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1. IDENTIFICATION OF THE PRODUCT AND COMPANY

1.1 Identification of the preparation: VINYLESTER RESIN Code: 51584
HARDENER VINYLESTER Code: 51545

1.2 Use of the preparation: Chemical anchoring for the building industry.

1.3 Company:

JCP Construction Products, Unit 07 Princess Court, Horace Rd, Kingston Surrey, KT1 2SL
Tel. 020 8546 6545. Fax 020 8546 6019, Email enquiries@jcpfixings.co.uk

1.4 Emergency phone number: 020 8546 6545

*2. IDENTIFICATION OF HAZARDS

May cause sensitization by skin contact.

*3. COMPOSITION/INFORMATION ON INGREDIENTS

Substances taking part in a percentage higher than the exemption limit and presenting a health and/or environment hazard, and/or with a Communitarian workplace exposure limit:

10-25 %	Ethylene dimethacrylate Xi:R37 R43	EC 202-617-2 Index No. 607-114-00-5 CAS 97-90-5
2,5-10 %	Hydroxypropyl methacrylate Xi:R36 R43	EC 248-666-3 Index No. 607-125-00-5 CAS 27813-02-1
< 2,5 %	Dibenzoyl peroxide E:R2 Xi:R36 R43	EC 202-327-6 Index No. 617-008-00-0 CAS 94-36-0

For more information on dangerous ingredients, see sections 8, 11, 12 and 16.

*4. FIRST AID MEASURES

When in doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person.

4.1 By inhalation: Remove the patient out of the contaminated area into the fresh air. If breathing is irregular or stops, administer artificial respiration. If the person is unconscious, place in appropriate recovery position. Keep the patient warm and at rest until medical attention arrives.

4.2 By contact with the skin: Remove contaminated clothing and wash it separately with an alkaline detergent. Throw away clothing should it be highly contaminated. Avoid concurrent exposure to sunlight or other sources of UV radiation which may increase skin sensitivity. Wash thoroughly the affected area with plenty of cold or lukewarm water and neutral soap, or use a suitable skin cleanser. Apply lanolin ointment. In the event of coetaneous eruptions contact a doctor. In the case of skin reddening or rashes, contact a doctor immediately.

4.3 By contact with eyes: Remove contact lenses. Rinse eyes copiously by irrigation with plenty of clean, fresh water for at least 15 minutes, holding the eyelids apart, until the irritation is reduced. If possible, alternate the rinsing with a 5% solution of sodium acerbate in water or a 2% solution of sodium bicarbonate in water. Both solutions should not to be more than 4 weeks old. Do not apply oils. Avoid concurrent exposure to sunlight or other sources of UV radiation which may increase eye sensitivity . Call a physician immediately.

4.4 By ingestion: If swallowed, seek immediate medical attention. If there has been any contact with the mouth, rinse out with large quantities of water only. Do not induce vomiting, due to the risk of aspiration. Keep the patient at rest.

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***5. FIRE-FIGHTING MEASURES**

5.1 Means of Extinction: Extinguishing powder or CO₂. In the case of more important fires, also alcohol resistant foam and water spray/mist. Do not use for extinguishing: halon.

5.2 Specific risks: As consequence of combustion or thermal decomposition, hazardous products may be produced: carbon monoxide, carbon dioxide, nitrogen oxides, hydrochloric acid. Exposure to combustion or decomposition products may be a hazard to health. Pyrolyzed acrylates are highly irritating to the respiratory system.

5.3 Fire-proof protective equipment: Depending on magnitude of fire, heat-proof protective clothing may be required, appropriate independent breathing apparatus, gloves, protective glasses or face masks and boots.

5.4 Other recommendations: Cool with water the tanks, cisterns or containers close to sources of heat or fire. Bear in mind the direction of the wind. Do not allow fire-fighting residue to enter drains, sewers or water courses.

***6. ACCIDENTAL SPILLAGE MEASURES**

6.1 Personal precautions: Eliminate possible sources of ignition and when appropriate, ventilate the area. Do not smoke. Avoid direct contact with this product. Avoid breathing vapours. For exposure controls and personal protection measures, see section 8.

