

- Business of Andrija Stampar Teaching Institute of Public Health is certified by BUREAU VERITAS CROATIA according to ISO 9001:2015, ISO 14001:2015 i ISO 45001:2018
- The official laboratory according by the Decision of the Ministry of Agriculture, Class: UP / I-322-01 / 16-01 / 59, Reg. No: 525-10 / 1308-17-5 of 7 February 2017.
- The official laboratory according by the Decision of the Ministry of Health; Class: UP / I-541-02 / 13-01 / 17, Reg: 525-10 / 1308-15-10 dated June 12, 2015.
- The Reference Laboratory for determination of Mycotoxins by the Decision of the Ministry of Agriculture, Class: UP / I-310-26 / 13-01 / 56, Reg. No. 525-10 / 1307-14-7 of 18 March 2014.
- Reference laboratory for pesticides in food of plant origin, for pesticides in fruit and vegetables, cereals, and pesticide testing by single residue methods (SRM); according to the Decision of the Ministry of Agriculture, Class: UP / I-322-01/17-01/120, Ur. No. 525-10/0766-19-16 of January 4, 2019.
- The Reference Center of the Ministry of Health for Food Safety testing; UP / I-510-01 / 15-01 / 31; Reg. No: 534-04-1-2 / 7-16-14 of 14 July 2016.
- The Decision of the Ministry of Agriculture of determining laboratories for Honey Adulteration Analysis, Class: UP / I-322-01 / 14-01 / 1408, Reg. No: 525-10 / 1307-14-2 of 15 July 2014.

## ANALYSIS REPORT

For analytical number: 05401 01193/19

Buyer R.B.M. S.p.A.  
25075 Nave, Via Giuseppe 1

Date: 03.02.2020.

### GENERAL INFORMATION

Class: 541-02/19-02/657

Delivery number: 381-5-2/2-20-02

Sample name: **n°1 coil of 10m multilayer pipe Ø20x2 PE-RT/Al/PE-RT made with DOWLEX 2388**

Sample type: pipes, pipelines

Delivery time: 20.12.2019. 11:11

Analysis began: 20.12.2019. 11:11

Analysis ended: 03.02.2020. 10:54

Request reason: Safety

Delivery type: Delivered

Delivered R.B.M. S.p.A.

Report delivery address 1. R.B.M. S.p.A., Italija, 25075 Nave, Via Giuseppe 1

### SAMPLE DESCRIPTION

Delivered sample is n°1 coil of 10m multilayer pipe Ø20x2 PE-RT/Al/PE-RT made with DOWLEX 2388 marked: RBM TITA-FIX PE-RT type II/Al/ PE-RT type II Ø20x2.0 – lot number M1.19.010-10 – production date 09.07.2019

The pipe is multilayered, the part that comes in contact with the drinking water is made of plastic.

Manufacturer / requester: R.B.M. S.p.A., Via Giuseppe 1, 25075 Nave (Brescia), Italy.

**CONFORMITY ASSESSMENT**

The analyzed sample considering the tested parameters complies with Art.37 Regulation on health safety of objects and materials in direct contact with food (O.G. 125/09, O.G. 31/11) connection with art. 4 of Annex I tb.3 and 4 of the Regulation on the parameters of compliance, methods of analysis, monitoring and safety plans for water for human consumption and the manner of keeping a register of legal entities engaged in the public water supply activity (O.G. 125/2017), due to Article 4 of the Act General Use Items (O.G. 39/13, 47/14,114/18) and Art. 7 pt. 4 of the of the Water Consumption Act (O.G. 56/13, 14/14, 64/15,104/17,115/18) the sample is considered to be safe.

Head of Division  
Jasna Bošnjir, Ph.D.



U<sup>++</sup> expanded measurement uncertainty using a coverage factor k=2

MDK<sup>+++</sup> Maximum levels according to legal obligations stated in the opinion

Date: 03.02.2020.

