

SAFETY DATA SHEET

MONOTEK® FLOORING – RESIN COMPONENTS

SECTION 1 - IDENTIFICATION

Product Identifier: MONOTEK® RESIN GRADES - B71, 410, 412, 332, 510, 526, 527, 528

Recommended Use: Methyl methacrylate resin binder system for industrial floorings, toppings and protective coatings in form of self levelling systems, mortars and patching compounds.

Company Details: **D.P.J. Coating Systems Pty Ltd** (Trade name owners – MONOTEK®)
Head Office: 2/ 25 Jersey Road, BAYSWATER, Victoria 3153
 Ph: 1800 062 301 Fax: 03 9720 8540 E: admin@dpj.com.au
 Website: www.monotek.com.au Emergency: 0397272299

SECTION 2 – HAZARD IDENTIFICATION

Hazardous according to criteria of Worksafe Australia.

Highly flammable. Irritating to eyes, respiratory system and skin. May cause sensitization by skin contact.

Other Names: Methyl Methacrylate resin solution, Flammable Liquid.

U N Number: 1866

Dangerous Goods & Sub Risk Class 3

Hazchem Code: 3(Y)E

Packaging Group: II

Poison Schedule (S.U.S.D.P.): S5

Product label elements:

RELEVANT PICTOGRAMS

Environmental Exclamation Mark Health Hazard Flammable Flammable liquid



SECTION 3 – COMPOSITION & PROPERTIES

General Description: Solution of an acrylic polymer in methacrylic acid esters/acrylic acid esters.

Components	CAS Number	Hazard symbols(s) / R phrase (s)	Content
Methyl methacrylate (MMA)	80-62-6	F, Xi 11-36/37/38 –43	30 – 60%
2-Ethylhexylacrylate	103-11-7	Xi 37/38-43	15 – 40%
N,N-bis-(2-hydroxypropyl)-p-toluidine	38668-48-3	T 25-52/53	0.1 – 1.0%



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Product Name: MONOTEK MMA Resin grades B71/410/412/332/510/526/527 REVISED / Issued: 06/12/2016
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This MSDS summarises, to our best knowledge at the date of issue, the health and safety hazards of the product and provides general guidance on how to safely handle it in the workplace. Since D.P.J. Coating Systems Pty Ltd cannot anticipate all the conditions and situations under which the product may be used, each user must, prior to use, assess and control the risks arising from the use of the product.

SECTION 4 – FIRST AID MEASURES**Health Effects**

Acute: Irritating to eyes, respiratory system and skin. May cause sensitization by skin contact.

Chronic:

First Aid:**General information:**

Removed soiled, soaked clothing immediately. Medical treatment necessary if symptoms occur which are obviously caused by skin or eye contact with the product or by inhalation of its concentrated vapours.

Vapour:

PROVIDE FRESH AIR. IF BREATHING IS LABOURED. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION. SEEK MEDICAL ADVICE.

Contact:

Skin - REMOVE FROM SKIN WITH SUITABLE SOLVENT BASED HANDCLEANER, FOLLOWED BY A THOROUGH WASHING WITH A MILD SOAP AND FRESH WATER. IF IRRITATION OCCURS CONSULT DOCTOR.

Eyes - FLUSH IMMEDIATELY WITH COPIUS AMOUNTS OF WATER AND SEEK MEDICAL ADVICE IMMEDIATELY.

Swallowed - **DO NOT** INDUCE VOMITING. OBTAIN MEDICAL ATTENTION IMMEDIATELY.

Emergency numbers:

Product number to be identified Bus (03) 9720 8777 or Free Call 1800 062 301 AH (03) 9727 2299

SECTION 5 – FIRE-FIGHTING MEASURES**Fire/Explosion Hazard:**

Protection against fire and explosion: Highly flammable. Keep away from sources of ignition. No smoking! Take precautionary measures against static discharges. Cool the container with water in case of fire (risk of polymerisation, see "Hazardous Reactions"). When heated above the flash point and/or during spraying (atomising), ignitable mixtures may form in air. Use explosion proof equipment only.

Extinguishing media, suitable

(X) dry powder (X) foam (X) water mist

Other: Covering with sand CO₂, halone. Water spray jet from safe distance.

Not to be used: Water.

Special protective equipment for fire fighting: Wear self contained breathing apparatus.

SECTION 6 – ACCIDENTAL RELEASE MEASURES**SPILLS -**

Precautionary measures related to people: Ensure adequate ventilation. Use personal protective clothing, Keep away from sources of ignition.

