



Report No:	02249-23
Receiving Date:	Feb 02, 2023
Issue Date:	Feb 06, 2023
Lab Location:	Lahore (Pakistan)
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Applicant:	Kamal Mills Private Limited.	Buyer Name:	Kik Textilien und Non-Food GmbH
Contact:	Muhammad Asad	Supplier Name:	Kamal Mills Private Limited.
Address:	3 KM, Jhumra Road, Khurrianwala, Faisalabad-Pakistan.	Agent:	Matrix Sourcing
Tel:	0300-8793742	Country of Origin:	Pakistan
E-mail:	Muhammad.asad@kamal.com.pk	Country of Destination:	Germany

Sample Information		
	Product Description:	Children boy ergee socks 4 pair
	Material Composition:	72% Cotton, 26% Polyamide, 2% Elastane
	Fabric:	Jersey
	Fabric Weight:	/
	Merchandise Category (WGR):	837
	P.O Reference No:	P203649
	P.O:	4500342496,4500336583
	Article No:	1172057901,1172057902
	Article Description:	Children boy ergee socks 4 pair
	Style Color:	Orange, Green
	Supplier No:	301363
	Season:	123
	Buying Dept (EKB) :	KIKO
	Dye stuff:	/
	Previous Report# (for retest):	/

Submitted Care instructions:	
Test Package:	"P 1: (incl. size 98 Baby & children items)"



For and on behalf of  
TEXTILE TESTING INTERNATIONAL

Ali Ashraf  
AVP Softlines



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Sr. No	Test properties	PASS	FAIL	Remarks
1	Appearance after washing:	X		
2	Colour fastness to perspiration:	X		
13	Quinoline:	X		
14	Phthalates	X		
0	Dimensional stability to washing	X		
1	Appearance after washing	X		
2	Colour fastness to water	X		
3	Colour fastness to perspiration	X		
4	Colour fastness to rubbing	X		
5	Fiber Composition	X		
6	Alkylphenole/ Alkylphenoethoxylate (AP/APEO)	X		
7	Fabric weight	X		
8	Seam spirality after laundering	X		
9	Azo-Dyes (including Aniline)	X		
10	Aromatic Amine Salts	X		
11	Formaldehyde	X		
12	Total Lead (Pb) Content	X		
13	Total Cadmium (Cd) Content	X		
14	Extractable (heavy) Metals	X		
15	Quinoline	X		
16	Phthalates	X		
17	Polycyclic Aromatic Hydrocarbon(PAH)	X		



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Sample	Material No	Component Description	Material Type
A	A1		Substrate
	A2		Substrate
	A3		Substrate
	A4		Substrate
	A5		Substrate
	A6		Substrate
	A7		Substrate
	A8		Substrate
	A9		Substrate
B	B1		Substrate
	B2		Substrate
	B3		Substrate
	B4		Substrate
	B5		Substrate
	B6		Substrate
	B7		Substrate
	B8		Substrate
	B9		Substrate
	B10		Substrate
C	C1		Substrate
	C2		Substrate
	C3		Substrate
	C4		Substrate
	C5		Substrate
	C6		Substrate
	C7		Substrate
	C8		Substrate
	C9		Substrate
	C10		Substrate
	C11		Substrate
D	D1		Substrate
	D2		Substrate
	D3		Substrate
	D4		Substrate
	D5		Substrate
	D6		Substrate
	D7		Substrate
	D8		Substrate
	D9		Substrate
	D10		Substrate



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	D11		Substrate
E	E1		Substrate
	E2		Substrate
	E3		Substrate
	E4		Substrate
	E5		Substrate
	E6		Substrate
	E7		Substrate
	E8		Substrate
	E9		Substrate
	E10		Substrate
F	F1		Substrate
	F2		Substrate
	F3		Substrate
	F4		Substrate
	F5		Substrate
	F6		Substrate
	F7		Substrate



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### Dimensional stability to washing

### Requirements

DIN EN ISO 6330:2021/ 5077:2008

Machine wash at (30°C) in household washing machine with Persil detergent, Normal cycle, 2.0 kg wash load, Flat dry.

