

## Advanced Materials

### Araldite® GY 23919 / Aradur® 23919 \*

Construction coating system

---

#### 2 component epoxy emulsion concrete sealer

---

#### Applications

Araldite® GY 23919 / Aradur® 23919 system provides a waterproof concrete topping with high strength and fast cure; ideal for driveways, factory floors and cement rendering. Mortars based on this system are suitable for bedding floor tiles, concrete blocks and bricks. An application of this system over newly set concrete can prevent excessive water loss during cure and to form an impervious oil resistant and non-dusting surface. The coating can also ensure a smooth even surface and stop hairline cracks.

If required, it may be overcoated with conventional paints.

---

#### Properties

- Forms a tough impervious coating with a matt finish.
- Excellent adhesion to wet or dry surfaces, including freshly poured concrete.
- Simple 1 : 1 mixing ratio
- Easy to apply by brush, roller or spray
- Odourless, relatively non-toxic and non-flammable
- Equipment, tools may be cleaned up with water
- Economical - supplied as a concentrate, requires dilution with extra water before application.

---

#### Key Data

##### Specified key data

<b>Araldite® GY 23919</b>	Aspect (visual)	Milky white liquid	
	Viscosity at 25 °C (ISO 2555, Brookfield)	20 000 – 30 000	[mPa s]
	Non-volatile, (ISO 3251-2008), tested at 110°C for 2 hours.	60 - 66	% w/w
<b>Aradur® 23919</b>	Aspect (visual)	Light yellow cream liquid	
	Viscosity at 25 °C (ISO 2555, Brookfield)	110 000 – 145 000	[mPa s]
	Non-volatile, (ISO 3251-2008), tested at 110°C for 2 hours.	26 - 30	% w/w
	Specific weight at 25 °C (ISO 2811-1 - 1997)	0.97 – 1.00	[g/cm <sup>3</sup> ]

Specified key data are individually checked throughout and guaranteed.

*\* In addition to the brand name product denomination may show different appendices, which allows us to differentiate between our production sites, e.g., BD = Germany, US = United States, IN = India, CI = China, etc.. These appendices are in use on packaging, transport and invoicing documents. Generally the same specifications apply for all versions. Please address any additional need for clarification to the appropriate Huntsman contact.*

---

**Key Data****Typical key data****Araldite® GY 23919**

Flash point (DIN 51758, Pensky-Martens Closed Cup)	> 100	[°C]
Specific weight at 25 °C (ISO 2811-1 - 1997)	1.00 – 1.10	[g/cm <sup>3</sup> ]
As-supplied form	Liquid	
Odour	Slight	
Shelf life (at storage temperature between 10 - 30 °C)	see expiry date on original container	
Hazardous decomposition products (when disposed of in fire)	carbon monoxide, carbon dioxide, other toxic gases and vapours	
Disposal	regular procedures approved by local authorities	

**Aradur® 23919**

Flash point (DIN 51758, Pensky-Martens Closed Cup)	> 100	[°C]
As-supplied form	Liquid	
Odour	Mild amine-like	
Shelf life (at storage temperature between 10 - 30 °C)	see expiry date on original container	
Hazardous decomposition products (when disposed of in fire)	carbon monoxide, carbon dioxide, nitrogen oxides, other toxic gases and vapours	
Disposal	regular procedures approved by local authorities	

Typical key data are spot checked; the values are typical for the product and are indicated for information only. The values are not guaranteed.

---

**Processing  
Data**

**IMPORTANT** : It is essential that the resin and hardener should be thoroughly mixed together according to the recommended mixing ratio. Water is then added to reduce the mixed viscosity to the desired consistency. Inaccuracies will result in a lowering of the physical properties of the cured system and if the error is sufficiently great, the system may not cure satisfactorily.

For maximum protection, apply at least two coats. To be effective as a curing membrane the coating of this mixed system must be applied within 30 minutes after being mixed. Substrate and surrounding temperatures should be above 15 °C and 40 - 50% Relative Humidity to prevent under-curing or the formation of a brittle coating.

---

**Processing data** (continues)

**Surface Pretreatment**

Aradur® 23919 and Araldite® GY 23919 are tolerant to application over poorly prepared surfaces, but for best results, thorough surface preparation is desirable:

1. Concrete : Should be free from grease and oil - if necessary, clean with industrial grade degreasing agents. Once clean, steps must be taken to remove laitance, this is best carried out by using:
  - Mechanical abrasion: High pressure water or wet grit blast.
  - Acid etching : concentrated Hydrochloric Acid 1:1 with water and spreading 0.5 litres of this mixture each m<sup>2</sup>. After the reaction has ceased (about 10 minutes) the area should be thoroughly washed and scrubbed with a stiff bristled broom to remove loose sand.

It is not necessary to dry the concrete before applying this Araldite® system.

2. Painted surfaces: Steps should be taken to remove all paint.
3. Brick, sandstone, masonry, plaster boards, fibre cement sheeting: Should be cleaned and free from dust.

**NOTE:**

Loose or weak concrete should be removed. Damaged surfaces can be repaired by first priming with Araldite® GY 23919 and Aradur® 23919 system. Fill up all voids using a mix of one part of Araldite® GY 23919 and Aradur® 23919 system to 2 parts of a sand/cement blend. Leave at least two hours before any overcoating. If sanding is required leave a minimum of 12 hours.

**Mix ratio**

Typical coating formulation

Araldite® GY 23919	1 parts by volume
Aradur® 23919	1 parts by volume
Tap water	0 – 2 parts by volume

The resin and hardener should be thoroughly mixed together in equal portions by volume. Water is then added to reduce the mixed viscosity to the desired consistency, to a maximum of 1 part water to 1 part of the neat resin/hardener mix.

