



الشركة المتخصصة للصناعات البلاستيكية

Specialized Co. For Plastic Industries

(الصغير و مرار)

HDPE Pipes Submittal

اعتماد مواسير البولي ايثيلين

SGS

Certificate JO15/2321

The management system of



الشركة المتخصصة للصناعات البلاستيكية
Specialized Co. For Plastic Industries
(التصدير و مزار)

Specialized Co. For Plastic Industries (S&M)

Amman – Marka Al Hizam Street – Infront of Coca Cola warehouses



has been assessed and certified as meeting the requirements of

ISO 9001:2008

For the following activities

Manufacturing of all kinds of plastic pipes and fittings from various raw materials (UPVC, HDPE, CPVC, PP) and supplying their accessories.

Further clarifications regarding the scope of this certificate and the applicability of ISO 9001:2008 requirements may be obtained by consulting the organisation

This certificate is valid from 8 July 2015 until 8 July 2018 and remains valid subject to satisfactory surveillance audits.
Re certification audit due before 21 June 2018
Issue 1. Certified since 8 July 2015

Authorised by

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Introduction

After many years of experiments and tests in the industrialized countries, S&M (Specialized Co. For Plastic Industries) took the initiative of introducing UPVC pipes production to Jordan back in 1978, thus becoming the first local UPVC pipes producer.

Ever since, S&M has followed a policy of continuous improvement. Thus, came the need to produce HDPE pipes which was demanded by our loyal clients, As they already know the standards and the quality which we produce strictly at.

In 2002, S&M started producing High quality HDPE pipes which is only formulated by virgin non recycled raw material. Filling a gap and a need in a market that demanded such trust worthy product. Moreover, for the purposes of quality, S&M use the most modern equipments and the best technical advises and experiences of its consultants.

S&M adopt different manufacturing standards, in order to be a leading manufacturer in the area. As S&M pipes conforms to the International Standards ISO 4427, As well as the German Standards DIN 8074/8075. Furthermore, S&M HDPE pipes are manufactured to British Standards BS 6437/6730 and AWWA C 906 - 90.

This puts S&M in a unique position of being able to produce the widest range of standards as well as the widest range of Dimensions and Pressure ratings.



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Specs and Standards

S&M HDPE pipes are manufactured in accordance with:

- ISO (International Specification Organization) (ISO 4427)
- German Standards (DIN 8074 and DIN 8075)
- British Standards (BS 6437, BS 6730 and BS 6920).
- AWWA C 906 - 90.
- Jordanian standard (JS 286/2008)
- European requirements (EN 15664 and EN12201)

Product development

S&M is adopting a policy of continuous research and development as an integral part of its operation. New technologies are continually integrated in the manufacturing processes. New products are always been introduced to our range and we are always seeking excellence in terms of our products and services.

S&M have already started manufacturing its own HDPE Compression fittings in accordance to the best designs and techniques.

For further details please contact our technical sales dept.



S&M Products Applications

Drinking Water:

S&M HDPE Pipes (WRc approved), Mainly used in domestic pipe systems and especially for potable water house connections. As if it comes into contact with potable water, it shall not constitute a toxic hazard, microbial growth, taste or odour, cloudiness or discolouration of the water.

Irrigation Systems:

Drip irrigation and Drum - type irrigation plants are from the applications the S&M HDPE are used for.

Industrial Pipelines:

Mainly S&M HDPE pipes are used for the transport of aggressive fluids (Acids, Iyes, Brine). Urban and rural networks Sewage pipes, mainly for aggressive sewage and in drinking water protection areas.

Electrical & Telecommunications Cables:

Since S&M HDPE pipes are themselves form an integral insulator, there is an ever-increasing demand for them as electrical conduit and subduct conduits. To facilitate work, a full line of fittings is available from the same material as the pipes.

Cooling water Pipelines:

S&M HDPE pipes particularly well suited for high voltage cables in power stations.



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Discharge Pipelines:

Since S&M HDPE pipes are used for discharge materials, they are frequently used in Hospitals and residential buildings.

Chlorination lines:

HDPE Pipes manufactured by S&M are used in Power plants and gas plants.

Range of production

HDPE Pipes from S&M are manufactured according to ISO, DIN and BS standards from 20mm up to 800mm outside diameter in various Nominal Pressure Classes, Standards Dimensions Ratio and Pipe Series, details of which are shown later in our catalogue.

S&M HDPE pipes up to Da125 are produced in 100 meters coil standard length. However, HDPE pipes Da140 - Da630 are produced in 12 Meters standards lengths (other lengths are available upon request). Standard colour is Black (other colours are available upon request).

Marking

S&M HDPE pipes are marked automatically during the process of production. Each pipe is marked according to its relevant standard classifications. Special marking can be added on request.



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Foreign Companies

Here we present a selection of foreign and international loyal organizations which whom we supplied there projects in Jordan with our products. Those companies is only a part of our loyal customers that we gained over the years.

USA:

1. Morganti Construction Co
2. Infilco Degremont
3. Mundy Construction Company
4. DYN Crop
5. ABB SUSA Inc
6. American International Contractors Inc (AICI)
7. AES levant holdings
8. N.A. WATER SYSTEMS VEOLIA

UK:

1. Tarmac Construction Company
2. George Wimpey International
3. Care international
4. Oxfam

Europe:

1. Consolidated Contractors Company (C.C.C)
2. Eeventosh construction company
3. Construzioni Gitto Stl
4. SALINI – Italstrade Joint Venture
5. Norwegian church AID
6. Ooms Avenhorn holding BV
7. (J&P) Joannou & Paraskevaides
8. Metka



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Japan:

1. DAI NIPPON Construction
2. Sumitomo Construction Co.
3. Hitachi Plant Engineering & Construction
4. Yachiyo Eng. Co. Ltd

Turkey:

1. Atela Dogan
2. Koray company
3. Bektasuglu Insaat Sanayi Ve
4. GAMA Industries tesisleri imalat Ve
5. Attila Dogan Insaat Ve Tessa A.Ş
6. TERMIŞ TESİSAT SAN. VE TİC. A.Ş

Arab:

1. Bin Ladin Organization
2. MAN International Contracting S.A.E
3. MAGNESIA / JORDAN
4. BROMEEN / JORDAN
5. Civilian Technologies Limited
6. (Petro Jet) The Petroleum Projects and Technical Consultation.
7. AL- Mansoor Contracting Co

China:

1. Wuhan Water Construction engineering Company
2. The Tenth Construction Company of Sinopec
3. China Chungqing International



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الشركة المتخصصة للصناعات البلاستيكية (الصغير و مرار)

Around the world:

1. Siemens Public Communication networks project office
2. Al- Catel Contracting
3. Preussab Noell
4. Larsen and toubro Limited (L&T)
5. LG
6. Group Five Constructions
7. JPC / water supply network upgrading and expansion project
8. Power engineering world
9. ACTED
10. ICRC

يسرنا ان نعرض عليكم بعض المشاريع التي وردت من قبلنا للشركات المحلية والاجنبية والمشاريع الكبرى والدوائر الحكومية وهذه النبذة لا تشكل الا جزءا من بعض المشاريع التي تم توريدها على مدى 35 عاما في بناء الاردن الحديث:

مشاريع خارج الاردن :

- مطار بيروت الدولي
- مشروع مياه ومجاري سنجار - العراق
- مسجد بغداد الكبير
- مياه ومجاري النجف
- مشروع الرضوانية - بغداد
- مباني وقلل الخرطوم والسودان
- مياه ومجاري الموصل - ربيعة
- بناية مكاتب (مانشستر) لندن
- امانة بغداد
- الميرية العامة للمياه والمجاري
- مشروع انتاج الطاقة (القدس3)
- مستشفى بغداد
- مطار بغداد الدولي
- مشروع النهر الصناعي العظيم - ليبيا
- مشروع مجمع ماء منطقة البو صالح



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الشركة المتخصصة للصناعات البلاستيكية (الصغير و مرار)

المشاريع الكبرى :

- اسكان الروضة - البنك الاسلامي
- حدائق الملك الحسين بن طلال
- مشروع معسكرات الزرقاء
- مشروع الشيدية - المدينة السكنية
- توسعة واعادة تأهيل شبكة مياه السلط
- مشاريع القطاع التربوي
- مشروع مصنع حامض الفسفوريك
- مشروع سد الكفرين والكرامة
- مشروع سد الموجب والوالاة
- مشروع مقامات الصحابة
- مشروع وادي العين لمعالجة المياه
- منتج شاطئ عمان السياحي
- مشروع اسكان حي الكرامة
- مشروع المعهد المروري
- البنية التحتية لبوابة القدس
- البنية التحتية لملاعب البولو
- مدينة الحسين الطبية
- منتج ايام الشمس السياحي
- مشروع قصر العدل اربد
- مشروع البنية التحتية لنقل كوابل الضغط العالي
- مشروع سرايا العقبة
- مشروع مركز الملك عبدالله الثاني للتدريب
- مشاريع محطات وقود المناصير
- خط الاتصالات لربط عمان- العقبة (زين)
- مصانع مجمع الصنوبر
- محطة تحويل كهرباء جنوب عمان
- محطة تحويل كهرباء شرق عمان
- محطة تحويل كهرباء شمال عمان
- تطوير معسكرات الزرقاء
- البنية التحتية لمدينة سحاب الصناعية
- البنية التحتية لمدينة اربد الصناعية
- البنية التحتية لمدينة التجمعات
- البنية التحتية لمدينة معان الصناعية
- البنية التحتية للمدينة الصناعية في المشتى
- المعبر الحدودي جسر الشيخ حسين
- حدود جابر
- مدينة العقبة الاقتصادية
- مطار العقبة المدني
- اسكان ابو نصير
- المنطقة الحرة - الزرقاء
- البنية التحتية لمياه ومجاري العقبة
- القيادة العامة للقوات المسلحة
- ميناء العقبة
- مشروع رغدان
- تالايه العقبة
- الحدود الجمركية
- مشروع تدريب الشرطة العراقية
- الجمعية العلمية الملكية
- حدائق الملك عبدالله الثاني
- بركة السباحة في المدينة الرياضية
- ملعب عمان الدولي - ابو علندا
- مجمع بنك الاسكان
- مدينة الكرك الصناعية
- مشروع الاندلسية
- اسكان التطوير الحضري - ماركا
- اسكان التطوير الحضري - المنارة
- اسكان عالية



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- مشروع معسكرات خدمة العلم
- مشروع سجن ام اللولو
- مشرع هناجر مدينة الحسن الصناعية
- مشروع العبدلي (البوليفارد)
- اكاديمية الدفاع المدني – الذهبية
- مدينة الجد
- مدينة الملك عبدالله بن عبدالعزيز
- كسارات المناصير
- مدينة الشرق
- مدينة اهل العزم
- سجن الهاشمية
- البنية التحتية صرف صحي العقبة
- توسعة صرح الشهيد
- مشروع اكسبرس
- شركة تطوير كافة بلديات المملكة
- مشروع مرسى زايد (العقبة)
- مشروع الزعتري
- مشروع تخفيض فاقد مياه الزرقاء
- محطة توليد شرق عمان (المناخر)
- شركة تحدي الالفية

المستشفيات:

- مستشفى الاستقلال
- مستشفى الزرقاء الحكومي
- المستشفى الاسلامي
- مستشفى البشير
- مركز الحسين للسرطان
- العيادات الطبية الامريكية
- مستشفى الرشيد
- المدينة الطبية – مركز فرح
- مستشفى المواساة الطبية
- تحديث وتطوير مستشفى البشير
- مستشفى زين الشرف
- مستشفى الاطفال (المدينة الطبية)
- مستشفى الزرقاء الحكومي الجديد
- مستشفى جرش الحكومي
- توسعة مستشفى فرح
- المركز العربي للقلب.
- مركز الامل
- المستشفى الايطالي / الكرك
- مستشفى جرش التخصصي
- المستشفى الخالدي
- مستشفى ابن الهيثم
- مستشفى جبل الزيتون
- مستشفى العيون التخصصي
- مستشفى عمان التخصصي
- مستشفى التخصصي
- مستشفى الاردن الحديث
- مستشفى سحاب الحكومي
- مستشفى الملك عبدالله / اربد
- مستشفى الاميرة بسمة / اربد
- مستشفى عمان الجراحي .
- مستشفى الجامعة الاردنية



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الشركة المتخصصة للصناعات البلاستيكية (الصغير و مرار)

الشركات الكبرى :

- شركة الاتصالات الاردنية
- شركة برومين الاردن
- مشروع بنك الاسكان
- شركة مينا جيو ثيرمال للطاقة
- شركة امنية
- شركة زين
- شركة البوتاس العربية
- شركة الفوسفات الاردنية
- شركة مصفاة البترول الاردنية
- شركة الكهرباء الاردنية
- شركة بتلكو
- شركة تطوير الاتصالات

الجوامع :

- جوامع اضرحة وجوامع الاغوار
- جامع ابو دريش
- جامع الشهيد الملك عبدالله
- جامع الفيحاء
- جامع المزار