6.2 Environmental precautions: Avoid contamination of drains, surface or subterranean water and soil. In the case of large scale spills or when the product contaminates lakes, rivers or sews, inform the appropriate authorities in accordance with local regulations.

6.3 Cleaning-up methods: Contain and mop up spills with non-combustible absorbent materials (earth, sand, vermiculite, diatomaceous earth, etc.). Do not use rags. The peroxide impregnated absorbent must be placed in a safe place and not put into a container. For subsequent waste disposal, follow the recommendations in section 13.

***7. HANDLING AND STORAGE**

7.1 Handling precautions: Comply with the health and safety at work laws.

- General recommendations: Do not weight it in the storage area. Avoid friction, rough handling or strong impacts. Avoid any type of leakage or escape. Keep the container tightly closed.

- Recommendations for the prevention of fire and explosion risks: Vapours are heavier than air and may spread along floors to a considerable distance. Vapours can form explosive mixtures with air and are able to reach distant ignition sources and flame up or explode. Due to its flammability, this material should only be used in areas from which all naked lights and other sources of ignition have been excluded and away from other heat or electrical sources. Do not smoke.

- Flash point: >61°C Setaflash

- Recommendations for the prevention of toxicological risks: Do not eat, drink or smoke in application and drying areas. After handling, wash hands with soap and water. For exposure controls and personal protection measures, see section 8.

7.2 Storage conditions: Prevent unauthorized access. Keep out of reach of children. This product should be stored isolated from heat and electrical sources. Do not smoke in storage area. Keep in a cool place. In order to avoid leakages, the containers, after use, should be closed carefully and placed in a vertical position. Class of store: According to current legislation. Maximum storage period: 12 months. Temperature interval: min: 5°C, max: 30°C.

- Incompatible materials: Keep away from reducing agents, oxidizing agents, acids, alkalis, amines, metals, heavy-metal compounds, polymerization initiators.

- Conditions to avoid: Heat: This preparation is quite stable at normal temperatures (around 20°C). However, at higher temperatures an exo-thermic decomposing reaction takes place. In the event of the decomposition taking place so fast that the heat only partially dissipates, an increased acceleration of the product's temperature occurs, finally giving rise to an auto-accelerated breaking down of the organic peroxide. Depending on the circumstances, eg. the amount, the degree of containment, etc., intense decomposition, auto-ignition or even an explosion may take place. Light: Avoid direct contact with sunlight as this could cause a rise in temperature, with the subsequent danger of the peroxide decomposing. Humidity: Avoid extreme humidity conditions.

- Type of packaging: According to current legislation.

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*8. EXPOSURE CONTROLS/PERSONAL PROTECTION 98/24/EC

8.1 Occupational Exposure Limits (TLV) AGCIH 2005

	TWA		STEL		An
	ppm	mg/m3	ppm	mg/m3	
Dibenzoyl peroxide		5,0		A4	1996

A4 - Non classified as carcinogenic in humans.

8.2 Occupational exposure controls, Directive 89/686/EEC: Provide adequate ventilation. Where reasonably practicable, this should be achieved by the use of local exhaust ventilation and good general extraction.

- Protection of respiratory system: Avoid the inhalation of vapours. Mask: Mask for gases and vapours (EN141). In order to obtain a suitable protection level, the filter class must be selected depending on the type and concentration of the contaminating agents present, in accordance with the specifications supplied by the filter producers. The respiratory equipment with filters does not work satisfactorily when the air contains high concentrations of vapour.

- Protection of eyes and face: Install emergency eye baths close to the working area. Do not wear contact lenses. Goggles: Safety goggles designed to protect against liquid splashes, with suitable lateral protection (EN166). Face shield: Recommendable when there is a risk of spillage, diffusion or atomization of the liquid.