Use breathing apparatus if exposed to concentrated vapours / dust/ aerosols or mists.

Environmental protective measures: Prevent product from entering drains/ surface water/ ground water.

Methods of clean-up/ absorption: Larger quantities: Remove mechanically (by pumping). Use explosion proof equipment. After spillage / leakage of small amounts: Prevent from spreading by mechanical means. Pick up residue with absorbent material (eg. DTE, sand, sawdust, universal absorbent, etc...) Dispose of in accordance with regulations.



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SECTION 7 – HANDLING & STORAGE

Handling:

Instructions on safe handling: Keep containers tightly closed. Ensure area is well ventilated.

Information on fire & explosion protection: Keep away from sources of ignition – NO SMOKING. Take precautionary measures against static discharges. In the event of fire, cool any endangered containers with water. Wear self contained breathing apparatus. When heated above the flashpoint and/or during spraying (atomising), ignitable mixtures may form in air. Use explosion proof equipment.

Storage:

Requirements for storage areas and containers: Keep only in original containers at a temperature not exceeding 30°C. Protect from radiated heat/ sunlight. Fill container to approximately 80% only as oxygen (air) is required for stabilization. With large storage containers, make sure that the oxygen (air) supply is sufficient to ensure stability.

Extinguishing media, suitable

(X) dry powder (X) foam (X) water mist

Other: Covering with sand CO₂, halone. Water spray jet from safe distance.

Not to be used: Water.

Special protective equipment for fire fighting: Wear self contained breathing apparatus.

SECTION 8 – EXPOSURE CONTROLS & PERSONAL PROTECTION

Exposure Standards:

Exposure standard represents the airborne concentration of a particular substance or mixture that must not be exceeded.

	Cas No:	TWA (ppm)	TWA (mg/m ³)	STEL (ppm)	STEL (mg/m ³)	Carcinogen Category	Notices	Ref	Notes
NOHSC / Safe Work Australia.	80-62-6	50	208	100	416	-	-	-	-
MAK (TWA-GERM): (ref to MMA (1988))		50	208	100	416	-	-	-	-
OEL (TWA-UK):		100	410						
TLV (TWA-USA) (refer to MMA 1989)		100	410						

*** Safe Work Australia note:** No exposure standard should be applied without reference to the Guidance Note on the interpretation of Exposure Standards for Atmospheric Contaminants in the Occupational Environment (NOHSC:3008(1995) and to related documentation

8-hour Time-weighted average (TWA) means the average airborne concentration of a particular substance when calculated over an eight (8)-hour working day, for a five-day working week.

Short term exposure limit (STEL) means the airborne concentration of a particular substance calculated as a time-weighted average over 15 minutes.

Personal Protection:

General protective measures: Do not inhale vapours. Avoid contact with eyes & skin.

Respiratory protection: respiratory protection (short term), filter appliance – type AK-P, - only required in very confined spaces with poor ventilation. Force ventilate if required.

Hand protection: In permeation tests, butyl, PVC & nitrile gloves perform better than latex or natural rubber. Gloves should be replaced regularly, especially after extended contact with the product. For each workplace, a suitable glove type must be selected.

Eye Protection: Tightly fitting goggles required when mixing/ blending materials.

Body Protecton: When handling larger quantities – face mask, rubber boots and rubber apron.



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Hygiene measures: Remove soiled or soaked clothing immediately. Store work clothing separately. Follow usual good standards of occupational hygiene. Use skin protection preparation (barrier cream) under gloves as a preventative measure.

Engineering Controls:

Ensure the area is well ventilated. Take precautionary measures against static discharges.

Keep containers tightly closed in a cool (max. 25°C), well ventilated place. protect against light, heat and direct sunlight. Shelf life: 6 months and depends on stabilization and storage conditions.

Flammability:

Keep away from sources of ignition**No smoking!**

Take precautionary measures against static discharges. Also refer to "Handling and Storage".

SECTION 9 – PHYSICAL & CHEMICAL PROPERTIES

Appearance - Form: Liquid **Colour:** Clear to moderately turbid **Odour:** Ester like /Characteristic of MMA