الادوية الاردنية :

- دار الغذاء
- الحكمة
- العربية للادوية
- الرام للصناعات الدولية
- الدولية للدواء / القسطل
- الدوائية المتطورة
- دار الدواء

السفارات :

- السفارة السودانية (منزل السفير)
- السفارة الاسترالية
- السفارة التايوانية
- السفارة الروسية (مشروع المغطس)
- السفارة الصينية
- السفارة الامريكية
- السفارة اليابانية
- السفارة البريطانية
- السفارة اللبنانية

محطات التنقية :

- الخربة السمراء "USAID"
- مادبا "USAID"
- زي "USAID"
- رحاب الحرارية "USAID"
- تنقية الشمال "USAID"
- وادي السير
- الغاز - اربد
- الغاز - الحزام الدائري "USAID"
- محطة تنقية الصرف الصحي / السلط
- محطة تنقية الفحيص وماحص
- محطة تحلية مياه زارة ماعين
- مشروع ري الفيضان - وادي عربية
- مشروع توريد مياه الحميمه - العقبة
- محطة تنقية السلط (الشركة الفنية للمقاولات)
- محطة طاقة مياه الكرك (شركة الكونكورد)
- محطة تنقية اللجون (نصر ارشيدات)
- محطة ضخ الزعتري والخط الناقل .
- محطة تنقية مياه المفرق (شركة الكونكورد)

الفنادق :

- فندق الشراتون (Sheraton)
- فندق الميريديان (le meridian)
- فندق عالية (Alia Hotel)
- فندق توليدو (Tolido)
- فندق الانباط / البتراء
- فندق ايوم / البتراء
- فندق ارواد
- فندق اوركيذا
- فندق الاردن
- فندق البحر الميت العلاجي
- مطعم كان زمان
- انتركونتينانتال عمان (Intercontinental)
- فندق الموفنبيك (Movenpick)
- فندق الفور سيزنز (Four Seasons)
- فندق الرويال (le'royal)
- نادي ديونز (Dunes Club)
- منتجع ايام الشمس السياحي
- فندق عشتار (حمامات ماعين)
- فندق خليج العقبة
- منتجع واحات النخيل (البحر الميت)
- فندق كمبنسكي (Kempinski)
- شركة منتجعات البحر الميت (الكونكورد)
- ائتلاف اسكو تيكو
- Holiday Inn resort dead sea

المباني الكبرى :

- مشروع اسكان ماركا الشمالية
- كلية الحرب الملكية
- كلية القيادة والاركان
- مركز بحوث البناء الجمعية العلمية
- اسكان نقابة المهندسين الزراعيين
- اسكان جمعية الرضوان
- مبنى هيئة الاوراق المالية
- اسكان اطباء الاسنان
- اسكان الصيادلة
- المبنى الاستثماري - الجامعة الاردنية
- مبنى الاتحاد للاذخار والاستثمار .
- مدارس اليوبيل
- المركز الوطني للبحوث ونقل التكنولوجيا
- متحف السيارات الملكي
- مبنى كلية السياحة والاثار
- مبنى المفاعل النووي - سنكترون
- مشروع مباني الدرك
- مشروع العقاد للتبريد
- مبنى كماتب مجموعة زياد المناصير
- مخيم الزعتري (اللاجئين السوريين)
- مخيم الازرق الهلال الاحمر الاماراتي
- مبنى امانة عمان الكبرى
- مبنى مطار الملكة علياء الدولي والبنية التحتية
- مبنى السيتي سنتر / جبل عمان
- مبنى شركة مصانع الاتحاد لانتاج التبغ والسجائر .
- مبنى نادي ديونز
- مبنى السوق المالي
- مبنى المركز الجغرافي الوطني
- مبنى شركة الكهرباء الوطنية
- مبنى مشروع اسكان مباني امانة عمان الكبرى
- امانة عمان - مشروع رغدان
- قصر العدل
- مبنى سجن الجويذة
- مشروع معسكرات الزرقاء
- مجمع البنك الاسلامي / الجاردنز
- مجمع عقاركو التجاري
- مدارس المنثور
- توسعة مبنى وزارة المياه والري
- مجمع عمر الدحلة التجاري
- مشروع مبنى بنك الاردن

مباني الوزارات :

- وزارة الزراعة / طريق المطار
- وزارة الداخلية / خلف فندق ريجنسي
- وزارة الاشغال العام
- وزارة المياه والري
- وزارة البريد والاتصالات
- وزارة الطاقة والثروة المعدنية



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الجامعات :

- جامعة اربد الاهلية
- جامعة فيلادلفيا
- جامعة عمان الاهلية
- جامعة البلقاء
- جامعة آل البيت
- الجامعة الالمانية / مادبا
- كينغز اكايمي / مادبا
- جامعة العلوم الاسلامية
- كلية الفنون ومبنى السكري ومبنى النخاع
- جامعة الزرقاء الاهلية (الخاصة)
- جامعة البتراء
- جامعة الزيتونة
- جامعة اليرموك
- الجامعة الاردنية
- جامعة العلوم والتكنولوجيا
- جامعة العلوم التطبيقية
- جامعة الحسين بن طلال
- جامعة مؤتة
- الجامعة الهاشمية

POLYETHYLENE
BorSafe™ HE3490-LS
BLACK BIMODAL PE100 POLYETHYLENE FOR PRESSURE PIPE

DESCRIPTION

BorSafe HE3490-LS is a black, bimodal, high density polyethylene classified as a MRS 10.0 material (PE100) produced by the advanced Borstar technology. Well dispersed carbon black gives outstanding UV resistance. Long term stability is ensured by an optimised stabilisation system.

APPLICATIONS

BorSafe HE3490-LS is recommended for pressure pipe systems in the applications field of drinking water and natural gas, pressure sewerage, relining, sea outfall and industrial. It is especially designed for the production of larger diameter, thick wall pipe, but can be processed for the whole range of diameters. It also shows excellent resistance to rapid crack propagation and slow crack growth.

