Mixtures**

**Hazardous ingredients:**

BISPHENOL A-(EPICHLORHYDRIN) {REACTION PRODUCT}

EINECS	CAS	CHIP Classification	CLP Classification	Percent
500-033-5	25068-38-6	Xi: R36/38; Sens.: R43; N: R51/53	-	20-40%

BISPHENOL F

-	28064-14-4	Xi: R36/38; Sens.: R43; N: R51/53	-	5-10%
---	------------	-----------------------------------	---	-------

**Section 4: First aid measures**

**4.1. Description of first aid measures**

- Skin contact:** Remove all contaminated clothes and footwear immediately unless stuck to skin. Wash immediately with plenty of soap and water.
- Eye contact:** Immediately flush with plenty of water for at least 15 mins holding eyelids apart to ensure flushing of the entire surface. Washing within one minute is essential to achieve maximum effectiveness. If symptoms persist seek medical attention
- Ingestion:** Do not induce vomiting. Wash out mouth with water. If conscious, give half a litre of water to drink immediately. Consult a doctor.
- Inhalation:** Remove casualty from exposure ensuring one's own safety whilst doing so. If unconscious and breathing is OK, place in the recovery position. Consult a doctor.

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

- Skin contact:** There may be irritation and redness at the site of contact.
- Eye contact:** There may be irritation and redness. The eyes may water profusely.
- Ingestion:** There may be soreness and redness of the mouth and throat.
- Inhalation:** There may be irritation of the throat with a feeling of tightness in the chest. Exposure may cause coughing or wheezing.

**Delayed / immediate effects:** Immediate effects can be expected after short-term exposure.

[cont...]

**SAFETY DATA SHEET**  
**DELTA QUICK STEEL TWIN CARTRIDGE - PART A**

Page: 3

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

**Immediate / special treatment:** Eye bathing equipment should be available on the premises.

**Section 5: Fire-fighting measures**

**5.1. Extinguishing media**

**Extinguishing media:** Product does not support combustion in any way. Suitable extinguishing media for the surrounding fire should be used.

**5.2. Special hazards arising from the substance or mixture**

**Exposure hazards:** In combustion emits toxic fumes.

**5.3. Advice for fire-fighters**

**Advice for fire-fighters:** Wear self-contained breathing apparatus. Wear protective clothing to prevent contact with skin and eyes.

**Section 6: Accidental release measures**

**6.1. Personal precautions, protective equipment and emergency procedures**

**Personal precautions:** Use appropriate PPE. Avoid contact with skin and eyes.

**6.2. Environmental precautions**

**Environmental precautions:** should not be released to the environment. Avoid subsoil penetration.

**6.3. Methods and material for containment and cleaning up**

**Clean-up procedures:** Mix with sand or vermiculite. Transfer to a closable, labelled salvage container for disposal by an appropriate method.

**6.4. Reference to other sections**

**Reference to other sections:** Refer to section 8 of SDS.

**Section 7: Handling and storage**

**7.1. Precautions for safe handling**

**Handling requirements:** Avoid direct contact with the substance. Ensure there is sufficient ventilation of the area. Do not handle in a confined space. Avoid the formation or spread of dust in the air.

**7.2. Conditions for safe storage, including any incompatibilities**

**Storage conditions:** Store in cool, well ventilated area. Keep container tightly closed. The floor of the storage room must be impermeable to prevent the escape of liquids.

**Suitable packaging:** Must only be kept in original packaging.

**7.3. Specific end use(s)**

**Specific end use(s):** No data available.

[cont...]

**SAFETY DATA SHEET**  
**DELTA QUICK STEEL TWIN CARTRIDGE - PART A**

Page: 4

**Section 8: Exposure controls/personal protection**

**8.1. Control parameters**

**Workplace exposure limits:** Not applicable.

**8.2. Exposure controls**

**Engineering measures:** Ensure there is sufficient ventilation of the area. The floor of the storage room must be impermeable to prevent the escape of liquids.

**Respiratory protection:** Not required under normal use

**Hand protection:** PVC or other plastic material gloves. For prolonged use the gloves should meet the requirements of EN374 preferably with class 2 performance level which indicates a breakthrough time of >30 mins.

