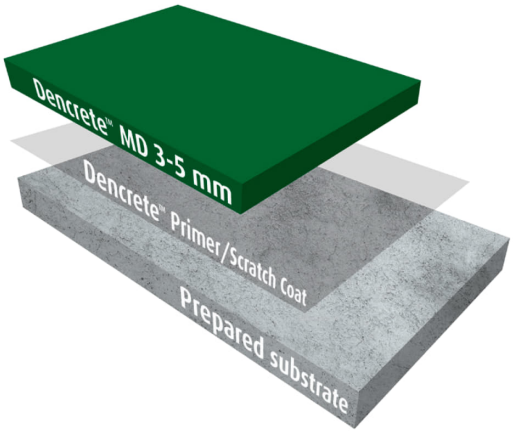
DenCoat™
Tomorrow's Floors Today

Dencrete™ MD (3-5 mm)

Dencrete MD is a bio-polyol based, monolithic, self levelling cementitious polyurethane screed with a thickness of 3-5 mm. It provides excellent resistance to aggressive chemicals and high abrasion resistance. It is dense and impervious and suitable for dry and semi-wet areas where cleanliness, a joint free finish and a robust long-lived floor is required.



Recommended Uses

- Food Manufacturing
- Dairies
- Commercial Kitchens
- Textile & Film
- Aerospace
- Warehouse & Storage
- Beverage & Breweries
- Pharmaceutical
- Packaging Halls
- Clean Rooms & Laboratories

Benefits

Excellent Chemical Resistance*
Resistant to majority of acids & solvents used in the manufacturing process

Temperature Resistant
Resistant to temperatures ranging from -15°C to 90°C hence resistant to hot water and steam

No VOC & Phthalate free
Biopolyol based product with no harmful emissions & odour

Abrasion Resistant
Resistant to high impact and heavy traffic therefore protects the surface below

Clean and Hygienic
Our floors are very easy to clean and do not support bacterial or fungal growth

Colours

Buff, Yellow, Red, Sky Blue, Green, Light Grey, Dark Grey

Our Certifications

REACH COMPLIANCE

ACTALIA

Technical Properties

Properties	Value
Appearance	Smooth Matt Finish
Mixed Density	2.00 Kg/l
Fully Cured at 23°C	7 days
Applied Thickness	3 -5 mm
Water Permeability	Nil – Karsten test (impermeable)
Shore D Hardness	90
Compressive Strength	53.9 N/mm2
Flexural Strength	22.0 N/mm2
Tensile Strength	19.0 N/mm2
Elongation at Break	100%
Crack Bridging Ability	1 mm
Reaction to fire	Bfl - s1
Bond Strength (Pull-off test)	> 1.5 MPa
Temperature Resistance	-15°C to 90°C at 4mm
Thermal Expansion Coefficient	< 38 ppm
Abrasion Resistance	20mg / 1000 cycles (Taber Abraser)
Thermal Conductivity	< 1.5 W/m-K
Slip Resistance	R9 – R13
Food Contact	No contamination

Note: Dencrete is not colour fast. UV exposure and heat will result in yellowing of the floor especially visible in light colours. However the floor performance will stay unaffected. It is recommended to apply an aliphatic UV resistant sealer to achieve colour stability of the floor. For specific colour requirements, please contact our representative.

* A detailed chemical resistance list is available on request

**These figures are typical properties achieved in laboratory tests where samples were cured for 28 days at 20 deg C and 50% relative humidity. Actual performance on the job site may vary from these values based on actual site conditions

Updated on Feb,2023

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Material Storage and Shelf life
Store in a dry place away from direct sunlight with temperatures between 15°C–30°C. Part A and B have a shelf life of 12 months and must be protected from frost. Part C has a shelf life of 6 months and must be protected from humidity.

Pot Life
Pot life is 15 minutes from mixing. All mixed product must be used within the pot life time limit, if the product is left in the container after mixing and not used, it may release hazardous fumes due to exothermic reaction.

Substrate Requirements
The concrete substrate should be a minimum of 25 N/mm², free from laitance, dust, oil, grease, loose material and other contamination which impair adhesion. The substrate should be dry to 75 % RH as per BS 8204 and free from dampness and rising ground water pressure etc.The tensile strength of the substrate should exceed1.5 N/Sq. m. The maximum moisture content in the subfloor should not be more than 5%.

Application Conditions
Ideal ambient, material and substrate temperature range is 15ºC - 30ºC to achieve best results. Application shouldn't be carried out if the temperature of the concrete is less than 10ºC or where the ambient relative humidity is greater than 85%. If the surface is clearly wet due to high relative humidity, the surface should be dried by means available.

Application Procedure
Dencrete should be installed by specialist applicators, who must follow the procedures laid down in guideline documents.
Here is the brief application procedure:

Surface Preparation
Surface must be prepared by suitable mechanical means - grinding, scarifying or as per the site requirement to ensure a perfect bonding with substrate.

- Remove all loose particles, dust using suitable mechanical means - industrial vacuum cleaner etc.
- Make grooves of 8mm X 8mm in size at approximately 100mm distance parallel to the wall and adjacent to the doorways, covering not more than 20 Sq.mtr. Fill the grooves with the same material.
- Repair all imperfections substrate - pot holes, cracks should be filled with PU Mortar. Flatness of the base should be checked for level to ensure that the specified thickness of treatment can be applied over the whole area.
- All the expansion & movement joints should be properly cut and maintained for terminations.

The surface is allowed to dry thoroughly before the priming /scratch coat is applied

Scratch Coat, Middle Coat and Top Coat
After surface preparation, apply the scratch coat of 1mm of Dencrete MD followed by the top coat. Dencrete is a monolithic system and hence the same PU material is used for all 3 coats.Add the Part A contents and then the Part D Pigment pack contents into a mixing bucket or directly into a rotary drum mixer. Mix thoroughly
for one minute then add the Part B contents. Mix at a low speed (ca.300 rpm) using an electric drill and paddle for at least 1 min until it is homogeneous. While stirring add component
C and stir for another 2 minutes until a homogeneous mix of the four components is achieved. Scrape the sides and the bottom of the container several times during mixing to ensure complete mixing.
Apply immediately to prepared areas without delay using a straight edge trowel or depth set rake to achieve the desired thickness. The surface should be gently rolled with spiked roller in order to release any entrapped air from the mixed also to blend out any trowel marks. Scratch off the excess with the edge of the trowel and leave to cure for 16 hours or overnight.

Note: If severe pin-holing is evident during the cured scratch coat, it indicates that air is rising from the substrate, remedial action should be taken. Failure to do so can result in increased risk of pin-holing on the surface top.

The video of the application procedure can be found on -
https://www.youtube.com/channel/UCrOCVD3V_zB4r2e_6Aexy7w

After Care Cleaning & Maintenance
Clean regularly using a single or double headed rotary scrubber drier along with a mildly alkaline detergent. Regular cleaning is essential to maintain and enhance the life of the floor.

Health & Safety
The product should not come in contact with eyes and skin or be swallowed. Ensure adequate ventilation and avoid inhalation of vapours. Wear suitable protective clothing, gloves and eye protection. In case of contact with skin, rinse with soap and water. If swallowed, seek medical attention.

Disposal & Spillage
Spillage of any of the product components should be absorbed onto sand or other inert materials and transferred to a suitable disposable vessel. Disposal of such spillage or empty packaging should be in accordance with local waste disposal authority regulations.

Disclaimer
The information in this data sheet is based upon the current state and our best practical and scientific knowledge. The user is responsible for checking the suitability of the products for their intended use.