Buyer: R.B.M. S.p.A., 25075 Nave, Via Giuseppe 1

**Sample name: n°1 coil of 10m multilayer pipe Ø20x2 PE-RT/Al/PE-RT made with DOWLEX 2388**

Sample delivery time to the Laboratory: 20.12.2019. 11:11

## ANALYSIS RESULTS

For analytical number: 05401 01193/19

Laboratory for Atomic Spectroscopy and Mass Spectrometry						
Analysis began: 20.12.2019. 11:11			Analysis ended: 22.01.2020. 07:59			
Name of analysis	Method	Technique	Measuring unit	Result	U <sup>++</sup>	MDK <sup>+++</sup>
Vanadium	SOP-263-053	AAS; ICP-MS	µg L <sup>-1</sup>	< 1		< 5
Lead (Pb)	SOP-263-053	AAS; ICP-MS	µg L <sup>-1</sup>	< 2		< 10
Cadmium (Cd)	SOP-263-053	AAS; ICP-MS	µg L <sup>-1</sup>	< 0,2		< 5
Arsenic (As)	SOP-263-053	AAS; ICP-MS	µg L <sup>-1</sup>	< 0,5		< 10
Mercury (Hg)	SOP-263-053	AAS; ICP-MS	µg L <sup>-1</sup>	< 0,1		< 1
Chromium (Cr)	SOP-263-053	AAS; ICP-MS	µg L <sup>-1</sup>	< 1		< 50
Nickel (Ni)	SOP-263-053	AAS; ICP-MS	µg L <sup>-1</sup>	< 4		< 20
Manganese (Mn)	SOP-263-053	AAS; ICP-MS	µg L <sup>-1</sup>	< 1		< 50
Selenium	SOP-263-053	AAS; ICP-MS	µg L <sup>-1</sup>	< 1		< 10
Barium (Ba)	SOP-263-053	AAS; ICP-MS	µg L <sup>-1</sup>	< 5		< 700
Zinc (Zn)	SOP-263-053	AAS; ICP-MS	µg L <sup>-1</sup>	< 5		< 3000
Iron (Fe)	SOP-263-053	AAS; ICP-MS	µg L <sup>-1</sup>	< 5		200
Aluminum (Al)	SOP-263-053	AAS; ICP-MS	µg L <sup>-1</sup>	< 5		< 200
Antimony (Sb)	SOP-263-053	AAS; ICP-MS	µg L <sup>-1</sup>	< 2		< 5
Cobalt (Co)	SOP-263-053	AAS; ICP-MS	µg L <sup>-1</sup>	< 1		
Copper	SOP-263-053	AAS; ICP-MS	mg L <sup>-1</sup>	< 0,01		< 2
Boron (B)	SOP-262-053 Edition 01	AAS; ICP-MS	mg L <sup>-1</sup>	< 0,01		1
Laboratory for Liquid Chromatography and Mass Spectrometry						
Analysis began: 20.12.2019. 11:11			Analysis ended: 31.01.2020. 08:28			
Name of analysis	Method	Technique	Measuring unit	Result	U <sup>++</sup>	MDK <sup>+++</sup>
Polycyclic aromatic hydrocarbons (PAHs)	SOP-259-053		mg m <sup>-2</sup> d <sup>-1</sup>	<0,0001		
Benzidine (CAS 92-87-5)	SOP-293-053 Edition 01		mg kg <sup>-1</sup>	< 0,01		
4-Chloro-o-toluidine (CAS 95-69-2)	SOP-293-053 Edition 01		mg kg <sup>-1</sup>	< 0,01		

The results are related only to sample analyzed and should not be used in the advertising purposes.

Laboratory for Liquid Chromatography and Mass Spectrometry						
Analysis began: 20.12.2019. 11:11			Analysis ended: 31.01.2020. 08:28			
Name of analysis	Method	Technique	Measuring unit	Result	U**	MDK***
2-naphtylamine (CAS 91-59-8)	SOP-293-053 Edition 01		mg kg <sup>-1</sup>	< 0,01		
4-Chloro-aniline (CAS 106-47-8)	SOP-293-053 Edition 01		mg kg <sup>-1</sup>	< 0,01		
4,4'-Methylenedianiline (CAS 101-77-9)	SOP-293-053 Edition 01		mg kg <sup>-1</sup>	< 0,01		
3,3'-dimethoxybenzidine (CAS 119-90-4)	SOP-293-053 Edition 01		mg kg <sup>-1</sup>	< 0,01		
3,3'-dimethylbenzidine (CAS 119-93-7)	SOP-293-053 Edition 01		mg kg <sup>-1</sup>	< 0,01		
4,4'-methylendi-o-toluidine (CAS 838-88-0)	SOP-293-053 Edition 01		mg kg <sup>-1</sup>	< 0,01		
2-Methoxy-5-methylaniline (CAS 120-71-8)	SOP-293-053 Edition 01		mg kg <sup>-1</sup>	< 0,01		
4,4'-diaminodiphenylether (CAS 101-80-4)	SOP-293-053 Edition 01		mg kg <sup>-1</sup>	< 0,01		
4,4'-thiodianiline (CAS 139-65-1)	SOP-293-053 Edition 01		mg kg <sup>-1</sup>	< 0,01		
o-toluidine (CAS 95-53-4)	SOP-293-053 Edition 01		mg kg <sup>-1</sup>	< 0,01		
2,4,5-trimethylaniline (CAS 137-17-7)	SOP-293-053 Edition 01		mg kg <sup>-1</sup>	< 0,01		
o-anisidine (CAS 90-04-0)	SOP-293-053 Edition 01		mg kg <sup>-1</sup>	< 0,01		
aniline (CAS 62-53-3)	SOP-293-053 Edition 01		mg kg <sup>-1</sup>	< 0,01		
4-aminobiphenyl (CAS 92-67-1)	SOP-293-053 Edition 01		mg kg <sup>-1</sup>	< 0,01		
Laboratory for Chemical Analysis of Food Contact Materials						
Analysis began: 20.12.2019. 11:11			Analysis ended: 03.02.2020. 10:54			
Name of analysis	Method	Technique	Measuring unit	Result	U**	MDK***
Sensory properties	-		-	does match.		
Total Organic Carbon (TOC)	HRN EN 1484:2002		mgm <sup>-2</sup> day <sup>-1</sup>	0,48		
Phenols	HRN ISO 6439:1998		mg m <sup>-2</sup> d <sup>-1</sup>	< 0,005		
Formaldehyde	SOP-320-054		mg m <sup>-2</sup> d <sup>-1</sup>	< 0,15	-	
no foreign odors and the impact on the clarity, color and odor of drinking water for three consecutive extractions each per 72 hours.						

Head of Division  
Jasna Bošnjir, Ph.D.



End of analysis report

The results are related only to sample analyzed and should not be used in the advertising purposes.

- Poslovanje NZZJZAŠ je certificirano od strane BUREAU VERITAS CROATIA prema normama ISO 9001:2015, ISO 14001:2015 i ISO 45001:2018
- Službeni laboratorij prema Rješenju Ministarstva poljoprivrede, Klasa: UP/I-322-01/16-01/59, Ur. broj: 525-10/1308-17-5 od 7. veljače 2017. godine.
- Službeni laboratorij prema Rješenju Ministarstva zdravlja Klasa: UP/I-541-02/13-01/17, Ur. Broj: 525-10/1308-15-10 od 12. lipnja 2015. godine.
- Referentni laboratorij za određivanje mikotoksina prema Rješenju Ministarstva poljoprivrede, Klasa: UP/I-310-26/13-01/56, Ur. broj 525-10/1307-14-7 od 18. ožujka 2014. godine.
- Referentni laboratorij za područje pesticida u hrani biljnog podrijetla, za pesticide u voću i povrću, žitaricama, te ispitivanju pesticida pojedinačnim metodama; prema Rješenju Ministarstva poljoprivrede, Klasa: UP/I-322-01/17-01/120, Ur. broj 525-10/0766-19-16 od 04. siječnja 2019. godine.
- Referentni centar Ministarstva zdravlja za ispitivanje zdravstvene ispravnosti hrane; UP/I-510-01/15-01/31; Ur. broj: 534-04-1-2/7-16-14 od 14. srpnja 2016. godine.

