



CONSERVATION BY DESIGN LIMITED

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TECHNICAL DATA SHEET

Paraloid® B72 Fixative (SY7F)

Product description

Ethyl methacrylate co-polymer (also known as Acraloid B72) diluted to a 20% w/v concentration in Acetone and supplied as a 125 ml solution in a metal tin

General

Paraloid / Acraloid B72 has been commonly used as a varnish to seal identification markings to furniture and artefacts on display both internally and externally for many years. Now the hassle factor, making up the 20% concentration in Acetone has been removed. Paraloid B72 Fixative comes pre-diluted and ready to use.

Application / Making Museum Objects

To apply ensure the area to be treated is clean. Using a fine brush apply the 20% weight *volume* of B72 dissolved in Acetone to the registration area and allow to dry, for up to 15 minutes.

On particularly rough surfaces a second coat may be preferable to form an even surface on which to apply the marking. Using an appropriate rotting isograph style pen (typical nib size of 010 or 020) and a water based drawing ink (rotting white, red or black ink) apply the reference marking and allow same to dry. Apply a further top coat of B72 Fixative as top surface sealant and allow to dry. Your reference marking is now sealed in place. If necessary Acetone can be used to remove the varnish.

As a fixative

Paraloid / Acraloid B 72 Fixative can be used to secure water soluble inks and colourings on a variety of paper surfaces undergoing washing or other water based treatments. After initial checks to ensure compatibility apply the 20% w/v concentration to the surface of the water based ink or colouring using a fine haired brush (size may vary according to area being treated). Allow to dry before treating the surface with water based solution.

Once the treatment has been completed and the surface is completely dry remove the fixative using Acetone. All applications require good ventilation in accordance with Health and Safety regulations.

Other uses

Paraloid B72 (acrylic polymer) is used for a variety of Conservation tasks.

When supplied in its common granular state (SY7) B72 is used to consolidate - wall paintings (1-5%); ground and pigment layers on oil paintings (5-10% in either toluene or isopropanol); fragile wood in furniture, polychrome sculpture etc (5-20%); worm holes in conjunction with microballoons which as used as a filling agent in wooden artefacts (30%); plaster on ceilings (ideally two coats at 15% solids or one coat of 25% solids); chalk, charcoal and pencil marks (2-4% in toluene or isopropanol); and as an adhesive for glass and ceramics [in acetone]; and as a varnish /fixative to secure identity markings on historical artefacts (20% w/v in acetone).

General Health & Safety Information

The solvent part of Paraloid Acraloid B72 Fixative is Highly flammable, the mixture is also classed as an irritant. Vapours may cause drowsiness and dizziness so use in a properly ventilated area is recommended. Always follow the correct health and safety regulations and ensure complete compatibility with the items being treated. Always consult full MSDS sheet prior to use.

Disposal & Ecological Considerations

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

Transportation.

UN no : 1263 Packaging Group: III Hazard Label: 3

Pack size / order details

Pre-diluted (20% w/v in Acetone) solution Packed in 125 ml metal containers.
Also available in granular form for mixing with solvents and in tube form as an adhesive..

Order Code

SY7F 125 ml tin containing pre-diluted 20% w/v in Acetone.

For further information call: +44 (0)1234 853555
or email us on: info@conservation-by-design.co.uk

1. Identification of the substance / preparation and of the company / undertaking.

Paraloid / Acraloid Fixative (SY7F)



- . Product details
- . Trade name: B72 Adhesive (125ml)
- . Application of the substance / the preparation Coating compound! Surface coating /paint




Supplied by:

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Timecare Works, 5 Singer Way
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Tel: +44 (0)1234 853555. Fax: +44 (0)1234 852334

2. Composition / information on ingredients.

- . Chemical characterization
- . Description: Mixture of substances listed below with non hazardous additions.

. Dangerous components:						
CAS: 67-64-1 EINECS: 200-662-2	propan-2-one		Xi,		F;R 11-36-52-66-67	50-10%

CAS: 9004-70-0	Nitrocellulose (12..JO/oN)				E;R 1-3	2.5-10%
CAS: 67-63-0 EINECS: 200-661-7	propan-2-ol		Xi		F; R 11-36-67	2.5%

- Additional information: For the wording of the listed risk phrases refer to section 16.

3. Hazards identification

Hazard description:



Xi Irritant

- Information concerning particular hazards for human and environment:

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

Has a narcotising effect

R 36 Irritating to eyes.

R 52 Harmful to aquatic organisms.

R 67 Vapours may cause drowsiness and dizziness.

Classification system:

The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

67-63-0	Propan-2-ol
108-88-3	toluene

4 First aid measures

- After inhalation: Supply fresh air.. consult doctor in case of complaints.
- After skin contact: Generally the product does not irritate the skin.
- After eye contact:
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- After swallowing: If symptoms persist consult doctor.

5 Fire fighting measures

- Suitable extinguishing agents:
CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- Protective equipment: Put on breathing apparatus

6 Accidental release measures

- **Person-related safety precautions:** Wear protective equipment Keep unprotected persons away.
- **Measures for environmental protection:**
- .Inform respective authorities in case of seepage into water course or sewage system.
- Measures for cleaning /collecting:
- Absorb with liquid-binding material (sand; diatomite, acid binders, universal binders, sawdust).
- Ensure adequate ventilation.

7 Handling and storage

- **Handling:**
- **Information for safe handling:**
- Keep receptacles tightly sealed.
- Ensure good ventilation /extraction at the workplace. Prevent formation of aerosols.
- **Information about fire - and explosion protection:**
Keep ignition sources away - Do not smoke. Protect against electrostatic charges.
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep receptacle tightly sealed.

