

**Safety Data Sheet**  
**according to 1907/2006/EC**

Ref: HSD/F6

Issue No: 11

Date of Issue: 24<sup>th</sup> October, 2011

**1. Product and Company Identification**

**Product Name:** FORMFIL

**Intended Uses:** Unsaturated polyester resin based formwork repair paste.

**Manufacturer:** UNIVERSAL SEALANTS (UK) LIMITED  
Kingston House, 3 Walton Road, Pattinson North,  
Washington, Tyne & Wear. NE38 8QA, United Kingdom

**Tel:** +44 (0) 191 416 1530      **Fax:** +44 (0) 191 415 4377      **Email:** info@usluk.com

**24 Hour Emergency Tel:** CHEMTREC +1 703 527 3887

**2. Hazard Identification**

**Possible Hazards:**

Base:

R10: Flammable.

R20: Harmful by inhalation.

R36/38: Irritating to eyes and skin.

Hardener

R7: May cause fire.

R36: Irritating to eyes.

R43: May cause sensitisation by skin contact.

**3. Composition / Information on Ingredients**

Name	CAS No	EINECS	Conc. (w/w)	Classification	R. Phrases
BASE COMPONENT					
Styrene	100-42-5	202-851-5	10-20%	F,Xn	10,20,36/38
Limestone	1317-65-3	215-279-6	10-20%	None	None
Talc	14807-96-6	238-877-9	40-50%	None	None
HARDENER COMPONENT					
Dibenzoyl Peroxide	94-36-0	202-327-6	50%	E,O,Xi	3,7,36,43
Dimethyl Phthalate	131-11-3	205-011-6	30%	None	None

**4. First Aid Measures**

**Inhalation:** In case of drowsiness or sickness remove to fresh air, keep patient warm and at rest. If unconscious, turn to the recovery position. Seek medical assistance.

**Skin Contact:** Promptly remove contaminated clothing and wash the affected area with plenty of soap and water to ensure all traces of product are removed, then rinse thoroughly. Any contaminated clothing must be thoroughly cleaned before re-using. Seek medical advice if irritation persists.

**Eye Contact:** Flush with copious amounts of clean water for at least 15 minutes, with the eye lids held open. Seek medical attention.

**Ingestion:** Wash out mouth with water. Keep patient at rest and obtain medical attention. DO NOT INDUCE VOMITING.

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**5. Fire Fighting Measures**

<b>Suitable Extinguisher Media:</b>	Alcohol-resistant foam, dry powder, carbon dioxide or sand.
<b>Unsuitable Extinguishing Media:</b>	Water, halons.
<b>Exposure Hazards:</b>	May give off toxic fumes if heated or involved in a fire, including carbon monoxide, carbon dioxide, benzoic acid, benzene and phenyl benzoate.
<b>Special Protective Equipment:</b>	In the event of fire wear self-contained breathing apparatus.

**6. Accidental Release Measures**

<b>Personal Precautions:</b>	Wear protective equipment as specified in Section 8. Do not eat, drink or smoke. Avoid contact with skin and eyes. Avoid breathing vapours and dust. Eliminate all ignition sources.
<b>Environmental Precautions:</b>	Eliminate all ignition sources. Keep people and animals away. Prevent entry into drains, sewers and watercourses. If spillage enters drains leading to sewerage works inform the local water company. If spillage enters rivers or watercourses inform the Environment Agency.
<b>Spillages:</b>	Cordon off area. Absorb/contain spillage using inert absorbent granules, sand or earth. Transfer collected material to heavy-duty plastic/steel drums and keep in a well ventilated place for subsequent safe disposal. See Section 13.

**7. Handling and Storage**

<b>Handling:</b>	No specific precautions required when handling unopened containers; follow any relevant manual handling guidance. Refer to Sections 6 and 8 if exposure to product is possible. Take precautionary measures against static discharges. Wash thoroughly with soap and water before eating, drinking or smoking, and after work
<b>Storage:</b>	Store in original containers in a well ventilated area away from heat, sunlight, ignition sources or open flame. Keep away from reducing agents (eg amines), acids, alkalis and heavy metal compounds (eg accelerators, driers, metal soaps).

**8. Exposure Controls / Personal Protection**

<b>Occupational Exposure Standards:</b>	Styrene - 8 hour TWA 100ppm, 15 min STEL 250ppm WEL. This exposure limit must not be exceeded at any time during the exposure period. Talc - 8 hour TWA 1mg/m <sup>3</sup> (respirable) WEL. General Dust - 8 hour TWA 10mg/m <sup>3</sup> (total inhalable), 4mg/m <sup>3</sup> (respirable) WEL.
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While the base component contains talc and general dusts, which have an Workplace Exposure Limits assigned to them, these materials are not present in powder form and therefore do not present an inhalation hazard.