## ISPITNI IZVJEŠTAJ

### Za analitički broj: 05401 01193/19

Kupac R.B.M. S.p.A.  
25075 Nave, Via Giuseppe 1

Datum: 03.02.2020.

#### OPĆI PODACI

Klasa: 541-02/19-02/657  
Ur. broj 381-5-2/2-20-02

Naziv uzorka: **VIŠESLOJNA CIJEV RBM TITA-FIX PE-RT SA DOWLEX 2388**  
Vrsta uzorka: cijevi, cjevovodi  
Vrijeme dostave: 20.12.2019. 11:11  
Analiza započeta: 20.12.2019. 11:11 Analiza završena: 03.02.2020. 10:54  
Razlog zahtjeva: Zdravstvena ispravnost  
Tip dostave: Dostavljeno  
Dostavljeno R.B.M. S.p.A.

Dostaviti: 1. R.B.M. S.p.A., Italija, 25075 Nave, Via Giuseppe 1

#### OPIS UZORKA:

Dostavljeni uzorak je VIŠESLOJNA CIJEV RBM TITA-FIX PE-RT SA DOWLEX 2388 sa istaknutim podacima: RBM TITA-FIX PE-RT type II/AI/ PE-RT type II Ø20x2.0 – lot number M1.19.010-10 – production date 09.07.2019.

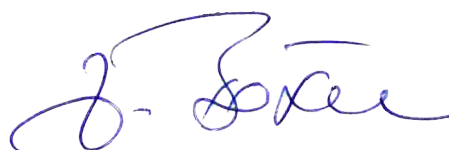
Cijev je višeslojna, dio koji dolazi u dodir s vodom za piće izrađen je iz umjetne mase.

Proizvođač / podnositelj zahtjeva: R.B.M. S.p.A., Via Giuseppe 1, 25075 Nave (Brescia), Italija.

**IZJAVA O SUKLADNOSTI:**

Analizirani uzorak obzirom na ispitane parametre sukladan je čl.37 Pravilnika o zdravstvenoj ispravnosti materijala i predmeta koji dolaze u neposredan dodir s hranom (N.N.125/09, N.N.31/11) veza s čl. 4 Priloga I tb.3 i 4 Pravilnika o parametrima sukladnosti, metodama analize, monitoringu i planovima sigurnosti vode za ljudsku potrošnju te načinu vođenja registra pravnih osoba koje obavljaju djelatnost javne vodoopskrbe (NN 125/2017), te se prema odredbama čl.4 Zakona o predmetima opće uporabe (N.N. 39/13, 47/14, 114/18 ) i čl. 7 tč. 4 Zakona o vodi za ljudsku potrošnju (N.N. 56/13 sa izmjenama N.N.14/14, 64/15,104/17,115/18) smatra zdravstveno ispravnim.

Voditelj Odjela  
Prof. dr. sc. Jasna Bošnjir dipl. ing.



Rezultati se odnose isključivo na analizirani uzorak i ne smiju se koristiti u reklamne svrhe. Faksimil je autentičan s originalnim potpisom ovlaštene osobe.

U<sup>00</sup> proširena mjerna nesigurnost uz obuhvatni faktor k=2

MDK<sup>000</sup> maksimalno dozvoljena količina prema zakonskim propisima navedenim u ocjeni sukladnosti

Datum: 03.02.2020.