DenCoat™ India
96 DSIDC Okhla Phase 1, New Delhi - 110020, India
Tel: +91 926 662 5145 Mail: info@dencoat.com Web: www.dencoat.com

SHRIRAM INSTITUTE FOR INDUSTRIAL RESEARCH

(A unit of Shriram Scientific and Industrial Research Foundation)

19, University Road, Delhi – 110007 (India)
An ISO - 9001, 14001 & OHSAS 18001 Certified Institute

Website : www.shriraminstitute.org
E-mail id : customercare@shriraminstitute.org

ULR NO. : TC544421000011745F

TEST CERTIFICATE

NO : C1/0000266554

Issued To :
Client Code : (FARD01U0571)
ULFCAR CHEMICALS PRIVATE LTD
PLOT NO 262 SECTOR 58
FARIDABAD
HARYANA-121004
Kind Attn: MR RAJDEEP SETHI,DIRECTOR

Date	: 16-09-2021
Job No	: 2109-1-141-306
Booking No	: RG2122/1/3950
Booking Date	: 06-09-2021
Customer Ref No.	: UCPL/002/2021-22
Customer Ref Dt.	: 31-08-2021

TC-5444

Job No- 2109-1-141-306

ONE SAMPLE DESCRIBED AS FLOOR COATING - DENCRETE MD/MF/HF/TC, WAS RECEIVED.

"THE SAMPLING WAS NOT CARRIED OUT BY SHRIRAM INSTITUTE FOR INDUSTRIAL RESEARCH. THE SAMPLE DESCRIPTION PROVIDED IN THE TEST CERTIFICATE ARE BASED ON DECLARATION BY THE SPONSOR."

S.NO	Test	Result	Protocol adopted
1	Compressive Strength, MPa	53.9	ASTM D 695-15

*****

D.O.R 06.09.2021
D.O.S 07.09.2021
D.O.C 16.09.2021

AUTHORISED SIGNATORY
EMPLOYEE CODE:(0159)

Phone : 91-11-27000100, 27667267, 27667860 Fax : 91-11-27667207

See overleaf for terms & conditions

SHRIRAM INSTITUTE FOR INDUSTRIAL RESEARCH

(A unit of Shriram Scientific and Industrial Research Foundation)

19, University Road, Delhi – 110007 (India)
An ISO - 9001, 14001 & OHSAS 18001 Certified Institute

Website : www.shriraminstitute.org
E-mail id : customercare@shriraminstitute.org

ULR NO. : TC544421000010112F

TEST CERTIFICATE

NO : C1/0000263508

TC-5444

Issued To :
Client Code : (FARD01U0571)
ULFCAR CHEMICALS PRIVATE LTD
PLOT NO 262 SECTOR 58
FARIDABAD
HARYANA-121004
Kind Attn: MR RAJDEEP SETHI,DIRECTOR

Date	: 16-08-2021
Job No	: 2108-1-141-224
Booking No	: RG2122/1/2930
Booking Date	: 04-08-2021
Customer Ref No.	: UCPL/001/2021-22
Customer Ref Dt.	: 31-07-2021

J.O.No : 2108-1-141-224

Sample Detail :

ONE SAMPLE OF FLOOR COATING DESCRIBED AS DENCRETE MD/MF/HF/TC, WAS RECEIVED.

The sampling was not carried out by SHRIRAM INSTITUTE FOR INDUSTRIAL RESEARCH. The sample particulars provided in the Test Certificate are based on the declaration by the Party.

S.No.	Tests	Results	Protocol/Instrument Used
1	Flexural Strength, Mpa	22	ASTM D 790-17

*****

D.O.R : 04/08/2021
D.O.C : 13/08/2021

AUTHORISED SIGNATORY
EMPLOYEE CODE:(4159)

Phone : 91-11-27000100, 27667267, 27667860 Fax : 91-11-27667207

SRI-C1 (Rev. 03)

See overleaf for terms & conditions

SHRIRAM INSTITUTE FOR INDUSTRIAL RESEARCH

(A unit of Shriram Scientific and Industrial Research Foundation)

19, University Road, Delhi – 110007 (India)
An ISO - 9001, 14001 & OHSAS 18001 Certified Institute

Website : www.shriraminstitute.org
E-mail id : customercare@shriraminstitute.org

ULR NO. : TC544421000010111F

TEST CERTIFICATE

NO : C1/0000263507

Issued To :
Client Code : (FARD01U0571)
ULFCAR CHEMICALS PRIVATE LTD
PLOT NO 262 SECTOR 58
FARIDABAD
HARYANA-121004
Kind Attn: MR RAJDEEP SETHI,DIRECTOR

Date : 16-08-2021
Job No : 2108-1-141-223
Booking No : RG2122/1/2930
Booking Date : 04-08-2021
Customer Ref No. : UCPL/001/2021-22
Customer Ref Dt. : 31-07-2021

J.O.No : 2108-1-141-223

Sample Detail :
ONE SAMPLE OF FLOOR COATING DESCRIBED AS DENCRETE MD/MF/HF/TC, WAS RECEIVED.

The sampling was not carried out by SHRIRAM INSTITUTE FOR INDUSTRIAL RESEARCH. The sample particulars provided in the Test Certificate are based on the declaration by the Party.

S.No.	Tests	Results	Protocol/Instrument Used
1	Tensile Strength, Mpa	19	ASTM D 638-14

*****

D.O.R : 04/08/2021
D.O.C : 13/08/2021

AUTHORISED SIGNATORY
EMPLOYEE CODE:(459)

Phone : 91-11-27000100, 27667267, 27667860 Fax : 91-11-27667207

See overleaf for terms & conditions

SHRIRAM INSTITUTE FOR INDUSTRIAL RESEARCH

(A unit of Shriram Scientific and Industrial Research Foundation)

19, University Road, Delhi – 110007 (India)
An ISO - 9001, 14001 & OHSAS 18001 Certified Institute

Website : www.shriraminstitute.org
E-mail id : customercare@shriraminstitute.org

TEST CERTIFICATE

NO : C1/0000263510

Issued To :
Client Code : (FARD01U0571)
ULECAR CHEMICALS PRIVATE LTD
PLOT NO 262 SECTOR 58
FARIDABAD
HARYANA-121004
Kind Attn: MR RAJDEEP SETHI,DIRECTOR

Date : 16-08-2021
Job No : 2108-1-141-226
Booking No : RG2122/1/2930
Booking Date : 04-08-2021
Customer Ref No. : UCPL/001/2021-22
Customer Ref Dt. : 31-07-2021

J.O.No : 2108-1-141-226

Sample Detail :
ONE SAMPLE OF FLOOR COATING DESCRIBED AS DENCRETE MD/MF/HF/TC, WAS RECEIVED.

The sampling was not carried out by SHRIRAM INSTITUTE FOR INDUSTRIAL RESEARCH. The sample particulars provided in the Test Certificate are based on the declaration by the Party.

S.No.	Tests	Results	Protocol/Instrument Used
1	Abrasion resistance, mg (Weight loss) at 1 kg weight & 1000cycle	20	ASTM D 4060-19

*****

D.O.R : 04/08/2021
D.O.C : 13/08/2021

AUTHORISED SIGNATORY
EMPLOYEE CODE:(4154)

Phone : 91-11-27000100, 27667267, 27667860 Fax : 91-11-27667207

See overleaf for terms & conditions

Phone : 0821-2514972

ಈ-ಮೇಲ : E-mail : csc@cftri.res.in

ಸಿಎಸ್‌ಐಆರ್ – ಕೇಂದ್ರೀಯ ಆಹಾರ ತಾಂತ್ರಿಕ ಸಂಶೋಧನಾಲಯ, ಮೈಸೂರು – 570 020

सी एस आई आर – केन्द्रीय खाद्य प्रौद्योगिक अनुसंधान संस्थान, मैसूरु – 570 020

CSIR-Central Food Technological Research Institute, Mysuru - 570 020, India

Giving Food a Future

TEST REPORT

CFTRI CUSTOMER SERVICE CELL

ULR	T	C	5	2	5	3	1	9	0	0	0	0	0	0	4	0	3	F

1	7	0	6	2	0

Name & Address of the Customer	:	**M/s. Onkar Exim Pvt. Ltd. Plot- #262, Sector- 58, Faridabad- 121004, Haryana**	
Request Reference	:	Your letter Ref No.: OEPL/092/2019-20 dated : 25.01.2020	
Name of the Product/Sample[a]	:	**Resinous and Polymeric coating DencoatDencrete MD/MF/HF/TC**	**Certificate No. TC 5253**
Sample Receipt Date	:	20.03.2020	**Page 1 of 1**

SAMPLE NOT DRAWN BY US

Test Parameter	Simulant (Temp/ Time)	Amount of Extractives	Limits as per USFDA – 175.300	Test Method
		mg/in^2	mg/in^2	
Global Migration Test	Distilled Water (49°C/24 hrs.)	1.48	1.8 for single use 18 for repeated use	USFDA – 175.300 1st April 2019

SV : SA = 0.99 : 1

Conclusion: The values are within the limits specified as per USFDA 175.300, 1st April 2019, for intended use for contact with aqueous (water) foods for repeated use at room temperature filling and storing.