#### Sample A:

Points Of Measurement	Before Wash (Cm)	After Wash (Cm)	Dimensional Change (%)	±5
Product Length	18.2	17.8	-0.55	
Product Width	18.8	15.5	0.22	

#### Sample B:

Points Of Measurement	Before Wash (Cm)	After Wash (Cm)	Dimensional Change (%)	±5
Product Length	18.2	17.8	-0.55	
Product Width	18.8	15.5	0.22	

#### Sample C:

Points Of Measurement	Before Wash (Cm)	After Wash (Cm)	Dimensional Change (%)	±5
Product Length	18.2	17.8	-0.55	
Product Width	18.8	15.5	0.22	

#### Sample D:

Points Of Measurement	Before Wash (Cm)	After Wash (Cm)	Dimensional Change (%)	±5
Product Length	18.2	17.8	-0.55	
Product Width	18.8	15.5	0.22	

(+) Denotes Extension (-) Shrinkage



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### Appearance after washing:

### Requirements

DIN EN ISO 6330:2021/ 5077:2008

Washing & drying procedure: Same as Dimensional stability to washing

### Sample A

Assesment	Result	
Colour Change	4-5	Class 3-4
Cross Staining	5	Class 4-5
Appearance	No seam open No stitch broken	Satisfactory
Pilling / Fuzzing	Slight pilling class 4-5	Class 4-5
Other Changes Observed	No other changes observed	Not Accepted

### Sample B

Assesment	Result	
Colour Change	4-5	Class 3-4
Cross Staining	5	Class 4-5
Appearance	No seam open No stitch broken	Satisfactory
Pilling / Fuzzing	Slight pilling class 4-5	Class 4-5
Other Changes Observed	No other changes observed	Not Accepted

### Sample C

Assesment	Result	
Colour Change	4-5	Class 3-4
Cross Staining	5	Class 4-5
Appearance	No seam open No stitch broken	Satisfactory
Pilling / Fuzzing	Slight pilling class 4-5	Class 4-5
Other Changes Observed	No other changes observed	Not Accepted

[illegible]





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### Colour fastness to perspiration:

### Requirements

DIN EN ISO 105-E04

Sample	Sample A	Sample A	Sample B	Sample B	
	Acid	Alkane	Acid	Alkane	
Color Change	4-5	4-5	4-5	4-5	Change 3-4
Self-staining	4-5	4-5	4-5	4-5	/
Staining On:	-	-	-	-	Staining 3-4
- Acetate	4-5	4-5	4-5	4-5	
- Cotton	4-5	4-5	4-5	4-5	
- Polyamide	4-5	4-5	4-5	4-5	
- Polyester	4-5	4-5	4-5	4-5	
- Acrylic	4-5	4-5	4-5	4-5	
- Wool	4-5	4-5	4-5	4-5	

Sample	Sample C	Sample C	Sample D	Sample D	
	Acid	Alkane	Acid	Alkane	
Color Change	4-5	4-5	4-5	4-5	Change 3-4
Self-staining	4-5	4-5	4-5	4-5	/
Staining On:	-	-	-	-	Staining 3-4
- Acetate	4-5	4-5	4-5	4-5	
- Cotton	4-5	4-5	4-5	4-5	
- Polyamide	4-5	4-5	4-5	4-5	
- Polyester	4-5	4-5	4-5	4-5	
- Acrylic	4-5	4-5	4-5	4-5	
- Wool	4-5	4-5	4-5	4-5	



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### Colour fastness to perspiration:

### Requirements

DIN EN ISO 105-E04

Sample	Sample E	Sample E	Sample F	Sample F	
	Acid	Alkane	Acid	Alkane	
Color Change	4-5	4-5	4-5	4-5	Change 3-4
Self-staining	4-5	4-5	4-5	4-5	/
Staining On:	-	-	-	-	Staining 3-4
- Acetate	4-5	4-5	4-5	4-5	
- Cotton	4-5	4-5	4-5	4-5	
- Polyamide	4-5	4-5	4-5	4-5	
- Polyester	4-5	4-5	4-5	4-5	
- Acrylic	4-5	4-5	4-5	4-5	
- Wool	4-5	4-5	4-5	4-5	

Sample	Sample G	Sample G	
	Acid	Alkane	
Color Change	4-5	4-5	Change 3-4
Self-staining	4-5	4-5	/
Staining On:	-	-	Staining 3-4
- Acetate	4-5	4-5	
- Cotton	4-5	4-5	
- Polyamide	4-5	4-5	
- Polyester	4-5	4-5	
- Acrylic	4-5	4-5	
- Wool	4-5	4-5	



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### Colour fastness to rubbing:

### Requirements

DIN EN ISO 105-X12:2016

Analyzed by LC-MS

Sample	Sample A		Sample B		
	Length	Width	Length	Width	
Dry rubbing	4-5	4-5	4-5	4-5	Dry 2-3
Wet rubbing	3	3	3	3	Wet 2

