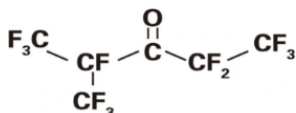


Noah®5112

Chemical name: Perfluoro (2-methyl-3-pentanone)

Synonyms: Noah5112; FK-5-1-12; Dodecafluoro-2-methylpentan-3-one;

Molecular Structure:



Molecular Formula: C₆F₁₂O

Molecular weight: 316.045

CAS No.: 756-13-8

EC NO.: 436-710-6

Chemical code: FK-5-1-12

◆ Introduction:

At normal temperature, Noah5112 is colorless, transparent and insulating liquid. It is the novel environmental harmonic and clean extinguishing agent. Noah5112 is listed in standard documents such as ISO14520-2006 Physical Characteristics of Gas Extinguishing System, the System Design, NFPA2001 Design Specification of Clean Gas Extinguishing System, and the application-design of the product is normatively described.

Noah5112 extinguishing agent is a novel substitution of halon extinguishing agent. It helps engineers and facility managers meet environmental regulations while helping ensure the safety of people, reduce risks and preserve business operations with minimal downtime. It features zero ozone depletion potential (ODP) and a global warming potential (GWP) of less than 1. Noah5112 also has the largest safety margin for use in occupied spaces of all clean agents. It effectively extinguishes fire faster than inert gas or water mist systems, requires less volume of fluid and is safe for use with electronics.

◆ Physical properties of Noah®5112:

Molecular mass	316.045
Boiling point at 1atm	49.2℃
Freezing point	-108℃
Critical temperature	168.7℃
Critical pressure	18.65 Bar
Critical density	639.1 kg/m ³
Heat of vaporization at boiling point	88.0 kJ/kg
Liquid Viscosity @25℃	0.524 cp
Solubility of water in Noah5112 @25℃	<0.001 wt%
Specific heat, liquid@25℃	1.013 kJ/kg °C
Specific heat capacity at room temperature@25℃, 1atm	0.0733m ³ /kg (1.175ft ³ /lb).
Saturated liquid density (25℃)	1.60 g/ml
Vapor pressure (25℃)	0.404 bar
Insulating property (110k)	3.8mA (Standard leakage current≤10mA)
Dielectric strength (kV)	74.6 kV (Test distance 3mm)
ODP	0
GWP	1.0
ALT(year)	0.014

◆ **Quality index:**

Inspected Item	Qualified Product	Superior Product
Purity, %,	≥99.70	≥99.90
Acidity, (as HCl), %	≤3x10 ⁻⁴	≤3x10 ⁻⁴
Water content, %	≤10x10 ⁻⁴	≤5x10 ⁻⁴
Non-volatile residue, %	≤0.01	
Quality standard:	Q/NY002-2018	

◆ **Certificate:**

- **UL** listed
- **REACH** registration; **K-REACH** (for South Korea)
- **FM** Approved

◆ **Concentrations & safety margins comparison:**

	Noah®5112	Halon1301	HFC-227ea	CO ₂
Use concentrations %	4.5-5.9	5	7.5-8.9	>30
NOAEL %	10	5	9	<5
Safety Margins %	72-122	0	5.9-20	Lethal

◆ **Environmental parameters comparison:**

	Noah®5112	Halon1301	HFC-227ea	HFC-236fa
ODP	0	12	0	0
GWP	1	6900	3800	9400
ALT(year)	0.014	65	36.5	226

◆ **Advantages:**

Excellent environmental protection performance	Noah®5112 meets the most stringent international environmental regulations
High fire-extinguishing efficiency	Minimum extinguishing concentration: 3.5% for Type A fire, 4.5% for Type B fire
Safe to use	The extinguishing concentration is much lower than (NOVAL), large safety margin
Good electrical insulation	Noah®5112 has a dielectric strength up to (3mm) 74.6KV and has passed the electrical insulation performance test of 110kV
Good cooling performance	Noah®5112 has a unique cooling effect after discharge
No residue after use	Noah®5112 volatilizes quickly after use, which will not cause damage to precision instruments, antique calligraphy and paintings
Atmospheric storage, convenient and safe transportation	Noah®5112 is liquid at room temperature, easy for filling, transportation and storage, also transported as normal cargo

◆ **Main application:**

- Noah®5112 is a green environmental, efficient and clean fire extinguishing agent, can be widely used all over the regional or local regional fire extinguishing system and portable fire extinguisher, especially applicable to electronic control center, computer room, transformer room, power distribution cabinets, wind power equipment room, energy storage power station, high precision instrument, museum, data processing center, ship control rooms, new energy vehicle lithium battery protection and other occasions of fire protection.
- It can be used as coolant for electronic equipment and protection gas for light metal smelting. It can also be used to replace sulfur hexafluoride for transformer protection.