[a]**Information as given by the customer.**

Please Note: The results contained in this Test Report relate only to the sample tested. This Report is intended only for your guidance and not valid for legal purposes or for advertisement.

डा. आलोक कुमार श्रीवास्तवा
Dr. Alok Kumar Srivastava
मुख्य वैज्ञानिक & प्रधान / Chief Scientist & Head
खाद्य सुरक्षा और विश्लेषणात्मक गुणवत्ता नियंत्रण प्रयोगशाला
Food Safety & Analytical Quality Control Laboratory
सीएसआईआर-केंद्रीय खाद्य प्रौद्योगिक अनुसंधान संस्थान
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DENCOAT
Mr DE VOS Philip
General Manager DenCoat
Mail: philip.devos@dencoat.eu

REPORT
REF PROPOSAL N°SMI.2020.556.1
Date: 08/02/2021

Validation of the antibacterial activity of surfaces impregnated with silver ions

(Phase I)

ACTALIA
SÉCURITÉ DES ALIMENTS

TABLE OF CONTENT

I. CONTEXT

DENCOAT wants to assess the bactericidal efficiency of a material impregnated with silver ions. **This report presents the results of a first phase from a laboratory study aiming to confirm the antibacterial efficacy of silver ions placed in flooring samples manufactured by DENCOAT under the conditions described by the ISO 22196:2011 standard**.

Following this first step, a second phase could be considered in order to test the technology over time (notably to demonstrate its resistance to washing). Nevertheless, this in-depth work will be the subjected to future discussions and independent proposals.

II. METHOD

This study was carried out according to a protocol derived from the ISO 22196:2011 standard. Any deviation from the standard protocol described in this standard is mentioned below.

II.1. Strains

- *Escherichia coli* ATCC 8739 (standard strain)
- *Staphylococcus aureus* ATCC 6538P (standard strain)
- *Cronobacter sakazakii* CIP 57.33 (collection strain isolated from milk powder)
- *Listeria monocytogenes* CIP 7838 (additional collection strain, serotype 4b with a human origin)
- *Pseudomonas aeruginosa* ATCC 15442 (strain used for validation of disinfectants efficacy)
- *Salmonella enterica* serovar Typhimurium ATCC14028 (strain used for culture media validation)
- *Staphylococcus aureus* MW2 (methicillin-resistant clinical strain)

II.2. Samples description

- Polyurethane-cement resin impregnated with silver ions supplied by DENCOAT (reference to be specified): the results obtained with the material will be compared with those measured on an inert control film (described below)
- Covering film and control samples = Japanese PE film used for making Stomacher bags, 0.09mm thickness, supplied by Sanitized

For each bacterial strain**, 6 control samples** were prepared (PE film – 3 samples were immediately analyzed after inoculation and 3 samples were analyzed after the 24-hour incubation period) + **3 samples of the material tested** + **9 covering films.**

For the "control" and "test" samples, 5cm x 5cm samples were cut. For the covering film, pieces of 4cm x 4cm were prepared.

Due to the presence of unwanted microbial flora on the samples, they were disinfected before inoculation by washing with 70% ethanol followed by UV exposure.

II.3. Samples preparation

The test suspensions were prepared and calibrated in NB 1/500 solution using optical density measurements to obtain bacterial suspensions between $2.5x10^5$ and $1.0x10^6$ CFU/ml.

Two hundred µl of these suspensions were dropped on the samples (test and control materials) before being covered with the covering film.

Immediately after inoculation, half of the control samples were analyzed (T0) while the other samples (test and control) were incubated at 35°C for 24 hours (T24).

II.4. Neutralization

Neutralization was performed as described in the standard by using 10ml of SCDLP medium.

II.5. Recovering cells and enumeration methods

Bacterial cells on samples were removed by pipetting the SCDLP medium onto the surface of materials (at least 4 successive washes were carried out). Nevertheless, because of the roughness of samples, a brushing step of the surface was performed in order to increase the recovery rate. This mechanical action was similarly applied on all materials (controls and tests).

Enumeration of viable bacteria in the neutralizing agent was carried out on PCA agar medium, as described in the standard.

III. RESULTS

Validation of the antibacterial activity of surfaces impregnated with silver ions against the 7 bacterial strains tested according to the ISO 22196:2011 standard.

Results are summarized in table 1.

The measured concentration on control samples at T0 ranged between 3.81 and 4.64 log CFU/cm². Despite a standardized calibration protocol, an inter-strain variability was observed. The variability of control sample concentrations at T0 were mainly below the maximum set by the standard (0.03 to 0.29 as opposed to the required maximum 0.2), except for *Listeria monocytogenes* (variability = 0.5).

However, even with such variable concentrations, results on control samples after an incubation of 24h et 35°C were satisfactory (min = 3.97 log CFU/cm² / max = 5.67 log CFU/cm² / requirement of the standard ≥1.79), which enables the use of the data to assess the antimicrobial activity of the tested material.

The number of viable cultivable bacteria recovered from silver ion-impregnated samples is generally very low. The maximum value measured is 0.31 CFU/cm². Results highlight the antimicrobial activity of the floor covering samples manufactured by DENCOAT impregnated with silver ions. Log reductions observed after 24h at 35°C ranged from ≥ 4.48 to ≥ 6.17 log CFU/cm² as a function of the strain.

Table 1: Results summary

	Samples n°	Standard target	*Escherichia coli* ATCC 8739	*Staphylococcus aureus* ATCC 6538P	*Cronobacter sakazakii* CIP 57.33	*Listeria monocytogenes* CIP 7838	*Pseudomonas aeruginosa* ATCC15442	*Salmonella Typhimurium* ATCC 14028	*Staphylococcus aureus* MW2
Inoculum concentration (CFU/ml)	-	$2,5x10^5$-$1,0x10^6$	$2,16x10^6$	$6,80x10^5$	$2,75x10^6$	$7,60x10^5$	$1,69x10^6$	$2,87x10^6$	$1,97x10^6$
Control sample (inert film without silver ions) immediately after inoculation = T0 (CFU/cm²)*	1	$6,2x10^3$-$2,5x10^4$	$3,22x10^4$	$6,09x10^3$	$4,53x10^4$	$8,41x10^4$	$1,23x10^4$	$3,78x10^4$	$1,34x10^4$
	2		$1,94x10^4$	$7,03x10^3$	$2,00x10^4$	$3,25x10^4$	$1,09x10^4$	$2,06x10^4$	$2,41x10^4$
	3		$1,91x10^4$	$6,34x10^3$	$2,31x10^4$	$1,44x10^4$	$1,28x10^4$	$3,34x10^4$	$1,34x10^4$
Mean (log CFU/cm²) = U_0		3,79-4,40	4,37	3,81	4,47	4,64	4,08	4,49	4,23
T0 variability**	-	≤ 0,2	0,20	0,06	0,23	0,50	0,03	0,21	0,29
Control sample (inert film without silver ions) after incubation of 24 =T24 (CFU/cm²)*	1	$\geq 6,2x10^1$	$> 2,06x10^5$	$> 2,06x10^5$	$4,28x10^5$	$9,38x10^3$	$> 2,06x10^5$	$5,00x10^4$	$3,44x10^4$
	2		$> 2,06x10^5$	$> 2,06x10^5$	$4,66x10^5$	$9,38x10^3$	$> 2,06x10^5$	$6,25x10^4$	$1,88x10^4$
	3		$> 2,06x10^5$	$> 2,06x10^5$	$5,25x10^5$	$9,38x10^3$	$> 2,06x10^5$	$1,88x10^4$	$2,19x10^4$
Mean (log CFU/cm²) = U_t		≥1,79	> 5,31	> 5,31	5,67	3,97	> 5,31	4,69	4,40
Resin after incubation of 24h = T24 (CFU/cm²)*	1	-	$< 3,13x10^{-1}$	$< 3,13x10^{-1}$	$< 3,13x10^{-1}$	$3,13x10^{-1}$	$< 3,13x10^{-1}$	$3,13x10^{-1}$	$3,13x10^{-1}$
	2	-	$< 3,13x10^{-1}$	$< 3,13x10^{-1}$	$< 3,13x10^{-1}$	$< 3,13x10^{-1}$	$< 3,13x10^{-1}$	$< 3,13x10^{-1}$	$3,13x10^{-1}$
	3	-	$< 3,13x10^{-1}$	$< 3,13x10^{-1}$	$< 3,13x10^{-1}$	$3,13x10^{-1}$	$< 3,13x10^{-1}$	$< 3,13x10^{-1}$	$< 3,13x10^{-1}$
Mean (log UFC/cm²) = A_t		-	<-0,51	<-0,51	<-0,51	<-0,51	<-0,51	<-0,51	<-0,51
Antibacterial resin activity*** = R		-	> 5,81	> 5,81	> 6,17	> 4,48	> 5,81	> 5,15	> 4,90