Sample	Sample C		Sample D		
	Length	Width	Length	Width	
Dry rubbing	4-5	4-5	4-5	4-5	Dry 2-3
Wet rubbing	3	3	3	3	Wet 2

Sample	Sample E		Sample F		
	Length	Width	Length	Width	
Dry rubbing	4-5	4-5	4-5	4-5	Dry 2-3
Wet rubbing	3	3	3	3	Wet 2

Sample	Sample G		Sample H		
	Length	Width	Length	Width	
Dry rubbing	4-5	4-5	4-5	4-5	Dry 2-3
Wet rubbing	3	3	3	3	Wet 2



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## Fiber Composition:

## Requirements

DIN EN ISO 1833-7:2017,11:2017

<u>Sample A</u>	<u>Labeled Fiber Content</u>	<u>Actual (Tested) Fiber Content</u>	<u>Suggested Fiber Content</u>	
Cotton (%)	72	69.2	69	±3%
Polyamide (%)	72	69.2	69	
Polyester (%)	72	69.2	69	
Elastane (%)	72	69.2	28	

<u>Sample B</u>	<u>Labeled Fiber Content</u>	<u>Actual (Tested) Fiber Content</u>	<u>Suggested Fiber Content</u>	
Cotton (%)	72	69.2	69	±3%
Polyamide (%)	72	69.2	69	
Polyester (%)	72	69.2	69	
Elastane (%)	72	69.2	28	

<u>Sample C</u>	<u>Labeled Fiber Content</u>	<u>Actual (Tested) Fiber Content</u>	<u>Suggested Fiber Content</u>	
Cotton (%)	72	69.2	69	±3%
Polyamide (%)	72	69.2	69	
Polyester (%)	72	69.2	69	
Elastane (%)	72	69.2	28	



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### Fiber Composition:

### Requirements

DIN EN ISO 1833-7:2017,11:2017

<u>Sample D</u>	<u>Labeled Fiber Content</u>	<u>Actual (Tested) Fiber Content</u>	<u>Suggested Fiber Content</u>	±3%
Cotton (%)	72	69.2	69	
Polyamide (%)	72	69.2	69	
Polyester (%)	72	69.2	69	
Elastane (%)	72	69.2	28	



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## Alkylphenole/ Alkylphenoethoxylate

## Requirements

### (AP/APEO):

EN ISO 21084:2019/ AP: Analyzed by GC-MS / EN ISO 18254-1:2016 / APEO:

Analyzed by LC-MS

Title	CAS No.	Sample A	Sample B	Sample C	Sample D	
Nonylphenol (NP), mixed isomers	104-40-5 11066-49-2 25154-52-3 84852-15-3	ND	ND	ND	ND	Sum of NP, OP: 5 mg/kg
Octylphenol (OP), mixed isomers	140-66-9 1806-26-4 27193-28-8	ND	ND	ND	ND	
Nonylphenol Ethoxylates (NPEO)	9016-45-9 26027-38-3 37205-87-1 68412-54-4 127087-87-0	ND	ND	ND	ND	Sum of NPEO, OPEO: 50 mg/kg
Octylphenol Ethoxylates (OPEO)	9002-93-1 9036-19-5 68987-90-6	ND	ND	ND	ND	
Sum NP/NPEO	-	ND	ND	ND	ND	/

Title	CAS No.	Sample E	Sample F	Sample G	Sample H	
Nonylphenol (NP), mixed isomers	104-40-5 11066-49-2 25154-52-3 84852-15-3	ND	ND	ND	ND	Sum of NP, OP: 5 mg/kg
Octylphenol (OP), mixed isomers	140-66-9 1806-26-4 27193-28-8	ND	ND	ND	ND	
Nonylphenol Ethoxylates (NPEO)	9016-45-9 26027-38-3 37205-87-1 68412-54-4 127087-87-0	ND	ND	ND	ND	Sum of NPEO, OPEO: 50 mg/kg
Octylphenol Ethoxylates (OPEO)	9002-93-1 9036-19-5 68987-90-6	ND	ND	ND	ND	
Sum NP/NPEO	-	ND	ND	ND	ND	/



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## Alkylphenole/ Alkylphenoethoxylate

## Requirements

### (AP/APEO):

EN ISO 21084:2019/ AP: Analyzed by GC-MS / EN ISO 18254-1:2016 / APEO:

Analyzed by LC-MS

Title	CAS No.	Sample I	Sample J	Sample K	
Nonylphenol (NP), mixed isomers	104-40-5 11066-49-2 25154-52-3 84852-15-3	ND	ND	ND	Sum of NP, OP: 5 mg/kg
Octylphenol (OP), mixed isomers	140-66-9 1806-26-4 27193-28-8	ND	ND	ND	
Nonylphenol Ethoxylates (NPEO)	9016-45-9 26027-38-3 37205-87-1 68412-54-4 127087-87-0	ND	ND	ND	Sum of NPEO, OPEO: 50 mg/kg
Octylphenol Ethoxylates (OPEO)	9002-93-1 9036-19-5 68987-90-6	ND	ND	ND	
Sum NP/NPEO	-	ND	ND	ND	/

Note
Unit: mg/kg: (milligram per kilogram)
MDL: 5mg/kg for (NP/OP): 30mg/kg (NPEO/OPEO)
ND: Not detected



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### Fabric weight:

### Requirements

ISO 3801:1977

Sample	Sample A	Sample B	Sample C	Sample D	±5%
g/m <sup>2</sup>	203.0	203.0	203.0	203.0	190 g/m <sup>2</sup>
Oz	5.99	5.99	5.99	5.99	5.60 Oz

Sample	Sample E	Sample F	Sample G	Sample H	±5%
g/m <sup>2</sup>	203.0	203.0	203.0	203.0	190 g/m <sup>2</sup>
Oz	5.99	5.99	5.99/	5.99	5.60 Oz

Sample	Sample I	Sample J	Sample K	±5%
g/m <sup>2</sup>	203.0	203.0	203.0	190 g/m <sup>2</sup>
Oz	5.99	5.99	5.99	5.60 Oz





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### Seam spirality after laundering:

### Requirements

ISO 16322-3:2021

Sample	Sample A	Sample B	Sample C	Sample D	
Spirality (%)	0.3	0.3	0.3	0.3	up to 2cm
Spirality (cm)	5.99	5.99	5.99	5.99	2cm

Sample	Sample E	Sample F	Sample G	Sample H	
Spirality (%)	0.3	0.3	0.3	203.0	up to 2cm
Spirality (cm)	5.99	5.99	5.99	5.99	2cm

Sample	Sample I	Sample J	Sample K	
Spirality (%)	203.0	203.0	203.0	up to 2cm
Spirality (cm)	5.99	5.99	5.99	2cm



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### Azo-Dyes (including Aniline):

### Requirements

All Textile: According to DIN EN ISO 14362-1:2017 – Analysis was conducted with GC-MS/HPLC-DAD.

Determination of 4-aminoazobenzene (CAS No.:60-09-3) –DIN EN ISO 14362-3:2017; with the use of Gas Chromatography – Mass Spectrometry (GC-MS)

	A1+A2+A3	B1+B2+B3	C1+C2+C3	D1+D2+D3	E1+E4+E5	E2+E3	mg/kg
Result	ND	ND	ND	ND	ND	ND	20

	F1+F2+F3	F4+F5	G1+G3+G5	G2+G4	H1+H2+H3	mg/kg
Result	ND	ND	ND	ND	ND	20

Note
n.d. = not detected
mg/kg = ppm
* = Exceeds the limit
Detection Limit = 5 mg/kg (for individual compound)

#### **List of Azo Dyes:**

Sr#	Substance name	CAS No.	Sr#	Substance name	CAS No.
1	Biphenyl-4-ylamine 4-aminobiphenyl xenylamine	92-67-1	14	6-Methoxy-m-toluidine p-Cresidine	120-71-8
2	Benzidine	92-87-5	15	4,4'-Methylene-bis-(2-chloro-aniline) 2,2'-Dichloro-4,4'-methylene-dianiline	101-14-4
3	4-Chloro-o-toluidine	95-69-2	16	4,4'-Oxydianiline	101-80-4
4	2-Naphthylamine	91-59-8	17	4,4'-Thiodianiline	139-65-1
5	o-Aminoazotoluene	97-56-3	18	o-Toluidine 2-Aminotoluene	95-53-4
6	5-Nitro-o-toluidine 4-Amino-2', 3-dimethylazobenzene 4-o-Tolylazo-o-toluidine	99-55-8	19	4-Methyl-m-phenylenediamine	95-80-7
7	4-Chloroaniline	106-47-8	20	2,4,5-Trimethylaniline	137-17-7
8	4-Methoxy-m-phenylenediamine	615-05-4	21	o-Anisidine 2-Methoxyaniline	90-04-0
9	4,4'-Methylenedianiline 4,4'-Diaminodiphenylmethane	101-77-9	22	4-Amino azobenzene	60-09-3
10	3,3'-Dichlorobenzidine 3,3'-Dichlorobiphenyl-4, 4'-ylenediamine	91-94-1	23	2,4-Xylidine	95-68-1
11	3,3'-Dimethoxybenzidine o-Dianisidine	119-90-4	24	2,6-Xylidine	87-62-7
12	3,3'-Dimethylbenzidine 4,4'-Bi-o-toluidine	119-93-7	25	Aniline	62-53-3
13	4,4'-Methylenedi-o-toluidine	838-88-0	26	4-Aminoaniline 1,4-Phenylenediamine	106-50-3



