

SAFETY DATA SHEET

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

1.1. Product identifier

Trade name or designation of the mixture	ES1 Bonder
Registration number	-
Synonyms	PIG® Multi-Purpose Repair Putty
Product code	803-0036
Issue date	01-November-2012
Version number	00
Revision date	01-November-2012
Supersedes date	-

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

Identified uses	Industrial Leak Sealant
Uses advised against	None known.

1.3. Details of the supplier of the safety data sheet

Supplier

Company name	Team Industrial Services, Inc.
Address	Postbus 37 4380 AA Vlissingen 3237 The Netherlands
Telephone	+31 (0) 118 48 58 00 Fax +31 (0) 118 48 58 86
e-mail	Not available.
Contact person	Not available.

1.4. Emergency telephone number +1 703-527-3887

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 Directive 67/548/EEC or 1999/45/EC as amended

This preparation is classified as dangerous according to Directive 1999/45/EC and its amendments.

Classification Xi;R36/38, R43, R52/53

The full text for all R-phrases is displayed in section 16.

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

Health hazards

Skin corrosion/irritation	Category 2	H315 - Causes skin irritation.
Serious eye damage/eye irritation	Category 2	H319 - Causes serious eye irritation.
Skin sensitisation	Category 1	H317 - May cause an allergic skin reaction.

Environmental hazards

Hazardous to the aquatic environment, long-term aquatic hazard	Category 3	H412 - Harmful to aquatic life with long lasting effects.
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Hazard summary

Physical hazards	Not classified for physical hazards.
Health hazards	Irritating to eyes and skin. May cause sensitisation by skin contact. Occupational exposure to the substance or mixture may cause adverse health effects.
Environmental hazards	Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Specific hazards	Preparation contains an epoxy resin, which may cause sensitisation and development of allergy.
Main symptoms	Irritating to eyes and skin. May cause allergic skin disorders in sensitive individuals.

2.2. Label elements

Label according to Regulation (EC) No. 1272/2008 as amended**Contains:** Diglycidyl ether of bisphenol A**Hazard pictograms****Signal word** Warning**Hazard statements**
H315 - Causes skin irritation.
H317 - May cause an allergic skin reaction.
H319 - Causes serious eye irritation.
H412 - Harmful to aquatic life with long lasting effects.**Precautionary statements****Prevention**
P261 - Avoid breathing dust/fume.
P272 - Contaminated work clothing should not be allowed out of the workplace.
P280 - Wear protective gloves and eye/face protection.
P273 - Avoid release to the environment.
Response
P302 + P352 - IF ON SKIN: Wash with plenty of soap and 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.
P333 + P313 - If skin irritation or rash occurs: Get medical advice/attention.
P337 + P313 - If eye irritation persists: Get medical advice/attention.
P362 - Take off contaminated clothing and wash before reuse.
P391 - Collect spillage.
Storage
Not available.
Disposal
P501 - Dispose of contents/container in accordance with local/regional/national/international regulations.**Supplemental label information** Contains epoxy constituents. May produce an allergic reaction.**2.3. Other hazards** Not a PBT or vPvB substance or mixture.**SECTION 3: Composition/information on ingredients****3.2. Mixtures****General information**

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	INDEX No.	Notes
Diglycidyl ether of bisphenol A	5-10	25068-38-6 500-033-5	-	603-074-00-8	
Classification:		DSD: Xi;R36/38, R43, N;R51/53			CLP: Skin Irrit. 2;H315, Skin Sens. 1;H317, Eye Irrit. 2;H319, Aquatic Chronic 2;H411
2,4,6-Tris-(dimethylaminomethyl)-phenol	1-5	90-72-2 202-013-9	-	603-069-00-0	
Classification:		DSD: Xn;R22, Xi;R36/38			CLP: Acute Tox. 4;H302, Skin Irrit. 2;H315, Eye Irrit. 2;H319
Zinc sulfide	1-5	1314-98-3 215-251-3	-	-	
Classification:		DSD: -			CLP: -

#: This substance has workplace exposure limit(s).
CLP: Regulation No. 1272/2008.
DSD: Directive 67/548/EEC.**Composition comments** All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume. The full text for all R- and H-phrases is displayed in section 16.**SECTION 4: First aid measures****General information** Symptoms may be delayed.**4.1. Description of first aid measures****Inhalation** If symptomatic, move to fresh air. Get medical attention if symptoms persist.

