

HIRSCH Czech Republic



rEPS PRODUCTION

ABOUT US

The company **HIRSCH Czech Republic s.r.o.** was established in January 2023 through the merger of Novopol s.r.o. and Morapal s.r.o.

Novopol s.r.o., based in Velký Třebešov near Česká Skalice, had a long history as a manufacturer of expanded polystyrene and corrugated cardboard packaging, dating back to 1992. Similarly, Morapal s.r.o., founded in the same year under the name Morávek and Král s.r.o., was involved in the production of wooden products, as well as products made from expanded polystyrene.

The company's headquarters:

HIRSCH Czech Republic s.r.o.

Šumperská 1352

783 91 Uničov

www.hirsch.cz



ABOUT US

In the Czech Republic, there are four manufacturing plants where we process and produce expanded polystyrene (EPS) products, products made from moulded pulp (MP), wooden products, and our own recycled EPS material (known as rEPS).

Production plant Velký Třebešov

- The production of EPS packaging
- UFH (underfloor heating)
- Wire Cutting EPS

Production plant Česká Skalice

- The production of EPS (insulation)
- The production of MP (moulded pulp)
- The production of rEPS (recycled EPS)

Production plant Uničov

- The production of wooden spacers and inserts.
- The production of EPS packaging

Production plant Červenka

- The production of wooden spacers and inserts.
- The production of Briquettes



BASIC INFORMATION

- The density of rEPS can vary depending on the specific formulation, but it typically ranges from 10-40 kg/m³. The melt flow index (MFI) of rEPS is also variable and depends on the molecular weight of the polystyrene used to make the beads. Typically, the MFI of rEPS is between 0.5 and 20 g/10 min.
- We are able to produce rEPS with a pentane content ranging from 3.5% to 4.9%, providing you with a variety of options to suit your specific needs.
- Currently, 85% of our rEPS production is utilized for the manufacturing of packaging materials, while the remaining 15% is used in the construction industry. This is primarily due to the fact that we do not add any flame retardant (FR) materials to our rEPS production. However, we are continuously working to develop a solution that will allow us to produce rEPS with FR materials in the future, which would open up new possibilities for the use of our product in various industries.

BASIC INFORMATION

- In the packaging industry, it is possible to use up to 100% rEPS material in the manufacturing of products, as there are no specific regulatory requirements for flame retardancy in this sector. However, in the construction industry, regulations require materials to meet specific fire safety standards. Therefore, while it is possible to use rEPS in construction, it must be mixed with virgin materials that contain flame retardant (FR) additives to meet the necessary safety requirements. Typically, the maximum amount of rEPS that can be used in construction is 30%, with the remaining 70% being virgin material that contains FR additives to meet the requirements for class E test. This ratio ensures that the final product meets the necessary safety standards while still benefiting from the unique properties of rEPS.
- rEPS requires a longer stabilization time in silos, ideally 48 hours, before it is ready for use in the manufacturing process.
- We have conducted tests on our rEPS product for the presence of phthalates, HBCDD, and heavy metals to ensure that it meets regulatory standards and is safe for use in various industries. These tests are a part of our rigorous quality control measures to guarantee that our customers receive high-quality, reliable products.

BASIC INFORMATION

- We are also currently in the process of obtaining certification for our rEPS product, which involves ensuring compliance with regulations related to waste material, quality control, and other industry-specific standards. This certification process is important to us, as it demonstrates our commitment to producing environmentally sustainable products and maintaining high standards for quality and safety.
- As a company, we are happy to provide free samples of up to 250kg to new customers who are interested in our rEPS product. We highly recommend that we are present during the pre-expansion and molding processes to ensure the best possible feedback and to assist with any technical support that may be needed. Our goal is to provide our customers with high-quality products and exceptional service, and we believe that this approach helps us achieve that goal.
- Our company's production goal for 2023 is to manufacture 500 tons of rEPS, and we plan to increase this amount to 750 tons in 2024. In addition, we are working towards the production of rEPS with FR in 2024, which will allow us to expand our product offerings and meet the needs of customers who require this specific feature in their manufacturing processes. We are committed to continuously improving and growing our business to meet the evolving demands of the market



BASIC INFORMATION

We have attached relevant documentation for your convenience. Please review these materials for further information on our product.