**Eye protection:** Safety glasses. Ensure eye bath is to hand.

**Skin protection:** Protective clothing.

**Section 9: Physical and chemical properties**

**9.1. Information on basic physical and chemical properties**

**State:** Paste

**Colour:** Black

**Odour:** Not significant

**Solubility in water:** Insoluble

**Viscosity:** Viscous

**Boiling point/range°C:** > 200

**Flash point°C:** Does not flash

**Relative density:** 1.80 +/-0.03

**9.2. Other information**

**Section 10: Stability and reactivity**

**10.1. Reactivity**

**Reactivity:** Stable under recommended transport or storage conditions.

**10.2. Chemical stability**

**Chemical stability:** Stable under normal conditions.

**10.3. Possibility of hazardous reactions**

**Hazardous reactions:** Polymerisation is a highly exothermic reaction and may generate sufficient heat to cause thermal decomposition and/or rupture containers.

**10.4. Conditions to avoid**

**Conditions to avoid:** Heat.

**10.5. Incompatible materials**

**Materials to avoid:** Strong oxidising agents. Acids. Bases. Amines.

[cont...]

**SAFETY DATA SHEET**  
**DELTA QUICK STEEL TWIN CARTRIDGE - PART A**

Page: 5

**10.6. Hazardous decomposition products**

**Haz. decomp. products:** In combustion emits toxic fumes. In combustion emits toxic fumes of carbon monoxide.

**Section 11: Toxicological information**

**11.1. Information on toxicological effects**

**Relevant effects for mixture:**

Effect	Route	Basis
Irritation	OPT DRM	Hazardous: calculated
Sensitisation	DRM	Hazardous: calculated

**Symptoms / routes of exposure**

**Skin contact:** There may be irritation and redness at the site of contact.

**Eye contact:** There may be irritation and redness. The eyes may water profusely.

**Ingestion:** There may be soreness and redness of the mouth and throat.

**Inhalation:** There may be irritation of the throat with a feeling of tightness in the chest. Exposure may cause coughing or wheezing.

**Delayed / immediate effects:** Immediate effects can be expected after short-term exposure.

**Section 12: Ecological information**

**12.1. Toxicity**

**Ecotoxicity values:** Not applicable.

**12.2. Persistence and degradability**

**Persistence and degradability:** Not biodegradable.

**12.3. Bioaccumulative potential**

**Bioaccumulative potential:** Bioaccumulation potential.

**12.4. Mobility in soil**

**Mobility:** Readily absorbed into soil.

**12.5. Results of PBT and vPvB assessment**

**PBT identification:** This substance is not identified as a PBT substance.

**12.6. Other adverse effects**

**Other adverse effects:** Harmful to aquatic organisms. May cause long term adverse effects in the aquatic environment.

**Section 13: Disposal considerations**

**13.1. Waste treatment methods**

**Disposal operations:** Transfer to a suitable container and arrange for collection by specialised disposal company.  
Waste disposal number - 08 04 12.

[cont...]

**SAFETY DATA SHEET**  
**DELTA QUICK STEEL TWIN CARTRIDGE - PART A**

Page: 6

**Waste code number:** 08 04 12

**Disposal of packaging:** Dispose of in a regulated landfill site or other method for hazardous or toxic wastes. Waste disposal No. 15 01 08.

**NB:** The user's attention is drawn to the possible existence of regional or national regulations regarding disposal.

**Section 14: Transport information**

**14.1. UN number**

**UN number:** UN3077

**14.2. UN proper shipping name**

**Shipping name:** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.  
(REACTION PRODUCTS OF EPICHLOROHYDRIN AND BISPHENOL F)

**14.3. Transport hazard class(es)**

**Transport class:** 9

**14.4. Packing group**

**Packing group:** III

**14.5. Environmental hazards**

**Environmentally hazardous:** Yes

**Marine pollutant:** No

**14.6. Special precautions for user**

**Special precautions:** No special precautions.

**Section 15: Regulatory information**

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

**15.2. Chemical Safety Assessment**

**Chemical safety assessment:** A chemical safety assessment has not been carried out for the substance or the mixture by the supplier.

**Section 16: Other information**

**Other information**

**Other information:** This safety data sheet is prepared in accordance with Commission Regulation (EU) No 453/2010.

\* indicates text in the SDS which has changed since the last revision.

