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## NOVACRON NC- A New Generation of Reactive Dyes

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Jean-Marie Sire has been associated with Ciba since March 1972 (CIBA-GEIGY, CIBA and HUNTSMAN Textile Effects, Basel (Switzerland)). He was the Project leader for the market introduction of NOVACRON NC reactive dyes (finalist of 2008 Award of Innovation of Society of Dyers and Colourists). He has several patents and publications to his credit. He has visited various countries across the globe for promotion purpose, training and technical assistance to subsidiaries and customers to assist sales organization.

He has an extensive technical expertise that includes identifying continuous, CPB and exhaust dyeing value drivers, supporting coherent range, product strategy and providing transparent overview on dyes positioning, focus and segmentation, besides other functions. He also has an extensive experience in participation and contribution to congresses, exhibitions related to textile technologies.



### ABSTRACT

Earth tone shades such as olive, grey, brown, sand, beige, khaki, represent a significant percentage of the colors dyed in continuous and exhaust mills. These shades are particularly difficult to dye and reproduce consistently with conventional yellow/red/blue reactive dyes. Any variation in dyeing conditions will lead to changes in the behavior of conventional reactive dyes which will result in shade deviations, seconds and increasing the cost of production due to reprocessing. This will result in delays in supply and reduced competitiveness. For these critical shades a proven increase in reproducibility has been obtained by using a totally different approach in the area of reactive dyes application: This involves the use of shading components close to the target shade. Bulk evaluation and feedback from textile industry have proven that NOVACRON NC, with robust poly-reactive systems and optimized selection of non-contrasting colors – Yellow NC / Brown NC / Olive NC / Grey NC– demonstrates a tremendous improvement in lab-to-production and batch-to-batch reproducibility. Repeated application problems and production issues such as tailing, center-side shade variations and two-sidedness have been eliminated. The right balance between yellow/brown/olive/grey non contrasting chromophores and modern hetero-bireactive chemistry has enabled Huntsman R&D to create original and novel reactive dyes for continuous and exhaust application on cellulosic fabrics. These dyes are ideal for home textile, apparel, shirting and sheeting. These new reactive dyes allow for higher productivity and easier shade planning by reducing the complexity of production (eg replacement of vat dyes by reactive dyes). NOVACRON NC dyes optimize the use of scarce energy and water resources whilst minimizing effluent load. This new generation of reactive dyes allow for the implementation of continuous dyeing processes without electrolyte, highly reliable silicate-free and low energy consuming cold pad-batch method. NOVACRON NC reactive dyes tremendously enhance the performances of short and ultra-short liquor ratio exhaust processes at low temperature (max 60°C) and with reduced amount of electrolyte. Ecology of application processes, performances of dyehouses are definitively improved. Finishes such as easy care, wrinkle-free, stain release, laundering with enzymes enhance the added value of the finished goods. The shade of conventional reactive dyes often changes after finishing. NOVACRON NC dyes have very high shade stability, on-tone fading leading to improvements in shade management and a cutting edge the Right-First-Time performance. Consumers request today very high fastness level to repeated washing. Light and wet-light fastness, ozone and gas fading have become real issues. The standard specifications for all these fastnesses for apparel and home textiles items are fulfilled by NOVACRON NC dyes due to the use of innovative chemistry. Extensive bulk trials have been carried out over the 2 years on a variety of fabrics using various application processes right around the world. The results of these trials have clearly demonstrated the superiority of NOVACRON NC dyes compared to any existing reactive dyeing system and we are pleased to say that our customers have been delighted with the increase in technical and commercial performance.