Kupac: R.B.M. S.p.A., 25075 Nave, Via Giuseppe 1

**Naziv uzorka: VIŠESLOJNA CIJEV RBM TITA-FIX PE-RT SA DOWLEX 2388**

Vrijeme dostave uzorka u laboratorij: 20.12.2019. 11:11

## REZULTATI ISPITIVANJA

### Za analitički broj: 05401 01193/19

Laboratorij za atomsku spektroskopiju i spektrometriju masa						
Analiza započeta: 20.12.2019. 11:11				Analiza završena: 22.01.2020. 07:59		
Naziv analize	Metoda	Tehnika ispitivanja	Mjerna jedinica	Rezultat	U <sup>00</sup>	MDK <sup>000</sup>
Vanadij	SOP-263-053	AAS; ICP-MS	µg L <sup>-1</sup>	< 1		< 5
Olovo (Pb)	SOP-263-053	AAS; ICP-MS	µg L <sup>-1</sup>	< 2		< 10
Kadmij (Cd)	SOP-263-053	AAS; ICP-MS	µg L <sup>-1</sup>	< 0,2		< 5
Arsen (As)	SOP-263-053	AAS; ICP-MS	µg L <sup>-1</sup>	< 0,5		< 10
Živa (Hg)	SOP-263-053	AAS; ICP-MS	µg L <sup>-1</sup>	< 0,1		< 1
Krom (Cr)	SOP-263-053	AAS; ICP-MS	µg L <sup>-1</sup>	< 1		< 50
Nikal (Ni)	SOP-263-053	AAS; ICP-MS	µg L <sup>-1</sup>	< 4		< 20
Mangan (Mn)	SOP-263-053	AAS; ICP-MS	µg L <sup>-1</sup>	< 1		< 50
Selen	SOP-263-053	AAS; ICP-MS	µg L <sup>-1</sup>	< 1		< 10
Barij (Ba)	SOP-263-053	AAS; ICP-MS	µg L <sup>-1</sup>	< 5		< 700
Cink (Zn)	SOP-263-053	AAS; ICP-MS	µg L <sup>-1</sup>	< 5		< 3000
Željezo (Fe)	SOP-263-053	AAS; ICP-MS	µg L <sup>-1</sup>	< 5		200
Aluminij (Al)	SOP-263-053	AAS; ICP-MS	µg L <sup>-1</sup>	< 5		< 200
Antimon (Sb)	SOP-263-053	AAS; ICP-MS	µg L <sup>-1</sup>	< 2		< 5
Kobalt (Co)	SOP-263-053	AAS; ICP-MS	µg L <sup>-1</sup>	< 1		
Bakar (Cu)	SOP-263-053	AAS; ICP-MS	mg L <sup>-1</sup>	< 0,01		< 2
Bor	SOP-262-053 Izdanje 01	AAS; ICP-MS	mg L <sup>-1</sup>	< 0,01		1
Laboratorij za tekućinsku kromatografiju i spektrometriju masa						
Analiza započeta: 20.12.2019. 11:11				Analiza završena: 31.01.2020. 08:28		
Naziv analize	Metoda	Tehnika ispitivanja	Mjerna jedinica	Rezultat	U <sup>00</sup>	MDK <sup>000</sup>
Polciklički aromatski ugljikovodici (PAH)	SOP-259-053		mg m <sup>-2</sup> d <sup>-1</sup>	<0,0001		
Benzidin (CAS 92-87-5)	SOP-293-053 Izdanje 01		mg kg <sup>-1</sup>	< 0,01		
4-kloro-o-toluidin (CAS 95-69-2)	SOP-293-053 Izdanje 01		mg kg <sup>-1</sup>	< 0,01		
2-naftilamin (CAS 91-59-8)	SOP-293-053 Izdanje 01		mg kg <sup>-1</sup>	< 0,01		

Rezultati se odnose isključivo na analizirani uzorak i ne smiju se koristiti u reklamne svrhe. Faksimil je autentičan s originalnim potpisom ovlaštene osobe. Mjerna nesigurnost za navedene metode dostupna je na zahtjev u ispitnom laboratoriju.

Laboratorij za tekućinsku kromatografiju i spektrometriju masa						
Analiza započeta: 20.12.2019. 11:11			Analiza završena: 31.01.2020. 08:28			
Naziv analize	Metoda	Tehnika ispitivanja	Mjerna jedinica	Rezultat	U**	MDK***
4-kloroanilin (CAS 106-47-8)	SOP-293-053 Izdanje 01		mg kg <sup>-1</sup>	< 0,01		
4,4'-diaminodifenilmetan (CAS 101-77-9)	SOP-293-053 Izdanje 01		mg kg <sup>-1</sup>	< 0,01		
3,3'-dimetoksibenzidin (CAS 119-90-4)	SOP-293-053 Izdanje 01		mg kg <sup>-1</sup>	< 0,01		
3,3'-dimetilbenzidin (CAS 119-93-7)	SOP-293-053 Izdanje 01		mg kg <sup>-1</sup>	< 0,01		
4,4'-metilendi-o-toluidin (CAS 838-88-0)	SOP-293-053 Izdanje 01		mg kg <sup>-1</sup>	< 0,01		
p-kresidin (CAS 120-71-8)	SOP-293-053 Izdanje 01		mg kg <sup>-1</sup>	< 0,01		
4,4'-oksidianilin (CAS 101-80-4)	SOP-293-053 Izdanje 01		mg kg <sup>-1</sup>	< 0,01		
4,4'-tiodianilin (CAS 139-65-1)	SOP-293-053 Izdanje 01		mg kg <sup>-1</sup>	< 0,01		
o-toluidin (CAS 95-53-4)	SOP-293-053 Izdanje 01		mg kg <sup>-1</sup>	< 0,01		
2,4,5-trimetilanilin (CAS 137-17-7)	SOP-293-053 Izdanje 01		mg kg <sup>-1</sup>	< 0,01		
o-anisidin (CAS 90-04-0)	SOP-293-053 Izdanje 01		mg kg <sup>-1</sup>	< 0,01		
anilin (CAS 62-53-3)	SOP-293-053 Izdanje 01		mg kg <sup>-1</sup>	< 0,01		
4-aminobifenil (CAS 92-67-1)	SOP-293-053 Izdanje 01		mg kg <sup>-1</sup>	< 0,01		
Laboratorij za predmete koji dolaze u kontakt s hranom						
Analiza započeta: 20.12.2019. 11:11			Analiza završena: 03.02.2020. 10:54			
Naziv analize	Metoda	Tehnika ispitivanja	Mjerna jedinica	Rezultat	U**	MDK***
Senzorska svojstva	-		-	odgovara.		
Ukupni organski ugljik (TOC)	HRN EN 1484:2002		mg m <sup>-2</sup> dan <sup>-1</sup>	0,48		
Fenoli	HRN ISO 6439:1998		mg m <sup>-2</sup> d <sup>-1</sup>	< 0,005		
Formaldehid (CH <sub>2</sub> O)	SOP-320-054		mg m <sup>-2</sup> d <sup>-1</sup>	< 0,15	-	
Cijev je bez stranih mirisa, te nije utjecala na bistrinu, boju i mirisa vode za piće tijekom tri uzastopne ekstrakcije svaka po 72 sata.						

Voditelj Odjela

Prof. dr. sc. Jasna Bošnjir dipl. ing.



Kraj izvještaja o ispitivanju

Rezultati se odnose isključivo na analizirani uzorak i ne smiju se koristiti u reklamne svrhe. Faksimil je autentičan s originalnim potpisom ovlaštene osobe. Mjerna nesigurnost za navedene metode dostupna je na zahtjev u ispitnom laboratoriju.



