

Dr. Ralph DerraÖffentlich bestellter und vereidigter Sachverständiger für
Verpackungsmaterialien, Boden- und Luftanalysen;
Sachverständiger in der Wasseranalytik

18 February 2016

Dr. Dr/Be-hoe

**UNBEDENKLICHKEITSERKLÄRUNG
CERTIFICATE OF COMPLIANCE
CERTIFICAT DE CONFORMITE**eingetragen
registered no.
registré

41766 U 16

für Firma
for Messrs
pour MMSika Deutschland GmbH
Kornwestheimer Straße 103 – 107
70439 Stuttgart
GermanyProdukt
Product
Produit

Sikaflex®-221

The product manufactured by the company mentioned above is a polyurethane sealing mass which is used for sealings in companies which are processing foodstuffs. Further application areas are refrigerated trucks and keep-fresh trucks in which among others foodstuffs are transported as well as stationary cold-storage containers in the food industry.

It was examined by us according to the

Methoden zur Untersuchung von Kunststoffen, soweit sie als Bedarfsgegenstände im Sinne des Lebensmittel- und Bedarfsgegenständegesetzes verwendet werden, einschließlich der 62. Mitteilung des BfR zur Untersuchung von Hochpolymeren, Bundesgesundheitsblatt 50, 524 (2007), Stand vom April 2007,

(Methods for testing plastics as far as they are used as consumer goods as defined by the Foodstuffs and Consumer Goods Act, including the 62nd memorandum of the BfR on the examination of high polymers, Bundesgesundheitsblatt 50, 524 (2007), state of April 2007),

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for the composition as well as for the release of substances which might endanger health and to the

"Methoden zur Untersuchung von Bedarfsgegenständen, Grundregeln für die Ermittlung der Migration in Prüflebensmittel", entsprechend der Vorschrift Nr. 80.30, 1 - 3 (EG) in der Amtlichen Sammlung von Untersuchungsverfahren nach § 64 des Lebensmittel- und Futtermittelgesetzbuchs - LFGB, Stand vom April 2008,

("Methods for the examination of consumer goods, basic rules for the determination of the migration into food simulants", according to the standard no. 80.30, 1 - 3 (EC) within the Official Collection of Testing Methods according to § 64 of the Foodstuffs and Animal Feed Code - LFGB, state of April 2008),

as well as to the

Series of standards EN 1186, EN 13130 and CEN/TS 14234 „Materials and Articles in Contact with Foodstuffs - Plastics“, current state,

for the migration behaviour.

The product is in compliance with the rules of the

Regulation (EC) No 1935/2004 of the European Parliament and of the Council of 27 October 2004 on materials and articles intended to come into contact with food and repealing Directives 80/590/EEC and 89/109/EEC, Official Journal of the European Union L 338/4 of 13.11.2004, modified by app. no. 5.17 of the regulation (EC) No 596/2009 of 18 June 2009, Official Journal of the European Union L 188 of 18 July 2009, article 3,

as well as of the

Lebensmittel-, Bedarfsgegenstände- und Futtermittelgesetzbuch (Lebensmittel- und Futtermittelgesetzbuch - LFGB) in der Fassung der Bekanntmachung vom 3. Juni 2013 (BGBl. I S. 1426), zuletzt geändert durch Artikel 67 der Verordnung vom 31. August 2015 (BGBl. I S. 1474), §§ 30 und 31,

(Foodstuffs, Consumer Goods and Animal Feed Code (Foodstuffs and Animal Feed Code - LFGB) in the version of the notification of 3 June 2013 (BGBl. p. 1426), last amendment by article 67 of the law of 31 August 2015 (BGBl. I p. 1474), §§ 30 and 31),

and meets the demands of the

Commission Regulation (EU) No 10/2011 of 14 January 2011 on plastic materials and articles intended to come into contact with food, Official Journal of the European Union L 12/1 of 15 January 2011, last amendment by Commission Regulation (EU) No 2015/174 of 5 February 2015, Official Journal of the European Union L 30/2 of 6 February 2015,

as well as of the

Bedarfsgegenständeverordnung in der Fassung der Bekanntmachung vom 23. Dezember 1997 (BGBl. 1998 I S. 5), zuletzt geändert durch Artikel 1 der Verordnung vom 24. Juni 2013 (BGBl. I S. 1682),

(Decree on Consumer Goods in the version of the communication of 23 December 1997 (BGBl. 1998 I p. 5), last modification by Article 1 of the Decree of 24 June 2013 (BGBl. I p. 1682)),

with regard to the migration behaviour in the case of use.

Thus, the polyurethane sealing mass Sikaflex®-221 according to the sample material submitted may be used safely for sealings in companies which are processing foodstuffs as well as in refrigerated trucks and keep-fresh trucks in which among others foodstuffs are transported as well as in stationary cold-storage containers in the food industry. However, a direct contact with unpacked foodstuffs is not intended.

This certificate of compliance represents the latest technical standard and is based on the certificate of compliance no. 25199 U 07 of 12 October 2007 in connection with a completely new examination of the product.

This certificate of compliance has a validity of 2 years and consists of 4 pages.

Staatlich anerkannter Sachverständiger
zur Untersuchung der Gegenproben von
Verpackungsmitteln aus Papier, Pappe,
Kunststoffen, Glas, Weichblech und
sonstigen Metallverpackungen auf ihre
lebensmittelrechtliche Unbedenklichkeit



(Behrendt)
Officially certified
and authorized food
chemist



The translation of the above stamps is given on page 4.
La traduction des estampilles est donnée en page 4.



Staatlich anerkannter Sachverständiger zur Untersuchung der Gegenproben von Verpackungsmitteln aus Papier, Pappe, Kunststoffen, Glas, Weißblech und sonstigen Metallverpackungen auf ihre lebensmittelrechtliche Unbedenklichkeit

Dr. Ralph Derra

Authorized expert for the analyses of packaging materials, attested by the Aschaffenburg Chamber of Industry and Commerce.

Expert autorisé pour l'analyse des matériaux d'emballage, assermenté par la Chambre d'Industrie et de Commerce d'Aschaffenburg.

State registered expert for the analysis of contrasting samples of packaging materials of paper, board, plastics, glass, tin plate and other metallic packaging materials as to their suitability for use with foodstuffs.

