

# ACRIFIX® 192 - Material Safety Data Sheet

## 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY/UNDERTAKING

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**Material Name:** ACRIFIX® 192

**Recommended Uses:** Adhesive for plastics. Polymerising adhesive for PLEXIGLAS®

## 2. HAZARDS IDENTIFICATION

### HAZARDOUS SUBSTANCE. DANGEROUS GOODS.

Classified as hazardous according to the criteria of NOHSC and as Dangerous Goods according to the Australian Dangerous Goods Code.

Highly flammable.  
Irritating to respiratory system and skin.  
May cause sensitisation by skin contact.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

Solution of an acrylic polymer in methyl methacrylate

### Hazardous Ingredients

Component	CAS Number	Hazard symbol(s) / R-phrases(s)	Content
1. methyl methacrylate	80-62-6	F, Xi R11-37/38-43	60,0 - 100,0 %
2. diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	75980-60-8	Xn, N R51/53-62	0,1 - 1,0 %

## 4. FIRST AID MEASURES

**General Information:** Remove soiled, soaked clothing immediately. Medical treatment is necessary if symptoms occur which are obviously caused by skin or eye contact with the product or by inhalation of its vapours.

**Inhalation:** Remove to fresh air. If rapid recovery does not occur, transport to nearest medical facility for additional treatment.

**After inhalation** Move subject to fresh air and keep him calm. See a physician.

**After contact with eyes** Keeping the eyelids apart flush thoroughly with water immediately.

If irritation persists, contact a physician.

**After contact with skin** Wash off immediately with soap and water. If skin irritation occurs consult a physician.

**After Ingestion** Do not induce vomiting. Contact a doctor immediately.

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## 5. FIRE FIGHTING MEASURES

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<b>Suitable extinguishing media</b>	Foam, dry chemical, carbon dioxide
<b>Unsuitable extinguishing media for safety reasons</b>	Water
<b>Special protective equipment for fire fighting</b>	Wear self-contained breathing apparatus.

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## 6. ACCIDENTAL RELEASE MEASURES

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Observe all relevant local and international regulations.

### Precautionary measures related to people

Take care for adequate ventilation. Use personal protective clothing. Keep away sources of ignition. Use breathing apparatus if exposed to vapours/dust/mist/aerosol.

### Environmental protective measures

Prevent product from getting into drains/surface water/groundwater.

### Methods of cleaning / adsorption

Larger quantities: Remove mechanically (by pumping). Use explosion-proof equipment! Smaller quantities and/or residues: Contain with absorbent material (e.g. sand, diatomaceous earth, acid absorbent, universal absorbent or sawdust). Dispose of in accordance with regulations.

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## 7. HANDLING AND STORAGE

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### Instructions on safe handling

Keep container tightly closed. Ensure the area is well ventilated.

### Information on fire and explosion protection

Keep away from sources of ignition --- No smoking. Take precautionary measures against static discharges In the event of fire, cool the endangered containers with water. When heated above the flash point and/or during spraying (atomizing), ignitable mixtures may form in air. Use explosion-proof equipment only.

### Storage

#### Requirements for storage areas and containers

Keep only in the original container at a temperature not exceeding 30 °C. Protect from light. Fill the container by approximately 90 % only as oxygen (air) is required for stabilisation. With large storage containers make sure the oxygen (air) supply is sufficient to ensure stability.

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## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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### Occupational exposure controls

For monitoring procedures refer to for instance "Empfohlene Analysenverfahren für Arbeitsplatzmessungen", Schriftenreihe der Bundesanstalt für Arbeitsschutz and "NIOSH Manual of Analytical Methods", National Institute for Occupational Safety and Health, NOHSC National Occupational and Safety Commission (Australia)

### Personal protective equipment

#### General protective measures

Do not inhale vapours. Avoid contact with eyes and skin.

#### Hygiene measures

Remove soiled or soaked clothing immediately. Store work clothing separately. Follow the usual good standards of occupational hygiene. Clean skin thoroughly after work; apply skin cream.

#### Respiratory protection

Breathing apparatus in case of high concentrations and in short term: filter appliance (filter A). None required if airborne concentrations are maintained below the exposure limits

## Exposure Limits

Component	Time Weighted Average
1	100 (ppm)

### Hand protection

Butyl rubber gloves ( 0,7 mm ), Breakthrough time approx. 60 min ( EN 374 )

In practice, due to variable exposure conditions, this information can only be an aid to orientation for the selection of a suitable chemical protection glove. In particular, this information does not substitute suitability tests by the end user.