Dibenzoyl Peroxide - 8 hour TWA 5mg/m<sup>3</sup> WEL.

Dimethyl Phthalate - 8 hour TWA 5mg/m<sup>3</sup>, 15min STEL 10mg/m<sup>3</sup> WEL.

While the hardener component contains dibenzoyl peroxide and dimethyl phthalate, it is very unlikely that these Workplace Exposure Limits would be exceeded under foreseeable conditions of use.

**Engineering Control Measures:**

Refer to any applicable COSHH assessments. Engineering controls should be used where practicable in preference to personal protection and may include physical containment and good ventilation.

**Respiratory Protection:**

If levels of styrene exceed the above limits, or in the unlikely event that the limits for dibenzoyl peroxide or dimethyl phthalate are exceeded, use an approved respirator fitted with an appropriate gas cartridge (organic substance). All items must conform to EN149 and should be suitable for the levels of contamination present in the workplace.

**Hand Protection:**

Wear Neoprene, Nitrile or PVC gloves or gauntlets. These must be manufactured to EN374. The material breakthrough time should be stated by the glove manufacturer, and must be observed at all times.

**Eye Protection:**

If eye contact with the product is likely chemical resistant goggles should be worn.

**Body Protection:**

Wear suitable impervious, chemical resistant overalls.

**Foot Protection:**

Wear chemical resistant safety footwear.

**Hygiene Measures:**

Handle in accordance with good industrial hygiene and safety practice.

<b>9. Physical and Chemical Properties</b>
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<b>Appearance:</b>	Base Off-white paste	<b>Boiling Point:</b>	Base	>=145°C
	Hardener White paste		Hardener	Decomposes
<b>Odour:</b> (Base)	Styrene	<b>Vapour Pressure @ 20°C:</b>	Base	6.52mb
(Hardener)	Faint		Hardener	N/A
<b>pH:</b> (Base)	N/A	<b>Evaporation Rate (Butyl Acetate = 1):</b>		N/D
(Hardener)	Weak Acid			
<b>Flash Point:</b> (Base)	>31°C	<b>Flammable Limits in Air:</b>	<b>Upper:</b>	6.1%
(Hardener)	>SADT value		<b>Lower:</b>	1.1%
<b>Solubility:</b> (Base)	Immiscible in water	<b>Autoignition Temperature:</b>	(Base)	490°C
(Hardener)	Insoluble in water			

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**SADT:** (Hardener) 50°C

**Flammability:** (Base) Flammable  
(Hardener) N/D

**Peroxide Content:** (Hardener) 49-51%

**Specific Gravity:** 1.74 (Mixed)

**Active Oxygen Content:** (Hardener) 3.24-3.37%

**10. Stability and Reactivity**

**Stability:** Base: Stable under normal conditions (see Section 7).  
Hardener: A dangerous self-accelerating decomposition reaction and, under certain circumstances, explosion or fire can be caused by direct contact with incompatible substances or by thermal decomposition at and above the SADT of 50°C.

**Materials to Avoid:** Base: Strong oxidising agents.  
Hardener: Acids, alkali, heavy metals and reducing agents. Avoid contact with rust, iron and copper. Do not mix with peroxide accelerators. Do not mix with reducing agents. Avoid temperatures above 25°C. Avoid shock and friction.

**Hazardous Decomposition Products:** Carbon monoxide, carbon dioxide, benzoic acid, benzene and phenyl benzoate.

**11. Toxicological Information**

There is no data available on the product itself.  
The following data applies to the Base material.

**Acute Toxicity:**

**Inhalation:** Harmful.

**Eye Contact:** Irritating to the eyes.

**Skin Contact:** Irritating to the skin.

**Ingestion:** May result in irritation to the gastro intestinal tract.

The following data applies to the Benzoyl peroxide component of the Hardener material.

**Acute Toxicity:**

**Eye Contact:** Moderately irritating.

**Skin Contact:** Non-irritating.

**Ingestion:** Oral LD50 (rat) >5000 mg/kg

**Genotoxicity:** Ames test: not mutagenic.

**12. Ecological Information**

There is no data available on the product itself.  
The following data applies to un-mixed material only, as once the base and hardener are combined the harmful constituents will react to form an inert product.  
Both styrene and dibenzoyl peroxide are readily biodegradable.

