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**Prüfbericht Nr. (Report No.):** 11935-1 TL20  
**Datum (Date):** 26.10.20  
**Auftrag Nr. (Order No.):** TL-05553-20  
**Auftragsdatum (Date of order):** 14.09.20  
**Ansprechpartner (Contact):** Customer Service  
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## Prüfbericht (Test Report)

Auftragsbezeichnung (Order descr.): **Chemische und lebensmittelrechtliche Untersuchungen (chemical tests and tests acc. to food law)**

Artikelbezeichnung (Article Name)	Shaker: MixStar
Material (Material)	PP - Borealis Borpure RJ377MO
Farbe (Colour)	pink/natur (pink/nature)
Artikel-Nr. (Article No.)	keine Angabe (no information)
Zustand bei Anlieferung (Condition of sample at delivery)	einwandfrei (no defects)
Eingangsdatum (Arrival date)	15.09.20
Untersuchungsbeginn (Test start date)	15.09.20
Untersuchungsende (Test end date)	26.10.20



### Grenzwertlisten (Limit lists)

Chem.	Grenzwerte nach Anforderungen Europäische Union
Food Contact	Grenzwerte nach Anforderungen Europäische Union

## Bewertung (Final conclusion): PASS

Die Beurteilung bezieht sich ausschließlich auf das angelieferte Prüfstück und die durchgeführten Prüfungen. Detaillierte Angaben zur Messunsicherheit sind im Prüflabor vorhanden und können auf Kundenwunsch bereitgestellt werden. Wenn nicht anders ausgewiesen, wurde der Konformitätsentscheid ohne Berücksichtigung der Messunsicherheit gefällt. (Test results and evaluation are only related to tested items and to performed methods. Detailed information regarding measurement uncertainties are available on request. Unless otherwise stated, the statement of conformity decision will be made without taking the measurement uncertainty into account.)



Ulrike Adam  
Prüfberichtsverantwortliche Chemie  
(authorized to sign test reports chemistry)

## Übersicht Chem. Prüfung (Overview of Chem. testing)

Proben-Nr. (Sample no)	Type / Style
20-030336-01	-

### Komponentenliste (Component list)

Nr (No)	Komponenten (Components)
01	gesamter Artikel (whole item )
02	Kunststoff transparent ( plastic transparent )
03	Kunststoff pink ( plastic pink )

### Bewertung kundenspez. Anforderungen (customer requirements evaluation)

	Komponenten (Components)			
	Getestet (Tested)	Result	Fail (Failed)	Nicht getestet (Not tested)
Chlorierte Paraffine (Chlorinated paraffins)	02, 03	PASS		
Metalle Gesamtgehalt (metals total content)	02, 03	PASS		
Metalle Gesamtgehalt (Metals Total Content)	02, 03	PASS		
Polycyclische aromatische Kohlenwasserstoffe (PAK) (Polycyclic aromatic hydrocabons (PAH))	02, 03	PASS		
Weichmacher: Phthalate (Plasticizers: Phthalates)	02, 03	PASS		

## Übersicht Food Contact Prüfung (Overview of Food Contact testing)

Proben-Nr. (Sample no)	Type / Style
20-030336-02	-

### Komponentenliste (Component list)

Nr (No)	Komponenten (Components)
01	gesamter Artikel (whole item )
02	Kunststoff transparent ( plastic transparent )
03	Kunststoff pink ( plastic pink )

### Bewertung kundenspez. Anforderungen (customer requirements evaluation)

	Komponenten (Components)			
	Getestet (Tested)	Result	Fail (Failed)	Nicht getestet (Not tested)
Gesamtmigration 3% Essigsäure (Total migration 3% acetic acid)	02, 03	PASS		
Gesamtmigration 50% Ethanol (Total migration 50 % ethyl alcohol)	02, 03	PASS		
Sensorische Prüfung - Bedarfsgegenstände (Organoleptic Test - Consumer Goods)	01	PASS		
Spezifische Migration der Metalle gemäß VO (EU) Nr. 10/2011 (specific migration of metals acc. to Regulation (EU) No. 10/2011)	02, 03	PASS		
Spezifische Migration von aromatischen Aminen (Specific migration of aromatic amines)	03	PASS		

Legende (Legend): Chem.: chemische Prüfungen (chemical tests), Phys.: Physikalische Prüfungen (physical tests), m.s.: Mischprobe (composite sample), n.d.: not determined, n.a.: not applicable, n.t.: not tested, i.m.: nicht genug Material (insufficient material), sum: Zusammenfassung (see summary), s.c.: see component, pos: positive, neg: negative, min: Unterer Grenzwert (minimum limit), max: Oberer Grenzwert (maximum limit), BL: unter Grenzwert (below limit), IN: inconclusive

## Einzeluntersuchungsergebnisse Chem. Prüfung (Detailed results of Chem. testing)

Proben-Nr. (Sample no): 20-030336-01

### Chlorierte Paraffine (Chlorinated paraffins)

Probenart (Sample type): Chem.