8 Exposure controls / personal protection

- Additional information about design of technical facilities: No further data; see item 7.

<i>. Ingredients with limit values that require monitoring at the workplace:</i>	
<i>. 67-64-1 propan-2-one</i>	
OES	Short-tenn value: 3620 mg/m ³ . 1500 ppm Long-tenn value: 1210mg/m ³ . 500 ppm New. 10ELV
<i>67-63-0 propan-2-ol</i>	
OES	Short-tenn value: 1250 mg/m ³ . 500 ppm Long-tenn value: 999 mg/m ³ ~ 400 ppm

- **Additional information:** The lists valid during the making were used as basis.
- **Personal protective equipment:**
- **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing Wash hands before breaks and at the end of work
Avoid contact with the eyes.
Avoid contact with the eyes and skin.
- **Respiratory protection:**
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.
Use suitable respiratory protective device in case of insufficient ventilation.
- **Protection of hands:**
The glove material has to be impenetrable and resistant to the product / the substance / the preparation.
Due to missing tests no recommendation to the glove material can be given for the product! the preparation!
the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**
The selection of the suitable gloves does not only depend on the material but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
- **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed
- **Eye protection**
Safety glasses
Tightly sealed goggles

9 Physical and chemical properties

- *General Information*
 - *Form:* Fluid
 - *Colour:* According to product specification
 - *Odour:* Characteristic
- *Change in condition*
Melting point Melting range: Undetermined

● Boiling point/Boiling range:	55 °C	
● Flash point:	Not applicable.	
● Ignition temperature:	465.0 °C	
● Self-igniting:	Product is not self igniting.	
● Danger of explosion:	Product does not present an explosion hazard	
● Explosion limits:	Lower:	2.6 Vol %
	Upper:	13.0 Vol %
● Vapour pressure at 20°C	233.0 hPa	
● Density at 20°C:	0.89 g/cm ³ .	
● Solubility in / Miscibility with water:	NOT MISCIBLE	
● Solvent content:		
● Organic solvents:	65.5 %	
● Solids content:	34.5 %	

10 Stability and reactivity

<ul style="list-style-type: none"> • <i>Thermal decomposition / conditions to be avoided:</i> 	No decomposition if used according to specifications. .
<i>Dangerous reactions :</i>	No dangerous reactions known.
<ul style="list-style-type: none"> • <i>Dangerous decomposition products:</i> 	No dangerous decomposition products known.

11 Toxicological information

- *Acute toxicity:*

<i>LD/LC50 values relevant for classification:</i>		
<i>67-64-1 propan-2-one</i>		
Oral	LD50	5800mg/kg (rat)
Dermal	LD50	20000 mg/kg (rbt)

- *Primary irritant effect:*
- *on the skin:* No irritant effect
- *on the eye:* Irritating effect
- *Sensitization:* No sensitizing effects known.
- *Additional toxicological information:*
- The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
- Irritant


12 Ecological information


- *Ecological effects:*
.Remark: Harmful to fish
- *General notes :*
Generally not hazardous for water Harmful to aquatic organisms

13 Disposal considerations

- Product:
- Recommendation
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- Unclean packaging:
- Recommendation: Disposal must be made according to official regulations.

14 Transport information

Land transport ADR/RID (cross-border)	
	
● ADR/RID class:	3 Flammable liquids.
● Danger code (Kemler):	30
● UN-Number:	3256
● Packaging group:	III
● Hazard label	3
● Description of goods:	3256 ELEVATED TEMPERATURE LIQUID, FLAMMABLE, MO.S. (ACETONE)

Maritime transport IMDG:	
	
● IMDG Class:	3
● UN Number:	3256
● Label	3
● Packaging group:	III
● EMS Number:	F-E,S-D
● Marine pollutant:	No
● Proper shipping name:	ELEVATED TEMPERATURE LIQUID, FLAMMABLE, MO.S.

Air transport ICAO-TI and ATA-DGR:	
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● ICAO/IATA Class:	3
● UN/ID Number:	3256
● Label	3
● Packaging group:	III
● Proper shipping name:	ELEVATED TEMPERATURE LIQUID, FLAMMABLE, N.O.S.

15 Regulatory information

- **Labelling according to EU guidelines:**
The product has been classified and marked in accordance with EU Directives I Ordinance on Hazardous Materials.
- **Code letter and hazard designation of product:**
Xi Irritant
- **Risk phrases:**
36 Irritating to eyes.
52 Harmful to aquatic organisms.
67 Vapours may cause drowsiness and dizziness.
- **Safety phrases:**
9 Keep container in a well-ventilated place.
16 Keep away from sources of ignition - NO smoking.
23 Do not breathe gas/vapours/spray (appropriate wording to be specified by the manufacturer).
26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
33 Take precautionary measures against static discharges.
61 Avoid release to the environment Refer to special instructions/safety data sheets.
- **National regulations:**
- **Technical instructions (air)**

Class	Share in %
NK	65.5

- **Waterhazard class:**
Generally not hazardous for water.

16 Other Information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- Relevant R-phrases
1 Explosive when dry.

11 Highly flammable.

3 Extreme risk of explosion by shock, friction, fire or other sources of ignition

36 Irritating to eyes.

52 Harmful to aquatic organisms.

66 Repeated exposure may cause skin dryness or cracking.

67 Vapours may cause drowsiness and dizziness.

- Department issuing MSDS: Product safety department: LABORATORY
- Contact: Health & Safety Officer