

TECHNICAL INFORMATION SHEET

COSAN CHEMICAL CORPORATION

400 FOURTEENTH STREET • P.O. BOX 7 • CARLSTADT, NJ 07072 • (201) 460-9300

COSAN 101

EPA Reg No. 8489-25

PRODUCT: COSAN 101 is an effective preservative for resin emulsions, latex paints, adhesives, dispersed colors, pigment slurries, and ready-mix joint cements. This product is a 77.2% aqueous solution of 4,4-dimethyloxazolidine and its trimethyl homolog. This organic molecule contains only four elements: carbon, hydrogen, oxygen, nitrogen and when used at recommended levels will prevent bacterial deterioration of water-based systems.

COSAN 101 has antimicrobial activity against a broad spectrum of microorganisms. Listed below are some MINIMUM INHIBITORY CONCENTRATIONS (MIC) of COSAN 101 against various microorganisms. This list is provided to show the broad spectrum activity of COSAN 101 and is not to be construed as a listing of organisms associated with the spoilage of any water-based system. The minimum inhibitory ranges shown are the highest concentrations showing growth and the lowest concentrations showing no growth.

ORGANISM

Pseudomonas aeruginosa
Pseudomonas fluorescens
Aerobacter aerogenes
Bacillus megaterium
Bacillus subtilis
Desulfovibrio desulfuricans
Escherichia coli
Proteus vulgaris
Staphylococcus aureus

MIC

125-250 ppm
 250-500 ppm
 125-250 ppm
 125-250 ppm
 125-250 ppm
 10-25 ppm
 250-500 ppm
 125-250 ppm
 125-250 ppm

ACCEPTED

NOV 29 1988

Under the Federal Insecticide, Fungicide, and
 Rodenticide Act, as amended, for the
 pesticide registered under
 EPA Reg. No. 8489-25

USE: COSAN 101 will protect and preserve raw materials and finished products at use concentrations of 0.1% to 0.5% based on total weight of composition. When used at the recommended level, this product will remain effective in the unopened can or package and throughout the substrate's useful service life. COSAN 101 will maintain its antibacterial efficacy without adversely affecting the physical properties of the formulation in either the wet or dry state. COSAN 101 is non-yellowing and can be added at any point in the production cycle. Good operating procedure should require the incorporation of this preservative early in the manufacturing process. The point of addition will vary with the process being conducted. The only guideline to follow is that after biocide addition the product should not be subjected to temperatures in excess of 175°F.

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**USE THE FOLLOWING CONCENTRATIONS
BASED ON TOTAL WEIGHT OF SYSTEMS.**

0.05 - 0.2%

To protect and preserve resin emulsions, the recommended concentration is based on total weight of system. This level will prevent bacterial spoilage from occurring throughout the emulsion's useful service life, which includes transit and storage. The point of preservative addition should be in the cool-down cycle. Where added quantities are not required, it can be safely post-added.

0.1 - 0.3%

• D-5900 can easily be incorporated during any phase of paint manufacture. We recommend the addition immediately after the initial charge of water. At recommended use levels, no adverse physical paint properties have been observed.

0.1 - 0.5%

0.1 - 0.3%

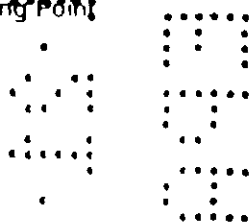
0.1 - 0.25%

in the manufacture of the above materials, preservative addition should come just after the addition of water or similar inert solvent. This will insure good product distribution and provide antibacterial activity to the product at an early stage of manufacture.

FOR SPECIFIC RECOMMENDATIONS PLEASE CONTACT COSAN CHEMICAL CORPORATION
MICROBIOLOGICAL ASSAY CAN DETERMINE THE LEVEL REQUIRED FOR YOUR PARTICULAR FORMULA AND
DESIRED END USE. THE COSAN LABORATORIES ARE READY TO SUPPLY THIS GUIDANCE.

SPECIFICATIONS:

Active Ingredients	77.2%
4,4-dimethyloxazolidine	74.7%
3,4,4-trimethyloxazolidine	2.5%
Physical Appearance	Clear, Almost Colorless Liquid
Color, Gardner	2 max
Specific Gravity (25/25°C)	0.98-0.99
Pounds Per Gallon	8.2
Viscosity (25°C)	app 7.5 cp
pH	10.5-11.5
Freezing Point	below -20°C



NOTICE: This product is for industrial use only by persons having technical skill in formulating coatings, adhesives, elastomers, etc. The manufacturer, CHEMICAL CORPORATION, MAKES NO REPRESENTATION OR WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, WITH RESPECT TO THE RESULTS WHEN NOT USED IN STRICT ACCORDANCE WITH PREPARED INSTRUCTIONS. CHEMICAL CORPORATION, INC. RECOMMENDATIONS FOR THE USE OF THIS PRODUCT ARE BASED ON INFORMATION THAT HAS BEEN FOUND TO BE RELIABLE. The performance of this product is dependent on many factors, including, but not limited to, the nature of the substrate to be treated. The manufacturer is not responsible for results when the product is used with materials, procedures, or conditions not recommended. The product is not to be used under unsanitary conditions or where it may be exposed to moisture. This product is a raw material, to formulate the product. Under no circumstances will the manufacturer be held responsible for any claims or damages, including profits, anyone in excess of the purchase price of the product. The product is to be stored in a cool, dry place, and handled not in strict accordance with the precautionary instructions on the label.