Norm: DIN EN ISO 18219:2016-02 (modifiziert) (modified)

Parameter	Unit	Limit	02+03 Result
Kurzkettige chlorierte Paraffine C10-C13 (SCCP) (Short chain chlorinated paraffins C10-C13 (SCCP))	mg/kg	1500	<100
<b>Evaluation</b>			<b>PASS</b>

### Metalle Gesamtgehalt (Metals Total Content)

Probenart (Sample type): Chem.

Norm: EPA 3015A: 2007-02; DIN EN ISO 17294-2:2017-01 (modifiziert) (modified); DIN EN 16711-1:2016-02

Parameter	Unit	Limit	02+03 Result
Aufschluss (digestion): Metalle Gesamtgehalt (metals total content)	Y/N		<b>YES</b>
Blei (Lead) (Pb): Gesamtgehalt (total content)	mg/kg	100	<5,0
Cadmium (Cd) Gesamtgehalt (Cadmium (Cd) total content)	mg/kg	75	<5,0
<b>Evaluation</b>			<b>PASS</b>

### Metalle Gesamtgehalt (metals total content)

Probenart (Sample type): Chem.

Norm: DIN EN ISO 17294-2: 2017-01, DIN EN ISO 62321-5 (modifiziert) (modified)

Parameter	Unit	Limit	02 Result	03 Result
Chrom (Cr) Chromium	mg/kg	10	<10	<10
Vanadium (V) (Vanadium (V))	mg/kg	20	<20	<20
Hafnium (Hf) (Hafnium (Hf))	mg/kg	100	<100	<100
Zirkonium (Zr) (Zirconium (Zr))	mg/kg	100	<100	<100
<b>Evaluation</b>			<b>PASS</b>	<b>PASS</b>

### **Polycyclische aromatische Kohlenwasserstoffe (PAK) (Polycyclic aromatic hydrocarbons (PAH))**

Probenart (Sample type): Chem.

Norm: AfPS GS 2014:01 PAK

Parameter	Unit	Limit	02	03
			Result	Result
Benzo[a]pyren (Benzo[a]pyrene)	mg/kg	0,2	<0,2	<0,2
Benzo[e]pyren (Benzo[e]pyrene)	mg/kg	0,2	<0,2	<0,2
Benzo[a]anthracen (Benzo[a]anthracene)	mg/kg	0,2	<0,2	<0,2
Benzo[b]fluoranthen (Benzo[b]fluoranthene)	mg/kg	0,2	<0,2	<0,2
Benzo[j]fluoranthen (Benzo[j]fluoranthene)	mg/kg	0,2	<0,2	<0,2
Benzo[k]fluoranthen (Benzo[k]fluoranthene)	mg/kg	0,2	<0,2	<0,2
Chrysen (Chrysene)	mg/kg	0,2	<0,2	<0,2
Dibenzo[a,h]anthracen (Dibenzo[a,h]anthracene)	mg/kg	0,2	<0,2	<0,2
Benzo[g,h,i]perylene (Benzo[g,h,i]perylene)	mg/kg	0,2	<0,2	<0,2
Indeno[1,2,3-cd]pyren (Indeno[1,2,3-cd]pyrene)	mg/kg	0,2	<0,2	<0,2
Naphthalin (Naphthalene)	mg/kg	1	<0,2	<0,2
Acenaphthylen (Acenaphthylene)	mg/kg	-	<0,2	<0,2
Acenaphthen (Acenaphthene)	mg/kg	-	<0,2	<0,2
Fluoren (Fluorene)	mg/kg	-	<0,2	<0,2
Phenanthren (Phenanthrene)	mg/kg	-	<0,2	<0,2
Pyren (Pyrene)	mg/kg	-	<0,2	<0,2
Anthracen (Anthracene)	mg/kg	-	<0,2	<0,2
Fluoranthen (Fluoranthene)	mg/kg	-	<0,2	<0,2
Summe PAK (Acenaphthylen, Acenaphthen, Fluoren, Phenanthren, Pyren, Anthracen, Fluoranthen) (Sum PAH (acenaphthylene, acenaphthene, fluorene, phenanthrene, pyrene, anthracene, fluoranthene))	mg/kg	1	<0,2	<0,2
Polyzyklische arom. Kohlenwasserstoffe - Summe 18-PAK (Polycyclic arom. hydrocarbons - sum 18-PAH)	mg/kg	1	<0,2	<0,2
<b>Evaluation</b>			<b>PASS</b>	<b>PASS</b>

### **Weichmacher: Phthalate (Plasticizers: Phthalates)**

Probenart (Sample type): Chem.

