

**ABRO Epoxy Steel Adhesive (Hardener)**

ACCORDING TO EC-REGULATIONS 1907/2006 (REACH), 1272/2008 (CLP) &amp; 2020/878

**SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING****1.1 Product identifier**

Product Name ABRO Epoxy Steel Adhesive (Hardener)  
Product code ES-506  
Unique Formula Identifier (UFI) JXF0-X0SX-M00P-G611

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

Identified Use(s) Adhesives.  
Uses Advised Against Not known.

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

Company Identification ABRO Industries Inc  
Address of Manufacturer 3580 Blackthorn Court  
South Bend  
USA  
Postal code 46628  
Telephone: +1 574-232-8289  
Fax Not known.  
E-mail abro@abro.com  
Office hours

**Supplier**

Company Identification Granville Oil & Chemicals Ltd  
Address of Supplier 29 Goldthorpe Ind. Est.,  
Goldthorpe,  
Rotherham,  
South Yorkshire,  
Postal code S63 9BL  
Telephone: +44 (0)1709 890099  
Fax Not known.  
E-mail lab@granvilleoil.com  
Office hours 08:00 - 17:00

**1.4 Emergency telephone number**

Emergency Phone No. +44 111  
National response centre NHS Direct





**SECTION 2: HAZARDS IDENTIFICATION****2.1 Classification of the substance or mixture**

Regulation (EC) No. 1272/2008 (CLP) Acute Tox. 4 :Harmful if swallowed.  
Skin Corr. 1B :Causes severe skin burns and eye damage.  
Skin Sens. 1A :May cause an allergic skin reaction.  
Eye Dam. 1 :Causes serious eye damage.  
Repr. 2 :Suspected of damaging fertility. Suspected of damaging the unborn

**ABRO Epoxy Steel Adhesive (Hardener)**

child.  
Aquatic Chronic 2 :Toxic to aquatic life with long lasting effects.

**2.2 Label elements**

Product Name	ABRO Epoxy Steel Adhesive (Hardener)
Contains	Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine. 2,4,6-tris(dimethylaminomethyl)phenol. nonylphenol
Hazard Pictogram(s)	    GHS05      GHS08      GHS07      GHS09
Signal Word(s)	Danger
Hazard Statement(s)	H302: Harmful if swallowed. H314: Causes severe skin burns and eye damage. H317: May cause an allergic skin reaction. H361fd: Suspected of damaging fertility. Suspected of damaging the unborn child. H411: Toxic to aquatic life with long lasting effects.
Precautionary Statement(s)	P101: If medical advice is needed, have product container or label at hand. P102: Keep out of reach of children. P260: Do not breathe dust/fume/gas/mist/vapours/spray. P264: Wash hands and exposed skin thoroughly after handling. P280: Wear protective gloves/protective clothing/eye protection/face protection. P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Unique Formula Identifier (UFI)	JXF0-X0SX-M00P-G611
<b>2.3 Other hazards</b>	This product contains: 25154-52-3 (Endocrine disrupting properties)
<b>2.4 Additional Information</b>	For full text of H/P Statements see section 16.

**SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS****3.1 Substances**

Not applicable.



**ABRO Epoxy Steel Adhesive (Hardener)**

**3.2 Mixtures**

HAZARDOUS INGREDIENT(S)	CAS No.	EC No. / REACH Registration No.	%W/W	Hazard Statement(s)	Hazard Pictogram(s)
Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine	68082-29-1		20-50	Skin Irrit. 2 H315 Skin Sens. 1A H317 Eye Dam. 1 H318 Aquatic Chronic 2 H411	GHS05 GHS07 GHS09
Talc (Mg3H2(SiO3)4)	14807-96-6		10-35	Not classified	None
2,4,6-tris(dimethylaminomethyl)phenol	90-72-2	202-013-9	5-15	Acute Tox. 4 H302 Skin Irrit. 2 H315 Eye Irrit. 2 H319	GHS07
nonylphenol	25154-52-3	246-672-0	3-13	Acute Tox. 4 H302 Skin Corr. 1B H314 Repr. 2 H361fd Aquatic Acute 1 H400 Aquatic Chronic 1 H410	GHS05 GHS08 GHS07 GHS09
Limestone	1317-65-3		5-25	Not classified	None
barium sulfate	7727-43-7		10-35	Not classified	None

HAZARDOUS INGREDIENT(S)	CAS No.	Specific Concentration Limit	M-factor	ATE
2,4,6-tris(dimethylaminomethyl)phenol	90-72-2			Acute Tox. 4 (H302) : 500
nonylphenol	25154-52-3			Acute Tox. 4 (H302) : 500

Contains no non-classified vPvB substances.

Contains a non-classified substance with a Union workplace exposure limit. Calcium carbonate inhalable dust (1317-65-3) Barium sulphate inhalable dust (7727-43-7) Talc, respirable dust (14807-96-6)

For full text of H/P Statements see section 16.

