Brake and Clutch Fluid DOT 3

Automotive Brake & Clutch Fluid

Product Data Sheet

Customer benefits

Good brake response

High boiling point and resistance to vapor formation under normal service conditions ensures that brake pedal travel is taken up in activating the brakes rather than compressing the fluid.

Protects metal surfaces

Buffered formulation provides protection from acidic oxidation products for cast iron and steel components by maintaining the pH of the fluid in the alkaline range. Advanced technology inhibitors protect other metals such as aluminum, brass, copper, zinc and tin from corrosion by forming a protective layer on the surface.

Minimizes leakage and loss of pressure

Correct seal swell and lubricity characteristics minimize leakage through seal shrinkage and component wear caused by excessive seal swelling and/or inadequate lubrication of moving parts.

Good performance during service life

High thermal and oxidation stability resists fluid degradation and formation of harmful deposits, ensuring the retention of key performance features over the full life of the fluid.

Applications

- All hydraulically operated motor vehicle braking systems (drum and disc types) for which a DOT 3 or SAE J1703 fluid is specified. This may include:
  - Vehicles with anti-lock (ABS) braking systems
  - Hydraulic clutch systems requiring conventional fluids
  - Passenger cars, commercial road transport, and motorcycles

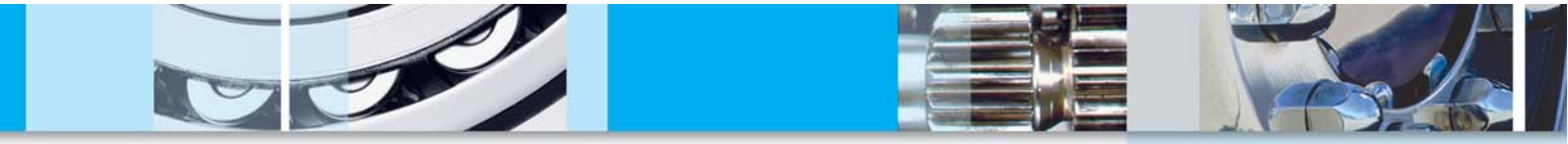
For vehicles operating in particularly severe service conditions, or where a DOT 4 fluid is specified, Caltex Brake and Clutch Fluid DOT 4 is recommended.

For vehicles operating in extreme service conditions, or where a DOT 5.1 fluid is specified, Caltex Brake and Clutch Fluid DOT 5.1 is recommended.

Not to be used in systems designed for mineral oil based fluids (LHM), e.g., certain Citroen models and many off-highway vehicles and tractors, or where Silicone DOT 5 fluids are recommended.

Product features:

- Brake and Clutch Fluid DOT 3 is a high quality, non-petroleum automotive brake fluid designed for use in conventional hydraulic brake and clutch systems under normal service conditions.



Product specifications

BRAKE AND CLUTCH FLUID DOT 3 KEY PROPERTIES	
FMVSS Grade	DOT 3
Equilibrium Reflux Boiling Pt., °C	229
pH	8.8
Viscosity,	
mm2/s @ -40°C	1365
mm2/s @ 100°C	2.2
Wet Equilibrium Reflux Boiling Pt., °C	152

1201

Performance standards

Brake and Clutch Fluid DOT 3 meets the requirements of the following specifications:

- U.S. Federal Motor Vehicle Safety Standard FMVSS No. 116 DOT 3
- SAE J1703
- ISO 4925 (Class 3)
- JIS K2233-95 (Type 3)

ENVIRONMENT, HEALTH and SAFETY

Information is available on this product in the Material Safety Data Sheet (MSDS) and Customer Safety Guide. Customers are encouraged to review this information, follow precautions and comply with laws and regulations concerning product use and disposal.

To obtain a MSDS for this product, visit: www.caltex.com.

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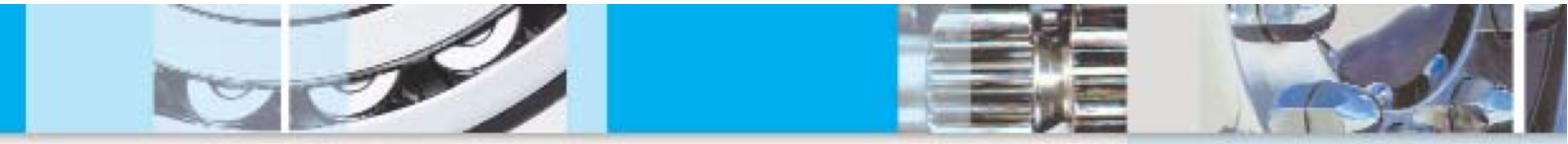

Service considerations

Conventional brake fluids absorb moisture from the air. This lowers the boiling point of the fluid and reduces the margin of protection against "vapor lock", a phenomenon which arises from the formation of vapor bubbles in the brake system and causes spongy pedal action or complete loss of braking effectiveness. Conditions conducive to vapor lock include frequent braking during long descents, towing heavy loads or binding brakes.

In order to minimize the amount of moisture absorbed, it is important that containers of brake fluid be kept tightly sealed and stored in a clean, dry location. Small containers should be used immediately after opening and then disposed of, along with any remaining contents.

In service, brake fluids slowly absorb moisture, both through the rubber brake hoses and also via the reservoir vent. For this reason, most vehicle manufacturers recommend regular changes of brake fluid at intervals varying from 12 to 36 months. Unless the vehicle manufacturer recommends otherwise, Caltex recommends that brake fluid is changed at 24 monthly intervals in order to avoid the danger of vapor lock outlined above.

Always change brake fluid in accordance with the vehicle manufacturer's recommendations.

When changing brake fluid, it is critical that no contamination of the fluid occurs. Contact with even small quantities of dirt, solvents, or particularly petroleum based products (mineral oils, fuels, greases, etc.), may result in complete brake failure or costly repairs, while contamination with moisture can cause vapor lock in service. Absolute cleanliness is essential to avoid these problems.

Under no circumstances should Caltex Brake and Clutch Fluid DOT 3 be mixed with any petroleum product, such as engine oil or hydraulic fluid. The use of brake fluid contaminated with mineral oil damages brake system seals which are specifically designed to be compatible with non-petroleum brake fluids, leading to leakage of the brake fluid and the compromise of brake system performance.

Caltex Brake and Clutch Fluid DOT 3 is compatible with other brands of DOT 3 brake fluid, and may be used as make-up or service refill wherever DOT 3 brake fluid is recommended.

Produced by:
Chevron Lubricants
- Asia Pacific

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