

1452

VOC-Free Organic Water-Soluble Liquid Flux

Halide Free

Product Description

Kester 1452 is a water-based, organic acid(OA) type flux. Its fluxing activity is provided by a combination of water-soluble organic ingredients and it is formulated to have superior wetting and cleaning action. This flux is halide free and contains no solvent other than water. Kester 1452 has been developed for wave soldering of electronic components in applications which require more strength than activated rosin but where a halide type flux would not be acceptable. It is especially recommended for use on Alloy 42, Kovar and nickel and can also be used on copper and its alloys.

Performance Characteristics:

- High activity
- Minimizes icicling and bridging
- High ionic cleanliness and no surface insulation resistance degradation
- Classified as ORH0 per J-STD-004

Physical Properties

Specific Gravity: 1.255 ± 0.005

Antoine Paar DMA 35 @ 25°C

Percent Solids (typical): 56

Tested to J-STD-004, IPC-TM-650, Method 2.3.34

pH (10% solution): 2.7

Hanna Instruments 8314 @ 25°C

Flash Point: >100°C (212°F)

Reliability Properties

Copper Mirror Corrosion: High

Tested to J-STD-004, IPC-TM-650, Method 2.3.32

Corrosion Test: High

Tested to J-STD-004, IPC-TM-650, Method 2.6.15

Silver Chromate: Pass

Tested to J-STD-004, IPC-TM-650, Method 2.3.33

Chloride and Bromides: 10 ppm max

Tested to J-STD-004, IPC-TM-650, Method 2.3.35

Fluorides by Spot Test: Pass

Tested to J-STD-004, IPC-TM-650, Method 2.3.35.1

Application Notes

Flux Application:

Kester 1452 can be applied by a spray, dip, or wave process. If foam application is desired, the flux must be diluted first with about 25% alcohol.

Process Considerations:

Kester 1452 can be used as received or diluted with water or alcohol before use. Normally dilution should not exceed 1:1 by volume.

Specific Gravity 1:1 with Water	1.133
Specific Gravity 1:1 with Isopropanol	1.034

Once thoroughly mixed, the solution will not separate on standing. Kester 1452 will attack metals to some extent and is recommended that polyethylene, PVC or fiberglass reinforced polyester containers be used. Any machinery or construction materials which might be exposed to direct contact with the flux should also be able to withstand exposure to acids.

Flux Control:

Specific gravity is normally the most reliable method to control the flux concentration. To check concentration, a hydrometer should be used. DI water can be used to replace evaporative losses.

Cleaning:

No neutralizer, saponifiers or detergents are necessary in the water wash system for complete removal of flux residues. It is not recommended to use high mineral content tap water. Otherwise, tap, deionized or softened water may be used for cleaning. The optimum water temperature is 70-80°C (158-176°F), although lower temperatures may be sufficient.

Storage and Shelf Life:

Because this formulation is water based, it is subject to freezing. A minimum storage temperature of 4°C (40°F) is recommended. If frozen, the Kester 1452 is easily reconstituted by stirring at room temperature. Shelf life is 3 years from date of manufacture when handled properly and held at 4-25°C (40-77°F).

Health & Safety:

This product, during handling or use, may be hazardous to health or the environment. Read the Material Safety Data Sheet and warning label before using this product.

World Headquarters: 515 E. Touhy Avenue, Des Plaines, Illinois, 60018 USA
Phone: (+1) 847-297-1600 • **Email:** customerservice@kester.com • **Website:** www.kester.com

Asia Pacific Headquarters
 500 Chai Chee Lane
 Singapore 469024
 (+65) 6449-1133
 customerservice@kester.com.sg

European Headquarters
 Ganghoferstrasse 45
 D-82216 Gernlinden
 Germany
 (+49) 8142-47850
 customerservice@kester-eu.com

Japanese Headquarters
 20-11 Yokokawa 2-Chome
 Sumida-Ku
 Tokyo 130-0003 Japan
 (+81) 3-3624-5351
 jpsales@kester.com.sg