**SECTION 4: FIRST AID MEASURES**

**4.1 Description of first aid measures**

**ABRO Epoxy Steel Adhesive (Hardener)**

Inhalation	Immediately call a POISON CENTRE/doctor.
Skin Contact	Take off immediately all contaminated clothing and wash it before reuse. If skin irritation or rash occurs: Get medical advice/attention. Specific treatment (see Medical Advice on this label). Rinse skin with water. Immediately call a POISON CENTRE/doctor.
Eye Contact	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTRE/doctor.
Ingestion	Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTRE/doctor.

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

Causes burns. Allergic contact dermatitis.

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

Specific treatment (see Medical Advice on this label). Immediately call a POISON CENTRE/doctor. Treat symptomatically.

**SECTION 5: FIREFIGHTING MEASURES****5.1 Extinguishing media**

Suitable Extinguishing media	Carbon dioxide, dry chemical, foam.
Unsuitable extinguishing media	None Known.

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

Hazardous combustion products: May include and are not limited to: Oxides of carbon. Oxides of nitrogen. Oxides of Sulphur.

**5.3 Advice for firefighters**

Fire fighters should wear complete protective clothing including self-contained breathing apparatus. Dike fire control water for later disposal.

**SECTION 6: ACCIDENTAL RELEASE MEASURES****6.1 Personal precautions, protective equipment and emergency procedures**

Do not touch or walk-through spilled material. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep people away from and upwind of spill/leak. Provide adequate ventilation. Ensure full personal protection (including respiratory protection) during removal of spillages.

**6.2 Environmental precautions**

Prevent entry into waterways, sewers, basements or confined areas. Spillages or uncontrolled discharges into watercourses must be alerted to the appropriate regulatory body.

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

Stop the flow of material if this is without risk. Before attempting clean up, refer to hazard data given above. Dampen material with water and use shovel or scoop to collect material in clean container for proper disposal. Rinse area with water. Prevent large spills from entering sewers or waterways. Contact emergency services and supplier for advice.

**6.4 Reference to other sections**

See Also Section 8, 13.

**ABRO Epoxy Steel Adhesive (Hardener)****SECTION 7: HANDLING AND STORAGE****7.1 Precautions for safe handling**

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid breathing dust/fume/gas/mist/vapours/spray. Wash hands and exposed skin thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves/protective clothing/eye protection/face protection. Use good industrial hygiene practices in handling this material. Avoid contact with eyes, skin and clothing. Avoid prolonged or repeated skin contact with this material.

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

Keep out of reach of children. Store in a tightly closed container in a dry, cool, well-ventilated place. Keep away from incompatible materials such as strong oxidizing agents, bases, acids, amines.

**7.3 Specific end use(s)**

Adhesives.

**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION****8.1 Control parameters****8.1.1 Occupational Exposure Limits**

Occupational Exposure Limits						
SUBSTANCE.	CAS No.	LTEL (8 hr TWA ppm)	LTEL (8 hr TWA mg/m <sup>3</sup> )	STEL (ppm)	STEL (mg/m <sup>3</sup> )	Note
Calcium carbonate inhalable dust	1317-65-3		10			
Calcium carbonate respirable dust	1317-65-3		4			
Limestone total inhalable	1317-65-3		10			
Limestone respirable	1317-65-3		4			
Marble total inhalable	1317-65-3		10			
Marble respirable	1317-65-3		4			
Barium sulphate inhalable dust	7727-43-7		10			
Barium sulphate respirable dust	7727-43-7		4			
Talc, respirable dust	14807-96-6		1			

Region                      Source  
United Kingdom        UK Workplace Exposure Limits EH40/2005 (Fourth edition, published 2020)

Remark                    Notes

**8.2 Exposure controls**

**ABRO Epoxy Steel Adhesive (Hardener)**

8.2.1. Appropriate engineering controls Use with ventilation, local exhaust ventilation or breathing protection. A washing facility/water for eye and skin cleaning purposes should be present.

8.2.2. Personal protection equipment



Eye Protection Wear eye protection with side protection (EN166).



Skin protection Wear protective clothing and gloves: Impervious gloves (EN 374).



Respiratory protection Where exposure guideline levels may be exceeded, use an approved NIOSH respirator.



Thermal hazards None known.

8.2.3. Environmental Exposure Controls Spillages or uncontrolled discharges into watercourses must be alerted to the appropriate regulatory body.

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES****9.1 Information on basic physical and chemical properties**

Physical state	Liquid.
Colour	Dark brown coloured liquid.
Odour	Mild odour
Melting point/freezing point	Not known.
Boiling point or initial boiling point and boiling range	> 232° C (>450° F).
Flammability	Not known.
Lower and upper explosion limit	Not known.
Flash Point	Closed cup: >93.3° C (>199.9° F) [Pensky-Martens.
Auto-ignition temperature	Not known.
Decomposition Temperature	Not known.
pH	Not known.
Kinematic Viscosity	Not known.
Solubility	Solubility (Water) : Not known. Solubility (Other) : Not known.
Partition coefficient n-octanol/water (log value)	Not known.
Vapour pressure	Not known.
Density and/or relative density	1.5 - 1.7
Relative vapour density	> 1
Particle characteristics	Not known.

**9.2 Other information**

None.

**ABRO Epoxy Steel Adhesive (Hardener)****SECTION 10: STABILITY AND REACTIVITY****10.1 Reactivity**

None anticipated.