Expert public pour l'étude du control des contre-échantillons d'emballages de papier, cartons, plastiques, verre, fer-blanc et d'autres emballages métalliques concernant leur conformité alimentaire.



Dr. Ralph Derra

Authorized expert for the analyses of soil and air, attested by the Aschaffenburg Chamber of Industry and Commerce.

Expert autorisé pour l'analyse du sol et de l'air, assermenté par la Chambre d'Industrie et de Commerce d'Aschaffenburg.

Die Rücklagen des untersuchten Materials werden bei der Gutachterstelle verwahrt.
A file sample of the tested material is kept at the expert's office.
Réserve du matériel analysé est gardée au bureau de l'expert.



TGA Licence No:
MI-15112007-LI-002191-11

APVMA Licence No:
6139

AS/NZS 4020:2005 Compliance Testing

Certificate of Analysis
(Supersedes all interim reporting)
Dated: 26/09/2016

1. CERTIFICATE OF ANALYSIS AND SAMPLE INFORMATION:

Methodology: AS/NZS 4020, Appendix A and in-house method TMP-191100 & TMP-191101

Eurofins | ams Report Reference No.: 1615065

Cross Reference No.: NA

Submitting Organisation: Sika Australia Pty. Ltd.

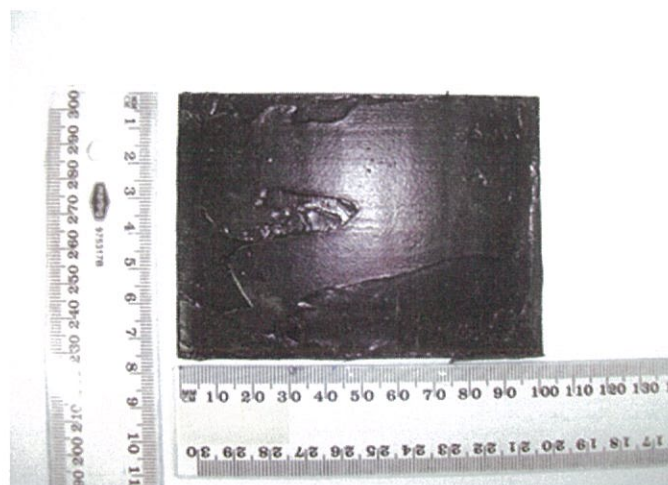
Contact: Rachel He

Address: 55 Elizabeth Street, Wetherill Park, NSW 2164, Australia

Interim Reporting: NA

Project Completion Date: 26/09/2016

Product Designation: Sikaflex 221, Polyurethane Adhesive Sealant



Batch No./ Manufacturing Date: 1000018775 / February 2016

Product Manufacturer: Sika Japan
1-1 Nagatoro/Hiratsuka-shi/ Kanagawa 254-0021, Japan

Eurofins ams Laboratory Final Report for the testing of a product to AS/NZS 4020, Products for use in contact with Drinking Water	Eurofins ams Report No.: 1615065
Submitting Organisation: Sika Australia Pty. Ltd.	
Product: Sikaflex 221, Polyurethane Adhesive Sealant	Date of Report: 26/09/2016

Sampling Organisation:	Sika Australia Pty. Ltd.
General Composition:	Refer to attachments
Product Use:	In-Line, Bonding and sealing adhesive
Temperature Range:	(5 – 40)°C
Previous Testing:	NA
Date of receipt of samples:	23/06/2016
Sample selection for tests:	As provided by the Submitting Organisation
Sample storage conditions:	Prepared and controlled as per AS/NZS 4020, <i>Appendix A</i>
Extracts:	Prepared as per AS/NZS 4020, <i>Appendices C, D, E, F, G & H</i>
Testing procedure:	<p>Test samples were prepared by coating Sikaflex 221 on one side of a glass test panel with dimensions of 1mm x 100mm x 75mm and exposure of ~7,500mm². All test panels were prepared by Eurofins ams. Manufacturer's instructions were followed in preparation and curing of the test panels. For testing, 2 x test panels were immersed in 1L of water to give a total testing exposure of ~15,000mm²/ 1L.</p> <p>Testing is based on the recommended 'total immersion' exposure of ~15,000mm² / 1L test water at (20 ± 2)°C to cover a cold water application up to <40°C.</p> <p>Refer to Attachment A for Photo of test sample & Product Data Sheet (PDS) and Attachment B for Material Safety Data Sheets (MSDS).</p>
Volume retention:	NA

Eurofins ams Laboratory Final Report for the testing of a product to AS/NZS 4020, Products for use in contact with Drinking Water	Eurofins ams Report No.: 1615065
Submitting Organisation: Sika Australia Pty. Ltd.	
Product: Sikaflex 221, Polyurethane Adhesive Sealant	Date of Report: 26/09/2016

2. SUMMARY OF RESULTS:

APPENDIX	RESULTS
C - TASTE	PASS at testing exposure
D - APPEARANCE	PASS at testing exposure
E - GROWTH OF AQUATIC MICRO-ORGANISMS	PASS at testing exposure
F - CYTOTOXIC ACTIVITY	PASS at testing exposure
G - MUTAGENIC ACTIVITY	PASS at testing exposure
H - EXTRACTION OF METALS	PASS at testing exposure

Based on completion and evaluation of all tests on 26/09/2016, the product, Sikaflex 221, Polyurethane Adhesive Sealant; fully complied with the test requirements of AS/NZS 4020:2005 to cover a cold water application up to <40°C, at the recommended 'total immersion' exposure of ~15,000mm² / 1L test water at (20 ± 2)° C.

Testing although determined by the relevant product Standard, is generally recognised for up to 5 years by the certifying body, providing the testing procedures remain the same, and the background information on all wetted parts and the product are adequately documented. Also, the results stated in the report relate to the samples of the product submitted for testing. Any changes in the material formulation and supplier/manufacturer of all wetted items, the process of manufacture, the method of application, or the surface area-to-volume ratio in the end-use, could affect the suitability of the product for use in contact with drinking water, and re-testing may be required before this actual time frame, governed by the completion and evaluation date.