PHYSICAL PROPERTIES

		Typical Value*	Unit	Test Method
Density	(Base resin)	949	kg/m ³	ISO 1183/ISO 1872-2B
Density	(Compound)	959	kg/m ³	ISO 1183/ISO 1872-2B
Melt Flow Rate	(190°C/2.16 kg)	<0.1	g/10 min	ISO 1133
Melt Flow Rate	(190°C/5.0 kg)	0.25	g/10 min	ISO 1133
Tensile Stress at Yield	(50 mm/min)	25	Mpa	ISO 527-2
Tensile Strain at Break		>600	%	ISO 527-2
Tensile Modulus	(1 mm/min)	1100	MPa	ISO 527-2
Charpy Impact, notched	(0°C)	16	kJ/m ²	ISO 179/1eA
Hardness, Shore D		60	-	ISO 868
Carbon Black Dispersion		<3		ISO 18553
Carbon Black content		>2	%	ASTM D 1603/ISO 6964
Brittleness Temperature		<-70	°C	ASTM D 746
Resistance to Rapid Crack Propagation, S4 test	(Pc at 0°C, test pipe 250mm SDR11)	>10	bar	ISO 13477
Resistance to Slow Crack Growth	(9.2bar, 80°C)	>1000	h	ISO 13479
Thermal Stability	(210°C)	>20	min	EN 728
ESCR	(10% Igepal), F ₅₀	>10000	h	ASTM D 1693-A

* Data should not be used for specification work.

BorSafe is a trademark of the Borealis group

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 Tel +65 6275 4100 | Fax +65 6377 1233 |
 www.borouge.com
 Borouge is part of the ADNOC and Borealis group of companies





Specialized Co. For Plastic Industries

الشركة المتخصصة للصناعات البلاستيكية

(الصغير و مرار)

CERTIFICATE OF MATERIAL COMPLIANCE

TO WHOM IT MAY CONCERN,

We hereby certify that our whole range which comes from 20mm up to 800mm HDPE Pipes manufactured By Specialized Co. For Plastic Industries are made from virgin HDPE raw material, which meet or exceed the requirements needed.

Borsafe™ HE3490-LS

A high quality low sag PE100 for pipe production

Borsafe™ HE3490-LS is a PE100 pressure pipe compound that provides an excellent balance between production, installation and long-term operational properties. It is a high output material that has good low sag properties, enabling pipe producers to use only one material for their full range of pipes, from small diameter service connections to large diameter thick walled transmission pipelines. It currently forms the core of the Borouge range of BorSafe™ pipe grades.

Borsafe™ HE3490-LS is on the PE100+ Association's list of high quality PE100 materials that meet their requirements and are tested on a regular basis by independent third-party laboratories.

Specialized Co. For Plastic Industries

General Manager

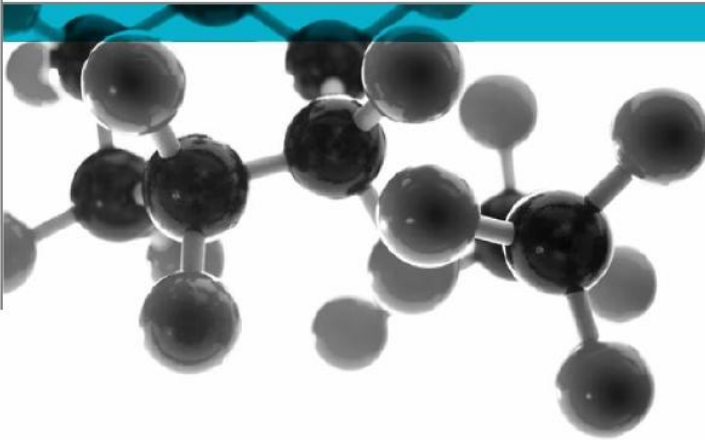
Eng. Ghalib Sughayer

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BS 6920 Cold water of 125mm Dia. PE100 Pipe Tasnee 100 Black



A Report To: Eng. Ahmad Soghayer
Specialized Co. For Plastic Industries
Jordan – Amman – Marka – Al Hezam Street

Date: 02/11/17

Copy: 01

Issue No.: 03

Page 1

Document Reference: U450699/9100/16

Testing
Advising
Assuring

This report is issued in accordance with our terms and conditions, a copy of which is available on request.

Registered Office: Exova (UK) Ltd, Lochend Industrial Estate, Newbridge, Midlothian EH28 8PL United Kingdom. Reg No.SC 70429

1. INTRODUCTION

At the request of Eng. Ahmad Soghayer of Specialized Co. For Plastic Industries, Exova Utilities was instructed to test a 125 mm diameter PE 100 pipe (Tasnee 100 Black) to BS6920 (cold water application). The test was subcontracted to an external laboratory which holds ISO 17025 accreditation for this test. Unless confirmed in writing by Exova prior to order acceptance the Exova Standard Terms and Conditions of Contract (November 2015 edition) apply in respect of the services provided by Exova (UK) Limited. They are available on request or at exova.com.

2. TEST SPECIMENS

Samples details are compiled in Table 1.

Table 1. Samples details

Exova Code	Component Tested	Material	Date Received
POLYM5074	125mm diameter pipe	Tasnee 100 Black	26/06/16



3. TEST METHOD

3.1. BS6920

Suitability of non-metallic products for use in contact with water intended for human consumption with regard to their effect on the quality of the water was conducted in accordance with BS 6920 (for cold water) [1]. This test was subcontracted to a laboratory which holds UKAS accreditation for this test.

The Water Regulations Advisory Scheme (WRAS) wishes to draw to the attention of product manufacturers and users that reports issued by accredited test laboratories do not of themselves constitute approval by the Scheme or the test laboratory. Only a letter from the Scheme, citing a Directory Reference Number, can be regarded as indicating approval.

4. TEST RESULTS

4.1. BS 6920

4.1.1. Sample Information

Sample information is compiled in Table 2.

Table 2. Sample information

General composition of product	PE
Trade name and reference of material	Tasnee 100 Black
Material manufacturer	Tasnee, KSA
Component name/ref	125 mm dia. PE100 Pipe
Component manufacturer	Specialized Co. For Plastic Industries, Jordan
Batch number of product	Batch F, Roll no 0001
Date of manufacture of product	09/06/2016
Method of manufacture of sample	Extrusion
Sampling procedure	Random

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Author: Dr Eric Hoang

Issue Date: 02/11/17

Client: Specialized Co. For Plastic Industries

Issue No.: 3

Description of sample	Matt opaque pipe section
Surface area of test piece	15571 mm ²
Number of articles constituting a test piece	1
Dimensions of test piece: ext/int diameter/thickness	102.63mm/57.54mm/11.74mmmm
Calibration mark of test containers	1 Litre
Condition of samples on receipt	satisfactory
Method of packaging	Plastic bag
Conditions of storage of the samples between receipt and testing	as instructed in BS6920-2.1: 2014: clause 5.2
Proposed use of the product	Water supply systems

4.1.2. Odour and Flavour of Water

Extraction temperature: 23°C

Date test commenced: 6 September 2016

Number of tasters in the taste panel: 3

Results for extract 1 for chlorine free test water and chlorinated test water are shown in Table 3 and Table 4 respectively.

