

Kalama® Benzoic Acid Technical Molten

Kalama® Technical Benzoic Acid Technical Molten is a liquid form of benzoic acid, used as an intermediate in the manufacture of chemicals, alkyd resins, polyesters, plasticizers, dyestuffs, preservatives, and rubber activators and retardants. It is also used as a diverting agent in crude oil recovery applications.

Formula: C₆H₅COOH

Molecular Weight: 122.12

CAS Registration Number: 65-85-0

EINCES Reg. Number: 200-618-2

Typical Properties

| | |
|--|---|
| Production location..... | Kalama, WA, USA |
| Assay (GC, by difference) | 99.5% minimum |
| Chlorinated compounds | None |
| Boiling point..... @ 760 mm Hg | 249°C / 480°F |
| @ 100 mm Hg | 186°C / 367°F |
| Freeze point | 122 °C / 252 °F |
| Specific gravity | (d 24/4 [solid])..... 1.32 |
| 25(d 180/4 [liquid])..... | 1.03 |
| Density | @ 155°C / 311°F8.75 lbs / gallon |
| Refractive index | @ 132°C / 270°F 1.54 |
| Flash point (T.C.C.)..... | 121°C / 250°F |
| Sublimation Point | 100°C / 212°F |
| Auto-ignition temperature..... | 573°C / 1063°F |
| Vapor pressure..... @ 132°C / 270°F | 10 mm Hg |
| @ 173°C / 343°F | 60 mm Hg |
| @ 186°C / 367°F | 100 mm Hg |
| @ 227°C / 441°F | 400 mm Hg |
| Vapor pressure equation (P = mm Hg, t = °C)..... | Log P = 8.57134 - (2726.2 / t + 230) |
| Solubility in water | @ 25°C / 77°F 0.35 grams / 100 grams of water |
| Heat of vaporization | @ 140°C / 284°F 207 BTU / lb. |
| @ 249°C / 480°F | 179 BTU / lb. |
| Specific heat..... @ 130°C / 266°F | 0.50 BTU / (lb. °F) |
| @ 160°C / 320°F | 0.54 BTU / (lb. °F) |
| @ 200°C / 392°F | 0.62 BTU / (lb. °F) |
| Heat of fusion | @ 122°C / 252°F 63.4 BTU / lb |
| Heat of combustion | @ 25°C / 77°F 11,370 BTU / lb |
| Viscosity | @ 130°C / 266°F 1.2 Centipoise |
| @ 177°C / 351°F | 0.3 Centipoise |

The above properties are typical of benzoic acid, but should not be confused with, or regarded as, sales specifications.

Storage & Handling

Due to its high melting point (122°C or 252°F), the handling of molten benzoic acid can result in thermal burns. The use of full protective clothing, including face shield, goggles, helmet, jacket, pants, and boots, is highly recommended. Kalama[®] Benzoic Acid Technical Molten should be stored in insulated Type 316L stainless steel tanks to avoid corrosion and product discoloration. The material is kept molten by means of steel coils (type 316L stainless) placed inside the tank. Storage temperatures should be kept (~ 140° C).

The flash point of benzoic acid is essentially the same as its melting point. Storing molten benzoic acid therefore involves storage above its flash point. Appropriate precautions for that type of storage must be observed. Storage in an inert environment is recommended – nitrogen blanketing or equivalent.

Benzoic Acid will freeze and block pipes, fittings, vents, etc. Therefore, special attention is needed to ensure that the material will remain in the molten state. When benzoic acid is reheated to the molten state, thermal expansion can burst piping if done incorrectly. Thus, **those considering storage and handling of molten benzoic acid are encouraged to contact Emerald Kalama Chemical for detailed recommendations.**

Transportation

Shipping molten benzoic acid involves the transportation of a material within its flammable range. Therefore, when shipping molten in tank cars or trucks, benzoic acid is regulated as a FLAMMABLE LIQUID, ELEVATED TEMPERATURE MATERIAL.

Contact Us

Americas

1499 SE Tech Center Pl, Ste 300, Vancouver, WA
800.223.0035 / +1.360.954.7100/ Fax +1.360.954.7201
KFLEX@emeraldmaterials.com

Asia Pacific

Rm 1708-09 Shui On Centre 6-8 Harbour Rd., Wanchai, Hong Kong
+852 25987807 / FAX +852 25981909
KFLEX.asia@emeraldmaterials.com

Europe, Middle East, Africa

Fascinatio Boulevard 200-232
3065 WB Rotterdam, The Netherlands
+31.88.888.0500
KFLEX.emea@emeraldmaterials.com

Global Service through our Regional Distribution Partners
www.emeraldkalama.com

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