Typical grouting formulation

Araldite® GY 23919	1 parts by volume
Aradur® 23919	1 parts by volume
Portland cement	2 parts by volume
Washed fine silica sand	2 parts by volume

**Application Method**

May be applied by brush, roller or conventional spray equipment. For roller and brush application, work the surface sufficiently to ensure thorough wetting of the surface and to eliminate air bubbles.

Leave about two hours before applying a second coat or after the first coat becomes touched dry.

Allow at least 24 hours to cure before applying conventional house paints, wall paper, floor coverings etc.

---

## Processing data

(continues)

**Pot life** Pot Life @ 25°C : 0.5 - 1.0 hour

Coating must be applied within 60 minutes of mixing at temperatures ranging between 20°C – 35°C.

**Note: Should not be used if temperature of substrate is below 15°C,**

<b>Coverage</b>	Coverage - Smooth Surface	1st coat	3-5m <sup>2</sup> /litre
		2nd coat	5-10m <sup>2</sup> /litre

The exact coverage depends on porosity of surface and how much additional water is added. Decrease in coverage by up to 50% on rough surface can be expected.

For fairly dense surfaces add one part of water to three parts of the neat Araldite® 23919 mixed system. For porous surfaces, such as concrete blocks, add 1 part of water to 1-2 parts of neat Araldite® 23919 mixed system.

**Cure time** Recommended cure time at 25°C

Minimum cure time 12 – 24 hours

Full cure time 7 days

Recoat This depends on temperature and humidity but under normal conditions a second coat of this system may be applied in about 2 hours.

**Note: Should not be subjected to normal traffic/use in less than 7 days at room temperatures ( 22 – 25°C).**

When fully cured, Araldite® GY 23919 and Aradur® 23919 will have a clear and matt finish.

**Recoating** This depends on temperature and humidity but under normal conditions a second coat of this system may be applied in about 2 hours (touched-dry coat) and no longer than 24 hours.

Allow at least 24 hours cure before applying conventional house paints, wall paper, floor coverings etc.

---

## Storage

Araldite® GY 23919 and Aradur® 23919 should be stored in a dry place, preferably in its sealed original container, at temperatures as stated above. Under these conditions, the shelf life will correspond to the expiry date stated on the label.

Partly emptied containers should be closed immediately after use.

For information on waste disposal and hazardous decomposition products likely to be generated in the event of fire, refer to the Material Safety Data Sheets (MSDS) for the individual products.

## Legal Notice

---

Huntsman Advanced Materials warrants only that its products meet the specifications agreed with the buyer. Typical properties, where stated, are to be considered as representative of current production and should not be treated as specifications.

The manufacture of materials is the subject of granted patents and patent applications; freedom to operate patented processes is not implied by this publication.

While all the information and recommendations in this publication are, to the best of our knowledge, information and belief, accurate at the date of publication, NOTHING HEREIN IS TO BE CONSTRUED AS A REPRESENTATION, WARRANTY OR CONDITION OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION, ANY WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR NONINFRINGEMENT OF ANY INTELLECTUAL PROPERTY RIGHT OF ANY THIRD PARTY.

IN ALL CASES, IT IS THE RESPONSIBILITY OF THE USER TO DETERMINE THE APPLICABILITY OF SUCH INFORMATION AND RECOMMENDATIONS AND THE SUITABILITY OF ANY PRODUCT FOR ITS OWN PARTICULAR PURPOSE.

The behaviour of the products referred to in this publication in manufacturing processes and their suitability in any given end-use environment are dependent upon various conditions such as chemical compatibility, temperature, and other variables, which are not known to Huntsman Advanced Materials. It is the responsibility of the user to evaluate the manufacturing circumstances and the final product under actual end-use requirements and to adequately advise and warn purchasers and users thereof.

Products may be toxic and require special precautions in handling. The user should obtain Safety Data Sheets from Huntsman Advanced Materials containing detailed information on toxicity, together with proper shipping, handling and storage procedures, and should comply with all applicable safety and environmental standards.

Hazards, toxicity and behaviour of the products may differ when used with other materials and are dependent on manufacturing circumstances or other processes. Such hazards, toxicity and behaviour should be determined by the user and made known to handlers, processors and end users.

Except where explicitly agreed in writing otherwise, the sale of product referred to in this publication is subject to the terms and conditions of sale of the Huntsman company from which you purchased the product (or those of the authorised distributor, as the case may be).

Huntsman Advanced Materials is an international business unit of Huntsman Corporation. Huntsman Advanced Materials trades through Huntsman affiliated companies in different countries including but not limited to Huntsman Advanced Materials LLC in the USA; Huntsman Advanced Materials (Europe) BVBA in Europe; and Huntsman Advanced Materials (Australia) Pty Ltd, Huntsman Advanced Materials (Hong Kong) Ltd, Huntsman Advanced Materials (Guangdong) Company Limited, Huntsman Advanced Materials (India) Pvt Ltd, Huntsman Japan KK, Huntsman Advanced Materials (Singapore) Pte Ltd and Huntsman Advanced Materials (Taiwan) Corporation in Asia Pacific.

ARALDITE and ARADUR are registered trademark of Huntsman Corporation or an affiliate thereof.

Copyright © 2009 Huntsman Corporation or an affiliate thereof. All rights reserved.

**Huntsman Advanced Materials**  
(Guangdong) Company Limited  
Flying Geese Mountain Industrial Park,  
Shilou Town,  
Panyu district, Guangzhou 511447  
P.R.China  
Tel.: +86-20 3937 7000  
Fax: +86-20 8486 5122  
[www.huntsmanadmat.cn](http://www.huntsmanadmat.cn)  
Email:  
advanced\_materials@huntsman.com