- Business of Andrija Stampar Teaching Institute of Public Health is certified by BUREAU VERITAS CROATIA according to ISO 9001:2015, ISO 14001:2015 i ISO 45001:2018
- The official laboratory according by the Decision of the Ministry of Agriculture, Class: UP / I-322-01 / 16-01 / 59, Reg. No: 525-10 / 1308-17-5 of 7 February 2017.
- The official laboratory according by the Decision of the Ministry of Health; Class: UP / I-541-02 / 13-01 / 17, Reg: 525-10 / 1308-15-10 dated June 12, 2015.
- The Reference Laboratory for determination of Mycotoxins by the Decision of the Ministry of Agriculture, Class: UP / I-310-26 / 13-01 / 56, Reg. No. 525-10 / 1307-14-7 of 18 March 2014.
- Reference laboratory for pesticides in food of plant origin, for pesticides in fruit and vegetables, cereals, and pesticide testing by single residue methods (SRM); according to the Decision of the Ministry of Agriculture, Class: UP / I-322-01/17-01/120, Ur. No. 525-10/0766-19-16 of January 4, 2019.
- The Reference Center of the Ministry of Health for Food Safety testing; UP / I-510-01 / 15-01 / 31; Reg. No: 534-04-1-2 / 7-16-14 of 14 July 2016.
- The Decision of the Ministry of Agriculture of determining laboratories for Honey Adulteration Analysis, Class: UP / I-322-01 / 14-01 / 1408, Reg. No: 525-10 / 1307-14-2 of 15 July 2014.

## ANALYSIS REPORT

For analytical number: 05401 01192/19

Buyer R.B.M. S.p.A.  
25075 Nave, Via Giuseppe 1

Date: 03.02.2020.

### GENERAL INFORMATION

Class: 541-02/19-02/657

Delivery number: 381-5-2/2-20-02

Sample name: **n°1 coil of 10m multilayer pipe Ø20x2 PE-RT/Al/PE-RT made with BASSELL 4731B**

Sample type: pipes, pipelines

Delivery time: 20.12.2019. 11:11

Analysis began: 20.12.2019. 11:11

Analysis ended: 03.02.2020. 10:55

Request reason: Safety

Delivery type: Delivered

Delivered R.B.M. S.p.A.

Report delivery address 1. R.B.M. S.p.A., Italija, 25075 Nave, Via Giuseppe 1

### SAMPLE DESCRIPTION

Delivered sample is n°1 coil of 10m multilayer pipe Ø20x2 PE-RT/Al/PE-RT made with BASSELL 4731B marked: RBM TITA-FIX PE-RT type II/Al/ PE-RT type II Ø20x2.0 – lot number M1.19.057-29 – production date 29.07.2019

The pipe is multilayered, the part that comes in contact with the drinking water is made of plastic.

Manufacturer / requester: R.B.M. S.p.A., Via Giuseppe 1, 25075 Nave (Brescia), Italy.

**CONFORMITY ASSESSMENT**

The analyzed sample considering the tested parameters complies with Art.37 Regulation on health safety of objects and materials in direct contact with food (O.G. 125/09, O.G. 31/11) connection with art. 4 of Annex I tb.3 and 4 of the Regulation on the parameters of compliance, methods of analysis, monitoring and safety plans for water for human consumption and the manner of keeping a register of legal entities engaged in the public water supply activity (O.G. 125/2017), due to Article 4 of the Act General Use Items (O.G. 39/13, 47/14,114/18) and Art. 7 pt. 4 of the of the Water Consumption Act (O.G. 56/13, 14/14, 64/15,104/17,115/18) the sample is considered to be safe.

Head of Division  
Jasna Bošnjir, Ph.D.



U<sup>++</sup> expanded measurement uncertainty using a coverage factor k=2

MDK<sup>+++</sup> Maximum levels according to legal obligations stated in the opinion

Date: 03.02.2020.