**10.2 Chemical Stability**

Stable under normal conditions.

**10.3 Possibility of hazardous reactions**

No hazardous reactions known if used for its intended purpose.

**10.4 Conditions to avoid**

Excessive heat.

**10.5 Incompatible materials**

Strong oxidizing agents, bases, acids, amines.

**10.6 Hazardous decomposition products**

Carbon oxides.

**SECTION 11: TOXICOLOGICAL INFORMATION****11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**

Acute toxicity - Ingestion	Calculation method : Harmful if swallowed. Calculation method : Calculated acute toxicity estimate (ATE) Calc ATE - 1785.71
Acute toxicity - Skin Contact	Calculation method : Not classified.
Acute toxicity - Inhalation	Calculation method : Not classified.
Skin corrosion/irritation	Calculation method : Causes severe skin burns and eye damage.
Serious eye damage/irritation	Calculation method : Causes serious eye damage.
Skin sensitization data	Calculation method : May cause an allergic skin reaction.
Respiratory sensitization data	Calculation method : Not classified.
Germ cell mutagenicity	Calculation method : Not classified.
Carcinogenicity	Calculation method : Not classified.
Reproductive toxicity	Calculation method : Suspected of damaging fertility. Suspected of damaging the unborn child.
Lactation	Calculation method : Not classified.
STOT - single exposure	Calculation method : Not classified.
STOT - repeated exposure	Calculation method : Not classified.
Aspiration hazard	Calculation method : Not classified.

**11.2 Information on other hazards**

Endocrine disrupting properties: List I: Substances identified as endocrine disruptors at EU level 25154-52-3 (Human health)

**SECTION 12: ECOLOGICAL INFORMATION****12.1 Toxicity**

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

Toxicity - Aquatic invertebrates

Not known.

Toxicity - Fish

Not known.

**ABRO Epoxy Steel Adhesive (Hardener)**

Toxicity - Algae Not known.  
Toxicity - Sediment Compartment Not classified.  
Toxicity - Terrestrial Compartment Not classified.

**12.2 Persistence and degradability**

Not known.

**12.3 Bioaccumulative potential**

Not known.

**12.4 Mobility in soil**

Not known.

**12.5 Results of PBT and vPvB assessment**

Not known.

**12.6 Endocrine disrupting properties**

Listed in: List I: Substances identified as endocrine disruptors at EU level 25154-52-3 (Environment)

**12.7 Other adverse effects**

Not known.

**SECTION 13: DISPOSAL CONSIDERATIONS****13.1 Waste treatment methods**

Dispose of contents in accordance with local, state or national legislation. Send to a licensed recycler, reclaimer or incinerator. Dispose of this material and its container to hazardous or special waste collection point. Dispose at suitable refuse site.

**13.2 Additional Information**

Disposal should be in accordance with local, state or national legislation.

**SECTION 14: TRANSPORT INFORMATION****14.1 UN number or ID number**

UN No. 2735

**14.2 UN proper shipping name**

UN proper shipping name POLYAMINES, LIQUID, CORROSIVE, N.O.S.

**14.3 Transport hazard class(es)**

ADR/RID

ADR/RID Class 8

ADR Classification Code C7

Special Provisions 274

Limited Quantities 5 L

Excepted Quantities E1

Emergency Action Code 2X

Mixed Packing Instructions for Packages P001 IBC03 LP01 R001

Special Packing Provisions for Packages

Special Packing Provisions for Packages

Special Packing Provisions for Packages



**ABRO Epoxy Steel Adhesive (Hardener)**

Mixed Packing Instructions for Packages	MP19
Packing Instructions for Portable Tanks	T7
Special Provisions for Portable Tanks	TP1 TP28
Tank Code for Tanks	L4BN
Special Provisions for Tanks	
Vehicle for Tank Carriage	AT
ADR Transport Category	3
Tunnel Restriction Code	E
Special Provisions for Carriage - Packages	V12
Special Provisions for Carriage - Bulk	
Special Provisions for Carriage - Loading, Unloading and Handling	
Special Provisions for Carriage - Operation	
ADR HIN	80
IMDG	
IMDG Class	8
Special Provisions	274
Limited Quantities	5 L
Excepted Quantities	E1
Mixed Packing Instructions for Packages	P001 IBC03 LP01 R001
Special Packing Provisions for Packages	
Packing Instructions for Portable Tanks	T7
Special Provisions for Portable Tanks	TP1 TP28
IMDG EMS	F-A, S-B
Stowage and Handling	Category A
Segregation	SGG18 SG35
Marine Pollutant	
ICAO/IATA	
IATA Proper Shipping Name	POLYAMINES, LIQUID, CORROSIVE, N.O.S.
Excepted Quantities	E1
Passenger and Cargo Aircraft Limited Quantities Packing Instructions	Y841
Passenger and Cargo Aircraft Limited Quantities Max net Qty	1L
Passenger and Cargo Aircraft Packing Instructions	852
Passenger and Cargo Aircraft Max net Qty	5L
Cargo Aircraft Packing Instructions	856
Cargo Aircraft Max net Qty	60L
Special Provisions	A3, A803

**ABRO Epoxy Steel Adhesive (Hardener)**

Emergency Response Guidebook (ERG) 8L

Code

Labels

Labels

8

**14.4 Packing group**

Packing group

III

**14.5 Environmental hazards**

Environmental hazards

Classified as a Marine Pollutant.