- Protection of hands and skin: Install emergency showers close to the working area. Barrier creams may help to protect the exposed areas of the skin. Barrier creams should not be applied once exposure has occurred. Gloves: Gloves resistant against chemicals (EN374). Do not wear PVC gloves as PVC absorbs acrylates. The breakthrough time of the selected glove material should be superior to the pretended period of use. The gloves should be immediately replaced when any sign of degradation is noted. Boots: No. Apron: No. Clothing: Suitable work clothes which avoid contact with the product should be worn. Put away work clothes under control and separately from the rest. Do not take contaminated clothing home. Wash contaminated work clothes before wearing them again.

8.3 Environmental exposure controls: Avoid any spillage in the environment. Avoid any release into the atmosphere.

*9. PHYSICAL AND CHEMICAL PROPERTIES

- Physical state: Paste
- Colour: Beige (Comp. A) / Varied (Comp. B)
- Odour: Characteristic
- Viscosity: 5×10^6 cps 20°C Brookfield (Comp. A)
- Specific gravity: 1,7 g/cc at 20°C (Comp. A) / 1,6 g/cc at 20°C (Comp. B)
- Flash point: >61°C
- Boiling point: 212°C at 760 mmHg
- Vapour pressure: 0,07 mmHg at 20°C

*10. STABILITY AND REACTIVITY

10.1 Stability: Stable under recommended storage and handling conditions.

10.2 Dangerous reactions: Possible dangerous reaction with reducing agents, oxidizing agents, acids, alkalis, amines, metals, heavy-metal compounds, polymerization initiators. Special care must be taken under all circumstances that there is no direct contact with accelerators, given that a violent decomposition could take place or even an explosion.

10.3 Thermal decomposition: As consequence of thermal decomposition, hazardous products may be produced: oxygen, nitrogen oxides, hydrochloric acid. The vapours given off on decomposing are inflammable, therefore any source of ignition could cause a fire.

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*11. TOXICOLOGICAL INFORMATION

No experimental toxicological data on the preparation is available.

11.1 Toxicological effects: Exposure to solvent vapour concentrations in excess of the stated occupational exposure limit, may result in adverse health effects, such as mucous membrane and respiratory system irritation and adverse effects on kidneys, liver and central nervous system. Symptoms and signs include: headache, dizziness, fatigue, muscular weakness, drowsiness and, in extreme cases, unconsciousness. Ingestion may result in the following effects: sore throat, abdominal pain, drowsiness, nausea, vomiting and diarrhoea; other effects may be as described for exposure to vapours. Repeated or prolonged contact with the solvents of the preparation, may cause removal of natural fat from the skin, resulting in non-allergic contact dermatitis and absorption through the skin.

- Some organic peroxides will cause serious, irreversible ocular injuries to the cornea, even after brief contact.

- The preparation's acrylic ingredients have irritant properties. Cases of skin allergies have been noted. Splashes in the eyes can cause irritation. Inhaling drops suspended in the air or aerosols may cause irritation to the respiratory system. Ingestion may cause collapse, serious respiratory difficulties and stimulation of the central nervous system. Repeated or prolonged contact with the skin or mucous membranes could give rise to symptoms of irritation, such as reddening, blistering, dermatitis, etc..

11.2 Dose and lethal concentrations for individual ingredients:

	DL50 Oral mg/kg	DL50 Coetaneous mg/kg	CL50 Inhalation mg/l.4hours
Ethylene dimethacrylate	3300 Rat		
Dibenzoyl peroxide	7710 Rat		

For more information about ingredients dangerous to health, see sections 2 and 8.

*12. ECOLOGICAL INFORMATION

No experimental ecotoxicological data on the preparation as such is available.

12.1 Spills on the soil: Prevent contamination of soil.

12.2 Spills in water: Do not allow to escape into drains, sewers or water courses.

12.3 Emissions to the atmosphere: Avoid any solvent release into the atmosphere.

- Product VOC: 282 g/l ASTM D-3960

- Mixing application VOC: 75 g/l ASTM D-3960

12.4 Ecotoxicological data for individual ingredients:

	CL50 mg/l.96hours	CE50 mg/l.48hours	CI50 mg/l.72hours
Dibenzoyl peroxide	2000 Fishes		

*13. CONSIDERATIONS FOR DISPOSAL

13.1 Handling of waste, Directive 75/442/CEE~91/156/CE: Take all necessary measures to prevent the production of waste whenever possible. Analyse possible methods for revaluation or recycling. Do not discharge into drains or the environment, dispose of at an authorised waste collection point. Waste should be handled and disposed of in accordance with current local/national regulations. For exposure controls and personal protection measures, see section 8.