* N = (100 × C × D × V)/A; N, Sample surface (CFU/cm²); C, enumeration mean; D, dilution; V, volume of SCDLP; A, Covering film surface (mm²)

** $(L_{max}-L_{min})/L_{mean}$

*** $R = (U_t - U_0) - (A_t - U_0) = U_t - A_t$

IV. CONCLUSION

Using a protocol adapted from the ISO 22196:2011 standard, results confirmed the **antimicrobial activity of the polyurethane-cement resin impregnated with silver ions against the 7 bacterial species tested**. Results are summarized below.

Tested material *(méethod)*	Strain	Difference control / active materiaf *R = log UFC/cm² Témoin – log UFC/cm² Material*	Difference in %
resin (*Protocol adapted from ISO 22196 :2011 standard)*	*Escherichia coli* ATCC 8739	> 5,81	>99,99%
	Staphylococcus aureus ATCC 6538P	> 5,81	>99,99%
	Cronobacter sakazakii CIP 57.33	> 6,17	>99,99%
	Listeria monocytogenes CIP 7838	> 4,48	>99,99%
	Pseudomonas aeruginosa ATCC 15442	> 5,81	>99,99%
	Salmonella Typhimurium ATCC14028	> 5,15	>99,99%
	Staphylococcus aureus MW2	> 4,90	>99,99%

For ACTALIA
Saint-Lô, 08/02/2021
Aurélie HANIN
Project manager in microbiology

ACTALIA
310 RUE POPIELUJKO
50000 SAINT LO
Tél. : 02.33.06.71.71
Fax : 02.33.06.71.81
www.actalia.eu

HACCP

Certificate of Registration

This is to certify that the following flooring systems manufactured by Dencoat India (Ulfcar Chemicals Private Limited) Property No-262, Sector-58, Faridabad, Haryana, 121004. under the brand name DenCoat are suitable for use in food and beverage facilities that meet the HACCP guidelines.

HACCP

for the following scope :

Brand Name : Dencoat Flooring Systems

1. Dencrete TC
2. Dencrete MD
3. Dencrete MF
4. Dencrete HF
5. Dencrete WR
6. Dencrete SL

CERTIFICATE NO. : 22ACAK11165H

ISSUED DATE : 03/08/2022
EXPIRY DATE : 02/08/2025

1ST SURVEILLANCE : 02/08/2023
2ND SURVEILLANCE : 02/08/2024

UKAC
UK ACKREDITERING CERTIFICATION LIMITED

Authorised Signatory

INTERNATIONAL QUALITY CERTIFICATION SERVICES UK LTD
272, Bath Street, Glasgow, G2 4JR, U.K.

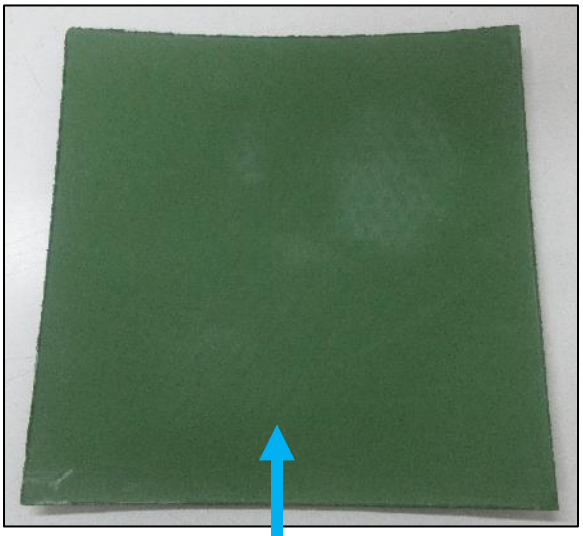
TEST REPORT

South Asia

Test Report No. GGN/H(Re)/22/002687

Dated 2022.12.30

Sample Image(s) (As Received)



Component No. A

Laboratory:
TÜV SÜD South Asia Pvt. Ltd.
373 Udyog Vihar Phase II
Sector 20
Gurgaon – 122016

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TÜV SÜD House
Off Saki Vihar Road
Saki Naka, Andheri (East),
Mumbai – 400072. India

TEST REPORT

South Asia

Test Report No. GGN/H(Re)/22/002687

Dated 2022.12.30

APPLICANT / COMPANY NAME	:	ULFCAR CHEMICALS PVT LTD
ADDRESS	:	PLOT NO. 262 SECTOR-58 FARIDABAD-121004, HARYANA, INDIA
ATTENTION / CONTACT PERSON	:	MR. RAJDEEP SETHI
TESTED SAMPLE	:	RECEIVED ON 2022.12.20 AT 01:44 P.M.
TEST PERIOD	:	2022.12.20 TO 2022.12.30
ARTICLE DESCRIPTION	:	DENCRETE MD/TC/MF/HF/SL/WR
PART/GRADE/COLOUR/DRAWING NO.	:	GREEN COATED PART
MATERIAL	:	FLOORING SAMPLE
SUPPLIER	:	ULFCAR CHEMICALS PVT LTD

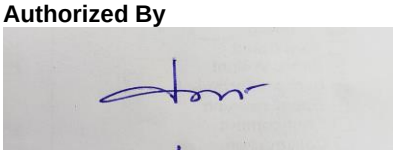
Note: The submitted sample(s) is / are Not Drawn by the Laboratory

NOTE: Unless otherwise agreed upon, Pass or Fail or Statement of compliance verdicts are given based on the measured values without any considerations of measurement uncertainties. Every test method has a measurement uncertainty which has been evaluated by the laboratory and are available on request. By taking measurement uncertainties into account it might happen that measured values can neither be assessed as Pass nor as Fail.

Remarks:

1. Sample(s) is / are tested as on-received basis.
2. Test(s) performed as requested by applicant.
3. Conclusion(s) of the test(s) was drawn as per compliance requirement(s) specified by applicant.
4. Test “REACH SVHC” was subcontracted to TÜV SÜD South Asia Pvt. Ltd, Ranipet (India).

Authorized By



Iswarchandra Yadav
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Please Contact:

For any technical issues: Anuradha Dhamija at :Anuradha.Dhamija@tuvsud.com
For any complaint: Ashima Sapra at: Ashima.Sapra@tuvsud.com

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TEST REPORT

Test Report No. GGN/H(Re)/22/002687

Dated 2022.12.30

Summary of Test Result(s)

S. No.	Test(s)	Conclusion (#)
1.	REACH SVHC (Analysis of substances of very high concern)	Pass
(#) For details regarding specification(s) / regulation(s) based on which compliance is decided, refer test details.		