Skin contact	Flush thoroughly with water for at least 15 minutes. Remove contaminated clothing and shoes. If irritation occurs, get medical assistance.
Eye contact	Flush eyes thoroughly with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Get medical attention. In case of irritation from airborne exposure, move to fresh air. Get medical attention if symptoms persist.
Ingestion	IF SWALLOWED: Call a POISON CENTRE or doctor/physician if you feel unwell. Do not induce vomiting. If vomiting occurs, the head should be kept low so that stomach vomit doesn't enter the lungs.

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

4.3. Indication of any immediate medical attention and special treatment needed Treat symptomatically.
Exposure may aggravate pre-existing skin or respiratory disorders.

SECTION 5: Firefighting measures

General fire hazards The product is combustible, and heating may generate vapours which may form explosive vapour/air mixtures.

5.1. Extinguishing media

Suitable extinguishing media Extinguish with foam, carbon dioxide, dry powder or water fog.

Unsuitable extinguishing media None.

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 Selection of respiratory protection for firefighting: follow the general fire precautions indicated in the workplace. Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Special fire fighting procedures Use standard firefighting procedures and consider the hazards of other involved materials. Cool containers exposed to heat with water spray and remove container, if no risk is involved.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel Avoid contact with eyes, skin, and clothing. Eliminate all sources of ignition. Wear appropriate personal protective equipment (See Section 8).

For emergency responders Keep unnecessary personnel away. Use personal protection recommended in Section 8 of the SDS.

6.2. Environmental precautions Avoid discharge into water courses or onto the ground.

6.3. Methods and material for containment and cleaning up Collect and dispose of spillage as indicated in Section 13.

6.4. Reference to other sections For personal protection, see section 8. For waste disposal, see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling Wear appropriate personal protective equipment (See Section 8). Avoid breathing mist or vapour. Avoid contact with eyes, skin, and clothing. Do not taste or swallow. The product is combustible, and heating may generate vapours which may form explosive vapour/air mixtures. Use only with adequate ventilation. Wash thoroughly after handling.

7.2. Conditions for safe storage, including any incompatibilities Keep container tightly closed and in a well-ventilated place. Store in a cool place below 90°F (32°C).

7.3. Specific end use(s) Industrial Leak Sealant

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

Germany. DFG MAK List (advisory OELs). Commission for the Investigation of Health Hazards of Chemical Compounds in the Work Area (DFG)

Components	Type	Value	Form
Zinc sulfide (CAS 1314-98-3)	TWA	2 mg/m ³	Inhalable fraction.

Germany. DFG MAK List (advisory OELs). Commission for the Investigation of Health Hazards of Chemical Compounds in the Work Area (DFG)

Components	Type	Value	Form
		0,1 mg/m ³	Respirable fraction.

Latvia. OELs. Occupational exposure limit values of chemical substances in work environment

Components	Type	Value
Zinc sulfide (CAS 1314-98-3)	TWA	5 mg/m ³

Lithuania. OELs. Limit Values for Chemical Substances, General Requirements (Hygiene Norm HN 23:2007)

Components	Type	Value
Zinc sulfide (CAS 1314-98-3)	TWA	5 mg/m ³

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	Type	Route	Value	Form
2,4,6-Tris-(dimethylaminomethyl)- phenol (CAS 90-72-2)	Workers	Dermal	0,2 mg/kg/day	Long term exposure systemic effects
		Inhalation	0,31 mg/m ³	Long term exposure systemic effects
Diglycidyl ether of bisphenol A (CAS 25068-38-6)	Workers	Dermal	8,33 mg/kg/day	Acute Systemic effects
		Dermal	8,33 mg/kg/day	Long term Systemic effects
		Inhalation	12,25 mg/m ³	Acute Systemic effects
		Inhalation	12,25 mg/m ³	Long term Systemic effects

Predicted no effect concentrations (PNECs)