**14.6 Special precautions for user**

Special precautions for user

Not known.

**14.7 Maritime transport in bulk according to IMO instruments**

No information available

**SECTION 15: REGULATORY INFORMATION****15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

European Regulations - Authorisations and/or Restrictions On Use

Candidate List of Substances of Very High Concern for Authorisation Not listed

REACH: ANNEX XIV list of substances subject to authorisation Not listed

REACH: Annex XVII Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

Nonylphenol C<sub>6</sub>H<sub>4</sub>(OH)C<sub>9</sub>H<sub>19</sub> (25154-52-3), 2,4,6-tris(dimethylaminomethyl)phenol (90-72-2), Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine (68082-29-1)

Community Rolling Action Plan (CoRAP) Not listed

Regulation (EU) N° 2019/1021 of the European Parliament and of the Council on persistent organic pollutants Not listed

Regulation (EC) N° 1005/2009 on substances that deplete the ozone layer Not listed

Regulation (EU) N° 649/2012 of the European Parliament and of the Council concerning the export and import of hazardous chemicals Nonylphenols (25154-52-3)

**National regulations**

Other

Not known.

**15.2 Chemical Safety Assessment**

A REACH chemical safety assessment has not been carried out.

**SECTION 16: OTHER INFORMATION**

The following sections contain revisions or new statements:

**ABRO Epoxy Steel Adhesive (Hardener)****LEGEND**

Hazard Pictogram(s)



GHS05



GHS08



GHS07



GHS09

Hazard classification

Acute Tox. 4 : Acute toxicity, Category 4

Skin Corr. 1B : Skin corrosion/irritation, Category 1B

Skin Irrit. 2 : Skin corrosion/irritation, Category 2

Skin Sens. 1A : Skin sensitization, Category 1A

Eye Dam. 1 : Serious eye damage/irritation, Category 1

Eye Irrit. 2 : Serious eye damage/irritation, Category 2

Repr. 2 : Reproductive toxicity, Category 2

Aquatic Acute 1 : Hazardous to the aquatic environment, Acute, Category 1

Aquatic Chronic 1 : Hazardous to the aquatic environment, Chronic, Category 1

Aquatic Chronic 2 : Hazardous to the aquatic environment, Chronic, Category 2

Hazard Statement(s)

H302: Harmful if swallowed.

H314: Causes severe skin burns and eye damage.

H315: Causes skin irritation.

H317: May cause an allergic skin reaction.

H318: Causes serious eye damage.

H319: Causes serious eye irritation.

H361fd: Suspected of damaging fertility. Suspected of damaging the unborn child.

H400: Very toxic to aquatic life.

H410: Very toxic to aquatic life with long lasting effects.

H411: Toxic to aquatic life with long lasting effects.

Precautionary Statement(s)

P201: Obtain special instructions before use.

P202: Do not handle until all safety precautions have been read and understood.

P260: Do not breathe dust/fume/gas/mist/vapours/spray.

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

P264: Wash hands and exposed skin thoroughly after handling.

P270: Do not eat, drink or smoke when using this product.

P272: Contaminated work clothing should not be allowed out of the workplace.

P273: Avoid release to the environment.

**ABRO Epoxy Steel Adhesive (Hardener)**

P280: Wear protective gloves/protective clothing/eye protection/face protection.

P301+P312: IF SWALLOWED: Call a POISON CENTRE/doctor if you feel unwell.

P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P302+P352: IF ON SKIN: Wash with plenty of water.

P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.

P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.

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.

P310: Immediately call a POISON CENTRE/doctor.

P321: Specific treatment (see Medical Advice on this label).

P330: Rinse mouth.

P333+P313: If skin irritation or rash occurs: Get medical advice/attention.

P362+P364: Take off contaminated clothing and wash it before reuse.

P363: Wash contaminated clothing before reuse.

P391: Collect spillage.

P405: Store locked up.

P501: Dispose of contents in accordance with local, state or national legislation.

## Acronyms

ADN : European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways

ADR : European Agreement concerning the International Carriage of Dangerous Goods by Road

ATE : Acute Toxicity Estimate

CAS : Chemical Abstracts Service

CLP : Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures

DNEL : Derived No Effect Level

EC : European Community

EINECS : European Inventory of Existing Commercial Chemical Substances

IATA : International Air Transport Association

IBC : Intermediate Bulk Container

ICAO : International Civil Aviation Organization

IMDG : International Maritime Dangerous Goods

LTEL : Long term exposure limit

PBT : Persistent, Bioaccumulative and Toxic

PNEC : Predicted No Effect Concentration

REACH : Registration, Evaluation, Authorisation and Restriction of Chemicals

RID : Regulations concerning the International Carriage of Dangerous Goods by Rail

