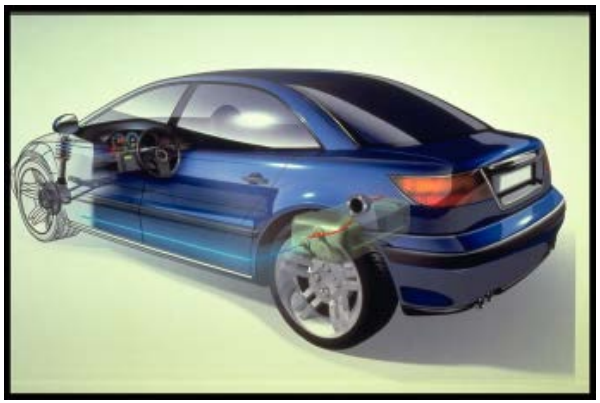
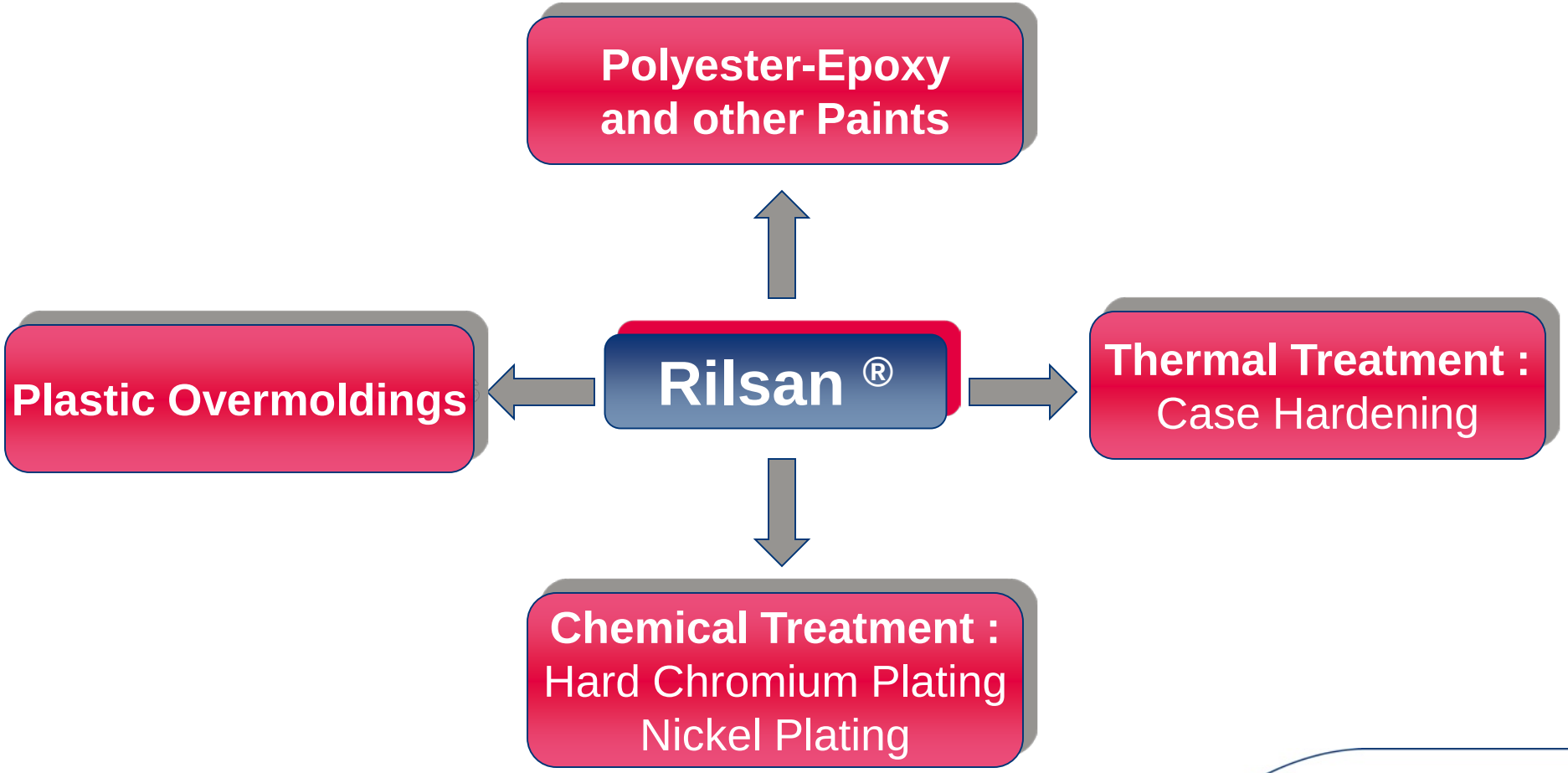
Automotive and industrial vehicles applications