Phthalates(Rohs) HBCDD

Safety Data Sheet

Heavy metals

Technical Sheet



TEST REPORT Job No./Report No. TR2228434 Date: 01 February 2023 Page 1 of 7

SGS CZECH REPUBLIC S.R.O.
K Hájům 1235/2 1550 Praha 5 Czech Republic
TEL: +420 225 864 343

To the attention of **Jana Melicharová**

The following sample(s) was/were submitted and identified by/on behalf of the client as:

Sample No.	Sample Description
A	RAW material (recycled expandable polystyrene)

Client's reference No.: TR 2228434
 P/N No.: ePS NOVOSTYRENE-R Grey
 Sample No.: 400071718
 Client Name: Hirsch Czech Republic s.r.o.
 Sumperská 1362, 783 01 Uhetov, Czech Republic
 Producer: HIRSCH Czech Republic s.r.o.
 Sample Receiving Date: 27 January 2023
 Testing Period: 27 January 2023 ~ 01 February 2023
 Overall Conclusion: PASS
 Test Results: Please refer to the next page(s).
 Performed Test Summary: Selected tests as requested by client against Client's performance standard.

SAFETY DATA SHEET		Date of issue: 04.02.2016
by regulation (EC) No 1907/2006 REACH		Date of revision: 11.04.2023
Page 1 / 7		Version: 3.0
Expandable polystyrene Novostyren®R		
SECTION 1: Identification of the substance/mixture and of the company/undertaking		
1.1 Product identifier	Name: NOVOSTYRENE R NOVOSTYRENE R Grey (carbon) NOVOSTYRENE R Black NOVOSTYRENE R Gray NOVOSTYRENE R Silver NOVOSTYRENE R Red NOVOSTYRENE R Green Registrations number: does not have a mixture	
1.2 Relevant identified uses of the substance or mixture and uses advised against	Identified uses: Preparation for the production of thermal insulation, fillings and packaging - for industrial use Uses advised against: for the product only according to the identified uses	
1.3 Details of the supplier of the safety data sheet	Supplier: HIRSCH Czech Republic s.r.o. Address: Sumperská 1362, 783 01 Uhetov, Czech Republic Telephone: +420 491 411 711 Email: cz-safety@hirsch-gruppe.com Emergency phone: HIRTSCH GROUP s.r.o., Pilsná 1194, 147 01 Tachov, Czech Republic Tel.: +420606611512, email: info@gergroup.cz	
1.4 Emergency telephone number	National Health Service (NHS) 111 National Poisoning Information Centre Scotland, NHS 24: 111	
SECTION 2: Hazard identification		
2.1 Classification of the substance or mixture		
Classification 1273/0005/AE: The substance is classified as dangerous.		
Dispersion health effects: Aquatic Chronic 3, H412, not classified		
Dispersion effects on the environment: Hazardous to aquatic life with long lasting effects.		
Dispersion physical-chemical effects: not classified		
2.2 Label elements		
The special labelling provisions set out in Section 3.3 of Annex I apply to this mixture.		
Hazard pictogram: Does not apply.		
Hazard word: Does not apply.		
Hazard statement: They are not required.		
Precautionary statements: P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P231 Store in a cool, dry place. P232 This material is highly flammable. P233 This material is highly flammable. Keep cool. P235 P237 Store in a well-ventilated place. Keep cool. P501 Dispose of contents and container in accordance with the applicable regulations.		
Additional information: H350H373H410 To be kept away from flames/hot surfaces, vapour-air mixture.		
2.3 Other hazards: The mixture is not assessed as PBT or vPvB. Pezzana vapors are flammable and can cause skin and eye irritation and can affect the nervous system.		
SECTION 3: Composition/information on ingredients		
3.1 Substances: Does not apply.		

