





SHTG 1230™ Extinguishing Agent

FK-5-1-12 · Total Flooding Clean Agent

SHTG 1230™, identified in international standards as FK-5-1-12, is the emerging clean fire suppression agent for total flooding applications. With zero ozone depletion potential and a minimal global warming potential, it disperses rapidly in the protected space, forming a homogeneous air and gas mixture that reaches even the most concealed flames. The agent is effective between 0 C and 50 C, and its low toxicity allows use in normally occupied areas.

The Next-Generation Clean Agent

- Zero ozone depletion potential
- Minimal global warming potential
- Effective between 0 C and 50 C
- Rapid, homogeneous dispersion
- Extinguishing speed comparable to Halon 1301
- Safe for occupied spaces up to 10.0% for 5 minutes
- UL Listed and FM Approved
- Fully recyclable at end of service life
- Compatible with 25, 42 and 50 Bar systems

Highest Quality

Every production batch of SHTG 1230™ is analyzed to the requirements of UL Solutions and FM Approvals and shipped with full documentation verifying its chemical and physical characteristics.

Maximum Fire Damage Reduction

The first rule of firefighting is speed: the longer a fire burns, the greater the damage it causes. SHTG 1230™ offers extinguishing performance comparable to Halon 1301, while systems using carbon dioxide or inert gases require up to ten times longer to extinguish.

Maximum Safety for the Environment

SHTG 1230™ has no effect on the ozone layer and only a minuscule impact on the greenhouse effect. The agent is recyclable, and its high efficiency allows smaller, lighter systems that further reduce environmental impact.

Maximum Cost and Benefit Ratio

A compact system requiring fewer cylinders lowers both installation and long-term maintenance costs, without compromising the reliability that made Halon-equivalent agents the historical standard for critical asset protection.

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PERSONNEL SAFETY AND EXPOSURE LIMITS

Due to its low toxicity, SHTG 1230™ can be used to protect normally occupied areas. Maximum exposure times were determined using the EPA-approved NOAEL/LOAEL protocol incorporated into NFPA 2001. Human exposure to an atmosphere containing up to 10.0% agent for up to 5 minutes is safe.

MAXIMUM PERMITTED HUMAN EXPOSURE TIME

Concentration (% v/v)	Concentration (ppm)	Max. Exposure Time (min)
10.0	100,000	5.00

Source: U.S. EPA-approved NOAEL/LOAEL protocol, incorporated into NFPA 2001. The NOAEL for cardiac sensitization is 10.0% v/v (100,000 ppm).

Minimal Space and System Weight

Where space is a critical factor, SHTG 1230™ offers a clear advantage: systems using carbon dioxide or other inert gases occupy up to three times more physical space and weight for equivalent protection.

Maximum System Design Flexibility

SHTG 1230™ is liquid at room temperature but is applied as a gas: its very low heat of vaporization and a vapor pressure twelve times higher than water allow it to transition to a gaseous state almost instantly upon discharge.

APPROVALS, STANDARDS AND AGENT PROPERTIES

Certifications	UL Listed (UL 2166), FM Approved (FM 5600), US EPA SNAP Listed
Design standards	NFPA 2001, ISO 14520-5, EN 15004-2
Extinguishing agent	FK-5-1-12, CAS 756-13-8 (Dodecafluoro-2-methyl-3-pentanone)
Ozone Depletion Potential	0
Global Warming Potential	< 1 (100-year ITH)
NOAEL	10.0% v/v; safe human exposure up to 10.0% for 5 minutes
Physical properties	Boiling point 49.2 C, liquid at room temperature, non-flammable
Operating temperature range	0 C to 50 C

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