Signed: _____



SANDHYA L. SINGH B. Tech, Postgrad. Dip. (Chem)
Manager, Chemistry and Toxicology; Approved Signatory

Date: 26/09/2016

Eurofins ams Laboratory Final Report for the testing of a product to AS/NZS 4020, Products for use in contact with Drinking Water	Eurofins ams Report No.: 1615065
Submitting Organisation: Sika Australia Pty. Ltd.	
Product: Sikaflex 221, Polyurethane Adhesive Sealant	Date of Report: 26/09/2016

3. TASTE OF WATER EXTRACT:

Methodology: AS/NZS 4020, *Appendix C* and in-house method TMP-191130.

Exposure: 'total immersion'; ~15,000mm² / 1L test water

Extraction temperature: (20 ± 2)°C **Scaling factor:** NA **Number of Panellists:** 4

No. of samples for Chlorine-free extract: 2 **No. of samples for Chlorinated extract:** 2

Description	Extract	Test Water	Taste (+ / -)	Taste Description (No. of tasters)	Test Dilution *(Taste intensity)
Test Blank	First 24h	Chlorine-free	-	-	-
	Final 9-day	Chlorine-free	NA	NA	NA
Sample	First 24h	Chlorine-free	-	-	-
	Final 9-day	Chlorine-free	NA	NA	NA
Test Blank	First 24h	Chlorinated	-	-	-
	Final 9-day	Chlorinated	NA	NA	NA
Sample	First 24h	Chlorinated	-	-	-
	Final 9-day	Chlorinated	NA	NA	NA

+ Taste detected - No taste detected NA Not applicable

AS/NZS 4020 test requirement: Minimum of 4 tasters with no discernible taste at the first 1/2 dilution.

Figure in brackets is the number of panellists detecting a taste at this dilution.

Note:

1. Tasters are given a 14-point scale to describe its intensity, with minimum of 1 as extremely weak, and maximum of >14 as extremely strong. An average of all tasters represents taste intensity.
2. First extract becomes final extract.

EVALUATION:

On the basis of these results the samples of this product referred to in this report have complied with the test requirements of AS/NZS 4020:2005, Taste of Water Extract; *Appendix C*.

Eurofins ams Laboratory Final Report for the testing of a product to AS/NZS 4020, Products for use in contact with Drinking Water	Eurofins ams Report No.: 1615065
Submitting Organisation: Sika Australia Pty. Ltd.	
Product: Sikaflex 221, Polyurethane Adhesive Sealant	Date of Report: 26/09/2016

4. APPEARANCE OF WATER EXTRACT:

Methodology: AS/NZS 4020, *Appendix D* and in-house methods TMP-191140 and TMP-191106.

Exposure: 'total immersion'; ~15,000mm² / 1L test water

Extraction temperature: (20 ± 2)°C **Scaling factor:** NA

No. of samples tested: 2

	a) TRUE COLOUR: Hazen Units (HU)		b) TURBIDITY: Nephelometric Turbidity Units (NTU)	
	First 24h	Final 9-day	First 24h	Final 9-day
Sample Extract pH = 7.33	5.0	NA	0.27	NA
Test Blank pH = 7.32	5.0	NA	0.34	NA
FINAL RESULT	<2	NA	<0.01	NA
AS/NZS 4020 Test sample requirements	≤5		≤0.5	

< = less than ≤ = less than or equal to NA Not applicable
 First extract becomes final extract

For test a), test extractions were performed by Eurofins ams Laboratories Pty. Ltd. The test extracts were subsequently subcontracted to Eurofins | mgt for assessment (NATA Accreditation No. 1261), Report No. 508023-W.

EVALUATION:

On the basis of these results the samples of this product referred to in this report have complied with the test requirements of AS/NZS 4020:2005, Appearance of Water Extract; *Appendix D*.

Eurofins ams Laboratory Final Report for the testing of a product to AS/NZS 4020, Products for use in contact with Drinking Water	Eurofins ams Report No.: 1615065
Submitting Organisation: Sika Australia Pty. Ltd.	
Product: Sikaflex 221, Polyurethane Adhesive Sealant	Date of Report: 26/09/2016

5. GROWTH OF AQUATIC MICRO-ORGANISMS:

Methodology: AS/NZS 4020, *Appendix E* and in-house method TMP-191150.

Incubation temperature: (30 ± 1)°C

Exposure: 'total immersion'

Component Name	Testing Exposure	Inoculum (mL)	* MEAN DISSOLVED OXYGEN DIFFERENCE (MDOD) in mg/L
Sikaflex 221, Polyurethane Adhesive Sealant	~15,000mm ² / 1L	100	<0.01
Negative Reference Control (glass plate)	~15,000mm ² / 1L	100	<0.01
Positive Reference Control (paraffin waxed glass plate)	~15,000mm ² / 1L	100	9.51
Test Blank	Blank / 1L	100	7.07 in mg/L as mean dissolved oxygen

NA Not applicable

* Difference from test blank and represents mean of triplicate readings (weeks 5, 6, 7)
AS/NZS 4020 test sample requirements: Less than or equal to 2.4 for MDOD

EVALUATION:

On the basis of these results the samples of this product referred to in this report have complied with the test requirements of AS/NZS 4020:2005, Growth of Aquatic Micro-organisms; *Appendix E*.

Eurofins ams Laboratory Final Report for the testing of a product to AS/NZS 4020, Products for use in contact with Drinking Water	Eurofins ams Report No.: 1615065
Submitting Organisation: Sika Australia Pty. Ltd.	
Product: Sikaflex 221, Polyurethane Adhesive Sealant	Date of Report: 26/09/2016

6. CYTOTOXIC ACTIVITY OF WATER EXTRACT:

Methodology: AS/NZS 4020, *Appendix F* and in-house method TMP-191160.

Exposure: 'total immersion'; ~15,000mm² / 1L test water

Extraction temperature: (20 ± 2)°C

Scaling factor: NA

Extracts: 24h, 48h & 72h

No. of samples tested: 2

The test sample extracts from the product, as well as the test blank (test water) were used to prepare a nutrient growth medium, subsequently utilised to grow a monkey kidney cell line (VERO ATCC CCL 81).

Microscopic Examination	Test Sample Extract (24h, 48h and 72h)	Test Blank (24h, 48h and 72h)
Cell Morphology:	Satisfactory	Satisfactory
Monolayer: Confluence/Healthy Growth as ~%	100%	100%

Cytotoxicity was detected with zinc sulphate, used as a positive control and analysed at 4µg/g, 8µg/g and 16µg/g of zinc. Water for Irrigation, Synthetic Water for Irrigation, and Phosphate Buffer Solution were included with the test blank as negative controls.

