



**HRIZOPRO**

1984

РОССИЯ

АШЫН

**STABILIZING ADDITIVE FOR SMA**





**HRIZOPRO**  
1984 РОССИЯ АСНУА

# Highlights

1. ECONOMIC BENEFIT
2. ADVANTAGES
3. OUR PARTNERS
4. REGISTERS
5. SAFETY

**3 kg/t SMA**  
consumption

**₱40K/t**  
price

# 1. ECONOMIC BENEFIT

**CONSUMPTION + PRICE =**

**50% ECONOMY**

**100 Ktons of SMA**

**» ANALOGS - APPLICATION**

PRICE	CONSUMPTION	ECONOMY
₱41K	3.5 kg	₱2.35M
₱46K	4.5 kg	₱8.70M
₱75K	3.0 kg	₱10.5M



# ECONOMIC BENEFIT

**3 kg/t SMA**

consumption

**₱12M**

costs for 300 t

**₱40K/t**

price

**100 Ktons**

amount of SMA

» **₱8.7M**

» **42% of the budget**

» If the additive used today costs **₱46K/t** and the consumption is **4.5 kg/t SMA**

## » ANALOGS - APPLICATION

price consumption	economy	40	41	42	43	44	45	46	47	48	49	50	60	70	75
		₱ thousand/t													
3 kg/t SMA	₱ million	0	0,3	0,6	0,9	1,2	1,5	1,8	2,1	2,4	2,7	3,0	6,0	9,0	<b>10,5</b>
	%	0	2	5	7	9	11	13	15	17	18	20	33	43	47
3.5 kg/t SMA	₱ million	2,0	<b>2,4</b>	2,7	3,1	3,4	3,8	4,1	4,5	4,8	5,2	5,5	9,0	12,5	14,3
	%	14	16	18	20	22	24	25	27	29	30	31	43	51	54
4.5 kg/t SMA	₱ million	6,0	6,5	6,9	7,4	7,8	8,3	<b>8,7</b>	9,2	9,6	10,1	10,5	15,0	19,5	21,8
	%	33	35	37	38	39	41	42	43	44	46	47	56	62	64



## 2. ADVANTAGES

CELLULOSE  
FIBRE



» 50% more profitable than the top seller

» 800°C thermal stability

» fluffing

» micro-reinforcement strength characteristics of SMA are improved by 2 times

» counteraction to de-icing reagents

» water resistance

» exposure to fungus and rodents

» exposure to sunlight





# HRIZO PRO

1984 РОССИЯ АСНИН

# 40+ YEARS

# ON THE MARKET



FEDERAL ROAD AGENCY  
**ROSAVTODOR**



**AVTODOR**  
STATE COMPANY

# MRHW



CENTRAL RING ROAD



Formula 1  
**SOCHI**



**CRIMEAN BRIDGE  
OFFICIAL SUPPLIER**



# 4. REGISTERS

Federal State information system of price formation in construction



<http://fgiscs.minstroyrf.ru/#/monitoring/info/420069>

Federal Unit Charges



<http://www.minstroyrf.ru/trades/view.state-fer.php>

Territory Unit Charges



<http://www.minstroyrf.ru/trades/view.territorial.php>



## MTCK

Moscow Territorial Construction Catalogue

<http://www.mtsk.mos.ru/default.aspx?WCI=VIEWPRODUCTION&WCE=GOTO.OBJECTCATALOGUE.99244>

RUSSIAN EXPORT CATALOGUE



[http://ruxport.org/rus\\_export\\_catalog](http://ruxport.org/rus_export_catalog)



Register of innovative products, technologies and services

<http://innoprod.startbase.ru/about/>



## MTCK

Register of innovative technology and technical solutions (IT and TS)

<http://www.mtsk.mos.ru/default.aspx?WCI=VIEWCATALOGUE&WCE=GOTO..10>

CERTIFIED BY SYSTEM SUPERPAVE FOR CANADA AND USA ROADS

**SHRP 2**  
STRATEGIC HIGHWAY RESEARCH PROGRAM  
*Accelerating solutions for highway safety, renewal, reliability, and capacity*

STRATEGIC HIGHWAY



RESEARCH PROGRAM



## 5. SAFETY



MINISTRY OF HEALTH OF  
THE RUSSIAN FEDERATION



FSBCI «Research Institute of Occupational  
Health of academician N.F. Izmerov»

**European Union 2003/18/EU and standard International  
Standard Organization № 14966 (ISO Standard 14966)  
and standard VDI 3492 (Germany)**

» actual data showed an air content of 0,0001 fibers in  
milliliter

» in 100 times less than the criterion «clear air»

» in 50 times less than the criterion «absolutely safe»

### **HALF-LIFE PERIOD**

» mineral fiber – 15 days

» cellulose fiber – 11 years

» in accordance with directive requirements



**World Health  
Organization**