Table 3. Chlorine free test water results

Taster	Odour description	Flavour description	Flavour dilution number
1	nil	nil	<1
2	nil	nil	<1
3	nil	nil	<1

Table 4. Chlorinated test water results

Taster	Odour description	Flavour description	Flavour dilution number
1	nil	nil	<1
2	nil	nil	<1
3	nil	nil	<1

Thus the samples of this product have been found to comply with the requirements of BS 6920: Part 1: clause 4 when extracted at 23°C.

4.1.3. Appearance of Water

Extraction temperature: 23°C

Date test commenced: 20 September 2016

Results for extract 1 are shown in Table 5.

Table 5. Appearance of water results

	Colour (Hazen units)	Turbidity (Formazine nephelometric units)
Test container (product)	<2.5	0.04
Blank	<2.5	0.02
Net Increase	nil	0.02

Thus the sample of this product has been found to comply with the requirements of BS 6920: Part 1: clause 5 when extracted at 23°C.

4.1.4. Growth of Aquatic Microorganisms

Date test commenced: 15 July 2016

Results are shown in Table 6.

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Client:	Specialized Co. For Plastic Industries	Issue No.:	3

Table 6. Mean dissolved oxygen difference results

Test container (product)	0.3 mg/l
Negative reference (glass) sample	0.4 mg/l
Positive reference (wax) sample	6.9 mg/l
Mean dissolved oxygen concentration of the test control	8.1 mg/l

Note - At the end of this test the test piece showed no changes in colour and appearance.

Thus the sample of this product has been found to comply with the requirements of BS 6920: Part 1: clause 6.

4.1.5. The Extraction of Substances That May Be of Concern To Public Health

Extraction temperature: 23°C

Date test commenced: 23 August 2016

Extracts were tested using Monkey African Green kidney CITES (Lot 10F019)

Results for the extraction of substances that may be of concern to public health are shown in Table 7.

Table 7. Extraction of Substances That May Be of Concern To Public Health results

Extract	Growth of cell tissue (monolayer)
Reagent blank	healthy, confluent
Zinc Sulfate validation solution (cytotoxic)	cell death
Sample	healthy, confluent

Thus the sample of this product has been found to give a non-cytotoxic response and therefore it has been found to comply with the requirements of BS 6920: Part 1: clause 7 when extracted at 23°C.

4.1.6. The Extraction of Metals

Extraction temperature: 23°C

Date test commenced: 20 September 2016

Number of extracts: 1

All analyses carried out as specified below:

Aluminium, Antimony, Arsenic, Barium, Cadmium, Chromium, Iron, Lead, Manganese, Mercury, Nickel, Selenium: Inductively coupled plasma emission spectroscopy (ICP-MS).

Results for the extraction of metals are shown in Table 8.

Table 8. Extraction of Metals results

Metal	Max. admissible Concentration (µg/L)	Reporting Limit (µg/L)	Concentration Final Extract (µg/L)		Determined Reagent Blanks (µg/L)
			I	II	
Aluminium (Al)	200	20.0	<20.0	<20.0	<20.0
Antimony (Sb)	5	0.5	<0.5	<0.5	<0.5
Arsenic (As)	10	1.0	<1.0	<1.0	<1.0
Boron (B)	1000	100.0	<100.0	<100.0	<100.0
Cadmium (Cd)	5	0.5	<0.5	<0.5	<0.5
Chromium (Cr)	50	5.0	<5.0	<5.0	<5.0
Iron (Fe)	200	20.0	<20.0	<20.0	<20.0
Lead (Pb)	10	1.0	<1.0	<1.0	<1.0
Manganese (Mn)	50	5.0	<5.0	<5.0	<5.0
Mercury (Hg)	1	0.1	<0.1	<0.1	<0.1
Nickel (Ni)	20	2.0	<2.0	<2.0	<2.0
Selenium (Se)	10	1.0	<1.0	<1.0	<1.0

Thus the samples of this product have been found to comply with the requirements of BS 6920: Part 1: clause 8 when extracted at 23°C.

5. CONCLUSION

The sample of the product referred to in this report has been tested in accordance with the methods specified in BS 6920: Part 2: 2014 "Suitability of non-metallic products for use in contact with water intended for human consumption with regard to their effect on the quality of the water: Methods of test" and the requirements of the Water Regulations Advisory Scheme 'WRAS Materials Guidance, Version 3 dated 10 March 2015'.

This product has satisfied the criteria set out in BS 6920: Part 1: 2014 "Specification" and thus complies with the requirements of the Water Regulations Advisory Scheme Tests of Effect on Water Quality (BS 6920: 2014): Cold Water Tests (23°C). It is suitable for use with cold but not hot water.

N.B The results specified in this report relate only to the samples of the products submitted for testing. Any changes in the nature or source of ingredients and the process of manufacture or application could affect the suitability of the products for use in contact with potable water.

Materials and products intended for use by a public water supply company in the preparation or conveyance of water may need to satisfy more comprehensive toxicological requirements as set specified by the Drinking Water Inspectorate. These additional requirements are necessary to ensure legal compliance with Regulation 31 of Water Supply (Water Quality) Regulations 2000.

REFERENCES

[1] BS 6920-1:2014 Suitability of non-metallic materials and products for use in contact with water intended for human consumption with regard to their effect on the quality of the water. Specification.



Specialized Co. For Plastic Industries
الشركة المتخصصة للصناعات البلاستيكية
(الصغير و مرار)

BS 6920 Cold water of 125mm Dia. PE100 Pipe Tasnee 100 Black

Exova

Report Signatories and Approval

Author	Dr Eric Hoang (Project Manager)  Eric Hoang Project Manager Exova Salford (For and on behalf of Exova (UK) Ltd)
Approver	Daniel Hesketh (Project Manager)  Daniel Hesketh Project Manager Exova-Coatings (For and on behalf of Exova (UK) Ltd)