Norm: DIN EN ISO 14389:2014-10 (modifiziert) (modified)

Parameter	Unit	Limit	02+03
			Result
Di-iso-decylphthalat / DIDP (Di-iso-decylphthalate)_nG	%	0,1	<0,02
Di-(2ethylhexyl)-phthalat / DEHP (Di-(2ethylhexyl)-phthalate)_nG	%	0,1	<0,02
Di-iso-nonylphthalat / DINP (Di-iso-nonylphthalate)_nG	%	0,1	<0,02
Butylbenzylphthalat / BBP (Butylbenzyl phthalate)_nG	%	0,1	<0,02
Dibutylphthalat / DBP (Dibutyl phthalate)_nG	%	0,05	<0,02
<b>Evaluation</b>			<b>PASS</b>

## Einzeluntersuchungsergebnisse Food Contact Prüfung (Detailed results of Food Contact testing)

Proben-Nr. (Sample no): 20-030336-02

### Gesamtmigration 3% Essigsäure (Total migration 3% acetic acid)

Probenart (Sample type): Food Contact

Norm: DIN EN 1186-1:2002-07; DIN EN 1186-3:2002-07; DIN EN 1186-5:2002-07; DIN EN 1186-9:2002-07

Parameter	Unit	Limit	02+03
			Result
Kontaktzeit Tag 3% Essigsäure (Contact time day 3 % acetic acid)	d		10
Kontakttemperatur 3% Essigsäure (Contact temperature 3 % acetic acid)	°C		40
Volumen 3% Essigsäure (Volume 3 % acetic acid)	L		0,6
Kontaktfläche 3% Essigsäure (Contact area 3 % acetic acid)	dm <sup>2</sup>		4,7
Gesamtmigration 3% Essigsäure 1. Migration (Total migration 3 % acetic acid first migration)	mg/dm <sup>2</sup>		<3
Gesamtmigration 3% Essigsäure 2. Migration (Total migration 3 % acetic acid second migration)	mg/dm <sup>2</sup>		<3
Gesamtmigration 3% Essigsäure 3. Migration (Total migration 3 % acetic acid third migration)	mg/dm <sup>2</sup>	10	<3
Optikbeurteilung 3% Essigsäure (Assessment of appearance 3 % acetic acid)			PASS
<b>Evaluation</b>			<b>PASS</b>

### Gesamtmigration 50% Ethanol (Total migration 50 % ethyl alcohol)

Probenart (Sample type): Food Contact

Norm: DIN EN 1186-1:2002-07; DIN EN 1186-3:2002-07; DIN EN 1186-5:2002-07; DIN EN 1186-9:2002-07

Parameter	Unit	Limit	02+03
			Result
Kontaktzeit Tag 50% Ethanol (Contact time day 50 % ethyl alcohol)	d		10
Kontakttemperatur 50% Ethanol (Contact temperature 50 % ethyl alcohol)	°C		40
Volumen 50% Ethanol (Volume 50 % ethyl alcohol)	L		0,6
Kontaktfläche 50% Ethanol (Contact area 50 % ethyl alcohol)	dm <sup>2</sup>		4,7
Gesamtmigration 50% Ethanol 1. Migration (Total migration 50 % ethyl alcohol first migration)	mg/dm <sup>2</sup>		<3
Gesamtmigration 50% Ethanol 2. Migration (Total migration 50 % ethyl alcohol second migration)	mg/dm <sup>2</sup>		<3
Gesamtmigration 50% Ethanol 3. Migration (Total migration 50 % ethyl alcohol third migration)	mg/dm <sup>2</sup>	10	<3
Optikbeurteilung 50% Ethanol (Assessment of appearance 50 % ethyl alcohol)			PASS
<b>Evaluation</b>			<b>PASS</b>

### **Sensorische Prüfung - Bedarfsgegenstände (Organoleptic Test - Consumer Goods)**

Probenart (Sample type): Food Contact

Norm: DIN 10955:2004-06

Ausgabedatum (Issue date): 2004-06

Parameter	Unit	Bedingung (Condition)
Simulanzmittel (Simulation agent)		Mineralwasser (mineral water)
Kontaktzeit (Contact time)	h	24
Kontakttemperatur (Contact temperature)	°C	40

