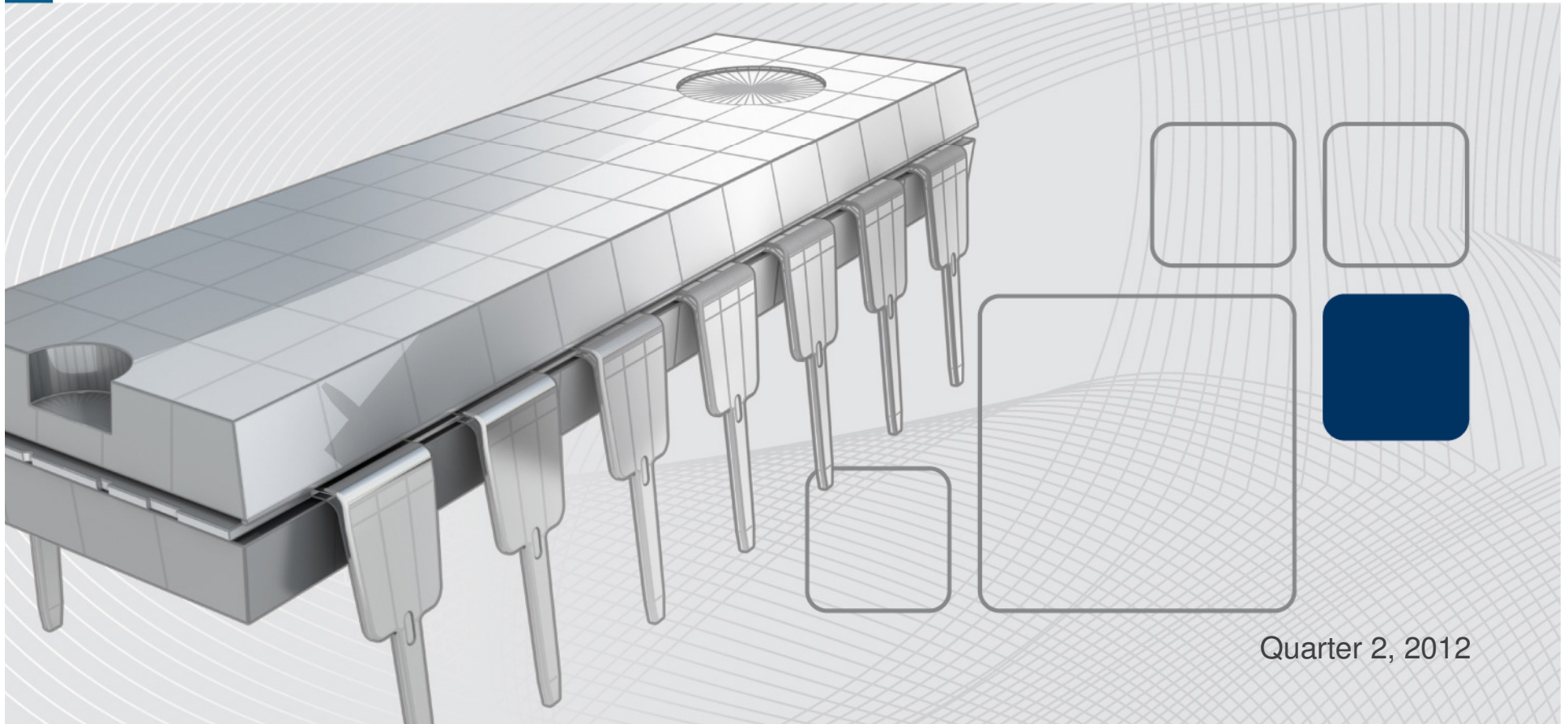




Advanced Materials

Raising insulation performance in passive components



Quarter 2, 2012

Table of contents

Raising performance	<u>Reliability and protection for passive components</u>
Transformers	<u>Lifetime protection for transformers</u>
	<u>Arathane® system for standard transformers</u>
	<u>Araldite® systems for high end transformers</u>
Capacitors	<u>Lifetime protection for capacitors</u>
	<u>Arathane® system for capacitors</u>
	<u>Araldite® system for capacitors</u>
Resistors	<u>Lifetime protection for resistors</u>
	<u>Arathane® system for resistors</u>
	<u>Araldite® system for resistors</u>

Raising performance

HUNTSMAN

Enriching lives through innovation

< Table of content

Raising performance >

Transformers >

Capacitors >

Resistors >

Reliability and protection for passive components



Main features and benefits

- Flammability resistance
- Thermal resistance
- Less energy consumption during manufacturing process
- Good adhesion to various substrates

Transformers

HUNTSMAN

Enriching lives through innovation

< Table of content

Raising performance >

Transformers >

Capacitors >

Resistors >

Lifetime protection for transformers



Key requirements

- Flexible: encapsulation of iron or ferrite cores, aid noise reduction (measured using hardness / tensile strength / Tg)
- Crack resistance
- Low viscosity: to facilitate impregnation of fine wires
- Low exotherm / shrinkage: to prevent damage to fine wires and limit changes in inductance
- High chemical and moisture resistance
- Increased electrical performance (dielectric strength)
- Increased thermal conductivity to dissipate heat quickly and prevent hot spots
- Long term thermal resistance
- Good adhesion to plastic housings and metal cores
- Flame retardance

Arathane® system for standard transformers

HUNTSMAN

Enriching lives through innovation

< Table of content

Raising performance >

Transformers >

Capacitors >

Resistors >

Arathane®

Arathane® VB U6942 / Arathane® VB U001/B

Curing conditions	Cold	
Tg	20° C	ISO 11357-2
Thermal class	E	IEC 60085
Hardness shore D at 23° C	D40 / A87	DIN 53505
Flammability	UL 94 / V-0 (6.4 mm)	Class / Requirements
Key properties	<ul style="list-style-type: none">• Flexible• Good thermal shock resistance	

