

IZOLEX NZ

EXOTHERMIC – INSULATING CUPS – COVERINGS FOR FEEDERS

DESCRIPTION

Exothermic – insulating cups **IZOLEX NZ** are made of refractory, high insulation and high exothermic materials. **IZOLEX NZ** is intended as a covering for a more economical supplying of steel castings, malleable iron, cast iron with ball shaped graphite and gray cast iron with lamellar graphite.

IZOLEX NZ cups have good insulation properties and restrict heat transfer from the feeder. Exothermic materials in contact with melt react and generate the heat into the feeder. Thermally speaking, in this case the casting is heat sink of feeder. In this case we also achieve more efficient and economical castings feeding. The length of feeding zone is longer, and consequently, the efficiency and economy of casting is improved when using **IZOLEX NZ** covering.

The results of measurements of solidification time of feeders have showed that the solidification module of feeders covered with **IZOLEX NZ** cups compared with un-covered feeders increases by a factor of 1,5 to 1,6.

Standard cups:

TYPE	Module [cm]		Dimensions of feeder's cup [mm]						Volume ₃ [dm ³]
	izolex	geom.	d _u	D _u	d _o	D _o	h	H	
NZ 125	1,25	0,80	42,5	63,0	36,0	59,0	85,0	97,0	0,10
NZ 150	1,50	0,95	52,0	74,0	48,0	69,5	69,5	80,0	0,13
NZ 165	1,65	1,05	57,5	80,5	52,5	75,5	78,0	92,0	0,18
NZ 170	1,70	1,10	59,0	79,0	50,0	72,5	106,5	116,0	0,25
NZ 195	1,95	1,25	69,5	94,5	65,0	89,0	87,0	99,5	0,30
NZ 220	2,20	1,40	79,0	103,0	71,5	99,0	96,5	108,0	0,42
NZ 240	2,40	1,55	89,0	115,0	81,0	109,5	103,5	120,0	0,58
NZ 270	2,70	1,75	97,0	127,5	91,0	119,0	117,0	133,0	0,80
NZ 310	3,10	2,00	118,0	154,5	112,0	147,0	130,0	150,0	1,35

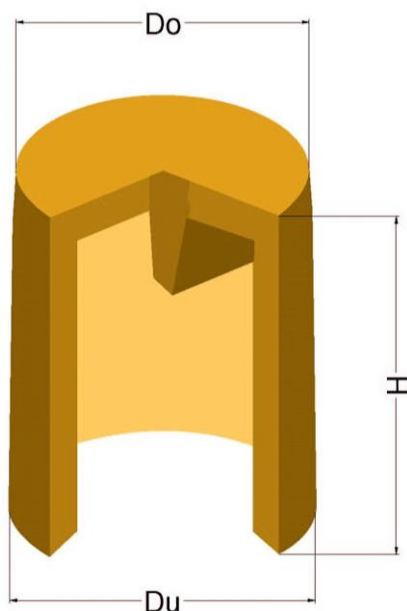
William's lobe dimensions [mm]:

Type	a [mm]	b [mm]
NZ 125	14	2
NZ 150	16	2
NZ 165	18	2
NZ 170	20	2
NZ 195	20	3
NZ 220	22	3
NZ 240	24	3
NZ 270	26	3
NZ 310	28	3

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Cross section for exothermic – insulating cup **IZOLEX NZ**:



USE

IZOLEX NZ cups have sufficiently high strength that can be used in moulding machines. Dimensional accuracy of the constructed covering also allows subsequent submission into the completed forms.

Remains of burned insulation cups **IZOLEX NZ** are, after the casting, solid, crusty, and when cleaning the castings, they can be easily separated from the rest of the sand.

Comparative data for increasing the efficiency of the melt with **IZOLEX NZ** feeders compared to conventional feeders [$\rho_{\text{melt}} = 7,4 \text{ kg/dm}^3$]

TYPE	Module [cm]		Volume [dm ³] and mass of feeder [kg]				Mass ratio of feeders conventional/ izolex NZ and savings	
	izolex NZ	geom.	izolex NZ ₃ [dm ³]	conventional (H=1,5D) ₃ [dm ³]	izolex NZ [kg]	conventional (H=1,5D) [kg]	Mass ratio	savings [kg]
NZ 125	1,25	0,80	0,10	0,350	0,74	2,590	3,50	1,850
NZ 150	1,50	0,95	0,13	0,604	0,96	4,469	4,65	3,509
NZ 165	1,65	1,05	0,18	0,804	1,33	5,949	4,47	4,619
NZ 170	1,70	1,10	0,25	0,879	1,85	6,505	3,52	4,655
NZ 195	1,95	1,25	0,30	1,327	2,22	9,820	4,42	7,600
NZ 220	2,20	1,40	0,42	1,906	3,11	14,104	4,53	10,994
NZ 240	2,40	1,55	0,58	2,474	4,29	18,307	4,26	14,017
NZ 270	2,70	1,75	0,80	3,523	5,92	26,070	4,91	20,150
NZ 310	3,10	2,00	1,35	5,333	9,99	39,464	3,95	29,474

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PACKING

IZOLEX NZ cups are packed in cardboard boxes or by agreement with the buyer.

STORING AND TRANSPORT

Exothermic – insulating cups **IZOLEX NZ** must be protected against moisture, so they must be transported only in covered vehicles. Cups **IZOLEX NZ** must be stored in covered and enclosed spaces.

According to international agreement of dangerous substances, cups **IZOLEX NZ** are not dangerous substances.

PROPERTIES

IZOLEX NZ have density about 0,8 kg/dm³ and react exothermic in contact with fluent metal.

Physical state	red cups
Auto ignition temperature	220°C
Combustion rate	12 s/cm
Moisture content	1% max