### Splash protection

Neoprene gloves

### General information

Gloves should be replaced regularly, especially after extended contact with the product. For each work-place a suitable glove type has to be selected.

### Eye protection

Tightly fitting goggles

### Body protection

On handling of larger quantities: face mask, chemical-resistant boots and apron

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

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<b>Form:</b>	viscous
<b>Colour:</b>	slightly violet
<b>Odour:</b>	ester-like

### Data relevant to safety

#### Changes in physical state

<b>Melting temperature</b>	Not determined
<b>Boiling Temperature</b>	approx. 100 °C at 1.013 hPa
<b>Flash point</b>	10 °C ( DIN 51755 / Abel Pensky Closed Cup ) (methyl methacrylate)
<b>Ignition temperature</b>	430 °C ( DIN 51794 ) (methyl methacrylate)
<b>Auto ignition</b>	Not determined
<b>Lower explosion limit</b>	2,1 %(V) at 10,5°C / 33,8°F (methyl methacrylate)
<b>Upper explosion limit</b>	12,5 %(V) (methyl methacrylate)
<b>Vapour pressure</b>	approx. 40 hPa at 20 °C
<b>Density</b>	approx. 1,02 g/cm <sup>3</sup> at 20 °C
<b>Relative vapour density (related to air)</b>	> 1 at 20 °C
<b>Solubility in water</b>	approx. 16 g/l at 20 °C
<b>Fat solubility</b>	Not determined
<b>pH-value</b>	Not applicable
<b>n-Octanol/water partition coefficient</b>	Not determined
<b>Viscosity (dynamic)</b>	1.600 - 2.000 mPa.s at 20 °C (Brookfield)
<b>Further information</b>	None

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## 10. STABILITY AND REACTIVITY

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<b>Thermal decomposition</b>	No decomposition when used as directed.
<b>Hazardous reactions</b>	Polymerization with heat evolution may occur in the presence of radical forming substances (e.g. peroxides), reducing substances, and/or heavy metal ions. The same applies to the effect of light or UV-light respectively.
<b>Hazardous decomposition</b>	None when used as directed.

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## 11. TOXICOLOGICAL INFORMATION

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<b>Acute Oral Toxicity</b>	Practically non-toxic if swallowed LD <sub>50</sub> rat, OECD 401 > 5.000 mg/kg
<b>Acute Inhalational Toxicity</b>	Related to substance: methyl methacrylate Low toxicity by inhalation LC <sub>50</sub> rat, 4 h 29,8 mg/l
<b>Acute Dermal Toxicity</b>	Related to substance: methyl methacrylate Practically non-toxic in contact with skin LD <sub>50</sub> rabbit > 5.000 mg/kg
<b>Irritant Effect on the Skin</b>	Related to substance: methyl methacrylate Contact with skin may cause irritations.
<b>Irritant Effect on the Eyes</b>	Related to substance: product Contact with the eyes may cause irritation. Related to substance: product

<b>Sensitisation</b>	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). Related to substance: methyl methacrylate
<b>Toxicity on Repeated Administration</b>	Dose ad which no adverse effects were observed (NOAEL). At higher doses adverse effects were observed. rat, inhalation, 2 a, 0, 25, 100, 400 ppm <b>NOAEL</b> 25 ppm Findings: Damage to mucous membranes in the nose at 400 ppm Related to substance: methyl methacrylate
<b>Mutagenicity</b>	Rat, in drinking water, 2 a, 0, 6/7, 60/70, 2000 ppm <b>NOAEL</b> 2000 ppm Findings: no toxic effects Related to substance: methyl methacrylate Positive as well as negative results in in vitro mutagenicity/ genotoxicity tests. No experimental indication of genotoxicity in vivo available. In summary not mutagenic according to internationally accepted criteria. Related to substance: methyl methacrylate
<b>Carcinogenicity</b>	Non-carcinogenic in inhalation and feeding studies carried out on rats, mice and dogs. Related to substance: methyl methacrylate
<b>Reprotoxicity / teratogenicity</b>	No indications of toxic effects were observed in reproduction studies in animals. Related to substance: methyl methacrylate
<b>General information</b>	There are no toxicological data available for the product as such. Avoid contact with the skin and eyes and inhalation of the product vapours.