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### Aromatic Amine Salts:

### Requirements

All Textile: According to DIN EN ISO 14362-1:2017 – Analysis was conducted with GC-MS/HPLC-DAD.

	A1+A2+A3	B1+B2+B3	C1+C2+C3	D1+D2+D3	E1+E4+E5	E2+E3	mg/kg
Result	ND	ND	ND	ND	ND	ND	20

	F1+F2+F3	F4+F5	G1+G3+G5	G2+G4	H1+H2+H3	mg/kg
Result	ND	ND	ND	ND	ND	20

Note
n.d. = not detected
mg/kg = ppm
* = Exceeds the limit
Detection Limit = 5 mg/kg (for individual compound)

### ***List of Aromatic Amine Salts:***

Sr#	Substance name	CAS No.	Sr#	Substance name	CAS No.
1	4-Chloro-o-toluidinium chloride	3165-93-3	3	4-meth methoxy-m-phenylene diammonium sulphate; 2,4- diaminoanisole sulphate	120-71-8
2	2-Naphthylammoniumacetate	553-00-4	4	2,4,5-trimethylaniline hydrochloride	21436-97-5



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## Formaldehyde:

## Requirements

DIN EN ISO 14184-1:2011

Substance Name	CAS No	A1+A2+A3	B1+B2+B3	C1+C2+C3	D1+D2+D3	E1+E4+E5	E2+E3	mg/kg
Formaldehyde	50-00-0	ND	ND	ND	ND	ND	ND	ND

Substance Name	CAS No	F1+F2+F3	F4+F5	G1+G3+G5	G2+G4	H1+H2+H3	mg/kg
Formaldehyde	50-00-0	ND	ND	ND	ND	ND	ND

MDL: 16 mg/kg
MDL: Method detection limit
ND: Not detected
mg/kg: milligram per kilogram



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### Total Lead (Pb) Content:

### Requirements

DIN EN 16711-1:2016, Analyzed by ICP-OES

Substance Name	CAS No	A1+A2+A3	B1+B2+B3	C1+C2+C3	D1+D2+D3	E1+E4+E5	E2+E3	mg/kg
Total Lead	50-00-0	ND	ND	ND	ND	ND	ND	75

Substance Name	CAS No	F1+F2+F3	F4+F5	G1+G3+G5	G2+G4	H1+H2+H3	mg/kg
Total Lead	50-00-0	ND	ND	ND	ND	ND	75

Note
MDL: 10 mg/kg



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### Total Cadmium (Cd) Content:

### Requirements

DIN EN 16711-1:2016, Analyzed by ICP-OES

Substance Name	CAS No	A1+A2+A3	B1+B2+B3	C1+C2+C3	D1+D2+D3	E1+E4+E5	E2+E3	mg/kg
Cadmium (Cd)	7440-43-9	ND	ND	ND	ND	ND	ND	40

Substance Name	CAS No	F1+F2+F3	F4+F5	G1+G3+G5	G2+G4	H1+H2+H3	mg/kg
Cadmium (Cd)	7440-43-9	ND	ND	ND	ND	ND	40

Note
MDL: 10 mg/kg



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### Extractable (heavy) Metals:

### Requirements

DIN EN 16711-2:2016, Analyzed by ICP-OES and DIN EN ISO 17075-1:2017 (modified) for Cr (VI)