STEL : Short term exposure limit

STOT : Specific Target Organ Toxicity

UN : United Nations

**ABRO Epoxy Steel Adhesive (Hardener)**

vPvB : very Persistent and very Bioaccumulative

Key literature references and sources for data used to compile the SDS Regulation (EC) No. 1272/2008 (CLP)

**Disclaimers**

Information contained in this publication or as otherwise supplied to Users is believed to be accurate and is given in good faith, but it is for the Users to satisfy themselves of the suitability of the product for their own particular purpose. ABRO Industries Inc gives no warranty as to the fitness of the product for any particular purpose and any implied warranty or condition (statutory or otherwise) is excluded except to the extent that exclusion is prevented by law. ABRO Industries Inc accepts no liability for loss or damage (other than that arising from death or personal injury caused by defective product, if proved), resulting from reliance on this information. Freedom under Patents, Copyright and Designs cannot be assumed.

**ABRO Epoxy Steel Adhesive (Resin)**

ACCORDING TO EC-REGULATIONS 1907/2006 (REACH), 1272/2008 (CLP) &amp; 2020/878

**SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING****1.1 Product identifier**

Product Name ABRO Epoxy Steel Adhesive (Resin)  
Product code ES-506  
Unique Formula Identifier (UFI) P6G0-F0V4-J005-G6S7

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

Identified Use(s) Not known.  
Uses Advised Against Not known.

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

Company Identification ABRO Industries Inc  
Address of Manufacturer 3580 Blackthorn Court  
South Bend  
USA  
Postal code 46628  
Telephone: +1 574-232-8289  
Fax Not known.  
E-mail abro@abro.com  
Office hours

**Supplier**

Company Identification Granville Oil & Chemicals Ltd  
Address of Supplier 29 Goldthorpe Ind. Est.,  
Goldthorpe,  
Rotherham,  
South Yorkshire,  
Postal code S63 9BL  
Telephone: +44 (0)1709 890099  
Fax Not known.  
E-mail lab@granvilleoil.com  
Office hours 08:00 - 17:00

**1.4 Emergency telephone number**

Emergency Phone No. +44 111  
National response centre NHS Direct

**SECTION 2: HAZARDS IDENTIFICATION****2.1 Classification of the substance or mixture**

Regulation (EC) No. 1272/2008 (CLP) Skin Irrit. 2 :Causes skin irritation.  
Skin Sens. 1 :May cause an allergic skin reaction.  
Eye Irrit. 2 :Causes serious eye irritation.  
STOT SE 3 :May cause respiratory irritation.

**ABRO Epoxy Steel Adhesive (Resin)**

Aquatic Chronic 2 :Toxic to aquatic life with long lasting effects.

**2.2 Label elements**

According to Regulation (EC) No. 1272/2008 (CLP)

Product Name

ABRO Epoxy Steel Adhesive (Resin)

Contains

reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight  $\leq$  700). 4,4'-methylenediphenol.

Hazard Pictogram(s)



GHS07



GHS09

Signal Word(s)

Warning

Hazard Statement(s)

H315: Causes skin irritation.

H317: May cause an allergic skin reaction.

H319: Causes serious eye irritation.

H335: May cause respiratory irritation.

H411: Toxic to aquatic life with long lasting effects.

Precautionary Statement(s)

P101: If medical advice is needed, have product container or label at hand.

P102: Keep out of reach of children.

P271: Use only outdoors or in a well-ventilated area.

P273: Avoid release to the environment.

P280: Wear protective gloves/protective clothing/eye protection/face protection.

P405: Store locked up.

Unique Formula Identifier (UFI)

P6G0-F0V4-J005-G6S7

**2.3 Other hazards**

None known.

**2.4 Additional Information**

For full text of H/P Statements see section 16.

**SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS****3.1 Substances**

Not applicable.

**3.2 Mixtures**

HAZARDOUS INGREDIENT(S)	CAS No.	EC No. / REACH	%W/W	Hazard Statement(s)	Hazard Pictogram(s)



**ABRO Epoxy Steel Adhesive (Resin)**

		Registration No.			
reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight ≤ 700)	25068-38-6	500-033-5	25-45	Skin Irrit. 2 H315 Skin Sens. 1 H317 Eye Irrit. 2 H319 Aquatic Chronic 2 H411	GHS07 GHS09
4,4'-methylenediphenol	620-92-8		10-35	Skin Irrit. 2 H315 Eye Irrit. 2 H319 STOT SE 3 H335 Aquatic Chronic 3 H412	GHS07
Talc (Mg3H2(SiO3)4)	14807-96-6		10-35	Not classified	None
triiron tetraoxide	1317-61-9		0.1-3	Not classified	None
Distillates (petroleum), hydrotreated light Kerosine - unspecified [A complex combination of hydrocarbons obtained by treating a petroleum fraction with hydrogen in the presence of a catalyst. It consists of hydrocarbons having carbon numbers predominantly in the range of C9 through C16 and boiling in the range of approximately 150 ° C to 290 ° C (302 ° F to 554 ° F).]	64742-47-8		0.1-1	Asp. Tox. 1 H304	GHS08
Limestone	1317-65-3		5-25	Not classified	None
iron	7439-89-6		5-15	Not classified	None

HAZARDOUS INGREDIENT(S)	CAS No.	Specific Concentration Limit	M-factor	ATE
reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight ≤ 700)	25068-38-6	Skin Irrit. 2	C>= 5.00 <= 100.00	
		Eye Irrit. 2	C>= 5.00 <= 100.00	

Contains no non-classified vPvB substances.