Parameter	Unit	Limit	01 Result
Geschmack (taste)	Note	2,5	0,5
Geruch (odour)	Note	2,5	0
<b>Evaluation</b>			<b>PASS</b>

Notenskala (grade scale)

- 0 - keine wahrnehmbare Abweichung (no abnormality)
- 1 - gerade wahrnehmbare Abweichung (very weak abnormality)
- 2 - schwache Abweichung (slight abnormality)
- 3 - deutliche Abweichung (explicit abnormality)
- 4 - starke Abweichung (strong abnormality)

### **Spezifische Migration der Metalle gemäß VO (EU) Nr. 10/2011 (specific migration of metals acc. to Regulation (EU) No. 10/2011)**

Probenart (Sample type): Food Contact

Norm: DIN EN 13130-1:2004; Hausmethode (inhouse method): SOP-IC-1012017-05

Parameter	Unit	Limit	02+03 Result
Simulanzmittel (Simulation agent)		-	3 % Essigsäure (3 % acetic acid)
Kontaktzeit (Contact time)	h	-	24
Kontakttemperatur (Contact temperature)	°C	-	40
Simulanzvolumen (Simulant volume)	L	-	0,6
Kontaktfläche (Contact area)	dm <sup>2</sup>	-	4,7
Optikbeurteilung (Assessment of appearance )	PASS/F AIL	-	PASS
Aluminium (Al)	mg/kg	1	<0,05
Barium (Ba)	mg/kg	1	<0,05
Kobalt (Cobalt) (Co)	mg/kg	0,05	<0,01
Kupfer (Copper) (Cu)	mg/kg	5	<0,1
Eisen (Iron) (Fe)	mg/kg	48	<0,1
Lithium (Li)	mg/kg	0,6	<0,01
Mangan (Manganese) (Mn)	mg/kg	0,6	<0,01
Zink (Zinc) (Zn)	mg/kg	5	<0,1
Nickel (Nickel) (Ni)	mg/kg	0,02	<0,01
<b>Evaluation</b>			<b>PASS</b>

### **Spezifische Migration von aromatischen Aminen (Specific migration of aromatic amines)**

Probenart (Sample type): Food Contact

Norm: DIN EN 13130-1:2004-08; Hausmethode (inhouse method): SOP-OC-306:2016-05

Ausgabedatum (Issue date): 2016-05

Parameter	Unit	Limit	03
			Result
Simulanzmittel 1 (Simulent agent 1)		-	3 % Essigsäure (3 % acetic acid)
Kontaktzeit 1 (Contact time 1)	h	-	24
Kontakttemperatur 1 (Contact temperatur 1)	°C	-	40
Kontaktfläche 1 (Contact area 1)	dm <sup>2</sup>	-	0,7
Simulanzvolumen 1 (Simulant volume 1)	L	-	0,1
Summe primäre aromatische Amine (sum primary aromatic amines)	mg/kg	0,01	<0,01
<b>Evaluation</b>			<b>PASS</b>



Die Auswahl des Prüfstückes erfolgte durch den Auftraggeber. Restliches Prüfmaterial wird nach 3 Monaten vernichtet. Ohne schriftliche Genehmigung des Prüflaboratoriums ist eine auszugsweise Vervielfältigung des Prüfberichts nicht gestattet. Der Prüfbericht wurde digital unterzeichnet und ist mit einem Passwort geschützt. Zum Drucken ist die Option -Dokument und Kommentare- einzustellen. Minorkomponenten können teilweise in einer für die Prüfung nicht ausreichenden Menge im Prüfstück vorliegen, sollten Tests aller Komponenten gewünscht sein, ist uns ausreichend Probenmaterial aller Komponenten zur Verfügung zu stellen. In diesem Fall wird der Bericht einen entsprechenden Vermerk enthalten. (The tested item was selected by the client. Remaining test material is disposed after 3 months. The report must not be reproduced except in full content without the written approval of the testing laboratory. The report is signed digitally and password protected. For printing use the print option -document and comments-. The amount of minor components may be insufficient to perform the announced tests. In this case the test report will carry the mark: component insufficient for lab test. If testing of all components is required we need a sufficient amount of all minor components.)

### Chlorierte Paraffine (Chlorinated paraffins)

EU-Anforderung: Verordnung (EU) 2019/1021

Test Methode: DIN EN ISO 18219:2016-02 (modifiziert) (modified)

akkreditierte Methode (accredited method)

Abweichung zur Norm: Angepasste Extraktion. Alternative Matrix (Textilien, Schuhe und Bedarfsgegenstände). (Deviation to standard: Adjusted extraction. Alternative matrix (consumer goods).)

