

# Cosutin Industrial CO., Limited

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## HC-600a (R600a)

### GENERAL DESCRIPTION

HC-600a is pure iso-butane and is primarily used in domestic refrigerators that previously used R12 and R134a. Operating pressures are significantly lower than those of R134a and its evaporating temperature is significantly higher. It's neither possible or safe to retrofit existing R12 and R134a equipment to HC-600a due to the substantially increased compressor displacement requirements and its extreme flammability, which makes it impossible to use safely in existing R12 and R134a refrigeration equipment.

HC-600a organic based, naturally occurring, non-ozone depleting and environmentally friendly refrigerants with negligible global warming potential. It is suitable for use in a wide spectrum of domestic, commercial and industrial applications and in certain types of air conditioning systems.

HC-600a can be used with most commonly used refrigeration lubricants and are particularly suited to mineral oils and alkyl benzene lubricants. Polyalphaolefins (POA) and Polyalkyleneglycol (PAG) are also acceptable for use where approved by the compressor manufacturer. However solubility tends to be increased with hydrocarbon refrigerants and it may be necessary to select a higher grade viscosity than for HFCs. This is particularly the case with Polyolester (POE) lubricants. Consult the compressor manufacturer for recommendation.

Isobutane(HC-600a) also can be used as a diluent, a propellant for aerosol cans and foam products, used as part of blended fuels, especially common in fuel canisters used for camping and as a raw material in the manufacture of propylene oxide.

### SPECIFICATIONS

Appearance :	Colourless and not turbid
Purity, %	≥99.9%
Moisture%	≤0.005
Evaporation residue %	≤0.01
Acidity %	≤0.0001

### PROPERTIES

#### HC-600a

CAS Number: 75-28-5

Colour: Colourless

Smell: Faint

Appearance: Colourless and not turbid

Chemical name: Isobutane

Chemical formula: C<sub>4</sub>H<sub>10</sub>

Flash point (ASTM D 92): -118 °C at 1,013 hPa

Boiling point/boiling range: -12.7 °C at 1,013 hPa

Auto ignition temperature: 490.0°C

Flammability limits: 1.9 to 8.5 vol. % in air

Liquid density (20°C): 557.0 kg/m<sup>3</sup>

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Solubility in water: 49 mg/l. (at 20°C)  
Vapor pressure(20°C): 2100 hPa  
Partition coefficient: 2.68 Log pow  
Relative vapor density: (air = 1) 2.06

### **Handling method and safety information**

HC-600a is Extremely flammable liquefied gas. Read the Material Safety Data Sheet (MSDS) before use.

### **Packaging specifications**

Filled in 6.5kg/926L cylinders, ISO tank.