Substance Name	CAS No.	MDL (mg/kg)	Sample A	Sample B	Sample C	Sample D	Sample E	(mg/kg)
As (Arsenic)	7440-38-2	0.2	ND	ND	ND	ND	ND	0.2
Pb (Lead)	7439-92-1	0.2	ND	ND	ND	ND	ND	0.2
Cd (Cadmium)	7440-43-9	0.1	ND	ND	ND	ND	ND	0.1
Cr VI (Chromium VI)	18540-29-9	0.5	ND	ND	ND	ND	ND	0.5
Sb (Antimony)	7440-36-0	0.5	ND	ND	ND	ND	ND	30
Cr (Chromium)	7440-47-3	0.5	ND	ND	ND	ND	ND	1.0
Co (Cobalt)	7440-48-4	0.5	ND	ND	ND	ND	ND	1.0
Cu (Copper)	7440-50-8	0.5	ND	ND	ND	ND	ND	25
Ni (Nickel)	7440-02-0	0.5	ND	ND	ND	ND	ND	1.0
Hg (Mercury)	7439-97-6	0.02	ND	ND	ND	ND	ND	0.02
Ba (Barium)	7440-39-3	0.5	ND	ND	ND	ND	ND	1000
Se (Selenium)	7782-49-2	0.5	ND	ND	ND	ND	ND	100

Substance Name	CAS No.	MDL (mg/kg)	Sample F	Sample G	Sample H	Sample I	Sample J	(mg/kg)
As (Arsenic)	7440-38-2	0.2	ND	ND	ND	ND	ND	0.2
Pb (Lead)	7439-92-1	0.2	ND	ND	ND	ND	ND	0.2
Cd (Cadmium)	7440-43-9	0.1	ND	ND	ND	ND	ND	0.1
Cr VI (Chromium VI)	18540-29-9	0.5	ND	ND	ND	ND	ND	0.5
Sb (Antimony)	7440-36-0	0.5	ND	ND	ND	ND	ND	30
Cr (Chromium)	7440-47-3	0.5	ND	ND	ND	ND	ND	1.0
Co (Cobalt)	7440-48-4	0.5	ND	ND	ND	ND	ND	1.0
Cu (Copper)	7440-50-8	0.5	ND	ND	ND	ND	ND	25
Ni (Nickel)	7440-02-0	0.5	ND	ND	ND	ND	ND	1.0
Hg (Mercury)	7439-97-6	0.02	ND	ND	ND	ND	ND	0.02
Ba (Barium)	7440-39-3	0.5	ND	ND	ND	ND	ND	1000
Se (Selenium)	7782-49-2	0.5	ND	ND	ND	ND	ND	100



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### Extractable (heavy) Metals:

### Requirements

DIN EN 16711-2:2016, Analyzed by ICP-OES and DIN EN ISO 17075-1:2017 (modified) for Cr (VI)

Substance Name	CAS No.	MDL (mg/kg)	Sample K	(mg/kg)
As (Arsenic)	7440-38-2	0.2	ND	0.2
Pb (Lead)	7439-92-1	0.2	ND	0.2
Cd (Cadmium)	7440-43-9	0.1	ND	0.1
Cr VI (Chromium VI)	18540-29-9	0.5	ND	0.5
Sb (Antimony)	7440-36-0	0.5	ND	30
Cr (Chromium)	7440-47-3	0.5	ND	1.0
Co (Cobalt)	7440-48-4	0.5	ND	1.0
Cu (Copper)	7440-50-8	0.5	ND	25
Ni (Nickel)	7440-02-0	0.5	ND	1.0
Hg (Mercury)	7439-97-6	0.02	ND	0.02
Ba (Barium)	7440-39-3	0.5	ND	1000
Se (Selenium)	7782-49-2	0.5	ND	100

Note
Method Detection Limit
mg/kg: milligram per kilogram
ND: Not detected





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### Quinoline:

### Requirements

DIN 54231:2005, Analyzed by GC-MS

Substance Name	CAS No	A1+A2+A3	B1+B2+B3	C1+C2+C3	D1+D2+D3	E1+E4+E5	E2+E3	mg/kg
Quinoline	91-22-5	ND	ND	ND	ND	ND	ND	Individual Test :50 2-1 composite: 22.5 3-1 composite: 15

Substance Name	CAS No	F1+F2+F3	F4+F5	G1+G3+G5	G2+G4	H1+H2+H3	mg/kg
Quinoline	91-22-5	ND	ND	ND	ND	ND	Individual Test :50 2-1 composite: 22.5 3-1 composite: 15

Note
MDL: 15 mg/kg



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## Phthalates

## Requirements

DIN 54231:2005, Analyzed by GC-MS

	H1+H2+H3	A1+A2+A3	B1+B2+B3	C1+C2+C3	D1+D2+D3	E1+E4+E5	mg/kg
Result	ND	ND	ND	ND	ND	ND	Individual Test :1000 2-1 composite: 450 3-1 composite: 300