13.2 Disposal of empty containers, Directive 94/62/EC: Emptied containers and packaging should be disposed of in accordance with currently local/national regulations. Never re-use a container which has contained peroxides.

13.3 Procedures for neutralizing or destroying the product: Controlled incineration in special facilities for chemical waste, but in accordance with local regulations.

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14. TRANSPORT INFORMATION

VINYLESTER RESIN KIT

14.1 Transport by road, Directive 94/55/EC (ADR):

Transport by rail, Directive 96/49/EC (RID):

Class: 3 Packaging group: III UN no. 3269

Transport document: Consignment paper

Written instructions.

14.2 Transport by sea (IMDG):

Class: 3 Packaging group: III UN no. 3269

Emergency Sheet (EmS): F-E,S-D

First Aid Guide (MFAG): -

Marine pollutant: No

Transport document: Shipping Bill of lading

14.3 Transport by air (ICAO/IATA):

Class: 3 Packaging group: III UN no. 3269

Transport document: Air Bill of lading

15. INFORMATION ON REGULATIONS

15.1 EC Labelling: Xi

This product is IRRITANT in accordance with Guideline 67/548/EEC and 1999/45/EC.

R37 Irritating to respiratory system.

R43 May cause sensitization by skin contact.

S3/7 Keep container tightly closed in a cool place.

S14 Keep away from reducing agents, oxidizing agents, acids, alkalis, amines, metals, heavy-metal compounds.

S36/37/39 Wear suitable protective clothing, gloves and protection for eyes, face.

S51 Use only in well-ventilated areas.

Dangerous ingredients: Hydroxypropyl methacrylate, Ethylene dimethacrylate

15.2 Restrictions to the marketing and use in accordance with Directive 76/769/EEC: Not applicable.

15.3 Other regulations: Not available.

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***16. OTHER INFORMATION**

Intended use: Only for professional use.

Component A:

Xi

This product is IRRITANT in accordance with Guideline 67/548/EEC and 1999/45/EC.

R43 May cause sensitization by skin contact.

S24 Avoid contact with skin.

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

S37 Wear suitable gloves.

S51 Use only in well-ventilated areas.

Dangerous ingredients: Hydroxypropyl methacrylate, Ethylene dimethacrylate.

Component B:

O, Xi

This product is OXIDIZING and IRRITANT in accordance with Guideline 67/548/EEC and 1999/45/EC.

R7 May cause fire.

R36 Irritating to eyes.

R43 May cause sensitization by skin contact.

S3/7 Keep container tightly closed in a cool place.

S14 Keep away from reducing agents, oxidizing agents, acids, alkalis, amines, metals, heavy-metal compounds.

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

S36/37/39 Wear suitable protective clothing, gloves and protection for eyes, face.

S50 Do not mix with accelerators or reducing agents.

Dangerous ingredients: Dibenzoyl peroxide

Text of R-phrases listed in section 2:

R2 Risk of explosion by shock, friction, fire or other sources of ignition.

R36 Irritating to eyes.

R37 Irritating to respiratory system.

R43 May cause sensitization by skin contact.

Material Safety Data Sheet regulations: Material Safety Data Sheet in accordance with Regulation (EC) No 1907/2006.

The information of this Material Safety Data Sheet, is based on the present state of knowledge and on current UE and national laws, as the users' working conditions are beyond our knowledge and control. The product is not to be used for other purposes than those specified, without first obtaining written handling instruction. It is always the responsibility of the user to take all necessary steps in order to fulfil the demand laid down in the local rules and legislation. The information in this Material Safety Data Sheet is meant as a description of the safety requirements of the product and it is not to be considered as a guarantee of the product's properties.
