



TECHNICAL BULLETIN

Aquatic Eco-Toxicity Information for RUBBERPREP[®]

National Coatings Corporation advocates the use of prudent judgment regarding the release of roof rinsate containing EPDM roof primer, RUBBERPREP[®] into the environment. Based on aquatic toxicity data, RUBBERPREP is classified as LOW CONCERN ($EC_{50} > 100$ mg/L) for fish, aquatic invertebrates and algae according to the US Environmental Protection Agency (EPA) classification criteria for environmental toxicity and fate of industrial chemicals. Specifically the results of the aquatic toxicity studies are as follows:

Rainbow Trout

96 hour $LC_{50} > 1000$ mg/L total product
96 hour NOEC = 500 mg/l total product

Daphnia Magna

48 hour $EC_{50} > 1000$ mg/L total product
48 hour NOEC = 500 mg/L total product

Selenastrum Capricornutum (sentinel algal test species data)

96-hour EC_{50}	$> 1,000$ mg/L	NOEC = 1,000 mg/L total product
96-hour E_bC_{50}	$> 1,000$ mg/L	NOEC = 250 mg/L total product
96-hour E_rC_{50}	$> 1,000$ mg/L	NOEC = 1,000 mg/L total product

Lethal Concentration 50% (LC_{50}); Effective Concentration 50% (EC_{50}); No Observable Effect Concentration (NOEC). Note for the algae, the E_bC_{50} reflects the amount required to inhibit biomass by 50% and the E_rC_{50} reflects the concentration required to inhibit by 50% the rate of growth of the organisms. Importantly, no effect of the formulated material on increased biomass in the algal cultures, i.e. induced algal blooms were observed.

The pH of the RUBBERPREP formulation is within the alkaline range (pH 12). Dilution of the primer with rinsate and subsequent added dilutionary capacity of receiving streams, rivers or ponds would likely buffer any potential for adverse effects to sensitive aquatic organisms as a consequence of pH perturbations. For smaller water courses, rinsate/receiving stream volume ratios are important, particularly during periods of low flow. In low flow situations where the rinsate will be directly released to the water course significant dilution of the formulation via rinsate is suggested. The RUBBERPREP formulation is not an emulsion and as such will not likely discolor any receiving water body.

Because of the low toxicity of the formulation to fish, aquatic invertebrates and algae it is unlikely that releases of the diluted RUBBERPREP material into a storm sewer will cause adverse impact to exposed organisms. The numbers and diversity of organisms in these non-natural systems are anticipated to be low. Increased dilutionary capacity of any receiving water body will serve to further mitigate any potential for adverse effects. Without detailed plans regarding the receiving water course at the site in question, caution should be exercised. Release of rinsate into pristine or near pristine water courses should be avoided.

With regard to the potential for persistence within the environment, Quantitative Structure Activity Relationship (QSAR) modeling employing the EPA's EPIWIN software indicates that for the principal components of RUBBERPREP, primary degradation will be anticipated to occur in the days to weeks range with ultimate biodegradation anticipated to occur within the weeks to months time frame. Thus, it is anticipated that the components of RUBBERPREP will not persist in the environment.

NOTE: Compliance with local regulatory ordinances regarding releases of the rinsate into the aquatic or soil compartments should be ensured prior to any disposal operation. RUBBERPREP contains approximately 5% phosphates by weight.