	E2+E3	F1+F2+F3	F4+F5	G1+G3+G5	G2+G4	mg/kg
Result	ND	ND	ND	ND	ND	Individual Test :1000 2-1 composite: 450 3-1 composite: 300

Note
N. D. = Not detected
Laboratory Reporting Limit: 50 mg/kg
N. D. = Not detected
mg/kg: milligram per kilogram

### List of Phthalates:

Sr#	Substance name	CAS No.	Sr#	Substance name	CAS No.
1	Bis (2-ethylhexyl) phthalate (DEHP)	117-81-7	12	1,2-Benzendicarboxylic acid alkyl esters, C7-rich (DIHP)	71888-89-6
2	Dibutyl phthalate (DBP)	84-74-2	13	1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear (DHxP)	68515-50-4
3	Benzyl butyl phthalate (BBP)	85-68-7	14	Dimethyl phthalate (DMP)	131-11-3
4	Diisobutyl phthalate (DIBP)	84-69-5	15	Di-n-propyl phthalate (DPP)	131-16-8
5	Di-"isononyl" phthalate (DINP)	28553-12-0 68515-48-0	16	Dicyclohexyl phthalate (DCP)	84-61-7 55819-02-8 169741-16-6
6	Di-"isodecyl" phthalate (DIDP)	26761-40-0 68515-49-1	17	1,2-Benzenedicarboxylic acid, di-2-propenyl ester (DAP)	131-17-9
7	Di-n-octyl phthalate (DNOP)	117-84-0	18	Di-iso-hexylphthalate (DIHxP)	71850-09-4
8	Di-n-pentylphthalate (n-, iso-, or mixed) (DIPP/ DNPP)	131-18-0 605-50-5 776297-69-9 84777-06-0	19	1,2-Benzenedicarboxylic acid, di-C6-10 alkyl esters	68515-51-5
9	Bis (2-methoxyethyl) phthalate (DMEP)	117-82-8	20	1,2-Benzenedicarboxylic acid, mixed decyl and hexyl and octyl diesters	68648-93-1



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10	Di-n-hexyl phthalate (DNHP)	84-75-3	21	Di-ethylphthalate (DEP)	84-66-2
11.1	1,2-Benzendicarboxylic acid, di-C7-11 branched and linear alkylesters (DHNUP)	68515-42-4	22	1,2-Cyclohexane dicarboxylic acid diisononyl ester (DINCH)	166412-78-8
11.2	Di-2-propyl heptyl phthalate (DHPH)	53306-54-0	23		
11.3	Di-n-nonylphthalate (DNP)	84-76-4	24		
11.4	Diisooctyl phthalate (DIOP)	27554-26-3	25		

### Polycyclic Aromatic Hydrocarbon (PAH):

### Requirements

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Substance Name	CAS No.	Sample A	Sample B	Sample C	Sample D	Sample E	Requirement
Benzo (a) anthracene	56-55-3	ND	ND	ND	ND	ND	
Benzo (a) pyrene	50-32-8	ND	ND	ND	ND	ND	
Benzo (b) fluoranthene	205-99-2	ND	ND	ND	ND	ND	
Benzo [e] pyrene	192-97-2	ND	ND	ND	ND	ND	
Benzo [j] fluoranthene	205-82-3	ND	ND	ND	ND	ND	
Benzo (k) fluoranthene	207-08-9	ND	ND	ND	ND	ND	
Chrysene	218-01-9	ND	ND	ND	ND	ND	
Dibenzo(a,h)anthracene	53-70-3	ND	ND	ND	ND	ND	
Naphthalene	91-20-3	ND	ND	ND	ND	ND	
Acenaphthylene	208-96-8	ND	ND	ND	ND	ND	
Acenaphthene	83-32-9	ND	ND	ND	ND	ND	
Fluorene	86-73-7	ND	ND	ND	ND	ND	
Phenanthrene	85-01-8	ND	ND	ND	ND	ND	
Anthracene	120-12-7	ND	ND	ND	ND	ND	
Fluoranthene	206-44-0	ND	ND	ND	ND	ND	
Pyrene	129-00-0	ND	ND	ND	ND	ND	
Indeno(1,2,3-cd) pyrene	193-39-5	ND	ND	ND	ND	ND	
Benzo(g,h,i) perylene	191-24-2	ND	ND	ND	ND	ND	
1-Methylpyrene	2381-21-7	ND	ND	ND	ND	ND	
Dibenzo[a,l]pyrene	191-30-0	ND	ND	ND	ND	ND	
Dibenzo[a,i]pyrene	189-55-9	ND	ND	ND	ND	ND	
Dibenzo[a,h]pyrene	189-64-0	ND	ND	ND	ND	ND	
Dibenzo[a,e]pyrene	192-65-4	ND	ND	ND	ND	ND	
Cyclopenta[c,d]pyrene	27208-37-3	ND	ND	ND	ND	ND	
Sum 24 PAHs	-	ND	ND	ND	ND	ND	
Rating	-						