ARKEMA
INNOVATIVE CHEMISTRY

Rilsan® coating

Rilsan® coating system competitively replaces



Case file: Sliding door rails

Qualified for:

Minivans/passenger cars opening door sliding systems

Grades :

ES Black 625 MACA, ES Black 710 MAC

Main reasons for choosing Rilsan®:

- Resistance to compression and abrasion
- Low coefficient of friction : vibration & noise control
- Protection against corrosion, chemical resistance
- Good weathering properties (UV, temperature)
- Nice surface finishing
- Cost competing solution vs. stainless steel

Case file: Spline / drive shafts

Qualified for :

Medium/Heavy & Light trucks transmissions

Tractors power take-off

Grades :

T Nat BHV2, T colored BV/HV

ES Black 820 MAC

Main reasons for choosing Rilsan® :

- Solution homologated for 40 years
- Outstanding abrasion resistance. Chemical resistance to oil & fluids
- Noise and vibration control
- Excellent creep resistance under load
- Easy processing (no sagging, good edge covering) & easy broaching

Case file: Steering shafts

Qualified for :

Telescopic passenger cars steering columns

Grades :

T Nat BHV2, T colored BV/HV

Main reasons for choosing Rilsan® :

- Low coefficient of friction over a wide temperature range
- Decreases the motor effort required for electrical steering systems
- Noise and vibration control
- Easy broaching to achieve desired thickness
- Flexible technology: applicable to any kind of design *(competes with cost advantages vs. injection molding)*

Case file: Gear Box Fork

Qualified for :

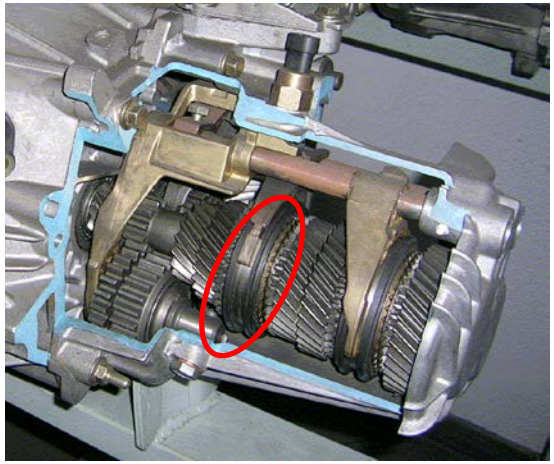
Tractors, Light trucks and Cars gearing boxes

Grades :

T Nat BHV2, T colored BV/HV

Main reasons for choosing Rilsan®:

- Outstanding abrasion resistance (no wear)
- Good mechanical (compression) resistance, over a large range of temperatures
- Chemical resistance to oil & fluids
- Less expensive solution :
  - - 2 X less expensive than Flame Sprayed Molybdenum Wire
  - - 10 X less expensive than Plasma coating with Molybdenum



Case file: Strap band for trucks

Qualified for :

Heavy trucks straps for air / diesel & gas tanks

Grades :

ES Black 710 MAC

Main reasons for choosing Rilsan®:

- Durable anti-corrosion protection (protects gas tank)
- Stone chipping resistance
- Bendability
- Good weathering properties (UV, temperature)
- Chemical resistance (brake liquid, fuel grease, salts...)
- Cost competing solution vs. stainless steel

Case file: Roof racks

Qualified for :

load carriers systems

Grades :

Pebax® ES Black 9002

Main reasons for choosing Pebax®:

- Softness. Protects exterior paint
- Adhesion and tractional properties (grip)
- Easy processing
- Flexible technology: material is applicable to any kind of design *(coated parts compete with cost advantages vs. injected molded parts)*

Case file: Parts for “under the hood” environment

Qualified for :

Releasing and Safety systems (hood support, hood release)

Grades :

T Black 7450 AC, T Yellow 7473 AC,

T Yellow 7379 MAC, MC Black 820 MAC

Main reasons for choosing Rilsan®:

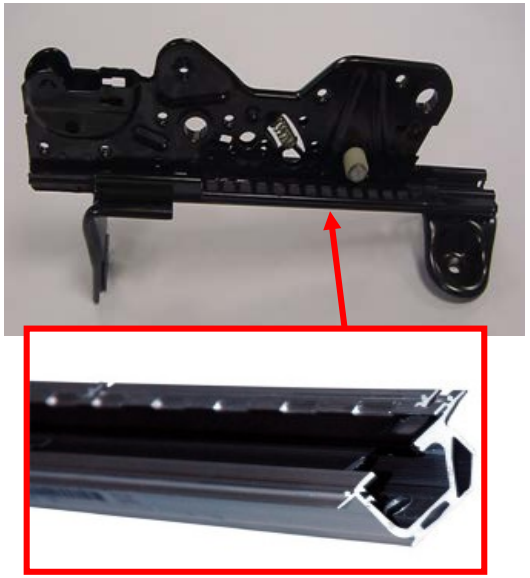
- Resistance to wear and “micro-vibrations”
- Good impact resistance
- Productivity of coating process (maxicoat)