Buyer: R.B.M. S.p.A., 25075 Nave, Via Giuseppe 1

**Sample name: n°1 coil of 10m multilayer pipe Ø20x2 PE-RT/Al/PE-RT made with BASSELL 4731B**

Sample delivery time to the Laboratory: 20.12.2019. 11:11

## ANALYSIS RESULTS

For analytical number: 05401 01192/19

Laboratory for Atomic Spectroscopy and Mass Spectrometry						
Analysis began: 20.12.2019. 11:11			Analysis ended: 22.01.2020. 07:57			
Name of analysis	Method	Technique	Measuring unit	Result	U <sup>++</sup>	MDK <sup>+++</sup>
Vanadium	SOP-263-053	AAS; ICP-MS	µg L <sup>-1</sup>	< 1		< 5
Lead (Pb)	SOP-263-053	AAS; ICP-MS	µg L <sup>-1</sup>	< 2		< 10
Cadmium (Cd)	SOP-263-053	AAS; ICP-MS	µg L <sup>-1</sup>	< 0,2		< 5
Arsenic (As)	SOP-263-053	AAS; ICP-MS	µg L <sup>-1</sup>	< 0,5		< 10
Mercury (Hg)	SOP-263-053	AAS; ICP-MS	µg L <sup>-1</sup>	< 0,1		< 1
Chromium (Cr)	SOP-263-053	AAS; ICP-MS	µg L <sup>-1</sup>	< 1		< 50
Nickel (Ni)	SOP-263-053	AAS; ICP-MS	µg L <sup>-1</sup>	< 4		< 20
Manganese (Mn)	SOP-263-053	AAS; ICP-MS	µg L <sup>-1</sup>	< 1		< 50
Selenium	SOP-263-053	AAS; ICP-MS	µg L <sup>-1</sup>	< 1		< 10
Barium (Ba)	SOP-263-053	AAS; ICP-MS	µg L <sup>-1</sup>	< 5		< 700
Zinc (Zn)	SOP-263-053	AAS; ICP-MS	µg L <sup>-1</sup>	< 5		< 3000
Iron (Fe)	SOP-263-053	AAS; ICP-MS	µg L <sup>-1</sup>	15,6		200
Aluminum (Al)	SOP-263-053	AAS; ICP-MS	µg L <sup>-1</sup>	< 5		< 200
Antimony (Sb)	SOP-263-053	AAS; ICP-MS	µg L <sup>-1</sup>	< 2		< 5
Cobalt (Co)	SOP-263-053	AAS; ICP-MS	µg L <sup>-1</sup>	< 1		
Copper	SOP-263-053	AAS; ICP-MS	mg L <sup>-1</sup>	< 0,01		< 2
Boron (B)	SOP-262-053 Edition 01	AAS; ICP-MS	mg L <sup>-1</sup>	< 0,01		1
Laboratory for Liquid Chromatography and Mass Spectrometry						
Analysis began: 20.12.2019. 11:11			Analysis ended: 31.01.2020. 08:27			
Name of analysis	Method	Technique	Measuring unit	Result	U <sup>++</sup>	MDK <sup>+++</sup>
Polycyclic aromatic hydrocarbons (PAHs)	SOP-259-053		mg m <sup>-2</sup> d <sup>-1</sup>	<0,0001		
Benzidine (CAS 92-87-5)	SOP-293-053 Edition 01		mg kg <sup>-1</sup>	< 0,01		
4-Chloro-o-toluidine (CAS 95-69-2)	SOP-293-053 Edition 01		mg kg <sup>-1</sup>	< 0,01		

The results are related only to sample analyzed and should not be used in the advertising purposes.

Laboratory for Liquid Chromatography and Mass Spectrometry						
Analysis began: 20.12.2019. 11:11			Analysis ended: 31.01.2020. 08:27			
Name of analysis	Method	Technique	Measuring unit	Result	U**	MDK***
2-naphtylamine (CAS 91-59-8)	SOP-293-053 Edition 01		mg kg <sup>-1</sup>	< 0,01		
4-Chloro-aniline (CAS 106-47-8)	SOP-293-053 Edition 01		mg kg <sup>-1</sup>	< 0,01		
4,4'-Methylenedianiline (CAS 101-77-9)	SOP-293-053 Edition 01		mg kg <sup>-1</sup>	< 0,01		
3,3'-dimethoxybenzidine (CAS 119-90-4)	SOP-293-053 Edition 01		mg kg <sup>-1</sup>	< 0,01		
3,3'-dimethylbenzidine (CAS 119-93-7)	SOP-293-053 Edition 01		mg kg <sup>-1</sup>	< 0,01		
4,4'-methylendi-o-toluidine (CAS 838-88-0)	SOP-293-053 Edition 01		mg kg <sup>-1</sup>	< 0,01		
2-Methoxy-5-methylaniline (CAS 120-71-8)	SOP-293-053 Edition 01		mg kg <sup>-1</sup>	< 0,01		
4,4'-diaminodiphenylether (CAS 101-80-4)	SOP-293-053 Edition 01		mg kg <sup>-1</sup>	< 0,01		
4,4'-thiodianiline (CAS 139-65-1)	SOP-293-053 Edition 01		mg kg <sup>-1</sup>	< 0,01		
o-toluidine (CAS 95-53-4)	SOP-293-053 Edition 01		mg kg <sup>-1</sup>	< 0,01		
2,4,5-trimethylaniline (CAS 137-17-7)	SOP-293-053 Edition 01		mg kg <sup>-1</sup>	< 0,01		
o-anisidine (CAS 90-04-0)	SOP-293-053 Edition 01		mg kg <sup>-1</sup>	< 0,01		
aniline (CAS 62-53-3)	SOP-293-053 Edition 01		mg kg <sup>-1</sup>	< 0,01		
4-aminobiphenyl (CAS 92-67-1)	SOP-293-053 Edition 01		mg kg <sup>-1</sup>	< 0,01		
Laboratory for Chemical Analysis of Food Contact Materials						
Analysis began: 20.12.2019. 11:11			Analysis ended: 03.02.2020. 10:55			
Name of analysis	Method	Technique	Measuring unit	Result	U**	MDK***
Sensory properties	-		-	does match.		
Total Organic Carbon (TOC)	HRN EN 1484:2002		mgm <sup>-2</sup> day <sup>-1</sup>	0,39		
Phenols	HRN ISO 6439:1998		mg m <sup>-2</sup> d <sup>-1</sup>	< 0,005		
Formaldehyde	SOP-320-054		mg m <sup>-2</sup> d <sup>-1</sup>	< 0,15	-	
no foreign odors and the impact on the clarity, color and odor of drinking water for three consecutive extractions each per 72 hours.						

Head of Division  
Jasna Bošnjir, Ph.D.




End of analysis report

The results are related only to sample analyzed and should not be used in the advertising purposes.