AS/NZS 4020 test sample requirements: 1) **Non-cytotoxic response- confluent monolayer similar to test blank.**

2) **Cytotoxic response- irregularly shaped cells & cell death similar to positive controls of 8µg/g & 16µg/g zinc sulphate.**

EVALUATION:

On the basis of these results the samples of this product referred to in this report have complied with the test requirements of AS/NZS 4020:2005, Cytotoxic Activity of Water Extract; *Appendix F*.

Eurofins ams Laboratory Final Report for the testing of a product to AS/NZS 4020, Products for use in contact with Drinking Water	Eurofins ams Report No.: 1615065
Submitting Organisation: Sika Australia Pty. Ltd.	
Product: Sikaflex 221, Polyurethane Adhesive Sealant	Date of Report: 26/09/2016

7. MUTAGENIC ACTIVITY OF WATER EXTRACT:

Methodology: AS/NZS 4020, *Appendix G* and in-house method TMP-191170.

Exposure: 'total immersion'; ~15,000mm² / 1L test water

Extraction temperature: (20 ± 2)°C

Scaling factor: NA

Extract: 24h

No. of samples tested: 2

BACTERIAL STRAIN: <i>Salmonella typhimurium</i>	* S9 -No +With	a) TRIPLICATES (REVERTANTS/PLATES)		b) MEAN ± STANDARD DEVIATION	
		TEST BLANK (Extractant Water)	SAMPLE EXTRACT (Leachate)	NEGATIVE CONTROL (Test culture only)	POSITIVE CONTROL (Standard diagnostic mutagen)
TA 98	-	a)	a)	a)	a)
		36 34 33	33 31 30	33 23 34	IV 3,340 3,710 3,460
		b)	b)	b)	b)
		34 ± 2	31 ± 2	30 ± 6	3,503 ± 189
TA 98	+	a)	a)	a)	a)
		41 45 40	28 37 30	39 48 39	IV 2,200 2,080 2,100
		b)	b)	b)	b)
		42 ± 3	32 ± 5	42 ± 5	2,127 ± 64
TA 100	-	a)	a)	a)	a)
		111 147 153	178 142 168	130 204 198	II 22,280 16,260 20,380
		b)	b)	b)	b)
		137 ± 23	163 ± 19	177 ± 41	19,640 ± 3,077

* Metabolic Activator NA = Not applicable > = greater than I = 2, 4-dinitrophenylhydrazine
 II = sodium azide III = Benzo(a)pyrene IV = 2-aminoanthracene

Eurofins ams Laboratory Final Report for the testing of a product to AS/NZS 4020, Products for use in contact with Drinking Water	Eurofins ams Report No.: 1615065
Submitting Organisation: Sika Australia Pty. Ltd.	
Product: Sikaflex 221, Polyurethane Adhesive Sealant	Date of Report: 26/09/2016

BACTERIAL STRAIN: <i>Salmonella typhimurium</i>	* S9	a) TRIPLICATES (REVERTANTS/PLATES) b) MEAN ± STANDARD DEVIATION			
	-No +With	TEST BLANK (Extractant Water)	SAMPLE EXTRACT (Leachate)	NEGATIVE CONTROL (Test culture only)	POSITIVE CONTROL (Standard diagnostic mutagen)
TA 100	+	a)	a)	a)	a)
		219 209 210	220 180 210	210 204 209	III 3,740 3,660 3,900
		b)	b)	b)	b)
		213 ± 6	203 ± 21	208 ± 3	3,767 ± 122
TA 102	-	a)	a)	a)	a)
		640 879 749	789 693 700	787 877 800	I 10,690 11,600 10,450
		b)	b)	b)	b)
		756 ± 120	727 ± 54	821 ± 49	10,913 ± 607
TA 102	+	a)	a)	a)	a)
		930 949 982	840 897 780	1,014 1,019 1,012	IV 8,160 8,270 8,580
		b)	b)	b)	b)
		954 ± 26	839 ± 59	1,015 ± 4	8,337 ± 218

* Metabolic Activator NA = Not applicable > = greater than I = 2, 4-dinitrophenylhydrazine
 II = sodium azide III = Benzo(a)pyrene IV = 2-aminoanthracene

AS/NZS 4020 test sample requirements: (The differences in the mean number of revertants between either of the negative controls and test sample extracts should not exceed two standard deviations (for triplicate analysis)).

Positive response: If mean revertants for sample extract outside the range of spontaneous revertants for test strain.

EVALUATION:

On the basis of these results the samples of this product referred to in this report have complied with the test requirements of AS/NZS 4020:2005, Mutagenic Activity of Water Extract; *Appendix G*.

Eurofins ams Laboratory Final Report for the testing of a product to AS/NZS 4020, Products for use in contact with Drinking Water	Eurofins ams Report No.: 1615065
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Product: Sikaflex 221, Polyurethane Adhesive Sealant	Date of Report: 26/09/2016

8. EXTRACTION OF METALS:

Methodology: AS/NZS 4020, *Appendix H* and in-house methods TMP-191180 and TMP-191230.

Exposure: 'total immersion'; ~15,000mm² / 1L test water

Extraction temperature: (20 ± 2)°C

Scaling factor: NA

Extracts: 24h

No. of samples for I: 2

No. of samples for II: 2

Element	AS/NZS 4020: Maximum Allowable Concentration mg/L (ppm)	Limit of Reporting mg/L (ppm)	Test Blank mg/L (ppm)	Sample Extract I mg/L (ppm)	Sample Extract II mg/L (ppm)	FINAL RESULT I mg/L (ppm)	FINAL RESULT II mg/L (ppm)
antimony ¹ (Sb)	0.003	0.0001	0.0007	0.0017	0.0017	0.0010	0.0010
Arsenic ¹ (As)	0.007	0.0002	0.0004	<0.0002	0.0002	<0.0002	0.0002
barium ¹ (Ba)	0.7	0.0001	0.0007	0.0008	0.0008	0.0001	0.0001
cadmium ¹ (Cd)	0.002	0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
chromium ¹ (Cr)	0.05	0.0002	0.0003	<0.0002	0.0003	<0.0002	<0.0002
copper ¹ (Cu)	2	0.0004	0.0011	0.0025	0.0012	0.0014	<0.0004
lead ¹ (Pb)	0.01	0.0001	<0.0001	<0.0001	0.0001	<0.0001	0.0001
Mercury ¹ (Hg)	0.001	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
molybdenum ¹ (Mo)	0.05	0.005	<0.005	<0.005	<0.005	<0.005	<0.005
nickel ¹ (Ni)	0.02	0.0005	0.0015	<0.0005	<0.0005	<0.0005	<0.0005
Selenium ¹ (Se)	0.01	0.0002	0.0020	0.0007	0.0005	<0.0002	<0.0002
silver ¹ (Ag)	0.1	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001

< = less than mg/L = milligram per litre ¹ = ICPMS – In-house Method Code: LTM-MET 3040
First extract becomes final extract.