Contains a non-classified substance with a Union workplace exposure limit. Calcium carbonate inhalable dust (1317-65-3) Talc, respirable dust (14807-96-6)

For full text of H/P Statements see section 16.



**ABRO Epoxy Steel Adhesive (Resin)****SECTION 4: FIRST AID MEASURES****4.1 Description of first aid measures**

Inhalation	Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTRE/doctor if you feel unwell.
Skin Contact	Wash contaminated skin with plenty of soap and water. Continue to rinse for at least 20 minutes. Take off immediately all contaminated clothing and wash it before reuse. If skin irritation occurs: Get medical advice/attention.
Eye Contact	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 20 minutes. Get medical attention.
Ingestion	Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

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

May cause irritation. Allergic contact dermatitis. If ingested, Irritating to mouth, throat and stomach.

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

Notes to physician: In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

**SECTION 5: FIREFIGHTING MEASURES****5.1 Extinguishing media**

Suitable Extinguishing media Carbon dioxide, dry chemical, foam.

Unsuitable extinguishing media None.

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

May decompose in a fire, giving off toxic and irritant vapours.

**5.3 Advice for firefighters**

Fire fighters should wear complete protective clothing including self-contained breathing apparatus. Dike fire control water for later disposal.

Hazardous combustion products: May include and are not limited to: Oxides of carbon. Oxides of nitrogen. Oxides of Sulphur.

**SECTION 6: ACCIDENTAL RELEASE MEASURES****6.1 Personal precautions, protective equipment and emergency procedures**

**ABRO Epoxy Steel Adhesive (Resin)**

Keep unnecessary personnel away. Do not touch or walk through spilled material. Ensure adequate ventilation. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep people away from and upwind of spill/leak.

**6.2 Environmental precautions**

Prevent entry into waterways, sewers, basements or confined areas. Spillages or uncontrolled discharges into watercourses must be alerted to the appropriate regulatory body.

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

Stop the flow of material if this is without risk. Before attempting clean up, refer to hazard data given above. Dampen material with water and use shovel or scoop to collect material in clean container for proper disposal. Rinse area with water. Prevent large spills from entering sewers or waterways. Contact emergency services and supplier for advice.

**6.4 Reference to other sections**

See Also Section 8, 13.

**SECTION 7: HANDLING AND STORAGE****7.1 Precautions for safe handling**

Avoid breathing dust/fume/gas/mist/vapours/spray. Wash hands and exposed skin thoroughly after handling. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection.

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

Keep out of reach of children. Store in a tightly closed container in a dry, cool, well-ventilated place. Keep away from incompatible materials such as strong oxidizing agents, bases, acids, amines.

**7.3 Specific end use(s)**

Not known.

**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION****8.1 Control parameters****8.1.1 Occupational Exposure Limits**

Occupational Exposure Limits						
SUBSTANCE.	CAS No.	LTEL (8 hr TWA ppm)	LTEL (8 hr TWA mg/m <sup>3</sup> )	STEL (ppm)	STEL (mg/m <sup>3</sup> )	Note
Calcium carbonate inhalable dust	1317-65-3		10			
Calcium carbonate respirable dust	1317-65-3		4			
Limestone total inhalable	1317-65-3		10			
Limestone respirable	1317-65-3		4			
Marble total inhalable	1317-65-3		10			

**ABRO Epoxy Steel Adhesive (Resin)**

Marble respirable	1317-65-3		4			
Talc, respirable dust	14807-96-6		1			

Region                      Source  
United Kingdom        UK Workplace Exposure Limits EH40/2005 (Fourth edition, published 2020)

Remark                    Notes

**8.2 Exposure controls**

8.2.1. Appropriate engineering controls    Ensure adequate ventilation. A washing facility/water for eye and skin cleaning purposes should be present.

8.2.2. Personal protection equipment    Handle in accordance with good industrial hygiene and safety practice. When using do not eat or drink. Wash hands before breaks and immediately after handling the product.



Eye Protection                      Wear eye protection with side protection (EN166).



Skin protection                      Wear protective clothing and gloves: Impervious gloves (EN 374).



Respiratory protection            Where exposure guideline levels may be exceeded, use an approved NIOSH respirator.



Thermal hazards                    None known.

8.2.3. Environmental Exposure Controls    Spillages or uncontrolled discharges into watercourses must be alerted to the appropriate regulatory body.

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES****9.1 Information on basic physical and chemical properties**

Physical state                      Liquid.  
Colour                                Dark brown coloured liquid.  
Odour                                Mild odor.  
Melting point/freezing point    Not known.  
Boiling point or initial boiling point and boiling range    > 232° C (>450° F).  
Flammability                      Not known.  
Lower and upper explosion limit    Not known.  
Flash Point                        Closed cup: >93.3° C (>199.9° F) [Pensky-Martens..  
Auto-ignition temperature        Not known.  
Decomposition Temperature        Not known.  
pH                                    Not known.  
Kinematic Viscosity                Not known.