Parameter	CAS No	Parameter	CAS No
Kurzkettige chlorierte Paraffine C10-C13 (SCCP) (Short chain chlorinated paraffins C10-C13 (SCCP))	85535-84-8		

### Gesamtmigration 3% Essigsäure (Total migration 3% acetic acid)

Test Methode: DIN EN 1186-1:2002-07; DIN EN 1186-3:2002-07; DIN EN 1186-5:2002-07; DIN EN 1186-9:2002-07

akkreditierte Methode (accredited method)

### Gesamtmigration 50% Ethanol (Total migration 50 % ethyl alcohol)

Test Methode: DIN EN 1186-1:2002-07; DIN EN 1186-3:2002-07; DIN EN 1186-5:2002-07; DIN EN 1186-9:2002-07

akkreditierte Methode (accredited method)

### Metalle Gesamtgehalt (Metals Total Content)

Test Methode: EPA 3015A: 2007-02; DIN EN ISO 17294-2:2017-01 (modifiziert) (modified); DIN EN 16711-1:2016-02

akkreditierte Methode (accredited method)

Abweichung von der Norm: Messen von Säureaufschlüssen (deviation to standard: analysis of acidic digests)

Parameter	CAS No	Parameter	CAS No
Blei (Lead) (Pb): Gesamtgehalt (total content)	7439-92-1	Quecksilber (Hg) Gesamtgehalt: Dänemark (mercury (Hg) total content: Denmark)	7439-92-1
Blei (Pb) (Lead) (Pb))	7439-92-1	Quecksilber (Hg) Gesamtgehalt: Norwegen (mercury (Hg) total content: Norway)	7439-92-1
Cadmium (Cd)	7440-43-9	Quecksilber (Mercury) (Hg): Gesamtgehalt (total content)	7439-97-6
Chrom (Chromium) (Cr): Gesamtgehalt (total content)	7440-47-3		

### Polycyclische aromatische Kohlenwasserstoffe (PAK) (Polycyclic aromatic hydrocabons (PAH))

Test Methode: AfPS GS 2014:01 PAK

akkreditierte Methode (accredited method)

Extraktion mit einem organischen Lösungsmittel. Detektion mit GC-MSD. (Extraction with organic solvent, detection by GC-MSD)

Parameter	CAS No	Parameter	CAS No
Acenaphthen (Acenaphthene)	83-32-9	Benzo[k]fluoranthen (Benzo[k]fluoranthene)	207-08-9
Acenaphthylen (Acenaphthylene)	208-96-8	Chrysen (Chrysene)	218-01-9
Anthracen (Anthracene)	120-12-7	Dibenzo[a,h]anthracen (Dibenzo [a,h]anthracene)	53-70-3
Benzo[a]anthracen (Benzo[a]anthracene)	56-55-3	Fluoranthen (Fluoranthene)	206-44-0
Benzo[a]pyren (Benzo[a]pyrene)	50-32-8	Fluoren (Fluorene)	86-73-7
Benzo[b]fluoranthen (Benzo[b]fluoranthene)	205-99-2	Indeno[1,2,3-cd]pyren (Indeno[1,2,3-cd]pyrene)	193-39-5
Benzo[e]pyren (Benzo[e]pyrene)	192-97-2	Naphthalin (Naphthalene)	91-20-3
Benzo[g,h,i]perylene (Benzo[g,h,i]perylene)	191-24-2	Phenanthren (Phenanthrene)	85-01-8
Benzo[j]fluoranthen (Benzo[j]fluoranthene)	205-82-3	Pyren (Pyrene)	129-00-0



### Sensorische Prüfung - Bedarfsgegenstände (Organoleptic Test - Consumer Goods)

Test Methode: DIN 10955:2004-06

akkreditierte Methode (accredited method)

Das Prüfgut wird einer sensorischen Panelprüfung (d.h. mit mehreren Testpersonen) unterzogen. Die Geschmacksabweichung wird durch eine Dreiecks-Prüfung ermittelt. Es erfolgt eine sensorische Beurteilung der Geruchs- und Geschmacksabweichung vom Lebensmittel. (A sensory panel test (with several test persons) is performed with the sample. The taste abnormality were detected by an triangle test. A organoleptic analysis is performed regarding the deviation of odour and taste of the food.)