Test extractions were performed by Eurofins ams Laboratories Pty. Ltd. The test extracts were subsequently subcontracted to Eurofins | mgt for assessment (NATA Accreditation No. 1261), Report No. 508023-W.

EVALUATION:

On the basis of these results the samples of this product referred to in this report have complied with the test requirements of AS/NZS 4020:2005, Extraction of Metals; *Appendix H*.

SAFETY DATA SHEET

According to 13 December 2014, No:29204, "Ministry of Environment and Urbanization; Regulation on Safety data sheets regarding hazardous substances and mixtures".



Sikaflex®-252

Version	Revision Date:	MSDS Number:	Date of last issue: -
1.0	21.01.2016	000000019902	Date of first issue: 21.01.2016

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade name : Sikaflex®-252

1.2 Relevant identified uses of the substance or mixture and uses advised against

Product use : Sealant/adhesive, For professional users only.

1.3 Details of the supplier of the safety data sheet

Company name of supplier : Sika Yapi Kimyasallari A.S.
İstanbul Deri Organize Sanayi Bölgesi 2. yol
J-7 Parsel / Aydınlı Orhanlı Mevkii
34944 Tuzla / İstanbul
Turkey
Telephone : +90 216 581 06 00
Telefax : +90 216 581 06 99
Emergency telephone number : +90 216 581 06 00 / 1260
E-mail address of person responsible for the SDS : EHS@tr.sika.com

1.4 Emergency telephone number

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Type of product : Mixture

Classification T.R. SEA No 28848

Skin irritation, Category 2	H315: Causes skin irritation.
Eye irritation, Category 2	H319: Causes serious eye irritation.
Respiratory sensitisation, Category 1	H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Classification T.R. SAE No 27092

Sensitising	R42: May cause sensitisation by inhalation.
Irritant	R36/38: Irritating to eyes and skin.

SAFETY DATA SHEET

According to 13 December 2014, No:29204, "Ministry of Environment and Urbanization; Regulation on Safety data sheets regarding hazardous substances and mixtures".



Sikaflex®-252

Version 1.0	Revision Date: 21.01.2016	MSDS Number: 000000019902	Date of last issue: - Date of first issue: 21.01.2016
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2.2 Label elements

Labelling T.R. SEA No 28848

Hazard pictograms :



Signal word : Danger

Hazard statements : H315 Causes skin irritation.
H319 Causes serious eye irritation.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Precautionary statements : **Prevention:**
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P280 Wear protective gloves/ eye protection/ face protection.
P284 In case of inadequate ventilation wear respiratory protection.
Response:
P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P337 + P313 If eye irritation persists: Get medical advice/ attention.
P342 + P311 If experiencing respiratory symptoms: Call a POISON CENTER or doctor/ physician.

Hazardous components which must be listed on the label:

4,4'-methylenediphenyl diisocyanate

Additional Labelling:

EUH204 Contains isocyanates. May produce an allergic reaction.

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Hazardous components

Chemical Name	CAS-No.	T.R. SAE No	T.R. SEA No 28848	Concentration
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SAFETY DATA SHEET

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	EC-No.	27092		(% w/w)
xylene Contains: ethylbenzene <= 25 %	1330-20-7 215-535-7	R10 Xn; R20/21 Xi; R36/37/38 Xn; R65 Xn; R48/20	Flam. Liq.3; H226 Acute Tox.4; H332 Acute Tox.4; H312 Skin Irrit.2; H315 Eye Irrit.2; H319 STOT SE3; H335 STOT RE2; H373 Asp. Tox.1; H304	>= 2,5 - < 3
naphtha (petroleum), hydrotreated heavy		Xn; R65 R10 R66	Flam. Liq.3; H226 Asp. Tox.1; H304	>= 1 - < 2,5
4,4'-methylenediphenyl diisocyanate	101-68-8 202-966-0	Carc.Cat.3; R40 Xn; R20-R48/20 Xi; R36/37/38 R42/43	Acute Tox.4; H332 Eye Irrit.2; H319 STOT SE3; H335 Skin Irrit.2; H315 Resp. Sens.1; H334 Skin Sens.1; H317 Carc.2; H351 STOT RE2; H373	>= 0,1 - < 1
dibutyltin dichloride	683-18-1 211-670-0	Repr.Cat.2; R60- R61 T+; R26 Mut.Cat.3; R68 T+; R26 T; R25-R48/25 C; R34 Xn; R21 N; R50/53 R43 Xn; R48/20	Muta.2; H341 Repr.1B; H360FD Acute Tox.2; H330 Acute Tox.3; H301 Acute Tox.4; H312 STOT RE1; H372 Skin Corr.1B; H314 Aquatic Acute1; H400 Aquatic Chronic1; H410	>= 0,01 - < 0,25

SECTION 4: First aid measures

4.1 Description of first aid measures

- General advice : Move out of dangerous area.
Consult a physician.
Show this safety data sheet to the doctor in attendance.
- If inhaled : Move to fresh air.
Consult a physician after significant exposure.
- In case of skin contact : Take off contaminated clothing and shoes immediately.
Wash off with soap and plenty of water.

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- If symptoms persist, call a physician.
- In case of eye contact : Immediately flush eye(s) with plenty of water.
Remove contact lenses.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist.
- If swallowed : Do not induce vomiting without medical advice.
Rinse mouth with water.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.