Solubility in water	approx. 20	g/l at 20 ⁰
Boiling Point	approx. 100	⁰ C @ 1.013 hPa (methyl methacrylate)
Ignition temperature (DIN51794)	430 ⁰	⁰ C (methyl methacrylate)
Lower Explosion Limit	2.1	% (V) methyl methacrylate)
Upper Explosion Limit	12.5	% (V) methyl methacrylate)
Density	approx. 0.98	g/cm ³ at 20 ⁰ C
Bulk Density	n.a.	kg/m ³
Vapour pressure	approx. 40	hPa @ 20 ⁰ C (methyl methacrylate)
Viscosity (dynamic)	approx. 250 - 350	mPa.s. @ 20 ⁰ C
Relative Vapour pressure (related to air) > 1		@ 20 ⁰ C
pH-value (n.a.g/lH ₂ O) (20 ⁰ C)	n.a.	
Flashpoint (DIN 51755)	10 ⁰ C	(of methyl methacrylate)
Further Information:	None	

SECTION 10 – STABILITY & REACTIVITY

Thermal decomposition: No decomposition when used as directed

Hazardous Decomposition products: None when used as directed

Hazardous reactions: Polymerisation with heat evolution may occur in the presence of radical forming substances (eg. Peroxides) reducing substances and/or heavy metal ions. Vapour/air mixtures are explosive (Vapour is heavier than air). Risk of polymerization (heat and pressure build up, risk of emissions of MMA)

Further Information: Incompatible substances: various soluble plastics like polystyrene or PMMA. product polymerizes after contact with radical formers such as peroxides, azocompounds, redox systems etc. and under influence of heat, light or other types of radiation. On the suspicion of polymerization cool container and mix (100Kg) product with (31t) stabilizer (200 g, 1,4-Dihydroxbenzol (CAS 123-31-0) dissolved in 101t MMA).



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SECTION 11 – TOXICOLOGICAL INFORMATION**Toxicity:****Acute oral toxicity:**

LD50 rat, OECD 401 Source:Literature >5000 mg/kg

The data mentioned above refers to the component Methyl methacrylate.

LD50 rat Source Literature 4435 mg/kg

The data mentioned above refers to the component 2-Ethylhexylacrylate.

LD50 rat Source literature 172 mg/kg

The data mentioned above refers to the component N,N-bis-(2-hydroxypropyl)-p-toluidine.

Acute inhalational toxicity:

LC50 rat, 4 h Source:Literature 29.8 mg/l

The data mentioned above refers to the component Methyl methacrylate.

LCLo mouse Source literature 0.6 mg/l

The data mentioned above refer to the component 2-Ethylhexylacrylate.

Acute dermal toxicity:

LD50 rabbit, Source:Literature >5000 mg/kg

The data mentioned above refers to the component Methyl methacrylate.

LD50 rabbit. Source literature >5000 mg/kg

The data mentioned above refer to the component 2-Ethylhexylacrylate.

Irritant effect on the skin:

(analogy) Irritating

Irritant effect on the eyes:

(analogy) Irritating

Sensitization:

In sensitisation tests on guinea pigs with and without adjuvant, both positive and negative results were found. In humans various types of allergic reactions have been observed (symptoms; headache, eye irritations, skin affections). Source:Literature

The data mentioned above refers to the component methyl methacrylate.

May cause sensitisation by skin contact.

The data mentioned above refer to the component 2-ethylhexylacrylate.

Toxicity on repeated administration:

Rat, inhalational, 2 a, 250 - 1000 ppm

Findings: Damage to mucous membranes in the nose, throat and lungs. Degeneration of the olfactory epithelium.

Source:Literature

The data mentioned above refers to the component methyl methacrylate.

Mouse, inhalational, 2 a, 500 – 1000 ppm

Findings: Damage to mucous membranes in nose, throat and lungs. Degeneration of the olfactory epithelium.

Source literature.

The data mentioned above refers to the component methyl methacrylate.

Mutagenicity: Positive as well as negative results in in vitro mutagenicity / genotoxicity test. No experimental information on genotoxicity in vivo available. In summary, not mutagenic according to internationally accepted criteria. Source:Literature.

The data mentioned above refers to the component methyl methacrylate.

Carcinogenicity: Non-carcinogenic in inhalation and feeding studies carried out on rats, mice and dogs. Source: Literature.

The data mentioned above refers to the component methyl methacrylate.

Several long-term skin painting studies for carcinogenicity in mice were conducted and gave contradictory results.

On the basis of all existing information, no definite conclusion on a carcinogenic activity can be drawn.

Source: Literature.



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The data mentioned above refers to the component 2-ethylhexylacrylate.

Reprotoxicity / teratogenicity:

No indications of teratogenic effects in experimental animals. Source:Literature.

The data mentioned above refers to the component methyl methacrylate.

Further information on toxicology: There is no toxicological data available for the product as such. Avoid contact with the skin and eyes and inhalation of the product vapours.