Material list / List of material(s) (As confirmed by applicant)

Component No.	Component description	Material	Color
A	Green PU Concrete	PU Concrete	Green

Sampling plan (As requested by applicant)

S. No.	Test	Component No.
1.	REACH SVHC (Analysis of substances of very high concern)	A

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Test Report No. GGN/H(Re)/22/002687

Dated 2022.12.30

REACH SVHC (Analysis of substances of very high concern)

Analysis of the 224 substances of very high concern (SVHC) on the Candidate List for authorization, concerning REACH Regulation (EC) No. 1907/2006 as published on the European Chemicals Agency (ECHA) website in October 2008, January 2010, March 2010, June 2010, December 2010, June 2011, December 2011, June 2012, December 2012, June 2013, December 2013, June 2014, December 2014, June 2015, December 2015, June 2016, Jan 2017, July 2017, Jan 2018, June 2018, January 2019, July 2019, January 2020, July 2020, January 2021, July 2021, January 2022, July 2022

Analysis based on LC-MS, GC-MS, Headspace-GC-MS, UPLC, ICP-OES and UV-VIS.

Requirement Limits for all individual parameters: < 0.1%

S. No.	Substance Name	CAS Number	LOQ (%)	Test Result (%)	Conclusion
				A	
1	Anthracene	120-12-7	0.01	< 0.01	Pass
2	Alkanes, C10-13, chloro (Short Chain Chlorinated Paraffins)	85535-84-8	0.01	< 0.01	Pass
3	4,4'- Diaminodiphenylmethane (MDA)	101-77-9	0.01	< 0.01	Pass
4	Dibutyl phthalate (DBP)	84-74-2	0.01	< 0.01	Pass
5	Sodium dichromate	7789-12-0, 10588-01-9	0.01	< 0.01	Pass
6	Diarsenic pentaoxide	1303-28-2	0.01	< 0.01	Pass
7	Triethyl arsenate	15606-95-8	0.01	< 0.01	Pass
8	Bis(tributyltin)oxide (TBTO)	56-35-9	0.01	< 0.01	Pass
9	Diarsenic trioxide	1327-53-3	0.01	< 0.01	Pass
10	5-tert-butyl-2,4,6-trinitro-m-xylene (musk xylene)	81-15-2	0.01	< 0.01	Pass
11	Bis (2-ethylhexyl) phthalate (DEHP)	117-81-7	0.01	< 0.01	Pass
12	Hexabromocyclododecane (HBCDD) and all major diastereoisomers identified: Alpha-hexabromocyclododecane Beta-hexabromocyclododecane Gamma-hexabromocyclododecane	25637-99-4, 3194-55-6 (134237-50-6) (134237-51-7) (134237-52-8)	0.01	< 0.01	Pass
13	Benzyl butyl phthalate (BBP)	85-68-7	0.01	< 0.01	Pass
14	Lead hydrogen arsenate	7784-40-9	0.01	< 0.01	Pass
15	Anthracene oil, anthracene paste, anthracene fraction	91995-17-4	0.01	< 0.01	Pass

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16	Pitch, coal tar, high temp.	65996-93-2	0.01	< 0.01	Pass
17	Anthracene oil, anthracene paste	90640-81-6	0.01	< 0.01	Pass
18	Lead chromate	7758-97-6	0.01	< 0.01	Pass
19	Diisobutyl phthalate	84-69-5	0.01	< 0.01	Pass
20	Tris(2-chloroethyl)phosphate	115-96-8	0.01	< 0.01	Pass
21	Anthracene oil, anthracene-low	90640-82-7	0.01	< 0.01	Pass
22	Anthracene oil, anthracene paste, anthracene fraction	91995-15-2	0.01	< 0.01	Pass
23	2,4-Dinitrotoluene	121-14-2	0.01	< 0.01	Pass
24	Anthracene oil	90640-80-5	0.01	< 0.01	Pass
25	Lead chromate molybdate sulphate red (C.I. Pigment Red 104)	12656-85-8	0.01	< 0.01	Pass
26	Lead sulfochromate yellow (C.I. Pigment Yellow 34)	1344-37-2	0.01	< 0.01	Pass
27	Acrylamide	79-06-1	0.01	< 0.01	Pass
28	Potassium chromate	7789-00-6	0.01	< 0.01	Pass
29	Disodium tetraborate, anhydrous	1303-96-4, 1330-43-4, 12179-04-3	0.01	< 0.01	Pass
30	Sodium chromate	7775-11-3	0.01	< 0.01	Pass
31	Boric acid	10043-35-3, 11113-50-1	0.01	< 0.01	Pass
32	Ammonium dichromate	7789-09-5	0.01	< 0.01	Pass
33	Tetraboron disodium heptaoxide, hydrate	12267-73-1	0.01	< 0.01	Pass
34	Potassium dichromate	7778-50-9	0.01	< 0.01	Pass
35	Trichloroethylene	79-01-6	0.01	< 0.01	Pass
36	Cobalt(II) dinitrate*	10141-05-6	0.01	< 0.01	Pass
37	Cobalt(II) carbonate*	513-79-1	0.01	< 0.01	Pass
38	Chromium trioxide*	1333-82-0	0.01	< 0.01	Pass
39	2-Methoxyethanol	109-86-4	0.01	< 0.01	Pass
40	Acids generated from chromium trioxide and their oligomers. Names of the acids and their oligomers: Chromic acid, Dichromic acid, Oligomers of chromic acid and dichromic acid.	7738-94-5, 13530-68-2	0.01	< 0.01	Pass

41	2-Ethoxyethanol	110-80-5	0.01	< 0.01	Pass
42	Cobalt(II) sulphate*	10124-43-3	0.01	< 0.01	Pass
43	Cobalt(II) diacetate*	71-48-7	0.01	< 0.01	Pass
44	Hydrazine	302-01-2, 7803-57-8	0.01	< 0.01	Pass
45	2-Ethoxyethyl acetate	111-15-9	0.01	< 0.01	Pass
46	1,2,3-Trichloropropane	96-18-4	0.01	< 0.01	Pass
47	1-Methyl-2-pyrrolidone	872-50-4	0.01	< 0.01	Pass
48	Strontium chromate	7789-06-2	0.01	< 0.01	Pass
49	1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters	68515-42-4	0.01	< 0.01	Pass
50	1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich	71888-89-6	0.01	< 0.01	Pass
51	Cobalt dichloride	7646-79-9	0.01	< 0.01	Pass
52	2,2'-dichloro-4,4'-methylenedianiline	101-14-4	0.01	< 0.01	Pass
53	Bis(2-methoxyethyl) ether	111-96-6	0.01	< 0.01	Pass
54	Aluminosilicate Refractory Ceramic Fibres are fibres covered by index number 650-017-00-8 in Annex VI, part 3, table 3.1 of Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, and fulfil the three following conditions: a) oxides of aluminium and silicon are the main components present (in the fibres) within variable concentration ranges b) fibres have a length weighted geometric mean diameter less two standard geometric errors of 6 or less micrometres (µm) c) alkaline oxide and alkali earth oxide (Na2O+K2O+CaO+MgO+BaO) content less or equal to 18% by weight(1)	-	0.01	< 0.01	Pass

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55	Bis(2-methoxyethyl) phthalate	117-82-8	0.01	< 0.01	Pass
56	Zirconia Aluminosilicate Refractory Ceramic Fibres are fibres covered by index number 650-017-00-8 in Annex VI, part 3, table 3.1 of Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, and fulfil the three following conditions: a) oxides of aluminium, silicon and zirconium are the main components present (in the fibres) within variable concentration ranges b) fibres have a length weighted geometric mean diameter less two standard geometric errors of 6 or less micrometres (µm). c) alkaline oxide and alkali earth oxide (Na2O+K2O+CaO+MgO+BaO) content less or equal to 18% by weight (1)	-	0.01	< 0.01	Pass
57	Trilead diarsenate	3687-31-8	0.01	< 0.01	Pass
58	Lead styphnate	15245-44-0	0.01	< 0.01	Pass
59	Formaldehyde, oligomeric reaction products with aniline	25214-70-4	0.01	< 0.01	Pass
60	Potassium hydroxyoctaoxodizincate dichromate	11103-86-9	0.01	< 0.01	Pass
61	Arsenic acid	7778-39-4	0.01	< 0.01	Pass
62	Pentazinc chromate octahydroxide	49663-84-5	0.01	< 0.01	Pass
63	2-Methoxyaniline; o-Anisidine	90-04-0	0.01	< 0.01	Pass
64	Dichromium tris(chromate)	24613-89-6	0.01	< 0.01	Pass
65	Calcium arsenate	7778-44-1	0.01	< 0.01	Pass