4.2 Most important symptoms and effects, both acute and delayed

- Symptoms : Asthmatic appearance
Allergic reactions
Excessive lachrymation
Erythema
Dermatitis
See Section 11 for more detailed information on health effects and symptoms.
- Risks : irritant effects
sensitising effects
Causes skin irritation.
Causes serious eye irritation.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.

4.3 Indication of any immediate medical attention and special treatment needed

- Treatment : Treat symptomatically.
-

SECTION 5: Firefighting measures

5.1 Extinguishing media

- Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

5.2 Special hazards arising from the substance or mixture

- Hazardous combustion products : No hazardous combustion products are known

5.3 Advice for firefighters

- Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

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Further information : Standard procedure for chemical fires.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Use personal protective equipment.
Deny access to unprotected persons.

6.2 Environmental precautions

Environmental precautions : Do not flush into surface water or sanitary sewer system.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For personal protection see section 8.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling : Do not breathe vapours or spray mist.
Avoid exceeding the given occupational exposure limits (see section 8).
Do not get in eyes, on skin, or on clothing.
For personal protection see section 8.
Persons with a history of skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.
Smoking, eating and drinking should be prohibited in the application area.
Follow standard hygiene measures when handling chemical products

Advice on protection against fire and explosion : Normal measures for preventive fire protection.

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice. When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday.

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7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Keep container tightly closed in a dry and well-ventilated place. Store in accordance with local regulations.

Other data : No decomposition if stored and applied as directed.

7.3 Specific end use(s)

Specific use(s) : No data available

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
xylene	1330-20-7	TWA (8 Hour)	50 ppm 221 mg/m ³	TR OEL
Further information	A skin notation assigned to the OEL identifies the possibility of significant uptake through the skin.			
		STEL 15 min	100 ppm 442 mg/m ³	TR OEL
Further information	A skin notation assigned to the OEL identifies the possibility of significant uptake through the skin.			
		TWA	50 ppm 221 mg/m ³	2000/39/EC
Further information	Identifies the possibility of significant uptake through the skin, Indicative			
		STEL	100 ppm 442 mg/m ³	2000/39/EC
Further information	Identifies the possibility of significant uptake through the skin, Indicative			
		TWA	50 ppm 221 mg/m ³	2000/39/EC
Further information	Identifies the possibility of significant uptake through the skin, Indicative			
		STEL	100 ppm 442 mg/m ³	2000/39/EC
Further information	Identifies the possibility of significant uptake through the skin, Indicative			

8.2 Exposure controls

Personal protective equipment

Eye protection : Safety glasses with side-shields
Eye wash bottle with pure water

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard must be worn at all times when handling chemical products. Reference number EN 374. Follow manufacturer specifications.

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Suitable for short time use or protection against splashes:
Butyl rubber/nitrile rubber gloves (0,4 mm),
Contaminated gloves should be removed.
Suitable for permanent exposure:
Viton gloves (0.4 mm),
breakthrough time >30 min.

- Skin and body protection : Protective clothing (e.g. Safety shoes acc. to EN ISO 20345, long-sleeved working clothing, long trousers). Rubber aprons and protective boots are additionally recommended for mixing and stirring work.
- Respiratory protection : Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
Use a properly fitted NIOSH approved air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary.
organic vapor filter (Type A)
A1: < 1000 ppm; A2: < 5000 ppm; A3: < 10000 ppm
Ensure adequate ventilation. This can be achieved by local exhaust extraction or by general ventilation. (EN 689 - Methods for determining inhalation exposure). This applies in particular to the mixing / stirring area. In case this is not sufficient to keep the concentrations under the occupational exposure limits then respiration protection measures must be used.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

- Appearance : paste
- Colour : various
- Odour : odourless
- Odour Threshold : No data available
- Flash point : ca. 80 °C
- Autoignition temperature : No data available
- Lower explosion limit (Vol-%) : No data available
- Upper explosion limit (Vol-%) : No data available

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Flammability	:	No data available
Oxidizing properties	:	No data available
pH	:	Not applicable
Melting point/range / Freezing point	:	No data available
Boiling point/boiling range	:	No data available
Vapour pressure	:	No data available
Density	:	ca.1,21 g/cm ³ at 20 °C
Water solubility	:	insoluble
Partition coefficient: n-octanol/water	:	No data available
Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	> 20,5 mm ² /s at 40 °C
Relative vapour density	:	No data available
Evaporation rate	:	No data available

9.2 Other information

No data available

SECTION 10: Stability and reactivity

10.1 Reactivity

No dangerous reaction known under conditions of normal use.

10.2 Chemical stability

The product is chemically stable.

10.3 Possibility of hazardous reactions

Hazardous reactions : Stable under recommended storage conditions.

10.4 Conditions to avoid

Conditions to avoid : No data available

10.5 Incompatible materials

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Materials to avoid : No data available

10.6 Hazardous decomposition products

No decomposition if stored and applied as directed.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Not classified based on available information.

Components:

xylene:

Acute dermal toxicity : Acute toxicity estimate: 1.100 mg/kg
Method: Converted acute toxicity point estimate

4,4'-methylenediphenyl diisocyanate:

Acute inhalation toxicity : Acute toxicity estimate: 1,5 mg/l
Test atmosphere: dust/mist
Method: Expert judgement

dibutyltin dichloride:

Acute oral toxicity : LD50 Oral (Rat): 219 mg/kg

Acute dermal toxicity : Acute toxicity estimate: 1.100 mg/kg
Method: Converted acute toxicity point estimate

Skin corrosion/irritation

Causes skin irritation.

Serious eye damage/eye irritation

Causes serious eye irritation.

Respiratory or skin sensitisation

Skin sensitisation: Not classified based on available information.

Respiratory sensitisation: May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Germ cell mutagenicity

Not classified based on available information.

Carcinogenicity

Not classified based on available information.

Reproductive toxicity

Not classified based on available information.

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STOT - single exposure

Not classified based on available information.

STOT - repeated exposure

Not classified based on available information.

Aspiration toxicity

Not classified based on available information.

SECTION 12: Ecological information

12.1 Toxicity

Components:

dibutyltin dichloride:

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia (water flea)): 1,4 mg/l
Exposure time: 48 h

M-Factor (Acute aquatic toxicity) : 10

12.2 Persistence and degradability

No data available

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

Product:

Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher..