Parameter	CAS No	Parameter	CAS No
Geruch (odour)		Geschmack (taste)	

### Spezifische Migration der Metalle gemäß VO (EU) Nr. 10/2011 (specific migration of metals acc. to Regulation (EU) No. 10/2011)

Test Methode: DIN EN 13130-1:2004; Hausmethode (inhouse method): SOP-IC-1012017-05

akkreditierte Methode (accredited method)

Migration mit einem Simulanzmittel. Detektion mit ICP-MS (DIN EN ISO 17294-2:2017-01; modifiziert). (Migration with a simulant. Detection by ICP-MS (DIN EN ISO 17294-2:2017-01; (modified))

### Spezifische Migration von aromatischen Aminen (Specific migration of aromatic amines)

Test Methode: DIN EN 13130-1:2004-08; Hausmethode (inhouse method): SOP-OC-306:2016-05

akkreditierte Methode (accredited method)

Migration mit einem Simulanzmittel. Analytik mittels LC/MSMS ; DIN EN 13130-3:2004-08(modifiziert). (migration with a simulant. Analytics by LC/MSMS DIN EN 13130-3:2004-08(modified))

Parameter	CAS No	Parameter	CAS No
2,4,5-Trimethylanilin (2,4,5-Trimethylaniline)	137-17-7	4-Chlor-o-toluidin (4-Chlor-o-toluidine)	95-69-2
2,4-Diaminoanisol (2,4-Diaminoanisole)	615-05-4	Anilin (Aniline)	62-53-3
2,4-Tolylendiamin (2,4-Tolylenediamine)	95-80-7	Benzidin (Benzidine)	92-87-5
2,4-Xylidin (2,4-Xylidine)	95-68-1	Kontaktfläche 1 (Contact area 1)	
2,6-Tolylendiamin (2,6-Tolylenediamine)	823-40-5	Kontakttemperatur 1 (Contact temperatur 1)	
2,6-Xylidin (2,6-Xylidine)	87-62-7	Kontaktzeit 1 (Contact time 1)	
2-Amino-4-nitrotoluol (2-Amino-4-nitrotoluole)	99-55-8	m-Phenylendiamin (m-Phenylendiamine)	108-45-2
2-Naphthylamin (2-Naphthylamine)	91-59-8	o-Aminoazotoluol (o-Aminoazotoluole)	97-56-3
3,3' -Dimethoxybenzidin (3,3' -Dimethoxybenzidine)	119-90-4	o-Anisidin (o-Anisidine)	90-04-0
3,3' -Dimethylbenzidin (3,3' -Dimethylbenzidine)	119-93-7	o-Toluidin (o-Toluidine)	95-53-4
4,4'-Diaminodiphenylmethan (4,4'-Diaminodiphenylmethane)	101-77-9	p-Chloranilin (p-Chloroaniline)	106-47-8
4,4'-Methylen-bis(2-chloranilin) (4,4'-Methylen-bis-(2-chloroaniline))	101-14-4	p-Kresidin (p-Cresidine)	120-71-8
4,4'-Methylendi-o-toluidin (4,4'-Methylendi-o-toluidine)	838-88-0	p-Phenylendiamin (p-Phenylendiamine)	106-50-3
4,4'-Oxydianilin (4,4'-Oxydianiline)	101-80-4	Simulanzmittel 1 (Simulent agent 1)	
4,4'-Thiodianilin (4,4'-Thiodianiline)	139-65-1	Simulanzvolumen 1 (Simulant volume 1)	
4-Aminoazobenzol (4-Aminoazobenzene)	60-09-3	Summe primäre aromatische Amine (sum primary aromatic amines)	
4-Aminodiphenyl (4-Aminodiphenyl)	92-67-1		

### Weichmacher: Phthalate (Plasticizers: Phthalates)

Test Methode: DIN EN ISO 14389:2014-10 (modifiziert) (modified)

akkreditierte Methode (accredited method)

Abweichung zur Norm: Alternative Matrix (Textilien, Schuhe und Bedarfsgegenstände). Erweiterung um alternative Weichmacher. (Deviation to standard: Alternative matrix (consumer products). Extension to alternative plasticizers.)