Document No.: U450699/9100/16

Page No.: 8 of 8

Author: Dr Eric Hoang

Issue Date: 02/11/17

Client: Specialized Co. For Plastic Industries

Issue No.: 3



المملكة الأردنية الهاشمية
إدارة الوقاية والحماية الذاتية

إدارة الوقاية والحماية الذاتية

الرقم : ح / ٤٩ / ٣٠٩ / ٢٠١٧ / ٤٤٨١

التاريخ : / / ١٤٣٨ هـ

الموافق : ١٣ / ٤ / ٢٠١٧ م

السادة / الشركة المتفحصه
للمصنعات البلاستيكية
الموضوع : تجديد الاعتماد

١. لا مانع لدينا من الموافقة على تجديد اعتمادكم في مجال بيع مواد ومعدات الوقاية والحماية الذاتية وفي مجال تصنيع مواد ومعدات الوقاية والحماية الذاتية (انابيب بلاستيكية HDPE) لهذا العام ٢٠١٧ م فقط شريطة التقيد بما يلي:
 - أن تكون تلك المواد مطابقة للمواصفات المعتمدة لدينا وعدم توريدها لأي مشروع إلا بعد أخذ الموافقة الخطية من قبل الدفاع المدني / إدارة الوقاية والحماية الذاتية.
 - عدم تجديد الترخيص للعام القادم الا بعد أخذ الموافقة الخطية من قبل الدفاع المدني / إدارة الوقاية والحماية الذاتية.
٢. علما بأن هذه الموافقة تتعلق فقط بمتطلبات وشروط المديرية العامة للدفاع المدني ولا تعني إعفاء الشركة من أية موافقات أو شروط تتطلبها الجهات المعنية الاخرى أو واردة في التشريعات المعمول بها.
٣. لاجراءاتكم لطفاً.

واقبلوا الاحترام

العميد

مدير إدارة الوقاية والحماية الذاتية
محمد ياسين الصبيحي

نسخة الى :

- مديرية دفاع مدني شرق عمان .
- إدارة الدراسات والأبحاث والتطوير /لادراج المؤسسة على موقع الدفاع المدني ضمن المجالات أعلاه (الكاتنة في ماركا هاتف (٠٦٤٨٩٢٣٧٧).
- ملف رقم (٤٠٦ ش) ، تم استيفاء الرسوم بموجب وصل رقم (٦٥٤٩٧٠) تاريخ ٥/٤/٢٠١٧م.



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المملكة الأردنية الهاشمية - عمان

الهاتف ٥٦٦٧٧١١ - ٥٦٦١١١١

البريد الإلكتروني: prevent_dpt@cdd.gov.jo



الجمعية العلمية الملكية
Royal Scientific Society

Royal Scientific Society
Conformity Assessment Division (CAD)

INSPECTION CERTIFICATE

Certificate No. : IN 520/ 16 / 508

Issue Date : 18/ 01 /2017

Reference No.: (170200) 152/28/38/15 89

Customer Name

Specialized Co. For Plastic Industries (S&M)

Description of Product

HDPE Pipes with diameter of 125mm and nominal thickness 11.4mm, Lot: H (ROLL No. from 1 to 307) manufactured date from 26/11/2016 to 21/12/2016, using (PE-100) black compound Borouge HE3490 LS

Producing Company

Specialized Co. For Plastic Industries (S&M)

Laboratory Test Results

(The test results related to the sample tested only)

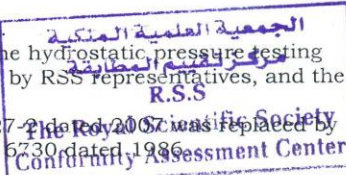
Type of Test*	Results			Acceptance limits (ISO 4427-2:2007)		Testing According to
	Min.	Max.	Aver.	Min.	Max.	
Outside Diameter (mm)	125.5	125.6	125.6	125.0	125.8	ISO 3126 : 2005
Wall thickness (mm)	11.9	12.4	12.1	11.4	12.7	ISO 3126 : 2005
Melt Flow Rate (MFR) (gm/10 min)	Pipes		Granules	Change of MFR by processing ± 20 %		ISO 1133-1 : 2011 (5Kg/190°C)
	0.24		0.24			
Change of MFR by processing	Zero %					
Elongation at Break	656%			≥ 350 %		ISO 6259 : 1997
Hydrostatic Strength at 80°C for 165 hours**	No failure of any test piece during test period			No failure of any test piece during test period		ISO 1167 : 2006
Thermal Stability*** °C (Oxidation temperature)	Pipe No.H-0193			Min 230°C		BSI 6730 :1986
	254.0	250.0	249.7			

Remarks:

*The appearance test was carried out by RSS team on site.

**The hydrostatic strength test was carried out by using the hydrostatic pressure testing machine at the company site, and the test was supervised by RSS representatives, and the equipment was verified by RSS team.

*** The oxidation induction time test according to ISO 4427-2:2007 was replaced by thermal stability (oxidation temperature) according to BSI 6730 dated 1986.



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Royal Scientific Society

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Conformity Assessment Division (CAD)

INSPECTION CERTIFICATE

Certificate No. : IN 520/ 16 / 508

Issue Date : 18/ 01 /2017

Reference No.: (170200) 152/28/38/ 1589

- The pipe sample was tested according to BSI standard No.6920 dated 2000 for its suitability to come into contact with potable water .Also the pipe compound was tested for the carbon black content. The test results were reported in our certificate No.:IN 75/14/275 dated 23/02/2015.

- The Hydrostatic strength tests at 20 °C for 100 hours and at 80 °C for 1000 hours were carried out according to ISO standard No.1167 dated 2006 for one diameter from size group 1. The test results were reported in our certificate No.:IN 75/15/103 dated 20/05/2015.

- The Longitudinal reversion test was carried out for one diameter from size group 1 and one diameter from size group 2 ,according to ISO standard No.2505 dated 2005. The test results were reported in our certificate No.: IN 520/16/484 (size group 1) dated 27/12/2016 and certificate No.: IN 520/16/280 (size group 2) dated 06/09/2016.

Observation

- Laboratory mentioned test results were found fully Complying to required standard.
- This is to certify that the pipes passing all mentioned tests were inspected on 17/01/2017 and stamped with the following stamp (RSS, RSS sign, QC) by Conformity Assessment Centre of Royal Scientific Society.
- A total of approximately (307roll x 100m length) 30700 m lengths of pipes were approved.

- The specific test results are in Lab Report No. 659, Designation No. 17/01/16/22426 Ref. (170103)152/28/38/1201 dated 15/01/2017.

-This certificate was issued with utmost conscience, integrity and to the best knowledge of RSS.