Araldite® systems for high end transformers

HUNTSMAN

Enriching lives through innovation

< Table of content

Raising performance >

Transformers >

Capacitors >

Resistors >

Araldite®

build
bond
protect

Araldite® CW 5730N / Aradur® HY 5731

Curing conditions	Hot	
Tg	30° C	ISO 11357-2
Thermal class	F	IEC 60085
Hardness shore D at 23° C	D70	DIN 53505
Flammability	UL 94 / V-0 (6 mm)	Class / Requirements
Key properties	<ul style="list-style-type: none">• Flexible EP• Excellent impregnation	

Araldite® XB 2252 / Aradur® XB 2253

Curing conditions	Cold	
Tg	65° C	ISO 11357-2
Thermal class	F	IEC 60085
Hardness shore D at 23° C	D86	DIN 53505
Flammability	UL 94 / V-0 (6 mm)	Class / Requirements
Key properties	<ul style="list-style-type: none">• High thermal endurance• Excellent impregnation	

Capacitors

< Table of content

Raising performance >

Transformers >

Capacitors >

Resistors >

Lifetime protection for capacitors



Key requirements

- High purity and humidity resistance (low dielectrics when humid)
- Fast casting and curing
- Flame retardance
- Non-corrosive to thin metal films
- Good adhesion to different plastics

Arathane® system for capacitors

HUNTSMAN

Enriching lives through innovation

< Table of content

Raising performance >

Transformers >

Capacitors >

Resistors >

Arathane®

Arathane® VB U6920 / Arathane® HY 5611-1

Curing conditions	Cold	
Tg	60° C	ISO 11357-2
Thermal class	F	IEC 60085
Hardness shore D at 23° C	D74 / A88	DIN 53505
Flammability	UL 94 / V-0 (6 mm)	Class / Requirements
Key properties	<ul style="list-style-type: none">• Hard PU• Hallogen free• Good thermal shock resistance• Good ageing resistance• High thermal conductivity	

Araldite® system for capacitors

HUNTSMAN

Enriching lives through innovation

< Table of content

Raising performance >

Transformers >

Capacitors >

Resistors >

Araldite®

build
bond
protect

Araldite® DBF / Aradur® HY 2966

Curing conditions	Hot	
Tg	54° C	ISO 11357-2
Thermal class	E	IEC 60085
Hardness shore D at 23° C	D80	DIN 53505
Flammability	n.a.	Class / Requirements
Key properties	<ul style="list-style-type: none">• Low viscosity• Good heat resistance• Good resistance to atmospheric and chemical degradation	

Resistors

< Table of content

Raising performance >

Transformers >

Capacitors >

Resistors >

Lifetime protection for resistors



Key requirements

- Fast cure at high temperatures
- High Tg
- High environmental resistance
- Flame retardance
- Good adhesion

Arathane® system for resistors

HUNTSMAN

Enriching lives through innovation

< Table of content

Raising performance >

Transformers >

Capacitors >

Resistors >

Arathane®

Arathane® VB U6920 / Arathane® HY 5611-1

Curing conditions	Cold	
Tg	60° C	ISO 11357-2
Thermal class	F	IEC 60085
Hardness shore D at 23° C	D74 / A88	DIN 53505
Flammability	UL 94 / V-0 (6 mm)	Class / Requirements
Key properties	<ul style="list-style-type: none">• Hard PU• Hallogen free• Good thermal shock resistance• Good ageing resistance• High thermal conductivity	

Araldite® system for resistors

HUNTSMAN

Enriching lives through innovation

< Table of content

Raising performance >

Transformers >

Capacitors >

Resistors >

Araldite®

build
bond
protect

Araldite® DBF / Aradur® HY 2966

Curing conditions	Hot	
Tg	54° C	ISO 11357-2
Thermal class	E	IEC 60085
Hardness shore D at 23° C	D80	DIN 53505
Flammability	n.a.	Class / Requirements
Key properties	<ul style="list-style-type: none">• Low viscosity• Good heat resistance• Good resistance to atmospheric and chemical degradation	

Keep our products at your fingertips

HUNTSMAN

Enriching lives through innovation

View the brochure on SlideShare

With this brochure get an overview of our comprehensive range of insulation systems for electronics applications.



Download our mobile apps on your smartphone

With these apps select immediately the right:

- Araldite® industrial adhesive for your specific need
- Araldite® composite formulated system for your process / application

Access the product description or send us an email to request the technical data sheet.



Araldite® - Adhesives (Europe)

Download on [iPhone](#) | [Android](#) | [BlackBerry](#)

Huntsman - Composite resins (Europe)

Download on [iPhone](#) | [Android](#) | [BlackBerry](#)



For more information

HUNTSMAN

Enriching lives through innovation

Ihr Lieferant:

T-E-Klebertechnik

Anwendungs-, Verfahrens- und Dosiertechnik

Großer Kolonnenweg 3
Tel.: 0511 - 353982 - 0
internet: www.t-e-klebertechnik.de

30163 Hannover
Fax.: 0511 353982 - 40
mail: infotek@t-e-klebertechnik.de



Registered for
REACH

Legal Disclaimer

**Copyright © 2012 Huntsman Corporation
or an affiliate thereof. All rights reserved.**

The use of the symbol ® herein signifies the registration of the associated trademark in one or more, but not all, countries. While the information and recommendations included in this publication are, to the best of Huntsman's knowledge, accurate as of the date of publication, nothing contained herein is to be construed as a representation or warranty of any kind, express or implied.