Components	Type	Route	Value	Form
2,4,6-Tris-(dimethylaminomethyl)- phenol (CAS 90-72-2)	Aqua (freshwater)	Not applicable	0,084 mg/l	
	Aqua (intermittent releases)	Not applicable	0,84 mg/l	
	Aqua (marine water)	Not applicable	0,0084 mg/l	
	STP	Not applicable	0,2 mg/l	
Diglycidyl ether of bisphenol A (CAS 25068-38-6)	Aqua (freshwater)	Not applicable	0,006 mg/l	
	Aqua (intermittent releases)	Not applicable	0,018 mg/l	
	Aqua (marine water)	Not applicable	0,0006 mg/l	
	Oral	Not applicable	11 mg/kg	
	Sediment (freshwater)	Not applicable	0,996 mg/l	
	Sediment (marine water)	Not applicable	0,0996 mg/l	
	Sewage Treatment Plant	Not applicable	10 mg/l	
	Soil	Not applicable	0,196 mg/l	

8.2. Exposure controls

Appropriate engineering controls Ensure adequate ventilation, especially in confined areas.

Individual protection measures, such as personal protective equipment

General information Personal protective 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). Wear a full-face respirator, if needed.

Skin protection

- Hand protection Chemical resistant gloves. Suitable gloves can be recommended by the glove supplier.

- Other	Wear chemical-resistant gloves, footwear and protective clothing appropriate for risk of exposure. Contact chemical protective clothing manufacturer for specific information.
Respiratory protection	If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.
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.
Environmental exposure controls	Environmental manager must be informed of all major releases.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Putty, grey color after cure.
Physical state	Liquid.
Form	Putty.
Colour	Grey.
Odour	Sulfur, mercaptan.
Odour threshold	Not available.
pH	Not applicable.
Melting point/freezing point	Not available.
Initial boiling point and boiling range	Not available.
Flash point	> 60 °C (> 140 °F)
Evaporation rate	Not applicable.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Vapour pressure	Not applicable.
Vapour density	Non-volatile
Relative density	1,95
Solubility(ies)	Insoluble
Partition coefficient (n-octanol/water)	No data available.
Decomposition temperature	Not available.
Viscosity	Not applicable.
Explosive properties	Not available.
Oxidizing properties	Not available.
9.2. Other information	
VOC (Weight %)	< 0,1 %

SECTION 10: Stability and reactivity

10.1. Reactivity	The product is non-reactive under normal conditions of use, storage and transport.
10.2. Chemical stability	Material is stable under normal conditions.
10.3. Possibility of hazardous reactions	Hazardous polymerisation does not occur.
10.4. Conditions to avoid	Heat, sparks, flames, elevated temperatures.
10.5. Incompatible materials	Strong oxidising agents. Strong acids. Strong bases. Amines.
10.6. Hazardous decomposition products	No hazardous decomposition products are known.

SECTION 11: Toxicological information

General information	Occupational exposure to the substance or mixture may cause adverse effects.
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Information on likely routes of exposure

Ingestion	Ingestion may cause irritation and malaise.
Inhalation	Vapours may irritate throat and respiratory system and cause coughing.
Skin contact	Causes skin irritation.
Eye contact	Causes serious eye irritation.

Symptoms Causes skin and eye irritation. Sensitisation.

11.1. Information on toxicological effects

Acute toxicity May cause discomfort if swallowed.

Components	Species	Test results
Zinc sulfide (CAS 1314-98-3)		
Acute		
<i>Dermal</i>		
LD50	Rat	> 2 g/kg
<i>Oral</i>		
LD50	Rat	> 15000 mg/kg
Skin corrosion/irritation	Causes skin irritation.	
Serious eye damage/irritation	Causes serious eye irritation.	
Respiratory sensitisation	Not assigned.	
Skin sensitisation	May cause an allergic skin reaction.	
Germ cell mutagenicity	Not available.	
Carcinogenicity	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.	
Reproductive toxicity	Not available.	
Specific target organ toxicity - single exposure	Not available.	
Specific target organ toxicity - repeated exposure	Not available.	
Aspiration hazard	Not available.	
Mixture versus substance information	Not available.	
Other information	Not available.	