**ABRO Epoxy Steel Adhesive (Resin)**

Solubility	Solubility (Water) : Not known. Solubility (Other) : Not known.
Partition coefficient n-octanol/water (log value)	Not known.
Vapour pressure	Not known.
Density and/or relative density	1.5 - 1.7.
Relative vapour density	> 1.
Particle characteristics	Not known.

**9.2 Other information**

None.

**SECTION 10: STABILITY AND REACTIVITY****10.1 Reactivity**

None anticipated.

**10.2 Chemical Stability**

Stable under normal conditions.

**10.3 Possibility of hazardous reactions**

No hazardous reactions known if used for its intended purpose.

**10.4 Conditions to avoid**

Excessive heat.

**10.5 Incompatible materials**

Strong oxidizing agents, bases, acids, amines.

**10.6 Hazardous decomposition products**

Carbon oxides.

**SECTION 11: TOXICOLOGICAL INFORMATION****11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**

Acute toxicity - Ingestion	Calculation method : Not classified.
Acute toxicity - Skin Contact	Calculation method : Not classified.
Acute toxicity - Inhalation	Calculation method : Not classified.
Skin corrosion/irritation	Calculation method : Causes skin irritation.
Serious eye damage/irritation	Calculation method : Causes serious eye irritation.
Skin sensitization data	Calculation method : May cause an allergic skin reaction.
Respiratory sensitization data	Calculation method : Not classified.
Germ cell mutagenicity	Calculation method : Not classified.
Carcinogenicity	Calculation method : Not classified.
Reproductive toxicity	Calculation method : Not classified.
Lactation	Calculation method : Not classified.
STOT - single exposure	Calculation method : May cause respiratory irritation.
STOT - repeated exposure	Calculation method : Not classified.
Aspiration hazard	Calculation method : Not classified.

**11.2 Information on other hazards**

Not known.

**ABRO Epoxy Steel Adhesive (Resin)****SECTION 12: ECOLOGICAL INFORMATION****12.1 Toxicity**

Toxic to aquatic life with long lasting effects.

Toxicity - Aquatic invertebrates	Not known.
Toxicity - Fish	Not known.
Toxicity - Algae	Not known.
Toxicity - Sediment Compartment	Not classified.
Toxicity - Terrestrial Compartment	Not classified.

**12.2 Persistence and degradability**

Not known.

**12.3 Bioaccumulative potential**

Not known.

**12.4 Mobility in soil**

Not known.

**12.5 Results of PBT and vPvB assessment**

Not known.

**12.6 Endocrine disrupting properties**

None known.

**12.7 Other adverse effects**

Not known.

**SECTION 13: DISPOSAL CONSIDERATIONS****13.1 Waste treatment methods**

Dispose of contents in accordance with local, state or national legislation. Send to a licensed recycler, reclaimer or incinerator. Dispose of this material and its container to hazardous or special waste collection point. Dispose at suitable refuse site.

**13.2 Additional Information**

Disposal should be in accordance with local, state or national legislation.

**SECTION 14: TRANSPORT INFORMATION****14.1 UN number or ID number**

UN No. 3082

**14.2 UN proper shipping name**

UN proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

**14.3 Transport hazard class(es)**

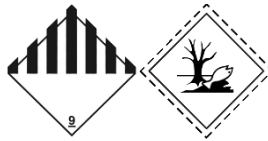
ADR/RID	
ADR/RID Class	9
ADR Classification Code	M6
Special Provisions	274, 335, 375, 601
Limited Quantities	5 L
Excepted Quantities	E1

**ABRO Epoxy Steel Adhesive (Resin)**

Emergency Action Code	•3Z
Mixed Packing Instructions for Packages	P001 IBC03 LP01 R001
Special Packing Provisions for Packages	PP1
Mixed Packing Instructions for Packages	MP19
Packing Instructions for Portable Tanks	T4
Special Provisions for Portable Tanks	TP1 TP29
Tank Code for Tanks	LGBV
Special Provisions for Tanks	
Vehicle for Tank Carriage	AT
ADR Transport Category	3
Tunnel Restriction Code	-
Special Provisions for Carriage - Packages	V12
Special Provisions for Carriage - Bulk	
Special Provisions for Carriage - Loading, Unloading and Handling	CV13
Special Provisions for Carriage - Operation	
ADR HIN	90
IMDG	
IMDG Class	9
Special Provisions	274, 335, 375, 601
Limited Quantities	5 L
Excepted Quantities	E1
Mixed Packing Instructions for Packages	P001 IBC03 LP01 R001
Special Packing Provisions for Packages	PP1
Packing Instructions for Portable Tanks	T4
Special Provisions for Portable Tanks	TP1 TP29
IMDG EMS	F-A S-F
Stowage and Handling Segregation	Category A
Marine Pollutant	
ICAO/IATA	
IATA Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Excepted Quantities	E1
Passenger and Cargo Aircraft Limited Quantities Packing Instructions	Y964
Passenger and Cargo Aircraft Limited Quantities Max net Qty	30Kg G
Passenger and Cargo Aircraft Packing Instructions	964

**ABRO Epoxy Steel Adhesive (Resin)**

Passenger and Cargo Aircraft Max net Qty 450L  
Cargo Aircraft Packing Instructions 964  
Cargo Aircraft Max net Qty 450L  
Special Provisions A97, A158, A197, A215  
Emergency Response Guidebook (ERG) 9L  
Code  
Labels  
Labels 9

**14.4 Packing group**

Packing group III

**14.5 Environmental hazards**

Environmental hazards Classified as a Marine Pollutant.