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## 12. ECOLOGICAL INFORMATION

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### Information on elimination (persistence and degradability)

<b>Biodegradability</b>	Readily degradable, OECD 301 C, 14 d 94 % Related to substance: methyl methacrylate
<b>Ecotoxicological effect</b>	
<b>Fish toxicity</b>	LC50 Oncorhynchus mykiss, rainbow trout, OECD 203, flow through, GLP, 96 h > 79 mg/l Related to substance: methyl methacrylate
<b>Daphnia toxicity</b>	EC50 Daphnia magna, OECD 202, flow through, 48 h 69 mg/l Related to substance: methyl methacrylate NOEC Daphnia magna, OECD 202 part 2, flow through, 21 d 37 mg/l Related to substance: methyl methacrylate
<b>Algae toxicity</b>	EC3 Scenedesmus quadricauda, DIN 38412 section 9, 8 d 37 mg/l Related to substance: methyl methacrylate
<b>Bacteria toxicity</b>	EC0 Pseudomonas putida 100 mg/l Related to substance: methyl methacrylate
<b>General information</b>	Do not allow to enter soil, waterways or waste water

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## 13. DISPOSAL CONSIDERATIONS

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<b>Product</b>	Waste is hazardous. It must be disposed of in accordance with the regulations after consultation of the competent local authorities and the disposal company in a suitable and licensed facility.
<b>Uncleaned packaging</b>	Contaminated packaging should be emptied optimally and after appropriate professional cleansing may be taken for reuse. Packaging that cannot be cleaned should be disposed of professionally. Uncontaminated packaging may be taken for recycling.
<b>Code of waste EW</b>	07 02 08 waste from the manufacture, formulation, supply and use (MFSU) of plastics, synthetic rubber and man-made fiber - other still bottoms and reaction residues Always check the given waste codes according to the actual conditions of manufacturing, formulation or use in your facilities.

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## 14. TRANSPORT INFORMATION

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Classified as Dangerous Goods according to the Australian Code for the Transport of Dangerous Goods by Road and Rail (7th Edition).

Proper Shipping Name: ADHESIVES (Contains Methyl Methacrylate)

<b>UN No:</b> 1133	<b>D.G.Class:</b> 3	<b>Packaging Group:</b> II
<b>HAZCHEM:</b> 3[Y]E	<b>Sub. Risk:</b> None allocated	<b>SUSDP:</b> None allocated
<b>G.T.EPG:</b> None allocated	<b>Spec.EPG:</b> None allocated	<b>CAS No.:</b> None allocated

**Air transport ICAO/IATA**

UN number 1133

Class 3

Packaging group II

Proper Shipping Name: ADHESIVES

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**15. REGULATORY INFORMATION**

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**Labeling in accordance with NOHSC: 2012 (1994)**

**Hazard symbol(s)**

F Highly flammable  
 Xi Irritant

**R-phrases(s)**

11 Highly flammable.  
 37/38 Irritating to respiratory system and skin.  
 43 May cause sensitisation by skin contact.

**S-phrases(s)**

9 Keep container in a well ventilated place  
 16 Keep away from sources of ignition --- No smoking.  
 23 Do not breathe vapour  
 24 Avoid contact with skin.  
 37 Wear suitable gloves.

**Status of Registration**

EINECS (EU) listed or exempted  
 TSCA (USA) listed or exempted  
 DSL (CDN) listed or exempted  
 AICS (AUS) listed or exempted  
 METI (J) listed or exempted

**Occupational restrictions**

Not for juveniles.  
 Not for pregnant woman and nursing mothers (EC Directive 92/85/EEC).

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**16. OTHER INFORMATION**

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**Miscellaneous information**

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

**R-phrases of relevance from Section 3**

11 Highly flammable.  
 37/38 Irritating to respiratory system and skin.  
 43 May cause sensitisation by skin contact.  
 51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.  
 62 Possible risk of impaired fertility.

**References**

relevant manuals and publications  
 own examinations  
 own toxicological and ecotoxicological studies  
 toxicological and ecotoxicological studies of other manufacturers  
 SIAR  
 OECD-SIDS  
 RTK public files

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