



DM-9118 Self-triggered Fire Extinguishing Capsule

*Material Safety Data Sheet (MSDS)
Industrial Fire Protection Solution*

Section 1 – Chemical Product

Product Name: DM-9118 Self-triggered Fire Extinguishing Capsule

Product Code: DM-9118

Section 2 – Hazard Identification

Hazard Statement: Harmful if swallowed or inhaled.

Precautionary Measures:

- Wash hands thoroughly after handling.
- Do not eat or drink while using this product.
- Wear protective gloves and protective clothing.

Emergency Measures:

- If swallowed, seek medical attention immediately.
- In case of skin contact, wash thoroughly with water.

Storage Conditions:

Store in a dry environment at room temperature.

Disposal:

Dispose according to local and national regulations through authorized channels.

Section 3 – Composition / Information on Ingredients

Perfluorohexanone: 88–95% (CAS No.: 756-13-8)

Gelatin: 6–15% (CAS No.: 9000-70-8)

Glutaraldehyde: 3–10% (CAS No.: 111-30-8)

Resorcinol: 2–6% (CAS No.: 108-46-3)

Sodium Polyphosphate: <1% (CAS No.: 68915-31-1)

Section 4 – First Aid Measures

Inhalation:

Move the affected person to fresh air immediately. Provide oxygen if breathing is difficult. If breathing stops, administer artificial respiration and seek medical attention.

Skin Contact:

Remove contaminated clothing and wash affected skin thoroughly with soap and water.

Eye Contact:

Rinse immediately with clean water for at least 15 minutes while keeping eyelids open and seek medical treatment.

Ingestion:

Do not induce vomiting unless instructed by medical personnel. Provide water to conscious persons only.

Section 5 – Firefighting Measures

This product possesses inherent fire-extinguishing properties. After the microcapsules have been fully released, carbon dioxide (CO₂), dry chemical powder, or water spray may be used as extinguishing agents. Immediately move to the upwind position, isolate nearby ignition sources, and extinguish the fire from the upwind side using appropriate fire-extinguishing media. During firefighting operations involving water, appropriate measures should be taken to minimize environmental impact and prevent contaminated wastewater from spreading.

Avoid environmental contamination caused by firefighting wastewater.

Section 6 – Accidental Release Measures

This product is in solid form and possesses inherent fire-extinguishing properties. In the event of normal leakage, it can be collected using appropriate collection equipment. After complete release of the microcapsules, if fire occurs, firefighters should wear protective clothing equipped with a self-contained breathing apparatus (SCBA). Use water spray or water mist to cool fire-exposed containers.

Prevent leakage into drains, soil, or water sources.

Section 7 – Handling and Storage

Wear appropriate protective equipment when handling.

Avoid contact with skin, eyes, and clothing.

Do not inhale vapors.

Store in a cool, ventilated location away from heat, sparks, and open flames.

Recommended storage temperature: 8°C – 28°C.

Section 8 – Exposure Controls / Personal Protection

Recommended PPE:

- Nitrile rubber gloves
- Respirator mask
- Safety goggles

Section 9 – Physical and Chemical Properties

Appearance: Yellow or dark yellow solid

Odor: Mild odor

Release Temperature: 80–150°C

Flammability: Non-flammable

Relative Density: 1.02 g/cm³

Section 10 – Stability and Reactivity

Stable under recommended handling and storage conditions.

Avoid exposure to heat, flames, sparks, and incompatible materials.

Hazardous decomposition products may include carbon monoxide, carbon dioxide, and hydrogen fluoride.

Section 11 – Toxicological Information

No complete toxicological data available.

Inhalation of vapors or mist may irritate the respiratory tract and nasal passages.

Section 12 – Ecological Information

Do not release into waterways, soil, or drains.

No complete ecological or biodegradability data available.

Section 13 – Disposal Considerations

Dispose through licensed waste disposal companies.

Solidified waste may be landfilled in accordance with local environmental regulations.

Section 14 – Additional Information

Prepared by: R&D Department

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This document is intended for professional industrial and commercial reference only.

Professional Product Summary

DM-9118 Self-triggered Fire Extinguishing Capsule is an advanced microcapsule-based fire suppression material designed for rapid automatic fire response. The product utilizes perfluorohexanone-based extinguishing technology with integrated self-activation characteristics suitable for industrial, electrical, battery, and confined-space fire protection applications.

Key Advantages:

- Automatic thermal-triggered fire suppression
- Compact solid-state design
- Non-flammable formulation
- Suitable for enclosed electrical environments
- Easy installation and maintenance
- Industrial-grade safety characteristics

Prepared for professional industrial, commercial, and presentation purposes.