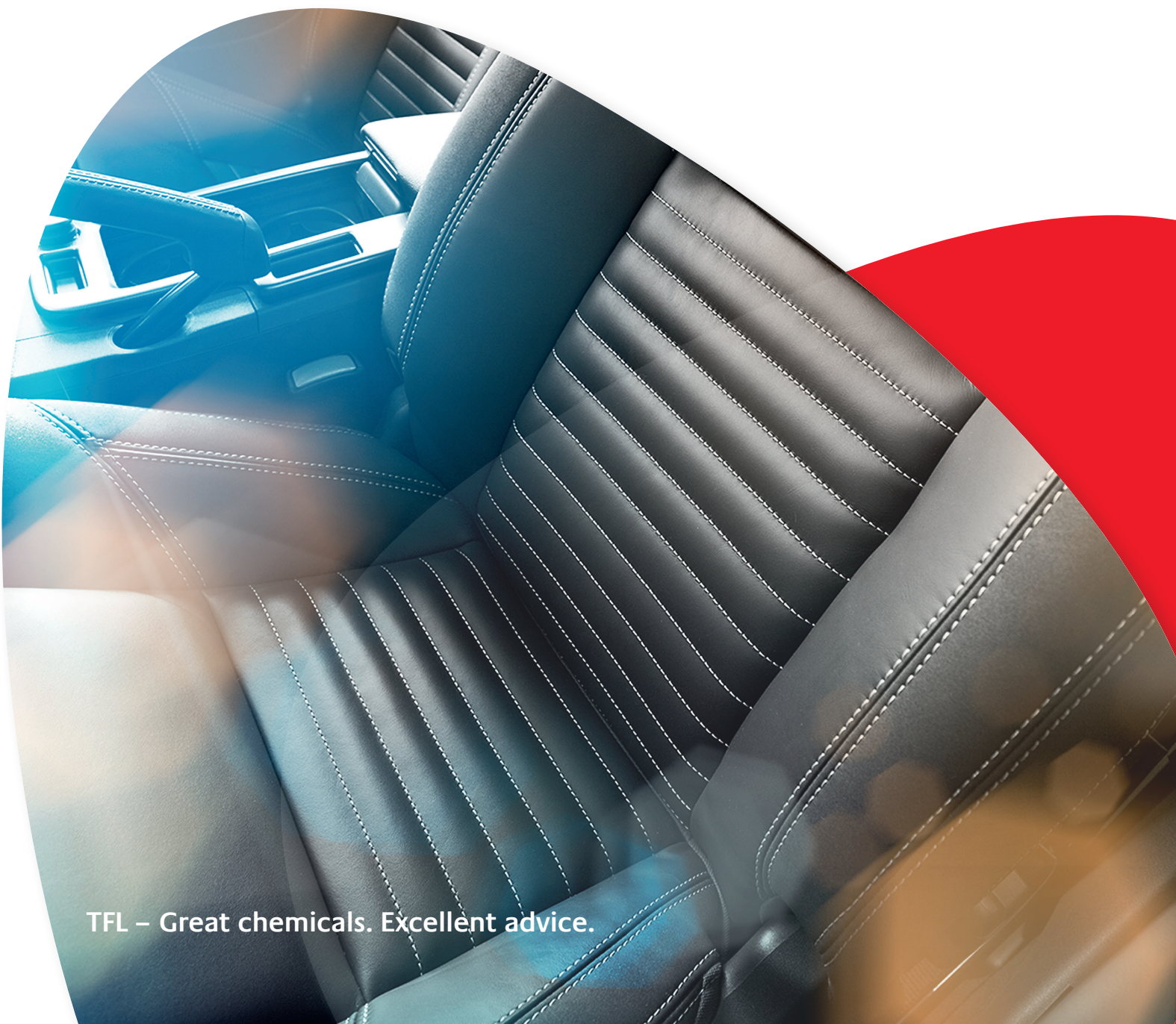




TFL LOW EMISSION

The next step to low emission in car interiors

» Selected processes and chemicals taking care of air quality



TFL – Great chemicals. Excellent advice.



Car leather – significant potential for emissions

Your TFL solution for better air quality in car interiors

Emissions of volatile organic compounds from vehicle trim components such as leather can affect the interior air quality and therefore the comfort and health of drivers and passengers. Several countries have therefore established regulations and guidelines about vehicle interior air quality (VIAQ) and the automotive industry has specified chemical emission limits and testing requirements for automotive components.

Product selection to fulfill low emission specifications

Chemicals applied in the leather processing may cause unwanted VOC emission. Therefore a careful screening of all products used from beamhouse to finishing needs to be performed to understand the main sources of potential emissions.