- Poslovanje NZZJZAŠ je certificirano od strane BUREAU VERITAS CROATIA prema normama ISO 9001:2015, ISO 14001:2015 i ISO 45001:2018
- Službeni laboratorij prema Rješenju Ministarstva poljoprivrede, Klasa: UP/I-322-01/16-01/59, Ur. broj: 525-10/1308-17-5 od 7. veljače 2017. godine.
- Službeni laboratorij prema Rješenju Ministarstva zdravlja Klasa: UP/I-541-02/13-01/17, Ur. Broj: 525-10/1308-15-10 od 12. lipnja 2015. godine.
- Referentni laboratorij za određivanje mikotoksina prema Rješenju Ministarstva poljoprivrede, Klasa: UP/I-310-26/13-01/56, Ur. broj 525-10/1307-14-7 od 18. ožujka 2014. godine.
- Referentni laboratorij za područje pesticida u hrani biljnog podrijetla, za pesticide u voću i povrću, žitaricama, te ispitivanju pesticida pojedinačnim metodama; prema Rješenju Ministarstva poljoprivrede, Klasa: UP/I-322-01/17-01/120, Ur. broj 525-10/0766-19-16 od 04. siječnja 2019. godine.
- Referentni centar Ministarstva zdravlja za ispitivanje zdravstvene ispravnosti hrane; UP/I-510-01/15-01/31; Ur. broj: 534-04-1-2/7-16-14 od 14. srpnja 2016. godine.

## ISPITNI IZVJEŠTAJ

### Za analitički broj: 05401 01192/19

Kupac R.B.M. S.p.A.  
25075 Nave, Via Giuseppe 1

Datum: 03.02.2020.

#### OPĆI PODACI

Klasa: 541-02/19-02/657  
Ur. broj 381-5-2/2-20-02

Naziv uzorka: **VIŠESLOJNA CIJEV RBM TITA-FIX PE-RT BASSELL 4731B**  
Vrsta uzorka: cijevi, cjevovodi  
Vrijeme dostave: 20.12.2019. 11:11  
Analiza započeta: 20.12.2019. 11:11      Analiza završena: 03.02.2020. 10:55  
Razlog zahtjeva: Zdravstvena ispravnost  
Tip dostave: Dostavljeno  
Dostavljeno R.B.M. S.p.A.

Dostaviti: 1. R.B.M. S.p.A., Italija, 25075 Nave, Via Giuseppe 1

#### OPIS UZORKA:

Dostavljeni uzorak je VIŠESLOJNA CIJEV RBM TITA-FIX PE-RT BASSELL 4731B sa istaknutim podacima: RBM TITA-FIX PE-RT type II/AI/ PE-RT type II Ø20x2.0 – lot number M1.19.057-29 – production date 29.07.2019.

Cijev je višeslojna, dio koji dolazi u dodir s vodom za piće izrađen je iz umjetne mase.

Proizvođač / podnositelj zahtjeva: R.B.M. S.p.A., Via Giuseppe 1, 25075 Nave (Brescia), Italija.

**IZJAVA O SUKLADNOSTI:**

Analizirani uzorak obzirom na ispitane parametre sukladan je čl.37 Pravilnika o zdravstvenoj ispravnosti materijala i predmeta koji dolaze u neposredan dodir s hranom (N.N.125/09, N.N.31/11) veza s čl. 4 Priloga I tb.3 i 4 Pravilnika o parametrima sukladnosti, metodama analize, monitoringu i planovima sigurnosti vode za ljudsku potrošnju te načinu vođenja registra pravnih osoba koje obavljaju djelatnost javne vodoopskrbe (NN 125/2017), te se prema odredbama čl.4 Zakona o predmetima opće uporabe (N.N. 39/13, 47/14, 114/18 ) i čl. 7 tč. 4 Zakona o vodi za ljudsku potrošnju (N.N. 56/13 sa izmjenama N.N.14/14, 64/15,104/17,115/18) smatra zdravstveno ispravnim.

Voditelj Odjela  
Prof. dr. sc. Jasna Bošnjir dipl. ing.



Rezultati se odnose isključivo na analizirani uzorak i ne smiju se koristiti u reklamne svrhe. Faksimil je autentičan s originalnim potpisom ovlaštene osobe.

U<sup>00</sup> proširena mjerna nesigurnost uz obuhvatni faktor k=2

MDK<sup>000</sup> maksimalno dozvoljena količina prema zakonskim propisima navedenim u ocjeni sukladnosti

Datum: 03.02.2020.