SECTION 12 – ECOLOGICAL INFORMATION

Ecological effects:

Information on elimination (persistence & degradability):

Ecotoxicological effect:

Fish toxicity:

LC50 oncorhynchus mykiss, rainbow trout, OECD 203, GLP, 96 h > 79 mg/l

Source: literature (the data mentioned above refers to methyl methacrylate)

Daphania toxicity:

EC50 daphnia magna, OECD 202, 48 h. Source Literature 69 mg/l

The data mentioned above refers to the component Methyl methacrylate.

Algae toxicity:

EC3 scenedesmus quadricauda, cell proliferation inhibition test, 8 d. Source Literature 37 mg/l

The data mentioned above refers to the component Methyl methacrylate.

Bacteria toxicity:

ECO pseudomonas putida. Source Literature 100 mg/l

The data mentioned above refers to the component Methyl methacrylate.

Further information on ecology: Do not allow product to enter soil, waterways or waste water.

SECTION 13 – DISPOSAL CONSIDERATIONS

DISPOSAL -

Product: Waste is hazardous and therefore must be kept under particular surveillance. It must be disposed of in accordance with the regulations after consultation with the relevant local authorities and the disposal company in a suitable and licenced facility.

Completely hardened product free of any liquid monomer may be regarded as industrial plastic waste similar to household refuse in most regions.

Uncleaned packaging: Contaminated packaging/ containers should ideally be emptied completely, professionally cleaned and then reused. Packaging that cannot be cleaned should be disposed of professionally. Uncontaminated packaging may be taken for recycling.

Code of Waste EWC: 08 01 02 Waste from the manufacture, formulation, supply and use (MFSU) of paint and varnish – waste paints and varnish free of halogenated solvents. Always check the given waste codes according to the actual conditions of manufacturing, formulation or use in your facilities.

WRK/ANSI: Empty container warnings

Improper disposal or reuse of this container may be dangerous and illegal. Refer to applicable federal, state or local regulations.

Since emptied containers retain product residue, follow label warnings even after container is emptied.

Residual vapours may explode on ignition; do not cut, drill, grind or weld on or near this container.



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SECTION 14 – TRANSPORT INFORMATION**Transport :****A.D.G. Classification -****UN Number:** 1866**Dangerous Goods Class:** 3**Packaging Group:** II**HAZCHEM Code:** 3 (Y)E**Proper shipping name for surface/ road transport:** RESIN SOLUTION, Flammable**Compatibility and Segregation:**

Must not be carried with dangerous goods with which it may interact so as to cause risk or danger to persons, property or the environment.

Storage: Refer to state regulations.**Inland waterway transport ADNR**

Class 3 item 5b UN Number 1866

Technical dispatch name: 1866 resin solution *

Shipment by sea IMDG/GGVSee

Class 3.2 EmS 3-05 MFAG 330 UN number 1866 Marine pollutant

Packed (+/0): 0 Packaging Group: II Proper Shipping name: Resin solution **)

Hazardous constituent: Methyl Methacrylate

Air Transport ICAO/IATA

Class 3 UN Number: 1866 Packaging group: II

Proper shipping name: Resin solution **)

DOT

Resin Solution UN number: 1866

*Further information: (containing methyl methacrylate)****) (containing methyl methacrylate)***SECTION 15 – REGULATORY INFORMATION****Regulatory information:****Hazardous components:** contains methyl methacrylate, 2-ethylhexylacrylate**Hazard symbols:** F Highly flammable.

Xi Irritant.

R-Phrases: R 11 Highly flammable.

R 36/37/38 Irritating to eyes, respiratory system and skin.

R43 May cause sensitization by skin contact.

S-phrase: S 16 Keep away from sources of ignition – NO SMOKING.

S 24 Avoid contact with skin.

S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S 37 Wear suitable gloves.

EINECS/ELINCS: Listed**DPJ COATING SYSTEMS** Pty Ltd.

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SECTION 16 – FURTHER INFORMATION

Miscellaneous Information: The product is normally supplied in a stabilized form. If the permissible storage period and/or storage temperature is noticeably exceeded, the product may polymerise with heat evolution.

Further Information:

The product is usually supplied in a stabilized form. Monotek® is based on a reactive methacrylate resin. Its hardening time is approx. 15 minutes after mixing with 3% w/w of hardener. It is used as an adhesive primer for Monotek® coatings, in particular on cement-bond substrates. We recommend to look up all of the details listed in our technical leaflets.

Contact Point: Mr. Craig Jones DIRECTOR (03) 9720 8777

Date: December, 2016

For further information, MSDS, technical data...visit -
WWW.MONOTEK.COM.AU



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