

# Technical Bulletin

# Propel

## Asphalt & Concrete Release Agent

### Product Description:

CASTLE PROPEL is a newly developed non hydrocarbon fully biodegradable release agent formulated with naturally derived vegetable based feedstocks. PROPEL is non hazardous and applicable via a variety of methods to ensure consistent asphalt release, and helps to minimise issues such as sticking, uneven release and build up on equipment, trucks and other equipment.

CASTLE PROPEL is a clear, golden liquid. A carefully formulated and balanced blend of naturally derived oil base and vegetable oil derivatives, PROPEL has been specifically formulated to provide a high level of operator health and safety and minimise any negative impact on the environment. Once applied to the truck bed or equipment surface, a micro film spreads across all wetted surfaces.

### Application:

CASTLE PROPEL is an economical product and, dependant on application, may be used undiluted, or up to a 1:3 dilution with water for asphalt release. It is important to allow the water component of PROPEL to evaporate and leave the thin film for release behind. Application can be via airless spray, of brush / mop. Usage rate is somewhat dictated by application techniques. Brush or mop application may reduce coverage to 25m<sup>2</sup> per Litre, whereas spraying the release agent will allow usage optimisation as low as 15m<sup>2</sup> per L. Excess application may be detrimental, but can be easily removed with a mop or dry cloth.

CASTLE PROPEL is a non hazardous environmentally responsible option for asphalt and concrete mould release applications, but as with any chemical product, simple OH&S precautions are advised. Care should be taken to avoid excessive contact with skin and eyes. If splashed, remove contaminated clothing and bathe affected areas thoroughly with water. If swallowed, give milk or water. DO NOT induce vomiting. For further information, consult CASTLE PROPEL Safety Data Sheet.

For maximum life cycle, CASTLE PROPEL should be stored in a cool place (<40°C) in its original sealed container.

Biodegradability of Castle Chemicals ropel asphalt release agent.

Biodegradability describes the process of natural or biological breakdown and degradation of organic materials. The rate of biodegradation is affected by the nature of the material, the level and type of microbial activity, temperature, degree of aeration, presence of water and other environmental factors.

Inorganic materials are not generally deemed to biodegrade, but organic materials such as surfactants will be degraded in this way. All organic materials will eventually biodegrade, however; more important is the time that this degradation takes. Hence, the much used term "biodegradable" really has no meaning at all when used alone. Any definition needs to be more specific. To this end, the OECD (Organisation for Co-Operation and Development) has a standard to define Biodegradability, OECD 301. Australia and New Zealand have a similar standard ASNZ 4351.

With reference to the above standards, they split the nature of classification of the biodegradable organic surfactants within our products as either Readily biodegradable or inherently biodegradable:

# Technical Bulletin

## INHERENTLY BIODEGRADABLE

The organic surfactants used in the product have been proven to degrade by between 20% and 70% within 28 days under test conditions. The compound is unlikely to persist in the environment.

Castle Chemicals 'PROPEL' contains 93.4% by weight of 'Readily' Biodegradable organic material, the other 6.6% of the formulation is an 'Inherently' Biodegradable surfactant that in fact degrades 52% within the 28 day window.

We have investigated a test on our complete formulated product 'Propel' which one might imagine (by extrapolation of the levels in the formula) would probably meet the Readily biodegradable standard. Unfortunately at present there are no accredited laboratories (NATA) capable or registered to carry out these tests. We are investigating our options with a European Laboratory, although costs may be prohibitive.

For and on Behalf of Castle Chemicals  
Graham Hatfield Bsc. MRSC (UK)  
Chief Chemist / Technical Manager.

Solutions, Chemistry, Service



'Solutions, Chemistry, Service'

**SHELF LIFE:** As a quality assured manufacturer, Castle Chemicals has a stringent Quality assurance programme. As part of this regime, the label on this product shows a batch number and date of manufacture. This product has a shelf life of 12 months from the label printed date of manufacture. This information contained herein is based on data considered accurate. However, no warranty is expressed or implied regarding the accuracy of these data or the results to be obtained from the use thereof. Castle Chemicals assumes no responsibility for personal injury or property damage to vendees, users or third parties caused by the material. Such vendees or users assume all risks associated with the use of material.

Page 2 of 2

**CASTLE CHEMICALS**

16 Rural Drive Sandgate NSW 2304 | Ph: 02 4014 5555 | Fax: 02 4968 4883 | [ccsales@castlechem.com.au](mailto:ccsales@castlechem.com.au) | [www.castlechem.com.au](http://www.castlechem.com.au)