Monsanto

# PRODUCT SPECIFICATION

TENTATIVE

## MONSANTO INDUSTRIAL CHEMICALS CO

PRODUCT MCS 1238

CODE NO.

GRADE

DATE EFFECTIVE March, 1976

MCS 1238 is Monsanto's tradename for a non-chlorinated, non-polychlorinated biphenyl dielectric fluid for capacitors. This application is tentative and subject to confirmation and change as experience is developed.

| CHARACTERISTICS | LIMITS |
|---|---|
| Appearance | A clear colorless to light straw liquid. |
| Specific Gravity at 25°/25°C | 1.01 - 1.03 |
| Viscosity @ 37.8°C | 9 - 12 cs. |
| Flash Point | 300°F Minimum |
| Fire Point | 320°F Minimum |
| Moisture | 0.005% Maximum |
| Df 100°C/60 Hz | 0.05 Maximum |
| DK 100°C | 5.0 - 5.2 |

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DSW 306278



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## MATERIALS COMPATIBILITY

MCS-1238 is compatible with all currently used dielectric materials; paper, polypropylene film, paper/film combination, metallized paper and metallized film. It is also generally compatible with other capacitor materials of construction used with Aroclor 1016^ chlorinated hydrocarbons. One exception is that two part epoxy sealants should not be used with MCS-1238.

It is recommended that compatibility tests be conducted with the fluid and samples of the specific materials to be used under conditions simulative of actual use. ASTM D3255, Method for Investigating the Compatibility of Transformer Insulation and Construction Materials in Askarels, has been found useful in compatibility testing.

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## HANDLING PRECAUTIONS

Since MCS-1238 may cause a moderate degree of skin irritation, care should be taken to avoid prolonged or repeated skin contact with this product. Should dermal contact occur, remove contaminant by washing with soap and water. In case of eye contact, flush eyes thoroughly with large amounts of water.

This product appears to possess no other acute toxicologic properties which would require special handling other than the good hygiene practices employed with any industrial chemical.

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## RECOMMENDATIONS FOR USE

An antioxidant and an epoxide scavenger should be used with MCS-1238. Ionol* (2,6-ditertiary butyl para cresol) antioxidant is present in the new fluid and 0.01% should be added to the fluid during each purification cycle in the capacitor impregnation process. A convenient method of handling the Ionol is to dissolve the required amount in a small amount of MCS-1238 and add the resulting solution to the batch of fluid.

The suggested sequence of MCS-1238 fluid preparation is similar to that used for Aroclor 1016 chlorinated hydrocarbons; specifically, remove moisture (20 ppm maximum), add epoxide, clay treat, add antioxidant, degas and then use the fluid for impregnation. Conditions for each step are determined by the specific equipment used; therefore, no operating details are listed.

## SHIPPING INFORMATION

DSW 306280

MCS-1238 is available in standard steel drums and cans. Shipping classification is Plastics Synthetic Liquid NOIBN.

MCS-1238 labels must contain the following statement:

CAUTION - MAY CAUSE SKIN IRRITATION.

AVOID PROLONGED OR REPEATED CONTACT WITH SKIN.

FIRST AID: IN CASE OF CONTACT, WASH THOROUGHLY WITH WATER.

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