الجمعية العلمية الملكية
مركز تقييم المطابقة

Head of CAD
R.S.S
The Royal Scientific Society
Conformity Assessment Center
Eng. Mulyoud Mustafa

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Royal Scientific Society
Royal Scientific Society

Conformity Assessment Division (CAD)

INSPECTION CERTIFICATE

Certificate No. : IN 520/ 17 / 078

Issue Date : 29/ 03 /2017

Reference No.: (170200) 152/28/38/ 6800

Customer Name

Specialized Co. For Plastic Industries (S&M)

Description of Product

HDPE Pipes with diameter of 63mm and nominal thickness 5.8mm, Lot: E
(ROLL No from 1 to 702) manufactured date from 12/02/2017 to 26/02/2017,
using (PE-100) black compound Borouge HE3490 LS

Producing Company

Specialized Co For Plastic Industries (S&M)

Laboratory Test Results

(The test results related to the sample tested only)

Type of Test*	Results			Acceptance limits (ISO 4427-2:2007)		Testing According to
	Min.	Max.	Aver.	Min.	Max.	
Outside Diameter (mm)	63.1	63.3	63.2	63.0	63.4	ISO 3126 : 2005
Wall thickness (mm)	6.0	6.3	6.10	5.8	6.5	ISO 3126 : 2005
Melt Flow Rate (MFR) (gm/10 min)	Pipes		Graaules	Change of MFR by processing ± 20 %		ISO 1133-1 : 2011 (5Kg/190°C)
	0.27		0.26			
Change of MFR by processing	+3.8					
Elongation at Break	648%			$\geq 350\%$		ISO 6259-1&3 : 2015
Hydrostatic Strength at 80°C for 165 hours**	No failure of any test piece during test period			No failure of any test piece during test period		ISO 1167 : 2006
Thermal Stability*** °C (Oxidation temperature)	Pipe No.E-0003			Min 230°C		BSI 6730 :1986
	252.6	251.8	254.2			

Remarks:

*The appearance test was carried out by RSS team on site.

**The hydrostatic strength test was carried out by using the hydrostatic pressure testing machine at the company site, and the test was supervised by RSS representatives, and the equipment was verified by RSS team.

*** The oxidation induction time test according to ISO 4427-2 dated 2007 was conducted by thermal stability (oxidation temperature) according to BSI 6730 dated 1986.

This Certificate is issued by CAD under its General Terms and Conditions. The issuance of this certificate does not exonerate buyers and sellers from exercising all their rights and discharging all their liabilities under the contract of sale. CAD's responsibility in consequence of the assignment under this certificate is limited to proven negligence and will in no case exceed the total 25,000 JD. Samples, if drawn, will not be kept for more than three months. All CAD services conduct without any discrimination as to race, color, religion, sex, etc.

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**Royal Scientific Society
Conformity Assessment Division (CAD)**

INSPECTION CERTIFICATE

Certificate No. : IN 520/ 17 / 078

Issue Date : 20/ 03 /2017

Reference No.: (170200) 152/28/38/6800

- The pipe sample was tested according to BSI standard No.6920 dated 2000 for its suitability to come into contact with potable water .Also the pipe compound was tested for the carbon black content. The test results were reported in our certificate No.: IN 75/14/275 dated 23/02/2015.

- The Hydrostatic strength tests at 20 °C for 100 hours and at 80 °C for 1000 hours were carried out according to ISO standard No.1167 dated 2006 for one diameter from size group 1. The test results were reported in our certificate No.: IN 75/15/103 dated 20/05/2015.

- The Longitudinal reversion test was carried out for one diameter from size group 1 and one diameter from size group 2 ,according to ISO standard No.2505 dated 2005. The test results were reported in our certificate No.: IN 520/16/484 (size group 1) dated 27/12/2016 and certificate No.: IN 520/16/280 (size group 2) dated 06/09/2016.

Observation

- Laboratory mentioned test results were found fully Complying to required standard.
-This is to certify that the pipes passing all mentioned tests were inspected on 15/03/2017 and stamped with the following stamp (RSS, RSS sign, QC) by Conformity Assessment Centre of Royal Scientific Society.
- A total of approximately (690 roll x 100m length) 69000 m lengths of pipes were approved.

- The specific test results are in Lab Report No. 107, Designation No. 17/01/17/3672 Ref. (170103)152/28/38/6718 dated 19/03/2017.

-This certificate was issued with utmost conscience, integrity and to the best knowledge of RSS.

الجمعية العلمية الملكية
مركز تقييم المطابقة
Head of CAD
R.S.S.
The Royal Scientific Society
Conformity Assessment Centre
Eng. Mahmoud Mustafa

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الجمعية العلمية الملكية
Royal Scientific Society
Royal Scientific Society

Conformity Assessment Division (CAD)

INSPECTION CERTIFICATE

Certificate No. : IN 520/ 17 / 029

Issue Date : 09/ 02 /2017

Reference No.: (170200) 152/28/38/ 3452

Customer Name

Specialized Co. For Plastic Industries (S&M)

Description of Product

HDPE Pipes with diameter of 32mm and nominal thickness 3.6mm, Lot. E
(ROLL No. from 1 to 300) manufactured date from 08/01/2017 to 11/01/2017,
using (PE-100) black compound Borouge HE3490 LS

Producing Company

Specialized Co. For Plastic Industries (S&M)

Laboratory Test Results

(The test results related to the sample tested only)

Type of Test*	Results			Acceptance limits (ISO 4427-2:2007)		Testing According to
	Min.	Max.	Aver.	Min.	Max.	
Outside Diameter (mm)	32.2	32.2	32.1	32.0	32.3	ISO 3126 : 2005
Wall thickness (mm)	3.8	3.9	3.9	3.6	4.1	ISO 3126 : 2005
Melt Flow Rate (MFR) (gm/10 min)	Pipes		Granules	Change of MFR by processing ± 20 %		ISO 1133-1 : 2011 (5Kg/190°C)
	0.34		0.34			
Change of MFR by processing	Zero%					
Elongation at Break	679 %			≥ 350 %		ISO 6259-1&3 : 2015
Hydrostatic Strength at 80°C for 165 hours**	No failure of any test piece during test period			No failure of any test piece during test period		ISO 1167 : 2006
Thermal Stability*** °C (Oxidation temperature)	Pipe No.E-0005			Min 230°C		BSI 6730 :1986
	252.0	250.2	251.1			

Remarks:

*The appearance test was carried out by RSS team on site.

**The hydrostatic strength test was carried out by using the hydrostatic pressure testing machine at the company site, and the test was supervised by RSS representatives, and the equipment was verified by RSS team.

*** The oxidation induction time test according to ISO 4427-2 dated 2007 was replaced by thermal stability (oxidation temperature) according to BSI 6730 dated 1986.

R.S.S.
For Royal Scientific Society
Conformity Assessment Center

This Certificate is issued by CAD under its General Terms and Conditions. The issuance of this certificate does not exonerate buyers and sellers from exercising all their rights and discharging all their liabilities under the contract of sale. CAD's responsibility in consequence of the assignment under this certificate is limited to proven negligence and will in no case exceed the total 25,000 JD. Samples, if drawn, will not be kept for more than three months. All CAD services conduct without any discrimination as to race, color, religion, sex, etc.