Parameter	CAS No	Parameter	CAS No
1,2-Benzoldicarbonsäure, Di-C6-8-verzweigte Alkylester, C7-reich /DIHP (1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich /DIHP)	71888-89-6	Dibutylphthalat / DBP (Dibutyl phthalate)	84-74-2
		Dibutylphthalat / DBP (Dibutyl phthalate)_nG	84-74-2
		Di-iso-nonylphthalat / DINP (Di-iso-nonylphthalate)	28553-12-0
Bis(2-methoxyethyl) phthalat / BMEP (Bis(2-methoxyethyl) phthalate)	117-82-8	Di-iso-nonylphthalat / DINP (Di-iso-nonylphthalate)_nG	28553-12-0
		Diisopentylphthalat / DIPP (Diisopentylphthalate / DIPP)	605-50-5
Butylbenzylphthalat / BBP (Butylbenzyl phthalate)	85-68-7	Di-n-hexylphthalat / DnHP (Di-n-hexylphthalate / DnHP)	84-75-3
Butylbenzylphthalat / BBP (Butylbenzyl phthalate)_nG	85-68-7	Di-n-octylphthalat / DNOP (Di-n-octylphthalate)	117-84-0
Di-(2ethylhexyl)-phthalat / DEHP (Di-(2ethylhexyl)-phthalate)	117-81-7	Di-n-pentylphthalat / DNPP (Di-n-pentylphthalate / DNPP)	131-18-0
Di-(2ethylhexyl)-phthalat / DEHP (Di-(2ethylhexyl)-phthalate)_nG	117-81-7		
Di-iso-butylphthalat / DIBP (Di-iso-butylphthalate)	84-69-5		
Di-iso-decylphthalat / DIDP (Di-iso-decylphthalate)	26761-40-0		
Di-iso-decylphthalat / DIDP (Di-iso-decylphthalate)_nG	26761-40-0		

### Metalle Gesamtgehalt (metals total content)

Test Methode: DIN EN ISO 17294-2: 2017-01, DIN EN ISO 62321-5 (modifiziert) (modified)

akkreditierte Methode (accredited method)

Abweichung zur Norm: Alternative Matrix (Verbraucherprodukte mit Lebensmittelkontakt). Untersuchung von Königswasserauflösungen mittels ICP/OES. (Deviation to standard: Alternative matrix (consumer products with food contact). Analysis after digestion with aqua regia.)

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Weitnau, 21.08.2018  
PSS/AS

## REGULATORY INFORMATION

We hereby confirm that our products

### MAXITHEN<sup>®</sup> PP4BB3837ASSG ROT FLUO

comply with the following statements, requirements and legal provisions:

#### FOOD CONTACT STATUS

According to our suppliers information and the when used under the conditions defined in our technical documentation the components we use for manufacturing our preparations (polymers, colourants and additives) are in accordance to Article 3, Par. 1 (a) of Regulation (EC) No 1935/2004 "On materials and articles intended to come into contact with food".

Furthermore they are in accordance with the conditions laid down for the respective raw material categories in the following provisions:

#### COLOURANTS:

- |         |  |
|---------|--|
| EU      | Purity requirements of the resolution AP (89) 1 „On the use of colourants in plastic materials coming into contact with food“  |
| Germany | Purity requirements of the recommendation IX issued by BfR (German Federal Risk Assessment Institute) dated Feb. 2 <sup>nd</sup> 2015 „Farbmittel zum Einfärben von Kunststoffen und anderen Polymeren für Bedarfsgegenstände“ |

#### POLYMERS AND ADDITIVES:

- |         |   |
|---------|---|
| EU      | Regulation (EU) No 10/2011 „On plastic materials and articles intended to come into contact with food“, amended with regulations (EU) No 321/2011, 1282/2011, 1183/2012, 202/2014, 865/2014, 2015/174, 2016/1416, 2017/752, 2018/79 and 2018/213. |
| Germany | Bedarfsgegenständeverordnung based upon issue 24 <sup>th</sup> February 2016.   |

**RESTRICTIONS, SPECIFICATIONS, SPECIFIC MIGRATION LIMITS AND MAXIMUM DOSAGES**  
According to Annex I of Regulation (EU) No 10/2011 the use of our product and the incorporated colorants, additives or adjuvants for plastics in contact with food is restricted in the following cases:

PRODUCT	REGULATED POLYMER	LEGISLATION	RESTRICTION	LIMIT	CONDITION / REFERENCE
PP4BB3837ASSG	ALL	REGULATION 10/2011	SML	SEVERAL	TESTING FOR SPECIFIC MIGRATION LIMITS IS  RECOMMENDED FOR::PM/REF NO 12788, 13390, 15272, 15274, 16480, 19150, 19965, 22840, 23590, 23740, 23380, 24057, 24550, 24910, 25180, 31348, 76866, AND  96240 (TABLE 1)

We herewith take reference to Annex II of Regulation (EU) No 10/2011. For the listed elements (Al, Ba, Co, Cu, Fe, Li, Mn, Ni, Zn) specific migrations limits are to be considered. Since the manufacturer of this product has no influence on subsequent processing, the processor himself of plastic materials and articles is requested to carry out the corresponding tests in line with standard usage of the final article.