**14.6 Special precautions for user**

Special precautions for user Not known.

**14.7 Maritime transport in bulk according to IMO instruments**

No information available

**SECTION 15: REGULATORY INFORMATION****15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

European Regulations - Authorisations and/or Restrictions On Use

Candidate List of Substances of Very High Concern for Authorisation Not listed

REACH: ANNEX XIV list of substances subject to authorisation Not listed

REACH: Annex XVII Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight  $\leq$  700) (25068-38-6), 4,4'-methylenediphenol (620-92-8), Distillates (petroleum), hydrotreated light Kerosine - unspecified [A complex combination of hydrocarbons obtained by treating a petroleum fraction with hydrogen in the presence of a catalyst. It consists of hydrocarbons having carbon numbers predominantly in the range of C9 through C16 and boiling in the range of approximately 150 ° C to 290 ° C (302 ° F to 554 ° F).] (64742-47-8)

Community Rolling Action Plan (CoRAP) Not listed

Regulation (EU) N° 2019/1021 of the European Parliament and of the Council on persistent organic pollutants Not listed

Regulation (EC) N° 1005/2009 on substances that deplete the ozone layer Not listed

Regulation (EU) N° 649/2012 of the European Parliament and of the Council concerning the export and import of hazardous chemicals Not listed

Not listed

**ABRO Epoxy Steel Adhesive (Resin)****National regulations**

Other Not known.

**15.2 Chemical Safety Assessment**

A REACH chemical safety assessment has not been carried out.

**SECTION 16: OTHER INFORMATION**

The following sections contain revisions or new statements:

**LEGEND**

Hazard Pictogram(s)



GHS07



GHS09

GHS08: GHS: Health hazard

Hazard classification

Asp. Tox. 1 : Aspiration hazard, Category 1

Skin Irrit. 2 : Skin corrosion/irritation, Category 2

Skin Sens. 1 : Skin sensitization, Category 1

Eye Irrit. 2 : Serious eye damage/irritation, Category 2

STOT SE 3 : Specific target organ toxicity — single exposure, Category 3

Aquatic Chronic 2 : Hazardous to the aquatic environment, Chronic, Category 2

Aquatic Chronic 3 : Hazardous to the aquatic environment, Chronic, Category 3

Hazard Statement(s)

H304: May be fatal if swallowed and enters airways.

H315: Causes skin irritation.

H317: May cause an allergic skin reaction.

H319: Causes serious eye irritation.

H335: May cause respiratory irritation.

H411: Toxic to aquatic life with long lasting effects.

H412: Harmful to aquatic life with long lasting effects.

Precautionary Statement(s)

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

P264: Wash hands and exposed 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.

P273: Avoid release to the environment.

P280: Wear protective gloves/protective clothing/eye protection/face protection.

P302+P352: IF ON SKIN: Wash with plenty of water.



**ABRO Epoxy Steel Adhesive (Resin)**

P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.

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 CENTRE/doctor 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.

P362+P364: Take off contaminated clothing and wash it before reuse.

P391: Collect spillage.

P403+P233: Store in a well-ventilated place. Keep container tightly closed.

P405: Store locked up.

P501: Dispose of contents in accordance with local, state or national legislation.

## Acronyms

ADN : European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways

ADR : European Agreement concerning the International Carriage of Dangerous Goods by Road

ATE : Acute Toxicity Estimate

CAS : Chemical Abstracts Service

CLP : Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures

DNEL : Derived No Effect Level

EC : European Community

EINECS : European Inventory of Existing Commercial Chemical Substances

IATA : International Air Transport Association

IBC : Intermediate Bulk Container

ICAO : International Civil Aviation Organization

IMDG : International Maritime Dangerous Goods

LTEL : Long term exposure limit

PBT : Persistent, Bioaccumulative and Toxic

PNEC : Predicted No Effect Concentration

REACH : Registration, Evaluation, Authorisation and Restriction of Chemicals

RID : Regulations concerning the International Carriage of Dangerous Goods by Rail

STEL : Short term exposure limit

STOT : Specific Target Organ Toxicity

UN : United Nations

vPvB : very Persistent and very Bioaccumulative

## Key literature references and sources for data used to compile the SDS

Regulation (EC) No. 1272/2008 (CLP)

## Disclaimers

Information contained in this publication or as otherwise supplied to Users is believed to be accurate and is given in good faith, but it is for the Users to satisfy themselves of the suitability of the product for their own particular purpose.

**ABRO Epoxy Steel Adhesive (Resin)**

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