Case file: Interior Parts - Seat components

Qualified for :

Seat sliding systems of any type

Seat belt anchors. Hooks, clips, springs



Grades :

T Black 7450 AC, MC Black 820 MAC

ES Black 625 MACA

Main reasons for choosing Rilsan®:

- Abrasion resistance
- Vibration and noise reduction
- Productivity of coating process (minicoat)
- Attractive surface finish

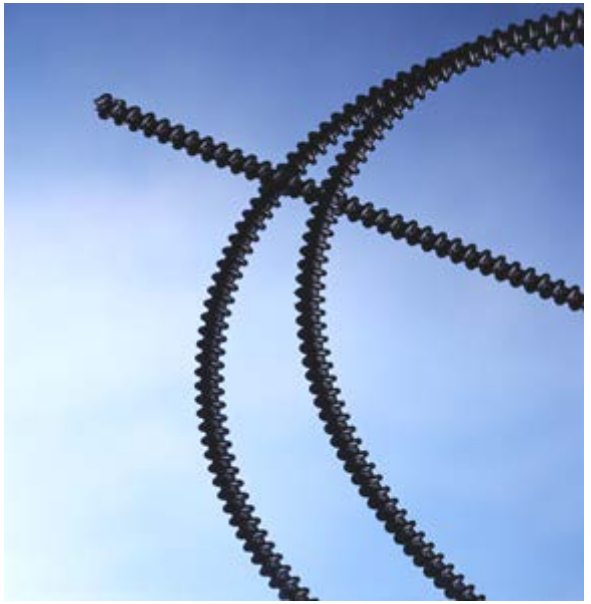
Case file: Sun roof cables

Qualified for :

Roof opening mechanisms (endless screw cables)

Grades :

ES black 625 MACA



Main reasons for choosing Rilsan®:

- Low coefficient of friction
- Long term wear resistance
- Performance over a wide range of temperatures

Case file: Handrails

Qualified for :

Public transportation (buses, trains, subway) equipments

Grades :

ES colored MAC, T colored MAC

Main reasons for choosing Rilsan®:

- Smoothness, warm-to-the-touch surface
- Abrasion resistance
- Impact resistance
- UV resistance
- Cleaning agent resistance
- Large choice of colours required by municipalities & companies

Case file: Anti-theft device

Qualified for :

Safety locking systems

Grades :

T colored MAC

Main reasons for choosing Rilsan®:

- Abrasion resistance
- Mechanical resistance
- Smooth, warm-to-the touch surface

Case file: Nudge bars

Qualified for :

Vans & 4WD pick-up trucks front protection systems

Grades :

T Black 7450 AC

Main reasons for choosing Rilsan®:

- High performance anti-corrosion solution
- Stone chipping resistance
- Resistance to outdoor exposure (UV resistance)

Case file: Wheel weights

Qualified for :

lead-free wheel weights, spared parts of all types

Grades :

MC Grey 49 MAC, ES Grey 49 MAC

Main reasons for choosing Rilsan®:

- High corrosion protection
- Stone shipping resistance
- UV resistance
- Bendability
- Productivity of coating process (minicoat)

Case file: Tubes / fuel line

Qualified for :

“under the hood” fuel line tubing

Grades :

ES(Y) Black MAC

Main reasons for choosing Rilsan®:

- Stone chip resistance
- Coating’s adhesion
- Finished tube processability (bending, flaring, etc...)
- Chemical resistance (brake liquid, fuel grease, salts, etc....)
- Competes with cross-head extrusion

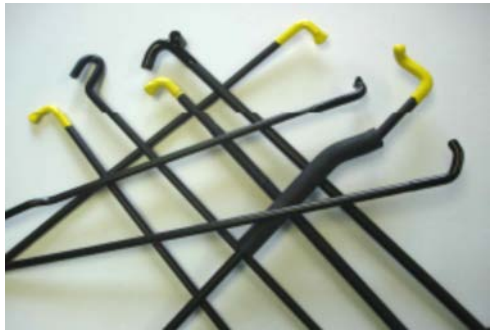
RFP : A large number of coating processes

Fluidized bed

- Spline shafts
- Drive shafts
- Gear box forks
- Under the hood parts
- Interior parts
- …

Electrostatic spraying

Minicoat



ARKEMA INNOVATIVE CHEMISTRY

RFP : A large number of coating processes

Fluidized bed

Electrostatic spraying

- Sliding door rails
- Strap bands
- Roof racks
- Seat components
- Tubes / fuel Lines
- …

Minicoat

ARKEMA INNOVATIVE CHEMISTRY

RFP : A large number of coating processes

Fluidized bed

Electrostatic spraying

Minicoat

- Seat components
- Under the hood parts
- Wheel weights
- Interior parts
- …

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