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**Dibenzoyl peroxide (78%)**

**Ecotoxicity:** Fish: Acute toxicity, 96h-LC50 = 2.0 mg/ltr (Poecilia reticulata)  
Bacteria: Activated sludge respiration inhibition test EC50 = 35 mg/ltr.

Hazardous for water. Do not allow the product to reach ground water, water bodies or sewage systems. Must not reach sewage water or drainage ditch undiluted or unneutralised.

**13. Disposal Considerations**

Un-reacted materials: Dispose of used containers and un-reacted product as hazardous waste, in accordance with all applicable local and national regulations, and in compliance with the Environmental Protection (Duty of Care) Regulations 1991.

**14. Transport Information**

**Kit:**

UN Number:	3269	Packaging Group:	III
<b>ROAD</b>		<b>AIR</b>	
ADR Class:	Limited quantity	Air Transport Number:	3
ADR Hazard No:	in compliance with chapter 3.4 LQ7 less than 5 litres per inner package	Packaging Instruction:	370

**SEA**

IMDG Class:	3
EMS:	F-E, S-D
Marine Pollutant:	No
Proper Shipping Name:	Polyester resin kit.

**15. Regulatory Information**

**EU Classification and Labelling Particulars:**

**Base:**

**Designated Name:** FORMFIL - BASE

**Classification:** Flammable & Harmful

**Indication(s) of Danger:** F & Xn

**Contains:** Styrene

**Risk and Safety Phrases:**

R10:	Flammable.
R20:	Harmful by inhalation.
R36/38:	Irritating to eyes and skin.
S23:	Do not breathe vapours.
S36/37/39:	Wear suitable protective clothing, gloves and eye/face protection.

**Hardener:**

**Designated Name:** FORMFIL - HARDENER

**Classification:** Oxidising & Irritant

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**Indication(s) of Danger:** O & Xi

**Contains:** 50% Dibenzoyl Peroxide with Dimethyl Phthalate

**Risk and Safety Phrases:**

R7: May cause fire.  
R36: Irritating to eyes.  
R43: May cause sensitisation by skin contact.  
S3/7: Keep container tightly closed in a cool place.  
S14: Keep away from reducing agents (e.g. amines), acids, alkalies and heavy metal compounds (e.g. accelerators, driers, metal soaps).  
S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
S50: Do not mix with peroxide-accelerators or reducing agents.

**UK Guidance Publications:** EH40; Occupational Exposure Limits, HSE. Revised annually.  
EH44; Dust in the Workplace: General Principles of Protection, HSE.  
EH26; Occupational Skin Diseases - Health and Safety Precautions, HSE.  
MDHS 14; Methods for the Determination of Respirable and Total Dusts, HSE.  
COSHH Essentials, HSE

**UK Legislation:** Health and Safety at Work, etc Act, 1974, and relevant Statutory Provisions.  
Control of Substances Hazardous to Health Regulations, 1999.  
The Manual Handling Operations Regulations, 1992.  
The Personal Protective Equipment at Work Regulations, 1992.  
Chemicals (Hazard Information and Packaging for Supply) Regulations, 2002 - CHIP 3.

<b>16. Other Information</b>
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**Full Text of R-Phrases Referred to above:**

R3: Extreme risk of explosion by shock, friction, fire or other sources of ignition.  
R7: May cause fire.  
R10: Flammable.  
R20: Harmful by inhalation.  
R36: Irritating to eyes.  
R36/38: Irritating to eyes and skin.  
R43: May cause sensitisation by skin contact.

**Training Advice:** Do not use unless trained to do so. Refer to the Technical Data Sheet for the product.

**Recommended Uses:** For professional use only. This product is designed for use for the rectification of surface defects on timber and metal formwork, and for small defects in concrete surfaces.

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**Further Information:**

This Safety Data Sheet was compiled in accordance with EU Directives 67/548/EEC and 1999/45/EC. The Ariel Regulatory Database provided by the 3E Corporation in Copenhagen, Denmark. ESES (The European Chemical Substances Information System), provided by the European Commission Joint Research Centre in Ispra, Italy. Reference was also made to the above legislation and guidance publications.

**MSDS First Issued:**

2<sup>nd</sup> November, 1989.

**MSDS Revised:**

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**Changes in this Version:**

Section 14 revised to reflect change in IATA classification.

**Prepared By:**

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**Disclaimer:**

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