**Phrases used in s.2 and 3:** R36/38: Irritating to eyes and skin.

R43: May cause sensitisation by skin contact.

R51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**Legal disclaimer:** The above information is believed to be correct but does not purport to be all inclusive and

[cont...]

**SAFETY DATA SHEET**  
**DELTA QUICK STEEL TWIN CARTRIDGE - PART A**

**Page: 7**

shall be used only as a guide. This company shall not be held liable for any damage resulting from handling or from contact with the above product.



**SAFETY DATA SHEET**  
**DELTA QUICK STEEL TWIN CARTRIDGE - PART B**

Page: 1

Compilation date: 12/03/14

Revision No: 5

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

**1.1. Product identifier**

**Product name:** DELTA QUICK STEEL TWIN CARTRIDGE - PART B

**Product code:** D320

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

**Use of substance / mixture:** Epoxy hardener preparation

**1.3. Details of the supplier of the safety data sheet**

**Company name:** Delta Adhesives Limited  
Units 39-40  
Claycliffe Business Park  
Cannon Way  
Barugh Green  
Barnsley, South Yorkshire  
S75 1JU

**Tel:** +44 (0) 1226 381 571

**Fax:** +44 (0) 1226 381 722

**Email:** info@delta-adhesives.co.uk

**1.4. Emergency telephone number**

**Section 2: Hazards identification**

**2.1. Classification of the substance or mixture**

**Classification under CHIP:** This product has no classification under CHIP.

**2.2. Label elements**

**Label elements under CHIP:**

**Hazard symbols:** No significant hazard.

**Safety phrases:** S2: Keep out of the reach of children.

S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S28: After contact with skin, wash immediately with plenty of soap and water.

**2.3. Other hazards**

**PBT:** This substance is not identified as a PBT substance.

**Section 3: Composition/information on ingredients**

[cont...]



**SAFETY DATA SHEET**  
**DELTA QUICK STEEL TWIN CARTRIDGE - PART B**

Page: 2

**3.2. Mixtures**

**Hazardous ingredients:**

2,4,6-TRIS(DIMETHYLAMINOMETHYL)PHENOL

EINECS	CAS	CHIP Classification	CLP Classification	Percent
202-013-9	90-72-2	Xn: R22; Xi: R36/38	-	1-5%

**Section 4: First aid measures**

**4.1. Description of first aid measures**

**Skin contact:** Wash immediately with plenty of soap and water.

**Eye contact:** Bathe the eye with running water for 15 minutes. Consult a doctor.

**Ingestion:** Wash out mouth with water. Do not induce vomiting. Give 1 cup of water to drink every 10 minutes.

**Inhalation:** Remove casualty from exposure ensuring one's own safety whilst doing so.

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

**Skin contact:** There may be mild irritation at the site of contact.

**Eye contact:** There may be irritation and redness.

**Ingestion:** There may be irritation of the throat.

**Inhalation:** There may be irritation of the throat with a feeling of tightness in the chest.

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

**Immediate / special treatment:** Not applicable.

**Section 5: Fire-fighting measures**

**5.1. Extinguishing media**

**Extinguishing media:** Carbon dioxide. Dry chemical powder. Foam. Water spray.

**5.2. Special hazards arising from the substance or mixture**

**Exposure hazards:** In combustion emits toxic fumes.

**5.3. Advice for fire-fighters**

**Advice for fire-fighters:** Wear self-contained breathing apparatus. Wear protective clothing to prevent contact with skin and eyes.

**Section 6: Accidental release measures**

**6.1. Personal precautions, protective equipment and emergency procedures**

**Personal precautions:** Refer to section 8 of SDS for personal protection details. Turn leaking containers leak-side up to prevent the escape of liquid.

**6.2. Environmental precautions**

**Environmental precautions:** Do not discharge into drains or rivers. Contain the spillage using bunding.

[cont...]

**SAFETY DATA SHEET**  
**DELTA QUICK STEEL TWIN CARTRIDGE - PART B**

Page: 3

**6.3. Methods and material for containment and cleaning up**

**Clean-up procedures:** Absorb into dry earth or sand. Transfer to a closable, labelled salvage container for disposal by an appropriate method.