12.6 Other adverse effects

Product:

Additional ecological information : There is no data available for this product.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

SAFETY DATA SHEET

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- Product : The generation of waste should be avoided or minimized wherever possible.
Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way.
Dispose of surplus and non-recyclable products via a licensed waste disposal contractor.
Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.
Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.
- European Waste Catalogue : 08 04 09* waste adhesives and sealants containing organic solvents or other dangerous substances
- Contaminated packaging : 15 01 10* packaging containing residues of or contaminated by dangerous substances
-

SECTION 14: Transport information

14.1 UN number

Not dangerous goods

14.2 UN proper shipping name

Not dangerous goods

14.3 Transport hazard class(es)

Not dangerous goods

14.4 Packing group

Not dangerous goods

14.5 Environmental hazards

Not dangerous goods

14.6 Special precautions for user

Not applicable

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

International Chemical Weapons Convention (CWC) : Not applicable

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Schedules of Toxic Chemicals and Precursors

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII) : 1,2-Benzenedicarboxylic acid, di-C9-11-branched alkyl esters, C10-rich 4,4'-methylenediphenyl diisocyanate dibutyltin dichloride

Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals : Not applicable

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59). : None of the components are listed (= > 0.1 %).

REACH - List of substances subject to authorisation (Annex XIV) : Not applicable

Regulation (EC) No 1005/2009 on substances that deplete the ozone layer : Not applicable

Regulation (EC) No 850/2004 on persistent organic pollutants : Not applicable

Ministry of Environment and Forestry; Regulation on Restriction Regarding to Manufacture, Placing on the Market and Use of Certain Hazardous Substances, Preparations and Articles. Dated 26 December 2008, Numbered 27092 (Bis). : 1,2-Benzenedicarboxylic acid, di-C9-11-branched alkyl esters, C10-rich

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.
Not applicable

Volatile organic compounds : Law on the incentive tax for volatile organic compounds (VOCV)
Volatile organic compounds (VOC) content: 4,19 %

Directive 2010/75/EU of 24 November 2010 on industrial emissions (integrated pollution prevention and control)
Volatile organic compounds (VOC) content: 4,19 %, 50,65 g/l
Remarks: VOC content excluding water

Directive 2010/75/EU of 24 November 2010 on industrial emissions (integrated pollution prevention and control)
Volatile organic compounds (VOC) content: 4,19 %, 50,65 g/l
Remarks: VOC content valid only for coating materials used on wood surfaces

Other regulations : According to 13 December 2014, No:29204, "Ministry of Environment and Urbanization; Regulation on Safety data sheets

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regarding hazardous substances and mixtures".
Regulation on Classification, Packaging and Labelling of Dangerous Substances and Preparations. Dated 26 December 2008, Numbered 27092 (Bis) Ministry of Environment and Forestry".
Regulation on Classification, Labelling and Packaging of Substances and Mixtures. Dated 11 December 2013, Numbered 28848 (Bis) Ministry of Environment and Forestry.
Regulation on Health and Safety Measures Of Working with Chemicals Substances Dated 12.08.13, numbered 28733 Ministry of Labour and Social Security.

SECTION 16: Other information

Full text of R-Phrases

R10	: Flammable.
R20	: Harmful by inhalation.
R20/21	: Harmful by inhalation and in contact with skin.
R21	: Harmful in contact with skin.
R25	: Toxic if swallowed.
R26	: Very toxic by inhalation.
R34	: Causes burns.
R36/37/38	: Irritating to eyes, respiratory system and skin.
R40	: Limited evidence of a carcinogenic effect.
R42/43	: May cause sensitisation by inhalation and skin contact.
R43	: May cause sensitisation by skin contact.
R48/20	: Harmful: danger of serious damage to health by prolonged exposure through inhalation.
R48/25	: Toxic: danger of serious damage to health by prolonged exposure if swallowed.
R50/53	: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R60	: May impair fertility.
R61	: May cause harm to the unborn child.
R65	: Harmful: may cause lung damage if swallowed.
R66	: Repeated exposure may cause skin dryness or cracking.
R68	: Possible risk of irreversible effects.

Full text of H-Statements

H226	: Flammable liquid and vapour.
H301	: Toxic if swallowed.
H304	: May be fatal if swallowed and enters airways.
H312	: Harmful in contact with skin.
H314	: Causes severe skin burns and eye damage.
H315	: Causes skin irritation.
H317	: May cause an allergic skin reaction.
H319	: Causes serious eye irritation.
H330	: Fatal if inhaled.

SAFETY DATA SHEET

According to 13 December 2014, No:29204, "Ministry of Environment and Urbanization; Regulation on Safety data sheets regarding hazardous substances and mixtures".



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H332	: Harmful if inhaled.
H334	: May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	: May cause respiratory irritation.
H341	: Suspected of causing genetic defects.
H351	: Suspected of causing cancer.
H360FD	: May damage fertility. May damage the unborn child.
H372	: Causes damage to organs through prolonged or repeated exposure.
H373	: May cause damage to organs through prolonged or repeated exposure.
H400	: Very toxic to aquatic life.
H410	: Very toxic to aquatic life with long lasting effects.

Full text of other abbreviations

Acute Tox.	: Acute toxicity
Aquatic Acute	: Acute aquatic toxicity
Aquatic Chronic	: Chronic aquatic toxicity
Asp. Tox.	: Aspiration hazard
Carc.	: Carcinogenicity
Eye Irrit.	: Eye irritation
Flam. Liq.	: Flammable liquids
Muta.	: Germ cell mutagenicity
Repr.	: Reproductive toxicity
Resp. Sens.	: Respiratory sensitisation
Skin Corr.	: Skin corrosion
Skin Irrit.	: Skin irritation
Skin Sens.	: Skin sensitisation
STOT RE	: Specific target organ toxicity - repeated exposure
STOT SE	: Specific target organ toxicity - single exposure
ADR	: Accord européen relatif au transport international des marchandises Dangereuses par Route
CAS	: Chemical Abstracts Service
DNEL	: Derived no-effect level
EC50	: Half maximal effective concentration
GHS	: Half maximal effective concentration
IATA	: International Air Transport Association
IMDG	: International Maritime Code for Dangerous Goods
LD50	: Median lethal dose (the amount of a material, given all at once, which causes the death of 50% (one half) of a group of test animals)
LC50	: Median lethal concentration (concentrations of the chemical in air that kills 50% of the test animals during the observation period)
MARPOL	: International Convention for the Prevention of Pollution from Ships, 1973 as modified by the Protocol of 1978
OEL	: Occupational Exposure Limit
PBT	: Persistent, bioaccumulative and toxic
PNEC	: Predicted no effect concentration
REACH	: Regulation (EC) No 1907/2006 of the European Parliament

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SVHC
vPvB

and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency
: Substances of Very High Concern
: Very persistent and very bioaccumulative

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Certification Date: 15.04.2015

The information contained in this Safety Data Sheet corresponds to our level of knowledge at the time of publication. All warranties are excluded. Our most current General Sales Conditions shall apply. Please consult the product data sheet prior to any use and processing.