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66	1,2-dichloroethane	107-06-2	0.01	< 0.01	Pass
67	Lead dipicrate	6477-64-1	0.01	< 0.01	Pass
68	Lead diazide, Lead azide	13424-46-9	0.01	< 0.01	Pass
69	Phenolphthalein	77-09-8	0.01	< 0.01	Pass
70	N,N-dimethylacetamide	127-19-5	0.01	< 0.01	Pass
71	4-(1,1,3,3-tetramethylbutyl) phenol	140-66-9	0.01	< 0.01	Pass
72	4,4'-bis(dimethylamino)benzophenone (Michler's ketone)	90-94-8	0.01	< 0.01	Pass
73	1,3,5-Tris(oxiran-2-ylmethyl)-1,3,5-triazinane-2,4,6-trione (TGIC)	2451-62-9	0.01	< 0.01	Pass
74	[4-[[4-anilino-1-naphthyl] [4-(dimethylamino)phenyl]methylene]cyclohexa-2,5-dien-1-ylidene] dimethylammonium chloride (C.I. Basic Blue 26) *[with ≥ 0.1% of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)]*	2580-56-5	0.01	< 0.01	Pass
75	1,2-dimethoxyethane; ethylene glycol dimethyl ether (EGDME)	110-71-4	0.01	< 0.01	Pass
76	[4-[4,4'-bis(dimethylamino) benzhydrylidene]cyclohexa-2,5-dien-1-ylidene]dimethylammonium chloride (C.I. Basic Violet 3) *[with ≥ 0.1% of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)]*	548-62-9	0.01	< 0.01	Pass
77	Formamide	75-12-7	0.01	< 0.01	Pass
78	Lead(II) bis(methanesulfonate)	17570-76-2	0.01	< 0.01	Pass
79	4,4'-bis(dimethylamino)-4''-(methylamino)trityl alcohol *[with ≥ 0.1% of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)]*	561-41-1	0.01	< 0.01	Pass
80	1,2-bis(2-methoxyethoxy) ethane (TEGDME; triglyme)	112-49-2	0.01	< 0.01	Pass
81	Diboron trioxide*	1303-86-2	0.01	< 0.01	Pass

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82	1,3,5-tris[(2S and 2R)-2,3-epoxypropyl]-1,3,5-triazine-2,4,6-(1H,3H,5H)-trione (β-TGIC)	59653-74-6	0.01	< 0.01	Pass
83	N,N,N',N'-tetramethyl-4,4'-methylenedianiline (Michler's base)	101-61-1	0.01	< 0.01	Pass
84	α,α-Bis[4-(dimethylamino)phenyl]-4 (phenylamino)naphthalene-1-methanol (C.I. Solvent Blue 4) *[with ≥ 0.1% of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)]*	6786-83-0	0.01	< 0.01	Pass
85	Lead cyanamidate*	20837-86-9	0.01	< 0.01	Pass
86	Sulfurous acid, lead salt, dibasic*	62229-08-7	0.01	< 0.01	Pass
87	Diazene-1,2-dicarboxamide (C,C'-azodi(formamide))	123-77-3	0.01	< 0.01	Pass
88	Fatty acids, C16-18, lead salts	91031-62-8	0.01	< 0.01	Pass
89	Diisopentylphthalate	605-50-5	0.01	< 0.01	Pass
90	Biphenyl-4-ylamine	92-67-1	0.01	< 0.01	Pass
91	Orange lead (lead tetroxide)	1314-41-6	0.01	< 0.01	Pass
92	4,4'-oxydianiline and its salts	101-80-4	0.01	< 0.01	Pass
93	1,2-Benzenedicarboxylic acid, dipentylester, branched and linear	84777-06-0	0.01	< 0.01	Pass
94	o-aminoazotoluene	97-56-3	0.01	< 0.01	Pass
95	Trilead dioxide phosphonate*	12141-20-7	0.01	< 0.01	Pass
96	Methyloxirane (Propylene oxide)	75-56-9	0.01	< 0.01	Pass
97	4-methyl-m-phenylenediamine (toluene-2,4-diamine)	95-80-7	0.01	< 0.01	Pass
98	Methoxyacetic acid	625-45-6	0.01	< 0.01	Pass
99	1-bromopropane (n-propyl bromide)	106-94-5	0.01	< 0.01	Pass
100	Heptacosafluorotetradecanoic acid	376-06-7	0.01	< 0.01	Pass
101	Tricosafluorododecanoic acid	307-55-1	0.01	< 0.01	Pass
102	Pentacosafluorotridecanoic acid	72629-94-8	0.01	< 0.01	Pass
103	Pentalead tetraoxide sulphate*	12065-90-6	0.01	< 0.01	Pass

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104	Tetraethyllead*	78-00-2	0.01	< 0.01	Pass
105	Dioxobis(stearato)trilead	12578-12-0	0.01	< 0.01	Pass
106	N-pentyl-isopentylphthalate	776297-69-9	0.01	< 0.01	Pass
107	Tetralead trioxide sulphate*	12202-17-4	0.01	< 0.01	Pass
108	1,2-Diethoxyethane	629-14-1	0.01	< 0.01	Pass
109	Dinoseb (6-sec-butyl-2,4-dinitrophenol)	88-85-7	0.01	< 0.01	Pass
110	N-methylacetamide	79-16-3	0.01	< 0.01	Pass
111	Bis(pentabromophenyl) ether (decabromodiphenyl ether; DecaBDE)	1163-19-5	0.01	< 0.01	Pass
112	[Phthalato(2-)]dioxotrilead	69011-06-9	0.01	< 0.01	Pass
113	Acetic acid, lead salt, basic	51404-69-4	0.01	< 0.01	Pass
114	Lead titanium trioxide*	12060-00-3	0.01	< 0.01	Pass
115	Lead oxide sulphate*	12036-76-9	0.01	< 0.01	Pass
116	Dimethyl sulphate*	77-78-1	0.01	< 0.01	Pass
117	Diethyl sulphate*	64-67-5	0.01	< 0.01	Pass
118	4,4'-methylenedi-o-toluidine	838-88-0	0.01	< 0.01	Pass
119	4-Nonylphenol, branched and linear *[substances with a linear and/or branched alkyl chain with a carbon number of 9 covalently bound in position 4 to phenol, covering also UVCB- and well-defined substances which include any of the individual isomers or a combination thereof]*	-	0.01	< 0.01	Pass
120	4-(1,1,3,3-tetramethylbutyl)phenol, ethoxylated *[covering well-defined substances and UVCB substances, polymers and homologues]*	-	0.01	< 0.01	Pass
121	N,N-dimethylformamide	68-12-2	0.01	< 0.01	Pass
122	Furan	110-00-9	0.01	< 0.01	Pass
123	Trilead bis(carbonate)dihydroxide*	1319-46-6	0.01	< 0.01	Pass

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124	Silicic acid ($H_2Si_2O_5$), barium salt (1:1), lead-doped [with lead (Pb) content above the applicable generic concentration limit for 'toxicity for reproduction' Repr. 1A (CLP) or category 1 (DSD); the substance is a member of the group entry of lead compounds, with index number 082-001-00-6 in Regulation (EC) No 1272/2008]	68784-75-8	0.01	< 0.01	Pass
125	3-ethyl-2-methyl-2-(3-methylbutyl)-1,3-oxazolidine	143860-04-2	0.01	< 0.01	Pass
126	o-Toluidine	95-53-4	0.01	< 0.01	Pass
127	Lead monoxide (lead oxide)*	1317-36-8	0.01	< 0.01	Pass
128	Lead titanium zirconium oxide*	12626-81-2	0.01	< 0.01	Pass
129	4-Aminoazobenzene	60-09-3	0.01	< 0.01	Pass
130	Silicic acid, lead salt*	11120-22-2	0.01	< 0.01	Pass
131	Lead dinitrate*	10099-74-8	0.01	< 0.01	Pass
132	Lead bis(tetrafluoroborate)*	13814-96-5	0.01	< 0.01	Pass
133	Dibutyltin dichloride (DBTC)	683-18-1	0.01	< 0.01	Pass
134	Cyclohexane-1,2-dicarboxylic anhydride [1], cis-cyclohexane-1,2-dicarboxylic anhydride [2], trans-cyclohexane-1,2-dicarboxylic anhydride [3] [The individual cis- [2] and trans- [3] isomer substances and all possible combinations of the cis- and trans-isomers [1] are covered by this entry]	85-42-7, 13149-00-3, 14166-21-3	0.01	< 0.01	Pass
135	Hexahydromethylphthalic anhydride [1], Hexahydro-4-methylphthalic anhydride [2], Hexahydro-1-methylphthalic anhydride [3], Hexahydro-3-methylphthalic anhydride [4] *[The individual isomers [2], [3] and [4] (including their cis- and trans-stereo isomeric forms) and all possible combinations of the isomers [1] are covered by this entry]*	25550-51-0, 19438-60-9, 48122-14-1, 57110-29-9	0.01	< 0.01	Pass