Kupac: R.B.M. S.p.A., 25075 Nave, Via Giuseppe 1

**Naziv uzorka: VIŠESLOJNA CIJEV RBM TITA-FIX PE-RT BASSELL 4731B**

Vrijeme dostave uzorka u laboratorij: 20.12.2019. 11:11

## REZULTATI ISPITIVANJA

### Za analitički broj: 05401 01192/19

Laboratorij za atomsku spektroskopiju i spektrometriju masa						
Analiza započeta: 20.12.2019. 11:11				Analiza završena: 22.01.2020. 07:57		
Naziv analize	Metoda	Tehnika ispitivanja	Mjerna jedinica	Rezultat	U <sup>00</sup>	MDK <sup>000</sup>
Vanadij	SOP-263-053	AAS; ICP-MS	µg L <sup>-1</sup>	< 1		< 5
Olovo (Pb)	SOP-263-053	AAS; ICP-MS	µg L <sup>-1</sup>	< 2		< 10
Kadmij (Cd)	SOP-263-053	AAS; ICP-MS	µg L <sup>-1</sup>	< 0,2		< 5
Arsen (As)	SOP-263-053	AAS; ICP-MS	µg L <sup>-1</sup>	< 0,5		< 10
Živa (Hg)	SOP-263-053	AAS; ICP-MS	µg L <sup>-1</sup>	< 0,1		< 1
Krom (Cr)	SOP-263-053	AAS; ICP-MS	µg L <sup>-1</sup>	< 1		< 50
Nikal (Ni)	SOP-263-053	AAS; ICP-MS	µg L <sup>-1</sup>	< 4		< 20
Mangan (Mn)	SOP-263-053	AAS; ICP-MS	µg L <sup>-1</sup>	< 1		< 50
Selen	SOP-263-053	AAS; ICP-MS	µg L <sup>-1</sup>	< 1		< 10
Barij (Ba)	SOP-263-053	AAS; ICP-MS	µg L <sup>-1</sup>	< 5		< 700
Cink (Zn)	SOP-263-053	AAS; ICP-MS	µg L <sup>-1</sup>	< 5		< 3000
Željezo (Fe)	SOP-263-053	AAS; ICP-MS	µg L <sup>-1</sup>	15,6		200
Aluminij (Al)	SOP-263-053	AAS; ICP-MS	µg L <sup>-1</sup>	< 5		< 200
Antimon (Sb)	SOP-263-053	AAS; ICP-MS	µg L <sup>-1</sup>	< 2		< 5
Kobalt (Co)	SOP-263-053	AAS; ICP-MS	µg L <sup>-1</sup>	< 1		
Bakar (Cu)	SOP-263-053	AAS; ICP-MS	mg L <sup>-1</sup>	< 0,01		< 2
Bor	SOP-262-053 Izdanje 01	AAS; ICP-MS	mg L <sup>-1</sup>	< 0,01		1
Laboratorij za tekućinsku kromatografiju i spektrometriju masa						
Analiza započeta: 20.12.2019. 11:11				Analiza završena: 31.01.2020. 08:27		
Naziv analize	Metoda	Tehnika ispitivanja	Mjerna jedinica	Rezultat	U <sup>00</sup>	MDK <sup>000</sup>
Polciklički aromatski ugljikovodici (PAH)	SOP-259-053		mg m <sup>-2</sup> d <sup>-1</sup>	<0,0001		
Benzidin (CAS 92-87-5)	SOP-293-053 Izdanje 01		mg kg <sup>-1</sup>	< 0,01		
4-kloro-o-toluidin (CAS 95-69-2)	SOP-293-053 Izdanje 01		mg kg <sup>-1</sup>	< 0,01		
2-naftilamin (CAS 91-59-8)	SOP-293-053 Izdanje 01		mg kg <sup>-1</sup>	< 0,01		

Rezultati se odnose isključivo na analizirani uzorak i ne smiju se koristiti u reklamne svrhe. Faksimil je autentičan s originalnim potpisom ovlaštene osobe. Mjerna nesigurnost za navedene metode dostupna je na zahtjev u ispitnom laboratoriju.

Laboratorij za tekućinsku kromatografiju i spektrometriju masa						
Analiza započeta: 20.12.2019. 11:11			Analiza završena: 31.01.2020. 08:27			
Naziv analize	Metoda	Tehnika ispitivanja	Mjerna jedinica	Rezultat	U**	MDK***
4-kloroanilin (CAS 106-47-8)	SOP-293-053 Izdanje 01		mg kg <sup>-1</sup>	< 0,01		
4,4'-diaminodifenilmetan (CAS 101-77-9)	SOP-293-053 Izdanje 01		mg kg <sup>-1</sup>	< 0,01		
3,3'-dimetoksibenzidin (CAS 119-90-4)	SOP-293-053 Izdanje 01		mg kg <sup>-1</sup>	< 0,01		
3,3'-dimetilbenzidin (CAS 119-93-7)	SOP-293-053 Izdanje 01		mg kg <sup>-1</sup>	< 0,01		
4,4'-metilendi-o-toluidin (CAS 838-88-0)	SOP-293-053 Izdanje 01		mg kg <sup>-1</sup>	< 0,01		
p-kresidin (CAS 120-71-8)	SOP-293-053 Izdanje 01		mg kg <sup>-1</sup>	< 0,01		
4,4'-oksidianilin (CAS 101-80-4)	SOP-293-053 Izdanje 01		mg kg <sup>-1</sup>	< 0,01		
4,4'-tiodianilin (CAS 139-65-1)	SOP-293-053 Izdanje 01		mg kg <sup>-1</sup>	< 0,01		
o-toluidin (CAS 95-53-4)	SOP-293-053 Izdanje 01		mg kg <sup>-1</sup>	< 0,01		
2,4,5-trimetilanilin (CAS 137-17-7)	SOP-293-053 Izdanje 01		mg kg <sup>-1</sup>	< 0,01		
o-anisidin (CAS 90-04-0)	SOP-293-053 Izdanje 01		mg kg <sup>-1</sup>	< 0,01		
anilin (CAS 62-53-3)	SOP-293-053 Izdanje 01		mg kg <sup>-1</sup>	< 0,01		
4-aminobifenil (CAS 92-67-1)	SOP-293-053 Izdanje 01		mg kg <sup>-1</sup>	< 0,01		
Laboratorij za predmete koji dolaze u kontakt s hranom						
Analiza započeta: 20.12.2019. 11:11			Analiza završena: 03.02.2020. 10:55			
Naziv analize	Metoda	Tehnika ispitivanja	Mjerna jedinica	Rezultat	U**	MDK***
Senzorska svojstva	-		-	odgovara.		
Ukupni organski ugljik (TOC)	HRN EN 1484:2002		mg m <sup>-2</sup> dan <sup>-1</sup>	0,39		
Fenoli	HRN ISO 6439:1998		mg m <sup>-2</sup> d <sup>-1</sup>	< 0,005		
Formaldehid (CH <sub>2</sub> O)	SOP-320-054		mg m <sup>-2</sup> d <sup>-1</sup>	< 0,15	-	
Cijev je bez stranih mirisa, te nije utjecala na bistrinu, boju i mirisa vode za piće tijekom tri uzastopne ekstrakcije svaka po 72 sata.						

Voditelj Odjela

Prof. dr. sc. Jasna Bošnjir dipl. ing.



Kraj izvještaja o ispitivanju

Rezultati se odnose isključivo na analizirani uzorak i ne smiju se koristiti u reklamne svrhe. Faksimil je autentičan s originalnim potpisom ovlaštene osobe. Mjerna nesigurnost za navedene metode dostupna je na zahtjev u ispitnom laboratoriju.