Fatliquoring has a high impact on the emission behavior of leather – be it odour, fogging or harmful substances. Enjoy significantly reduced emissions in your car interior with an innovative TFL fatliquoring concept. Thanks to CORIPOL® LE / AV / AT you can enjoy a soft and smooth ride with the best in class emission behavior for automotive leathers of all kinds.



CORIPOL® LE, CORIPOL® AV, CORIPOL® AT			
CORIPOL®	LE	AV	AT
Chemistry	Natural and synthetic materials	Natural, renewable fatty substances	Viscosity optimized lecithin
Active content	82 %	50 %	94 %
Stability against → low pH	●	●	●
Stability against → hard water	●	●	
Stability against → chromium		●	
Application	Main fatliquor for nappa articles	Main fatliquor for embossed articles	Co – fatliquor for inner softness

The selection of suitable de-greasing, retanning, fixing and finishing products are also of high importance for the optimization of the emission behavior. Please consult your TFL representative for advice. TFL can offer you tailor made solutions for your articles.

Chinese Emission GB / T27630

The chinese government is defining a new national standard specifying different concentration limits for eight VOC's emitted by components used in car interiors.

Acetaldehyde in automotive leathers is the biggest challenge within the eight VOC's of GB / T27630. Acetaldehyde has a very low boiling point and is highly water soluble; nevertheless it may occur in leather and can be detected in emission tests, such as TSM0508G:2009 & TIS 01204-00351A.

How to control acetaldehyde in leather?

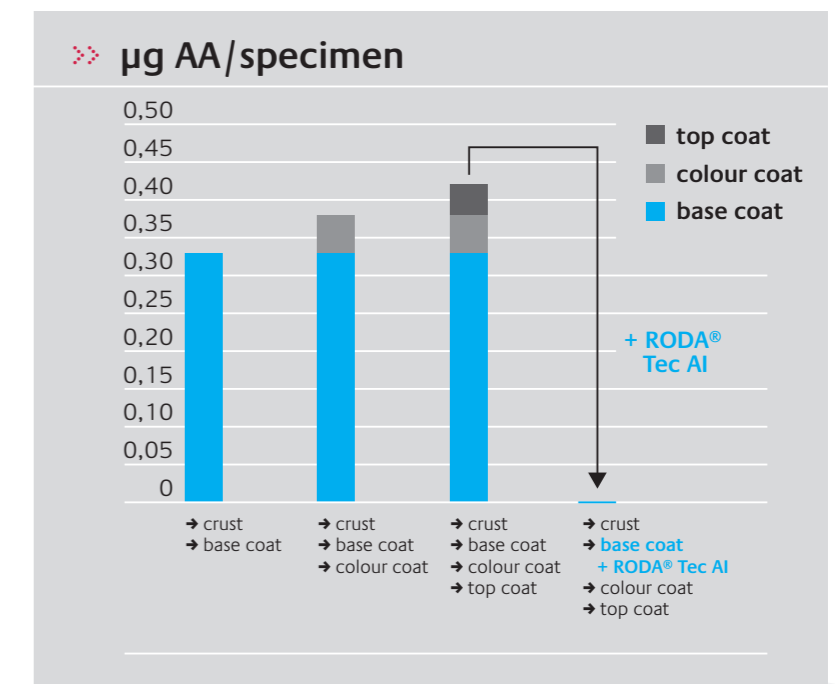
Acetaldehyde isn't used in the synthesis of TFL products, however, small amounts may be found with extraction methods. Therefore TFL has selected products to be used from beamhouse to finishing which allow leather production with a significant reduction in acetaldehyde, such as:

- PELLVIT® LSG in soaking / BORRON® DL / SAF in de-liming to avoid the use of non-ionic de-greasing agents
- CORIPOL® LE / AV / AT are best in class for automotive fatliquoring
- MAGNOPAL® SFT-F / IPF in retanning and filling to develop specific articles

RODA® Tec AI – the acetaldehyde Inhibitor

TFL has developed an acetaldehyde scavenger to be used in wet end applications and in finishing to eliminate remaining acetaldehyde which may still be present in spite of optimized product selection.

Please find below a chart showing the accumulation of acetaldehyde levels in the different finishing layers and, the significant impact of RODA® Tec AI used in base coat to reduce acetaldehyde emission:



Enjoy a clean ride with TFL tailor made solutions for optimal emission behaviour of your leather interior. Discover superior softening power and the lowest levels of volatile substances with CORIPOL® LE / AV / AT. Buckle up for more safety against acetaldehyde emissions with TFL's latest innovation: RODA® Tec AI.



TFL PRODUCT SELECTION – to fulfill low emission specifications



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