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CADSM01S0204 , Rev



الجمعية العلمية الملكية
Royal Scientific Society
Conformity Assessment Division (CAD)

INSPECTION CERTIFICATE

Certificate No. : IN 520/ 17 / 029

Issue Date : 09/ 02 /2017

Reference No.: (170200) 152/28/38/3452

- The pipe sample was tested according to BSI standard No.6920 dated 2000 for its suitability to come into contact with potable water .Also the pipe compound was tested for the carbon black content. The test results were reported in our certificate No.:IN 75/ 14/275 dated 23/02/2015.

- The Hydrostatic strength tests at 20 °C for 100 hours and at 80 °C for 1000 hours were carried out according to ISO standard No.1167 dated 2006 for one diameter from size group 1. The test results were reported in our certificate No.:IN 75/15/103 dated 20/05/2015.

- The Longitudinal reversion test was carried out for one diameter from size group 1 and one diameter from size group 2 ,according to ISO standard No.2505 dated 2005. The test results were reported in our certificate No.: IN 520/16/484 (size group 1) dated 27/12/2016 and certificate No.: IN 520/16/280 (size group 2) dated 06/09/2016.

Observation

- Laboratory mentioned test results were found fully Complying to required standard.
- This is to certify that the pipes passing all mentioned tests were inspected on 06/02/2017 and stamped with the following stamp (RSS, RSS sign, QC) by Conformity Assessment Centre of Royal Scientific Society.
- A total of approximately (300roll x 100m length) 30000 m lengths of pipes were approved.

- The specific test results are in Lab Report No. 31, Designation No. 17/01/17/1124 Ref. (170103)152/28/38/3148 dated 06/01/2017.

-This certificate was issued with utmost conscience, integrity and to the best knowledge of RSS.

الجمعية العلمية الملكية
Head of CAD
مدير تقييم المطابقة
R.S.S
The Royal Scientific Society
Conformity Assessment
Eng. Mahmoud Mustafa

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الجمعية العلمية الملكية
Royal Scientific Society
Royal Scientific Society

Conformity Assessment Division (CAD)

INSPECTION CERTIFICATE

Certificate No. : IN 520/ 17 / 01

Issue Date : 31/ 01 / 2017

Reference No.: (170200) 152/28/38/2-775

Customer Name

Specialized Co. For Plastic Industries (S&M)

Description of Product

HDPE Pipes with diameter of 25mm and nominal thickness 2.3mm, Lot: A
(ROLL No. from 1 to 1103) manufactured date from 21/12/2016 to 02/01/2017,
using (PE-100) black compound Borouge HE3490 LS

Producing Company

Specialized Co. For Plastic Industries (S&M)

Laboratory Test Results

(The test results related to the sample tested only)

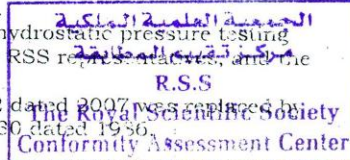
Type of Test*	Results			Acceptance limits (ISO 4427-2:2007)		Testing According to
	Min.	Max.	Aver.	Min.	Max.	
Outside Diameter (mm)	25.2	25.2	25.2	25.0	25.3	ISO 3126 : 2005
Wall thickness (mm)	2.5	2.6	2.55	2.3	2.7	ISO 3126 : 2005
Melt Flow Rate (MFR) (gm/10 min)	Pipes		Granules	Change of MFR by processing ± 20 %		ISO 1133-1 : 2011 (5Kg/190°C)
	0.25		0.25			
Change of MFR by processing	Zero					
Elongation at Break	699%			≥ 350 %		ISO 6259 : 2013
Hydrostatic Strength at 80°C for 165 hours**	No failure of any test piece during test period			No failure of any test piece during test period		ISO 1167 : 2006
Thermal Stability*** °C (Oxidation temperature)	Pipe No E-9013			Min 230°C		BSI 6730 : 1986
	254.0	254.1	250.8			

Remarks:

*The appearance test was carried out by RSS team on site.

**The hydrostatic strength test was carried out by using the hydrostatic pressure testing machine at the company site, and the test was supervised by RSS representative, and the equipment was verified by RSS team.

*** The oxidation induction time test according to ISO 4427-2 dated 2007 was replaced by thermal stability (oxidation temperature) according to BS: 6730 dated 1986.



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الجمعية العلمية الملكية
Royal Scientific Society
Royal Scientific Society

Conformity Assessment Division (CAD)

INSPECTION CERTIFICATE

Certificate No. : IN 520/ 17 / 01

Issue Date : 31/ 01 /2016

Reference No.: (170200), 152/28/38/ 2175

- The pipe sample was tested according to BSI standard No.6920 dated 2000 for its suitability to come into contact with potable water .Also the pipe compound was tested for the carbon black content. The test results were reported in our certificate No.:IN 75/14/275 dated 23/02/2015.

- The Hydrostatic strength tests at 20 °C for 100 hours and at 80 °C for 1000 hours were carried out according to ISO standard No.1167 dated 2006 for one diameter from size group 1. The test results were reported in our certificate No.:IN 75/15/103 dated 20/05/2015.

- The Longitudinal reversion test was carried out for one diameter from size group 1 and one diameter from size group 2 ,according to ISO standard No.2505 dated 2005. The test results were reported in our certificate No.: IN 520/16/484 (size group 1) dated 27/12/2016 and certificate No.: IN 520/16/280 (size group 2) dated 06/09/2016.

Observation

- Laboratory mentioned test results were found fully Complying to required standard.

-This is to certify that the pipes passing all mentioned tests were inspected on 26/01/2017 and stamped with the following stamp (RSS, RSS sign, QC) by Conformity Assessment Centre of Royal Scientific Society.

- A total of approximately (1091 roll x 100m length) 109100 m lengths of pipes were approved

- The specific test results are in Lab Report No. 6, Designation No. 17/01/17/179 Ref. (170103)152/28/38/2126 dated 24/01/2017.

-This certificate was issued with utmost conscience, integrity and to the best knowledge of RSS.

الجمعية العلمية الملكية
مركز تقييم المطابقة
Head of CAD
R.S.S. *[Signature]*
The Royal Scientific Society
Conformity Assessment Centre
Ezz. Ahmad Mustafa

This Certificate is issued by CAD under its General Terms and Conditions. The issuance of this certificate does not exonerate buyers and sellers from exercising all their rights and discharging all their liabilities under the contract of sale. CAD's responsibility in consequence of the assignment under this certificate is limited to proven negligence and will in no case exceed the total 25,000 JD. Samples, if drawn, will not be kept for more than three months. All CAD services conduct without any discrimination as to race, color, religion, sex, etc.

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