AGRO CS s.r.o. EKOAKVA LABORATOR

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 DIČ: CZ64529413
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 tel.: 497 457 748, 767

PROTOKOL O ZKOUŠCE Č. 22/III/2023

Zákazník: HIRSCH Czech Republic s.r.o.
 Velký Třebenov 20
 Velký Třebenov
 582 03

Vzorek roztoku č.: 17
 Měření: 17
 Popis: Viskozita suspenze ePS NOVOSTYRENE - R Grey, výrobce HIRSCH Czech Republic s.r.o.
 Odebrá provedl: zkušebna
 Datum odběru: 11.1.2023
 Dle laboratorní žádosti: 11.1.2023
 Data provedení lab. činnosti: 11.1.2023 - 15.2.2023
 Místy provedení lab. činnosti: ALL Czech Republic, s.r.o., Na Harč 336/6, 190 00 Praha 9 - Vysočany

Státnoství	Typ výřuku	Jednotka	Hodnota	Zkušební metoda
suboxidovaného železa			230328-AE	suboxidovaného železa

Konec vyhodnocení částí protokolu o zkoušce

Poznámka:
 Výsledky zkoušek uvedené na všech listech protokolu se týkají pouze zkušebního vzorku.
 Odběr vzorků provedený laboratorní je dokumentován v "Protokolu o odběru", který je nedílnou součástí "Protokolu o zkoušce".
 Běh písemného zkoušení laboratorní se nemí provádí reprodukovatelně (nejsí načet celý).
 Laboratorní rozhodnutí za informace dodané zákazníkem - včetně těch, které mají vliv na počet výsledků.
 Data získaná zákazníkem jsou omezena ve skupině "Zkušební metoda" sloupcem "základní".
 Pokud je v části "Odebrá provedl" uvedeno "základní", výsledky se vztahují ke vzorku, jak byl přijat.

HIRSCH Czech Republic EKOAKVA LABORATOR

Novostyren® R
 Expandable polystyrene

Technical sheet
 Date of issue: 5/3/2018

1. CHARACTERISTICS
 Novostyren® R is an expandable polystyrene (EPS) consisting of white polystyrene beads without flame retardant or contains low amounts of a new type flame retardant (without HBCD) and a low amount of hydrocarbon blowing agent (pentane).

Material surface is treated against sticking and formation of static charge.

Due to possible content of low amount of halogenated flame retardant and hydrocarbon blowing agent, it is not suitable for applications coming in direct contact with food.

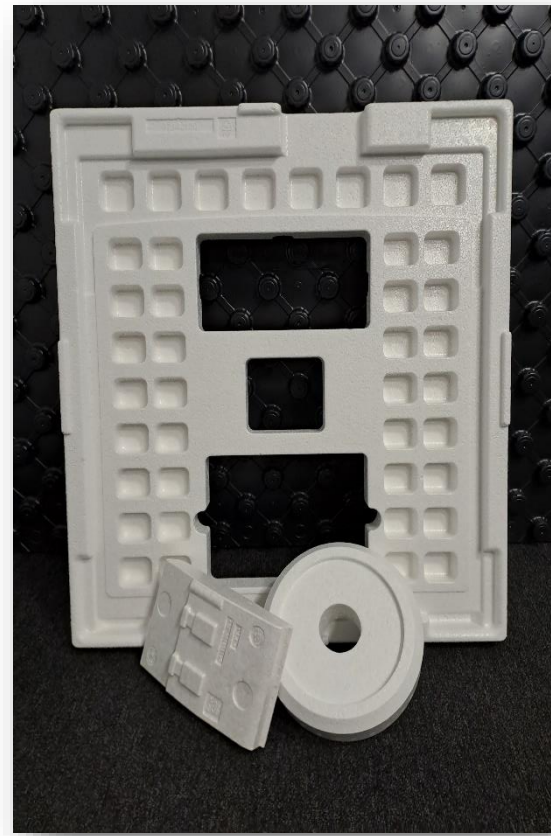
2. IDENTIFICATION
 Product identification is based on the registered trade name **Novostyren® R**.

3. TECHNICAL PARAMETERS

Basic parameters	Standard	unit	Novostyren® R
Particle size fraction > 95%	internal	mm	0.90 - 1.80
Blowing agent content	internal	% wt.	< 5
Bulk density of basic material	internal	kg / m ³	550 - 600

Typical parameters

Recommended bulk density	unit	Novostyren® R	
1. foaming	internal	kg / m ³	20
2. foaming	internal	kg / m ³	13
Reaction to fire	EN ISO 11825-2 / EN 13 501	class	not declared





THANK YOU FOR YOUR ATTENTION

Jakub Kredvik

rEPS Manager

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