Substance Name	CAS No.	Sample F	Sample G	Sample H	Sample I	Sample J	Requirement
Benzo (a) anthracene	56-55-3	ND	ND	ND	ND	ND	
Benzo (a) pyrene	50-32-8	ND	ND	ND	ND	ND	



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Benzo (b) fluoranthene	205-99-2	ND	ND	ND	ND	ND	
Benzo [e] pyrene	192-97-2	ND	ND	ND	ND	ND	
Benzo [j] fluoranthene	205-82-3	ND	ND	ND	ND	ND	
Benzo (k) fluoranthene	207-08-9	ND	ND	ND	ND	ND	
Chrysene	218-01-9	ND	ND	ND	ND	ND	
Dibenzo(a,h)anthracene	53-70-3	ND	ND	ND	ND	ND	
Naphthalene	91-20-3	ND	ND	ND	ND	ND	
Acenaphthylene	208-96-8	ND	ND	ND	ND	ND	
Acenaphthene	83-32-9	ND	ND	ND	ND	ND	
Fluorene	86-73-7	ND	ND	ND	ND	ND	
Phenanthrene	85-01-8	ND	ND	ND	ND	ND	
Anthracene	120-12-7	ND	ND	ND	ND	ND	
Fluoranthene	206-44-0	ND	ND	ND	ND	ND	
Pyrene	129-00-0	ND	ND	ND	ND	ND	
Indeno(1,2,3-cd) pyrene	193-39-5	ND	ND	ND	ND	ND	
Benzo(g,h,i) perylene	191-24-2	ND	ND	ND	ND	ND	
1-Methylpyrene	2381-21-7	ND	ND	ND	ND	ND	
Dibenzo[a,l]pyrene	191-30-0	ND	ND	ND	ND	ND	
Dibenzo[a,i]pyrene	189-55-9	ND	ND	ND	ND	ND	
Dibenzo[a,h]pyrene	189-64-0	ND	ND	ND	ND	ND	
Dibenzo[a,e]pyrene	192-65-4	ND	ND	ND	ND	ND	
Cyclopenta[c,d]pyrene	27208-37-3	ND	ND	ND	ND	ND	
Sum 24 PAHs	-	ND	ND	ND	ND	ND	
Rating	-						

Substance Name	CAS No.	Sample K	Requirement
Benzo (a) anthracene	56-55-3	ND	
Benzo (a) pyrene	50-32-8	ND	
Benzo (b) fluoranthene	205-99-2	ND	
Benzo [e] pyrene	192-97-2	ND	
Benzo [j] fluoranthene	205-82-3	ND	
Benzo (k) fluoranthene	207-08-9	ND	
Chrysene	218-01-9	ND	
Dibenzo(a,h)anthracene	53-70-3	ND	
Naphthalene	91-20-3	ND	
Acenaphthylene	208-96-8	ND	
Acenaphthene	83-32-9	ND	
Fluorene	86-73-7	ND	
Phenanthrene	85-01-8	ND	
Anthracene	120-12-7	ND	
Fluoranthene	206-44-0	ND	
Pyrene	129-00-0	ND	
Indeno(1,2,3-cd) pyrene	193-39-5	ND	



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Benzo(g,h,i) perylene	191-24-2	ND	
1-Methylpyrene	2381-21-7	ND	
Dibenzo[a,l]pyrene	191-30-0	ND	
Dibenzo[a,i]pyrene	189-55-9	ND	
Dibenzo[a,h]pyrene	189-64-0	ND	
Dibenzo[a,e]pyrene	192-65-4	ND	
Cyclopenta[c,d]pyrene	27208-37-3	ND	
Sum 24 PAHs	-	ND	
Rating	-		

Note
MDL: 0.2 mg/kg
Method Detection Limit
mg/kg: milligram per kilogram



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### Polycyclic Aromatic Hydrocarbon(PAH):

### Requirements

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