

TASK BOOK SPECIFICATIONS

Object: Two-stage anti-hail rockets of mortar reactive launch type

Contracting authority: Special Service for Active Influences on Hydrometeorological Processes

1. General description.

Solid fuel single-stage anti-hail rockets of mortar reactive launch type intended for active influence on natural hail processes in order to minimize hail falls.

2. Requirements for the necessary technical characteristics:

- a) Maximum length - not more than 1200 mm.
- b) Rocket diameter - 60 mm.
- c) Rocket mass - not more than 5.0 kg.
- d) Mass of the freezing composition (active smoke composition) - not less than 0.8 kg.
- e) Number of active ice-forming nuclei generated by the rocket head:
 - at a temperature of minus 10°C - not less than $1,2 \times 10^{16}$.
- f) The maximum height of the flight path - not more than 8000 m.
- g) Effective action range - not less than 9.0 km.
- h) Ignition time of the active smoke pyrotechnic cartridge - not more than 8 sec.
- i) Launching capacity by means of modified anti-hail launching systems of TKB-040, TKB-04-01 type, launching voltage (pulse) 12 V, launch pulse duration 20 msec.
- j) Number of rockets in a packing box - no more than 4 pieces.
- k) Rocket warranty period - at least 3 years, of which 6 months being in ground conditions, under the eaves.
- l) During the warranty period, the rockets will retain their normal characteristics and reliability:
 - in the range of air temperatures at the ground surface from 0° to at least + 45°C;
 - at a wind speed at the surface of the ground of at least 25.0 m/sec;
 - at the relative humidity of the ambient air up to 98%;
 - after launching the rockets, the rockets in the neighboring guides of the launching installation will be in reliable condition;
 - after at least 20 reloads of the launch facility.

m) Presence of four self-liquidation points.

n) Probability of safe use for the population, at the confidence level of 0.9, should be at least 0.9998.

o) Presence of scientific expertise on the freezing capacity of the crystallization reagent from specialized laboratories in other countries (stationary and dynamic regime).

3. Cost/price calculation requirements.

The lowest price that meets the technical requirements.

4. Definitions.

Freezing capacity - the ability of a series of substances to initiate the appearance of the solid phase with their placement in an overcooled cloudy environment (usually in the form of aerosols).

9. Mandatory documents when submitting bid

At this point the contracting authority indicates which documents are required to be submitted when submitting the bid through the SIA RSAP [*Automated Information System "State Register of Public Procurement"*]. Also, here are indicated the documents that contain personal data, which are not submitted through SIA RSAP and are not public for all.

10. Mandatory documents for evaluation of bids

At this point the contracting authority indicates which documents are required to be submitted in the SIA RSAP when evaluating the bid. Also, here are indicated the documents that contain personal data, which are not submitted through SIA RSAP and are not public for all, they are presented at the evaluation stage directly to the contracting authority.

Contracting authority



Date

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Note: This model of task book specification is indicative and may be supplemented, modified, specified by the contracting authority, depending on the type and specificity of the goods/services. The contacting authority is obliged to comply with the law.