



AUTOMATE™ Black 1XS

Liquid Concentrated Solvent Soluble Dye

Description

AUTOMATE™ Black 1XS is a single phase, liquid concentrated solvent soluble dye provided in a xylene solvent system. The solvent is used in the product as a viscosity depressant and standardizing agent.

The product has been found to be completely miscible in all petroleum fuels, lubricating oils and many other related hydrocarbon solvents, including grease and hydraulic oils. It has found use in a variety of applications including the coloration of lubricants, solvents, and explosives. It can be mixed with other colors in the AUTOMATE product line to create a limitless number of shades.



The product is available in bung-type nonreturnable steel containers.

Recommended Dosage

The following recommendations are provided as a starting point for typical applications. Actual dosage will depend on desired color strength as well as background color of the base material.

Fuels	5 to 20 mg/l
Lubricants	50 to 200 mg/l
Greases	500 to 2000 mg/l

Typical Physical Properties

AUTOMATE™ Black 1XS

Dye Type	Azo/Anthraquinone Mixture
Specific Gravity	0.95 – 0.97
Density (lbs/Gal)	8.0
Brookfield Viscosity @ 25°C	5 to 50 cps
Flash Point, (ASTM D-3278)	30°C, 83°F
Pour Point, (ASTM D-97-87)	-10°C to - 20°C

These are typical properties, not to be construed as specifications.



Product Specifications

AUTOMATE™ Black 1XS

Color Strength	100 ± 5%
Absorbance (at 64 mg/l conc.)	0.769 AU ± 5%
Wavelength Measured	646 ± 5 nm
Color Shade (Chromaticity Values)	
X Value	0.336 – 0.407
Y Value	0.348 – 0.399
Insolubles	1.0% Max
(Filter Method)	
Water	0.4% Max
(Karl Fisher Method)	

Handling Precautions

AUTOMATE Black 1XS has been formulated to accommodate handling at temperatures down to 0°C. To ensure pumpability at temperatures below this we recommend diluting the product with an aromatic solvent.

Any piping, fittings, valves, filters, metering pumps, etc. should have wetted parts compatible with that of a naphthalene depleted heavy aromatic solvent system.

Before using this product, consult the Safety Data Sheet (SDS) for details on product hazards, first aid measures, recommended handling precautions, recommended personal protection equipment and product storage.

CAUTION! Keep combustible and/or flammable products and their vapors away from heat, sparks, flames and other sources of ignition including static discharge. Processing or operating at temperatures near or above product flashpoint may pose a fire hazard. Use appropriate grounding and bonding techniques to manage static discharge hazards.

Storage

The recommended storage temperature for this material is between 10 and 40°C. Exposure to excessively low temperatures should be avoided as it may cause increased levels of precipitation. The product is flammable with a low flash point. Therefore it should be stored away from excessive heat sources and all potential ignition sources. **All metal containers should be grounded during storage, handling and transfer.**

If product containers are kept sealed and dry and extreme temperatures are avoided the shelf life of the material is greater than 3 years. The container should be tightly closed when not in use in order to prevent solvent evaporation.

Product Stewardship

Dow has a fundamental concern for all who make, distribute, and use its products, and for the environment in which we live. This concern is the basis for our product stewardship philosophy by which we assess the safety, health, and environmental information on our products and then take appropriate steps to protect employee and public health and our environment. The success of our product stewardship program rests with each and every individual involved with Dow products - from the initial concept and research, to manufacture, use, sale, disposal, and recycle of each product.



Customer Notice

Dow strongly encourages its customers to review both their manufacturing processes and their applications of Dow products from the standpoint of human health and environmental quality to ensure that Dow products are not used in ways for which they are not intended or tested. Dow personnel are available to answer your questions and to provide reasonable technical support. Dow product literature, including safety data sheets, should be consulted prior to use of Dow products. Current safety data sheets are available from Dow.

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