

# MATERIAL AND SAFETY DATA SHEET

## 1: IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND OF THE COMPANY / UNDERTAKING

**Product Name:** Calibration Fluid IE  
**Application:** Calibration fluid for fuel injection pumps and injector nozzles.  
**Company:** Castrol Brazil Ltda..  
**Address:** 2400, Itaóca Avenue - Inhaúma Rio de Janeiro - Brazil  
**Telephone:** 55 - 21 - 598 7222

## 2: COMPOSITION / INFORMATION ON INGREDIENTS

**Composition:** Hydrocarbon solvent highly refined and additives.  
None of the ingredients of this product are classified as hazardous.

## 3: HAZARDS IDENTIFICATION

FLAMABLE.

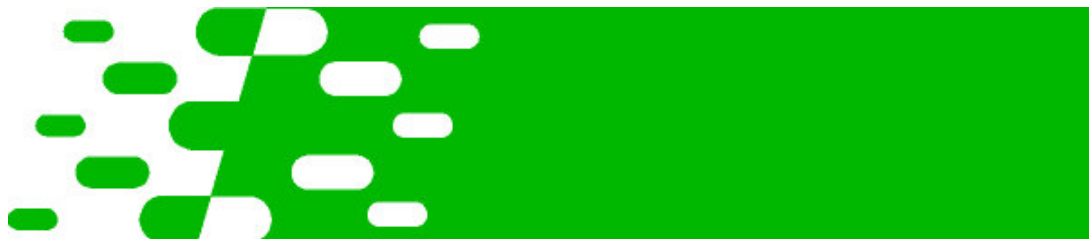
F



Facilmente inflamável

## 4: FIRST AID MEASURES

**Eyes:** Irrigate immediately with copious quantities of water for several minutes. Obtain medical attention if irritation persists.  
**Skin:** Wash thoroughly with soap and water or suitable skin cleanser as soon as possible. Obtain medical advice if skin disorder develop.  
**Inhalation:** Remove from exposure.  
**Ingestion:** Obtain medical attention urgently. Do NOT induce vomiting. Beware of aspiration if vomiting occurs.



---

## 5: FIRE FIGHTING MEASURES

|  |  |
|--|--|
| <b>Suitable extinguishing media:</b>       | Carbon dioxide, powder, foam or water fog. Do not use water jets.  |
| <b>Unknown fire and explosion hazards:</b> | None.  |
| <b>Special protective equipment:</b>       | Wear self containing breathing apparatus when fire fighting in a confined space. Cool fire exposed containers with water spray to prevent rupture. |
| <b>Hazardous combustion:</b>               | Potential combustion products are irritant fumes.  |

---

## 6: ACCIDENTAL RELEASE MEASURES

|                                    |  |
|------------------------------------|--|
| <b>Personal precautions:</b>       | Immediately issue NO SMOKING and NO NAKED FLAMES warnings. Isolate all electrical sources.             |
| <b>Environmental Precautions:</b>  | Spilt product presents a significant slip hazard. Prevent entry into drains, sewers and water courses. |
| <b>Decontamination procedures:</b> | Soak up with inert absorbent or contain and remove by best available means.                            |

---

## 7: HANDLING AND STORAGE

|                  |   |
|------------------|---|
| <b>Handling:</b> | Do not smoke and avoid ignition sources. Avoid breathing vapours and spray mist. Use only in well ventilated areas. To avoid the possibility of skin disorders, repeated or prolonged contact with products of this type must be avoided. It essential to maintain a high standard of personal hygiene. |
| <b>Storage:</b>  | Store away from sources of ignition. Never leave a container unsealed.  |

---

## 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

|                                       |  |
|---------------------------------------|--|
| <b>Engineering control measures:</b>  | Local exhaust ventilation is recommended. All equipment must be electrically grounded. Use flameproof equipment and isolate all potential sources of ignition. Mechanical methods to minimise exposure must take precedence over personal protective measures. |
| <b>Personal protection equipment:</b> | Safety glasses. Impervious gloves (e.g. PVC). Plastic apron. Change contaminated clothing immediately and clean before re-use. In case of insufficient ventilation wear suitable respiratory equipment.  |

---



## 9: PHYSICAL AND CHEMICAL PROPERTIES

---

|                                    |                      |
|------------------------------------|----------------------|
| <b>Appearance</b>                  | Light Yellow liquid. |
| <b>Odour:</b>                      | Mild.                |
| <b>Viscosity @ 20 °C</b>           | 1,26 typical.        |
| <b>Flash point, °C</b>             | 38 typical           |
| <b>Autoignition, °C</b>            | above 80             |
| <b>Density @ 20 °C</b>             | 0,772 typical.       |
| <b>Water solubility:</b>           | Insoluble            |
| <b>Vapour pressure, kPa@ 20 °C</b> | Above 0,1            |

---

## 10: STABILITY AND REACTIVITY

---

|  |                             |
|--|-----------------------------|
| <b>Stability:</b>                        | Stable, will no polymerise. |
| <b>Conditions to avoid:</b>              | Temperatures above 40 °C.   |
| <b>Materials to avoid:</b>               | Strong oxidising agents.    |
| <b>Hazardous decomposition products:</b> | Irritant fumes.             |

---

## 11: TOXICOLOGICAL INFORMATION

---

The following toxicological assessment is based on knowledge of the toxicity of the product's components.

### Health Effects:

|                       |   |
|-----------------------|---|
| <b>Eyes:</b>          | May cause transient irritation. Vapour may cause irritation.  |
| <b>Skin:</b>          | May defat the skin. May cause transient irritation.   |
| <b>By inhalation:</b> | Mist and vapours may cause irritation to nose and respiratory tract.<br>Vapours may cause headaches, dizziness and central nervous system depression. |
| <b>By ingestion:</b>  | May cause nausea, vomiting and diarrhoea. Aspiration of liquid during ingestion or vomiting may cause severe chemical pneumonitis.                    |
| <b>Chronic:</b>       | Repeated and prolonged skin contact may lead to skin disorders.   |

---

## 12: ECOLOGICAL INFORMATION

---

|                                       |   |
|---------------------------------------|---|
| <b>Environmental assessment:</b>      | Contains volatile organic compounds. When used and disposed as intended, no adverse environmental effects are foreseen. |
| <b>Mobility:</b>                      | Mobile liquid. Insoluble in water.  |
| <b>Persistence and degradability:</b> | Not readily biodegradable, but is inherently biodegradable.   |





|                                   |                                     |
|-----------------------------------|-------------------------------------|
| <b>Bioaccumulative potential:</b> | Not expected to be bioaccumulative. |
| <b>Ecotoxicity:</b>               | Not determined.                     |

---

### 13: DISPOSAL CONSIDERATIONS

---

Disposal must be in accordance with local and national legislation.

|                                   |  |
|-----------------------------------|--|
| <b>Unused product:</b>            | May be sent for reclamation.   |
| <b>Used/contaminated product:</b> | Dispose of through an authorised waste contractor to a licensed site.<br>May be incinerated. |
| <b>Packaging:</b>                 | Dispose of through an authorised waste contractor to a licensed site.<br>May be incinerated. |

---

### 14: TRANSPORT INFORMATION

---

#### Road Freight at Mercosul

Proper shipping name: Flamable liquid, not soluble in water.

UN Number: 1993

#### Air transportation domestic and international ICAO & IATA Section 4.2

Proper Shipping Name: Flamable liquid, not soluble in water.

UN Number: 1993

#### Sea Transportation international - IMDG Code Amendment 29-98

Proper Shipping Name: Flamable liquid, not soluble in water.

UN Number: 1993