TR / EN



PRODUCT DATA SHEET

Sikaflex®-521 UV

ISOCYANATE FREE WEATHERING RESISTANT SEALANT

TYPICAL PRODUCT DATA (FURTHER VALUES SEE SAFETY DATA SHEET)

Chemical base		Silane Terminated Polymer
Color (CQP001-1)		White, grey, black
Cure Mechanism		Moisture-curing
Density (uncured)	depending on color	1.4 kg/l
Non-sag properties		Good
Application temperature	ambient	5 – 40 °C
Skin time (CQP019-1)		30 minutes ^a
Curing speed (CQP049-1)		(see diagram)
Shrinkage (CQP014-1)		2 %
Shore A hardness (CQP023-1 / ISO 868)		40
Tensile strength (CQP036-1 / ISO 37)		1.8 MPa
Elongation at break (CQP036-1 / ISO 37)		400 %
Tear propagation resistance (CQP045-1 / ISO 34)		5.5 N/mm
Service temperature (CQP513-1)		-50 – 90 °C
	4 hours	140 °C
	1 hour	150 °C
Shelf life (CQP016-1)	cartridge / unipack	12 months ^a
	pail / drum	9 months ^a

CQP = Corporate Quality Procedure

^a 23 °C / 50 % r. h.^a storage below 25 °C

DESCRIPTION

Sikaflex®-521 UV is a weathering resistant 1-component Silane Terminated Polymer (STP) sealant that cures on exposure to atmospheric humidity. This multipurpose product is suitable for internal and external sealing applications.

PRODUCT BENEFITS

- Ageing and weathering resistant
- Bonds well to a wide variety of substrates without the need for special pre-treatment
- Can be painted
- Can be sanded
- Low odor
- Isocyanate- and solvent-free
- Silicone- and PVC-free

AREAS OF APPLICATION

Sikaflex®-521 UV adheres well to a wide variety of substrates and is suitable for elastic sealing and bonding. Suitable substrate materials include timber, metals, metal primers and paint coatings (2-part systems), ceramic materials and plastics.

Seek manufacturer's advice and perform tests on original substrates before using Sikaflex®-521 UV on materials prone to stress cracking.

This product is suitable for experienced professional users only. Test with actual substrates and conditions have to be performed to ensure adhesion and material compatibility.

CURE MECHANISM

Sikaflex®-521 UV cures by reaction with atmospheric moisture. At low temperatures the water content of the air is generally lower and the curing reaction proceeds somewhat slower (see diagram 1).

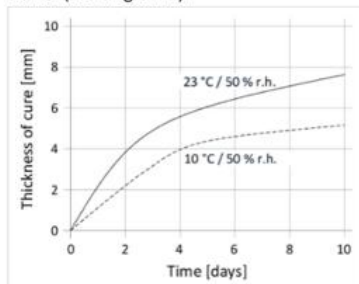


Diagram 1: Curing speed Sikaflex®-521 UV

CHEMICAL RESISTANCE

Sikaflex®-521 UV is generally resistant to fresh water, seawater, diluted acids and diluted caustic solutions; temporarily resistant to fuels, mineral oils, vegetable and animal fats and oils; not resistant to organic acids, glycolic alcohol, concentrated mineral acids and caustic solutions or solvents.

METHOD OF APPLICATION

Surface Preparation

Surfaces must be clean, dry and free from grease, oil and dust.

Surface treatment depends on the specific nature of the substrates and is crucial for a long lasting bond. Suggestions for surface preparation may be found on the current edition of the appropriate Sika® Pre-Treatment Chart. Consider that these suggestions are based on experience and have in any case to be verified by tests on original substrates.

Application

Sikaflex®-521 UV can be processed between 5 °C and 40 °C but changes in reactivity and application properties have to be considered. The optimum temperature for substrate and sealant is between 15 °C and 25 °C.

Sikaflex®-521 UV can be processed with hand, pneumatic or electric driven piston guns as well as pump equipment. For advice on selecting and setting up a suitable pump system, contact the System Engineering Department of Sika Industry.

Tooling and finishing

Tooling and finishing must be carried out within the skin time of the sealant. It is recommended using Sika® Tooling Agent N. Other finishing agents must be tested for suitability and compatibility prior to the use.

Removal

Uncured Sikaflex®-521 UV can be removed from tools and equipment with Sika® Remover-208 or another suitable solvent. Once cured, the material can only be removed mechanically. Hands and exposed skin have to be washed immediately using Sika® Cleaner-350H cleaning towels or a suitable industrial hand cleaner and water. Do not use solvents on skin!

Overpainting

Sikaflex®-521 UV can be overpainted within the skin formation time. 2 component epoxy paints are usually suitable. Other paints must be tested for compatibility by carrying out preliminary trials under manufacturing conditions. The elasticity of paints is usually lower than of elastomers what could lead to cracking of the paint film in the joint area.

FURTHER INFORMATION

The information herein is offered for general guidance only. Advice on specific applications is available on request from the Technical Department of Sika Industry.

Copies of the following publications are available on request:

- Safety Data Sheets
- Sika Pre-treatment Chart
- Silane Terminated Polymer
- General Guidelines
- Bonding and Sealing with Sikaflex® and SikaTack®

PACKAGING INFORMATION

Cartridge	300 ml
Unipack	600 ml
Pail (on request)	23 l
Drum (on request)	195 l

BASIS OF PRODUCT DATA

All technical data stated in this document are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

HEALTH AND SAFETY INFORMATION

For information and advice regarding transportation, handling, storage and disposal of chemical products, users shall refer to the actual Safety Data Sheets containing physical, ecological, toxicological and other safety-related data.

DISCLAIMER

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