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373 Udyog Vihar Phase II
Sector 20
Gurgaon – 122016

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Registered Office:
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TÜV SÜD House
Off Saki Vihar Road
Saki Naka, Andheri (East),
Mumbai – 400072. India

136	Henicosafluoroundecanoic acid	2058-94-8	0.01	< 0.01	Pass
137	6-methoxy-m-toluidine (p-cresidine)	120-71-8	0.01	< 0.01	Pass
138	Pyrochlore, antimony lead yellow	8012-00-8	0.01	< 0.01	Pass
139	Cadmium	7440-43-9	0.01	< 0.01	Pass
140	Cadmium oxide*	1306-19-0	0.01	< 0.01	Pass
141	Dipentyl phthalate (DPP)	131-18-0	0.01	< 0.01	Pass
142	4-Nonylphenol, branched and linear, ethoxylated [substances with a linear and/or branched alkyl chain with a carbon number of 9 covalently bound in position 4 to phenol, ethoxylated covering UVCB- and well-defined substances, polymers and homologues, which include any of the individual isomers and/or combinations thereof]	-	0.01	< 0.01	Pass
143	Ammonium pentadecafluorooctanoate (APFO)	3825-26-1	0.01	< 0.01	Pass
144	Pentadecafluorooctanoic acid (PFOA)	-	0.01	< 0.01	Pass
145	Cadmium sulphide*	1306-23-6	0.01	< 0.01	Pass
146	Disodium 3,3'-[[1,1'-biphenyl]-4,4'-diylbis(azo)]bis(4-aminonaphthalene-1-sulphonate)(C.I. Direct Red 28)	573-58-0	0.01	< 0.01	Pass
147	Disodium 4-amino-3-[[4'-[(2,4-diaminophenyl)azo][1,1'-biphenyl]-4-yl]azo] -5-hydroxy-6-(phenylazo)naphthalene-2,7-disulphonate (C.I. Direct Black 38)	1937-37-7	0.01	< 0.01	Pass
148	Dihexyl phthalate	84-75-3	0.01	< 0.01	Pass
149	Imidazolidine-2-thione (2-imidazoline-2-thiol)	96-45-7	0.01	< 0.01	Pass
150	Lead di(acetate)*	301-04-2	0.01	< 0.01	Pass
151	Trixylyl phosphate*	25155-23-1	0.01	< 0.01	Pass
152	1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear	68515-50-4	0.01	< 0.01	Pass

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153	Sodium perborate; perboric acid, sodium salt*	-	0.01	< 0.01	Pass
154	Sodium peroxometaborate*	4-4-7632	0.01	< 0.01	Pass
155	Cadmium chloride*	10108-64-2	0.01	< 0.01	Pass
156	2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (DOTE)	15571-58-1	0.01	< 0.01	Pass
157	Reaction mass of 2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate and 2-ethylhexyl 10-ethyl-4-[[2-[(2-ethylhexyl)oxy]-2-oxoethyl]thio]-4-octyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (reaction mass of DOTE and MOTE)	-	0.01	< 0.01	Pass
158	Cadmium fluoride*	7790-79-6	0.01	< 0.01	Pass
159	Cadmium sulphate*	10124-36-4:31119-53-6	0.01	< 0.01	Pass
160	2-benzotriazol-2-yl-4,6-di-tert-butylphenol (UV-320)	3846-71-7	0.01	< 0.01	Pass
161	2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328)	25973-55-1	0.01	< 0.01	Pass
162	1,2-benzenedicarboxylic acid, di-C6-10-alkyl esters; 1,2-benzenedicarboxylic acid, mixed decyl and hexyl and octyl diesters with ≥ 0.3% of dihexyl phthalate (EC No. 201-559-5)	68515-51-5; 68648-93-1	0.01	< 0.01	Pass
163	5-sec-butyl-2-(2,4-dimethylcyclohex-3-en-1-yl)-5-methyl-1,3-dioxane [1], 5-sec-butyl-2-(4,6-dimethylcyclohex-3-en-1-yl)-5-methyl-1,3-dioxane [2] [covering any of the individual isomers of [1] and [2] or any combination thereof]	-	0.01	< 0.01	Pass
164	1,3-propanesultone	1120-71-4	0.01	< 0.01	Pass
165	2,4-di-tert-butyl-6-(5-chlorobenzotriazol-2-yl)phenol (UV-327)	3864-99-1	0.01	< 0.01	Pass
166	2-(2H-benzotriazol-2-yl)-4-(tert-butyl)-6-(sec-butyl)phenol (UV-350)	36437-37-3	0.01	< 0.01	Pass
167	Nitrobenzene	98-95-3	0.01	< 0.01	Pass

168	Perfluorononan-1-oic acid (2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,9-heptadecafluorononanoic acid and its sodium and ammonium salts	375-95-1; 21049-39-8; 4149-60-4	0.01	< 0.01	Pass
169	Benzo(a)Pyrene	50-32-8	0.01	< 0.01	Pass
170	4,4'-isopropylidenediphenol (bisphenol A)	80-05-7	0.01	< 0.01	Pass
171	p-(1,1-dimethylpropyl) phenol	80-46-6	0.01	< 0.01	Pass
172	Nonadecafluorodecanoic acid (PFDA) and its sodium and ammonium salts	3108-42-7;335-76-2;383-45-3	0.01	< 0.01	Pass
173	4-heptylphenol, branched and linear [substances with a linear and / or branched alkyl chain with a carbon number of 7 covalently bound predominantly in position 4 to phenol, covering also UVCB- and well-defined substances which include any of the individual isomers or a combination therof]	-	0.01	< 0.01	Pass
174	Perfluorohexane-1-sulphonic acid and its salts (PFHxS)	-	0.01	< 0.01	Pass
175	Benz[a]anthracene	56-55-3, 1718-53-2	0.01	< 0.01	Pass
176	Cadmium carbonate*	513-78-0	0.01	< 0.01	Pass
177	Cadmium hydroxide*	21041-95-2	0.01	< 0.01	Pass
178	Cadmium nitrate*	10022-68-1, 10325-94-7	0.01	< 0.01	Pass
179	Chrysene	218-01-9, 1719-03-5	0.01	< 0.01	Pass
180	Dodecachloropentacyclo[12.2.1.16,9.02,13.05,10]octadeca-7,15-diene ("Dechlorane Plus"™) covering any of its individual anti- and syn-isomers or any combination thereof	-	0.01	< 0.01	Pass
181	Reaction products of 1,3,4-thiadiazolidine-2,5-dithione, formaldehyde and 4-heptylphenol, branched and linear (RP-HP) with ≥0.1% w/w 4-heptylphenol, branched and linear (4-HPbl)	-	0.01	< 0.01	Pass