SECTION 12: Ecological information

12.1. Toxicity

Components	Species	Test results	
Diglycidyl ether of bisphenol A (CAS 25068-38-6)			
Fish	LC50	Salmo gairdneri	1,5 mg/l, 96 hours
Aquatic			
Crustacea	EC50	Daphnia magna	2,7 mg/l, 48 hours
Zinc sulfide (CAS 1314-98-3)			
Aquatic			
Fish	LC50	Fathead minnow (Pimephales promelas)	1826 mg/l, 96 hours
12.2. Persistence and degradability	No data available.		
12.3. Bioaccumulative potential	No data available.		
Partition coefficient n-octanol/water (log Kow)	No data available.		
Bioconcentration factor (BCF)	Not available.		
12.4. Mobility in soil	No data available.		
Mobility in general	No data available.		
12.5. Results of PBT and vPvB assessment	Not a PBT or vPvB substance or mixture.		
12.6. Other adverse effects	Harmful to aquatic life with long lasting effects.		

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Residual waste	Dispose of in accordance with all applicable regulations.
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied.
EU waste code	08 04 09* Waste codes should be assigned by the user based on the application for which the product was used.
Disposal methods/information	Disposal recommendations are based on material as supplied. Disposal must be in accordance with current applicable laws and regulations, and material characteristics at time of disposal. Recover and reclaim or recycle, if practical.

SECTION 14: Transport information

ADR

The product is not covered by international regulation on the transport of dangerous goods.

RID

The product is not covered by international regulation on the transport of dangerous goods.

ADN

The product is not covered by international regulation on the transport of dangerous goods.

IATA

The product is not covered by international regulation on the transport of dangerous goods.

IMDG

The product is not covered by international regulation on the transport of dangerous goods.

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code This substance/mixture is not intended to be transported in bulk.

SECTION 15: Regulatory information

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

EU regulations

Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I

Not listed.

Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex II

Not listed.

Regulation (EC) No. 850/2004 On persistent organic pollutants, Annex I as amended

Not listed.

Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 1 as amended

Not listed.

Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 2 as amended

Not listed.

Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 3 as amended

Not listed.

Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex V as amended

Not listed.

Regulation (EC) No. 166/2006 Annex II Pollutant Release and Transfer Registry

Not listed.

Regulation (EC) No. 1907/2006, REACH Article 59(1) Candidate List as currently published by ECHA

Not listed.

Authorisations

Regulation (EC) No. 143/2011 Annex XIV Substances Subject to Authorisation

Not listed.

Restrictions on use

Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use as amended

Not listed.

Directive 2004/37/EC: on the protection of workers from the risks related to exposure to carcinogens and mutagens at work

Not regulated.

Directive 92/85/EEC: on the safety and health of pregnant workers and workers who have recently given birth or are breastfeeding

Not regulated.

Other EU regulations

Directive 96/82/EC (Seveso II) on the control of major-accident hazards involving dangerous substances

Not regulated.

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

2,4,6-Tris-(dimethylaminomethyl)- phenol (CAS 90-72-2)

Diglycidyl ether of bisphenol A (CAS 25068-38-6)

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

Diglycidyl ether of bisphenol A (CAS 25068-38-6)

Other regulations

The product is classified and labelled in accordance with Regulation (EC) 1272/2008 (CLP Regulation) as amended and respective national laws implementing EC directives. This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006 as amended. 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.

National regulations

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

DNEL: Derived No-Effect Level.
PNEC: Predicted No-Effect Concentration.
PBT: Persistent, bioaccumulative and toxic.
vPvB: Very Persistent and very Bioaccumulative.

References

US. IARC Monographs on Occupational Exposures to Chemical Agents
HSDB® - Hazardous Substances Data Bank
National Toxicology Program (NTP) Report on Carcinogens
ACGIH Documentation of the Threshold Limit Values and Biological Exposure Indices

Information on evaluation method leading to the classification of mixture

The classification for health and environmental hazards is derived by a combination of calculation methods and test data, if available.

Full text of any statements or R-phrases and H-statements under Sections 2 to 15

R22 Harmful if swallowed.
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.
R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
H302 - Harmful if swallowed.
H315 - Causes skin irritation.
H317 - May cause an allergic skin reaction.
H319 - Causes serious eye irritation.
H411 - Toxic to aquatic life with long lasting effects.

Training information

Follow training instructions when handling this material.

Disclaimer

The information in the sheet was written based on the best knowledge and experience currently available.