The following elements, in form of a chemical compound, are included in above mentioned product:

- o Al, SML = 1mg/kg LM (valid from September 14<sup>th</sup> 2018 on)

## EXPLANATIONS:

- SML: Specific migration limit of a substance in a plastic article into food or in food simulant, according to Regulation (EC) No 10/2011
- SML(T): Sum of specific migration limits of a group of substances in a plastic article into food or in food simulant, according to Regulation (EC) No 10/2011
- LM: Food or food simulant
- %: Dosage of our product in percent by weight
- max.: Maximum dosage of our product indicated as percentage by weight. Condition of a maximum dosage is that the used polymer is containing no further similar substances. Otherwise this has to be taken into consideration.

The fact if a migration limit value is maintained or not, can only be determined at the final article, because this is a result of the packaging system that consists of used colourant, polymer and additives together with the foodstuff itself.

## NON INTENTIONALLY ADDED SUBSTANCES (NIAS)

Regulation (EU) No 10/2011 obliges manufacturers of food contact articles to assess the formation and migration of non-intentionally added substances (NIAS) in their products as well as it obliges the producers of materials of intermediate stage to transfer all data necessary to perform this assessment to their customers. In order to fulfil this obligation we want to give you the following information:

Due to the ubiquitous antioxidative stabilisation of plastics the following NIAS may be present in our masterbatches and in final articles:

2,6-di-tert-butyl-p-benzoquinone (CAS 719-22-2)  
2,6-di-tert-butyl-4-ethylphenol (CAS 4130-42-1)  
3,5-di-tert-butyl-4-hydroxybenzaldehyde (CAS 1620-98-0)  
3,5-di-tert-butyl-4-hydroxy acetophenone (CAS 14035-33-7)  
7,9-di-tert-butyl-1-oxaspiro(4,5)deca-6,9-diene-2,8-dione (CAS 82304-66-3)  
3-(3,5-di-tert-butyl-4-hydroxyphenyl) methylpropanoate (CAS 6386-38-5)  
3-(3,5-di-tert-butyl-4-hydroxyphenyl) propanoic acid (CAS 20170-32-5)  
2,4-di-tert-Butylphenol (CAS-No.: 96-76-4)  
Tris-(2,4-di-tert-butylphenyl)phosphate (CAS 95906-11-9)  
Short-chained (up to C12) alkanes

We are in constant communication with our suppliers about the topic of NIAS. Up to the date of issue of the present declaration we were not informed about further potential NIAS in their products that are subject to any restrictions or thresholds in foodstuff. We will inform you immediately if this should change.

As an ISO certified company we have a quality control system in place, which ensures the usage of raw materials according to their specifications, especially concerning thermal stability, time/temperature profiles and other parameters. In this context we take care to stick to the processing conditions that were set by our suppliers. Also considering this kind of NIAS we constantly gather information from literature and inter-trade organisations about known issues with certain raw materials and processing steps to be ready to modify our processing conditions if the need should arise.

To be on the safest side possible we would like to refer to the processing conditions that we describe in our technical data sheets. The processing temperatures mentioned in these information materials are derived from our suppliers' information. Up to a holding time of at maximum 5 minutes the probability of NIAS formation is negligibly small at this temperature in clean processing equipment.

## DUAL USE ADDITIVES

Our product contains a functional additive which is listed as food additive in Regulation (EC) No 1333/2008 or (EC) No 1334/2008:

- CAS 31566-31-1, E471

## GOOD MANUFACTURING PRAXIS (GMP) ACCORDING TO REGULATION (EC) NO 2023/2006

Our company fulfils the demands of regulation (EC) No 2023/2006 on good manufacturing practice for materials and articles intended to come into contact with food so far as our products are within the scope of this regulation. Particularly the traceability demand is fulfilled for our raw materials and products.

## DISCLAIMER:

Concerning the conformity to the rules and regulations mentioned in this document we refer to the information received from our suppliers and want to inform you that the analytical control of limits and possible trace contaminations of the substances mentioned above in our products is not designated. The persons and entities placing food contact article or a material on the market must ensure through appropriate measurements that these materials and articles comply with the appropriate rules and standards as well as the legally prescribed restrictions and limits (as OML, SML values) and that they do not bring about an unacceptable change in the composition and/or a deterioration in the organoleptic characteristics of food.

We hope this information is of service to you.

Best regards

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