182	Benzene-1,2,4-tricarboxylic acid 1,2 anhydride (trimellitic anhydride) (TMA)	552-30-7	0.01	< 0.01	Pass
183	Benzo[ghi]perylene	191-24-2	0.01	< 0.01	Pass
184	Decamethylcyclopentasiloxane (D5)	541-02-6	0.01	< 0.01	Pass
185	Dicyclohexyl phthalate	84-61-7	0.01	< 0.01	Pass
186	Disodium octaborate*	12008-41-2	0.01	< 0.01	Pass
187	Dodecamethylcyclohexasiloxane (D6)	540-97-6	0.01	< 0.01	Pass
188	Ethylenediamine	107-15-3	0.01	< 0.01	Pass
189	Lead*	7439-92-1	0.01	< 0.01	Pass
190	Octamethylcyclotetrasiloxane (D4)	556-67-2	0.01	< 0.01	Pass
191	Terphenyl, hydrogenated	61788-32-7	0.01	< 0.01	Pass
192	2,2-bis(4'-hydroxyphenyl)-4-methylpentane	6807-17-6	0.01	< 0.01	Pass
193	Benzo[k]fluoranthene	207-08-9	0.01	< 0.01	Pass
194	Fluoranthene	206-44-0	0.01	< 0.01	Pass
195	Phenanthrene	85-01-8	0.01	< 0.01	Pass
196	Pyrene	129-00-0	0.01	< 0.01	Pass
197	1,7,7-trimethyl-3-(phenylmethylene)bicyclo[2.2.1]heptan-2-one	15087-24-8	0.01	< 0.01	Pass
198	2,3,3,3-tetrafluoro-2-(heptafluoropropoxy)propionic acid, its salts and its acyl halides (covering any of their individual isomers and combinations thereof)	-	0.01	< 0.01	Pass
199	2-methoxyethyl acetate	110-49-6	0.01	< 0.01	Pass
200	Tris(4-nonylphenyl, branched and linear) phosphite (TNPP) with ≥ 0.1% w/w of 4-nonylphenol, branched and linear (4-NP)	-	0.01	< 0.01	Pass
201	4-tert-butylphenols (PTBP)	98-54-4	0.01	< 0.01	Pass
202	Diisohexyl phthalate	71850-09-4	0.01	< 0.01	Pass
203	2-benzyl-2-dimethylamino-4'-morpholinobutyrophenone	119313-12-1	0.01	< 0.01	Pass
204	2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one	71868-10-5	0.01	< 0.01	Pass
205	Perfluoro butane sulfonic acid (PFBS) and its salts	---	0.01	< 0.01	Pass

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206	1-vinylimidazole	1072-63-5	0.01	< 0.01	Pass
207	2-methylimidazole	693-98-1	0.01	< 0.01	Pass
208	Butyl 4-hydroxybenzoate	94-26-8	0.01	< 0.01	Pass
209	Dibutylbis(pentane-2,4-dionato-O,O')tin	22673-19-4	0.01	< 0.01	Pass
210	Bis(2-(2-methoxyethoxy)ethyl)ether	143-24-8	0.01	< 0.01	Pass
211	Dioctyltin dilaurate, stannane, dioctyl-, bis(coco acyloxy) derivs., and any other stannane, dioctyl-, bis(fatty acyloxy) derivs. wherein C12 is the predominant carbon number of the fatty acyloxy moiety	-	0.01	< 0.01	Pass
212	1,4-dioxane	123-91-1	0.01	< 0.01	Pass
213	2,2-bis(bromomethyl)propane-1,3-diol (BMP); 2,2-dimethylpropan-1-ol, tribromo derivative/3-bromo-2,2-bis(bromomethyl)-1-propanol (TBNPA); 2,3-dibromo-1-propanol (2,3-DBPA)	1522-92-5, 36483-57-5, 3296-90-0, 96-13-9	0.01	< 0.01	Pass
214	2-(4-tert-butylbenzyl)propionaldehyde and its individual stereoisomers	75166-31-3, 80-54-6, 75166-30-2	0.01	< 0.01	Pass
215	4,4'-(1-methylpropylidene)bisphenol	77-40-7	0.01	< 0.01	Pass
216	glutaral	111-30-8	0.01	< 0.01	Pass
217	Medium-chain chlorinated paraffins (MCCP)	1372804-76-6, 85535-85-9, 198840-65-2	0.01	< 0.01	Pass
218	orthoboric acid, sodium salt	25747-83-5, 22454-04-2, 14312-40-4, 1333-73-9, 13840-56-7, 14890-53-0	0.01	< 0.01	Pass
219	Phenol, alkylation products (mainly in para position) with C12-rich branched alkyl chains from oligomerisation, covering any individual isomers and/or combinations thereof (PDDP)	210555-94-5, 27459-10-5, 27147-75-7, 121158-58-5, 74499-35-7, 57427-55-1	0.01	< 0.01	Pass

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220	6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol	119-47-1	0.01	< 0.01	Pass
221	tris(2-methoxyethoxy) vinylsilane	1067-53-4	0.01	< 0.01	Pass
222	(±)-1,7,7-trimethyl-3-[(4-methylphenyl)methylene]bicyclo[2.2.1]heptan-2-one covering any of the individual isomers and/or combinations thereof (4-MBC)	-	0.01	< 0.01	Pass
223	S-(tricyclo(5.2.1.02,6)deca-3-en-8(or 9)-yl O-(isopropyl or isobutyl or 2-ethylhexyl) O-(isopropyl or isobutyl or 2-ethylhexyl) phosphorodithioate	255881-94-8	0.01	< 0.01	Pass
224	N-(hydroxymethyl)acrylamide	924-42-5	0.01	< 0.01	Pass

Abbreviation

(1) “mg/kg” denotes milligram per kilogram & is equivalent to ppm (parts per million); (2) “ND” denotes Not Detected or below limit of quantification. (3) “°C” denotes degree Celsius;

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South Asia

Test Report No. GGN/H(Re)/22/002687

Dated 2022.12.30

Note:

LOQ = Limit of quantification. All LOQ are based on homogenous material.

LOQ = 0.01% is evaluated for element (i.e. cobalt, arsenic, lead, Cadmium, sodium, chromium, chromium (VI), silicon, aluminum, zirconium, boron, potassium, and molybdenum.

Bis(tributyltin)oxide (TBTO) is tested and calculated in term of Tributyl tin.

The substances are UVCB (substance of unknown or variable composition, complex reaction products or biological materials), which are identified by its main constituents.

Individual concentrations to the constituent of UVCB with an amount of < 0.01% were not considered by the calculation of the sum.

(1) The test result is based on microscopic and chemical evaluation.

* For the substances concentrations are calculated on the basis of total metal content (Pb, Cd, Co, Ti, Zr, Mo, Al, Cr, Ba, B, As, Ca, Zn, K, Sr).

By calculation, if detected, this material probably contains Boric acid (CAS: 10043-35-3/11113-50-1), Disodium tetraborate, anhydrous (CAS: 1330-43-4/12179-04-3/1303-96-4), or Tetraboron disodium heptaoxide hydrate (CAS: 12267-73-1). The calculation is based on the total boron content by ICP-OES.It suggests to check the respective recipe. If the theoretical content of the respective substance is >0.1% in the weight of whole article.

Calculated concentrations of cobalt(II) sulphate, cobalt(II) dinitrate, cobalt(II) carbonate, cobalt(II) diacetate are based on the total cobalt by ICP-OES.

Calculated concentrations of Sodium dichromate, potassium dichromate, chromium trioxide, chromic acid and dichromic acid are based on the identified chromium(VI) by UV-VIS Spectrophotometer.

The tested material(s) was analyzed for relevant SVHC substance(s) only as the additional risk for other SVHC substances is low in the tested material(s). The testing is focused on the possibility of contamination during production & material specific contamination of the product.

--- END OF THE TEST REPORT ---

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QUALITY CERTIFICATION

Certificate of Registration

This is to certify that
The Quality Management System of

ULFCAR CHEMICALS PRIVATE LIMITED

Property No-262, Sector-58, Faridabad, Haryana, 121004

has been assessed and found to be in compliance with the requirements of the standard

ISO 9001:2015

for the following scope :

Manufacturers of Polyurethane and Epoxy Flooring Systems and Components

CERTIFICATE NO. : 23ZEEZ0629Q

ISSUED DATE : 30/03/2023
EXPIRY DATE : 29/03/2026

1ST SURVEILLANCE : 29/03/2024
2ND SURVEILLANCE : 29/03/2025

UKAC
UK ACKREDITERING CERTIFICATION LIMITED

ISO 9001

Authorised Signatory

INTERNATIONAL QUALITY CERTIFICATION SERVICES UK LTD
272, Bath Street, Glasgow, G2 4JR, U.K.