

Safety Data Sheet (SDS) for ISTO-1 Firefighting Powder

CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: ISTO-1 Firefighting Powder
Synonyms: Firefighting substance, fire-extinguishing powder
Manufacturer/Distributor: Sapfir Ltd. / Steinberg Trade & Trust GmbH & Co.KG
Address: Elsastraße 1, 59320 Ennigerloh, Germany
Telephone Number: +49 (0) 2525 962727
Mail: info@tungus.de
Relevant Identified Uses: Used as a component in a fire suppression system as firefighting substance

HAZARDS IDENTIFICATION

Non-hazardous powder. Organs most likely exposed: respiratory system, skin, eyes.

Potential Hazards:

Inhalation	May cause irritation of the upper respiratory tract, transient cough, and shortness of breath.
Skin Contact	May cause mild irritation.
Eye Contact	May cause irritation.
Ingestion	Not a likely method of exposure but could cause mild gastrointestinal discomfort.

Classification: Not classified as hazardous according to Directive 1999/45/EC or Regulation (EC) No 1272/2008 (CLP).

COMPOSITION AND INFORMATION ON INGREDIENTS

Component	CAS Number	Concentration (%)	Classification
Monoammonium phosphate	7722-76-1	25–90%	Eye Irrit. 2 (H319)
Aluminum oxide	1344-28-1	Not specified	Not classified
Silicon oxide	60676-86-0	Not specified	Not classified

FIRST AID MEASURES

Inhalation: Move person to fresh air. Seek medical attention if symptoms persist.

Eye Contact: Flush eyes with plenty of water. Consult an ophthalmologist if irritation persists.

Skin Contact: Wash with soap and water. If irritation occurs, seek medical advice.

Ingestion: Rinse mouth with water. Drink plenty of water. Do not induce vomiting unless directed by medical personnel. Seek medical attention.

FIRE FIGHTING MEASURES

Suitable Extinguishing Media: ISTO-1 is a fire-extinguishing agent and not combustible. Use appropriate extinguishing media for surrounding fire (e.g., water mist or spray).

Special Precautions: Avoid inhalation of decomposition products. Use self-contained breathing apparatus if needed.

ACCIDENTAL RELEASE MEASURES

Personal Precautions: Wear appropriate protective equipment. Avoid breathing dust. Ensure proper ventilation.

Environmental Precautions: Prevent material from entering waterways, sewers, or soil.

Cleanup Methods: Use dry cleaning and vacuuming in case of accidental discharge.

HANDLING AND STORAGE

Powder should be stored in temperature conditions ranging from -50°C up to +50°C in separated dry, heated/non-heated warehouses. During storage and handling, conditions should be provided to protect from mechanical damage of packing, direct sunlight, atmospheric precipitation or other sources of water and contact with corrosive mediums.

PERSONAL EXPOSURE PROTECTION MEASURES

Respiratory Protection	Use a dust-protective mask if exposure exceeds permissible limits.
Hand Protection	Rubber gloves (EN 374).
Eye Protection	Safety goggles (EN 166).
Skin Protection	General workwear.

PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Fine-grind powder, white to light grey, off-white common
pH	Not applicable
Flammability	Not flammable
Decomposition Temperature	Stable below 90°C
Humidity	0–15%

STABILITY AND REACTIVITY

Stability: Stable under normal conditions. Avoid exposure to heat above 50°C.

Hazardous Reactions: None under recommended conditions.

Incompatible Materials: Strong oxidizing agents.

Decomposition Products: Potential release of CO₂ and CO under extreme heat.

TOXICOLOGICAL INFORMATION

Inhalation: May cause mild respiratory irritation.

Oral Toxicity: LD50 (rat): Monoammonium phosphate – 2000 mg/kg

Skin/Eye Contact: May cause temporary irritation.

ECOLOGICAL INFORMATION

Powder presents no ecological hazard. Main components of the powder are natural minerals and are used as fertilizer in agriculture.

DISPOSAL CONSIDERATIONS

Dispose of powder and packaging in accordance with local, regional, and national regulations. Avoid discharge into sewers or waterways.

TRANSPORT INFORMATION

UN Number: Not applicable

UN Classification: Not classified as dangerous goods

Packaging Requirements: Maximum package weight: 30 kg

REGULATORY INFORMATION

Compliant with EU Regulation No. 1907/2006 (REACH) and CLP Regulation No. 1272/2008.

OTHER INFORMATION

Work areas should be well-ventilated.

Avoid exposure to atmospheric precipitation and moisture.

Ensure compliance with applicable legal and regulatory requirements during storage and disposal.