**6.4. Reference to other sections**

**Reference to other sections:** Refer to section 8 of SDS.

**Section 7: Handling and storage**

**7.1. Precautions for safe handling**

**7.2. Conditions for safe storage, including any incompatibilities**

**Storage conditions:** Store in cool, well ventilated area. Keep container tightly closed.

**Suitable packaging:** Must only be kept in original packaging.

**7.3. Specific end use(s)**

**Specific end use(s):** No data available.

**Section 8: Exposure controls/personal protection**

**8.1. Control parameters**

**Workplace exposure limits:** Not applicable.

**8.2. Exposure controls**

**Engineering measures:** Ensure there is sufficient ventilation of the area.

**Respiratory protection:** Respiratory protection not required.

**Hand protection:** Protective gloves.

**Eye protection:** Safety glasses. Ensure eye bath is to hand.

**Skin protection:** Protective clothing.

**Section 9: Physical and chemical properties**

**9.1. Information on basic physical and chemical properties**

**State:** Paste

**Colour:** White

**Odour:** Sulphurous.

**Solubility in water:** Insoluble

**Flash point°C:** Does not flash

**Relative density:** 1.72 +/-0.03

**pH:** 3 - 5

**9.2. Other information**

**Section 10: Stability and reactivity**

**10.1. Reactivity**

**Reactivity:** Stable under recommended transport or storage conditions.

[cont...]

**SAFETY DATA SHEET**  
**DELTA QUICK STEEL TWIN CARTRIDGE - PART B**

Page: 4

**10.2. Chemical stability**

**Chemical stability:** Stable under normal conditions.

**10.3. Possibility of hazardous reactions**

**Hazardous reactions:** Hazardous reactions will not occur under normal transport or storage conditions.  
Decomposition may occur on exposure to conditions or materials listed below.

**10.4. Conditions to avoid**

**Conditions to avoid:** Heat.

**10.5. Incompatible materials**

**Materials to avoid:** Strong oxidising agents. Epoxy resins Amines.

**10.6. Hazardous decomposition products**

**Haz. decomp. products:** In combustion emits toxic fumes of carbon monoxide. In combustion emits toxic fumes of sulphur oxides. In combustion emits toxic fumes of nitrogen oxides.

**Section 11: Toxicological information**

**11.1. Information on toxicological effects**

**Toxicity values:** Not applicable.

**Symptoms / routes of exposure**

**Skin contact:** There may be mild irritation at the site of contact.

**Eye contact:** There may be irritation and redness.

**Ingestion:** There may be irritation of the throat.

**Inhalation:** There may be irritation of the throat with a feeling of tightness in the chest.

**Section 12: Ecological information**

**12.1. Toxicity**

**Ecotoxicity values:** Not applicable.

**12.2. Persistence and degradability**

**Persistence and degradability:** Only slightly biodegradable.

**12.3. Bioaccumulative potential**

**12.4. Mobility in soil**

**12.5. Results of PBT and vPvB assessment**

**PBT identification:** This substance is not identified as a PBT substance.

**12.6. Other adverse effects**

**Section 13: Disposal considerations**

[cont...]

**SAFETY DATA SHEET  
DELTA QUICK STEEL TWIN CARTRIDGE - PART B**

Page: 5

**13.1. Waste treatment methods**

**Disposal operations:** Can be landfilled when in compliance with the Environmental Protection (Duty of Care) Regulations 1991.

**Waste code number:** 08 04 12

**Disposal of packaging:** Dispose of in a regulated landfill site or other method for hazardous or toxic wastes.

**NB:** The user's attention is drawn to the possible existence of regional or national regulations regarding disposal.

**Section 14: Transport information**

**Transport class:** This product does not require a classification for transport.

**Section 15: Regulatory information**

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

**15.2. Chemical Safety Assessment**

**Chemical safety assessment:** A chemical safety assessment has not been carried out for the substance or the mixture by the supplier.

**Section 16: Other information**

**Other information**

**Other information:** This safety data sheet is prepared in accordance with Commission Regulation (EU) No 453/2010.

\* indicates text in the SDS which has changed since the last revision.

**Phrases used in s.2 and 3:** R22: Harmful if swallowed.

R36/38: Irritating to eyes and skin.

**Legal disclaimer:** The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. This company shall not be held liable for any damage resulting from handling or from contact with the above product.