

# Rockhard

The Indestructible Paint Newsletter  
issue 2

Our regular  
feature this issue:  
**Aero India  
2001**

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## ISO 14001 .....

Indestructible's application for ISO 14001 was mentioned in the previous issue of Rockhard. We are pleased to announce that this has now been approved.

Indestructible now have the distinction of being one of a very few small or medium sized industrial paint companies to meet the stringent requirements of this ISO standard.

Achieved on first inspection with no discrepancies noted, approval followed a very intensive 10 month system development programme, ably lead by Factory Manager Dave Chapman.



**Sales Manager Graham  
Armstrong congratulates Dave  
Chapman**

## Beautiful brass & copper .....

The Copper Development Association will be continuing its series of presentations around the country this year.

The next one in the series, to be held at Birmingham during October, follows the outstanding success of the previous four, held at Bolton and Bristol last year and at London and Derby this year. Further presentations will be announced later.

The main theme is the intrinsic corrosion resistance of copper and brass and their attractive colouring for many applications.

Indestructible Paint Ltd., will continue to provide technical information at the seminars on the types of coatings necessary to preserve these cosmetic properties.

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## EU solvents directive .....

To be implemented by our DETR, this directive and our consultation was first promised for September 1999. This was successively postponed until January 2001 when HM Government announced that they would not meet the commission's timetable of 1st April.

The current series of PG6 guidance notes are, therefore, expected to continue for some time, the methods of compliance remaining unchanged.

Regulations for the directive however, are expected soon. How implementation can occur without definitive guidance for users and regulators alike remains to be seen. We expect more record keeping (for both solvent use and emission conformance), while the use of compliant coatings, although still valid, will gradually be eliminated as a verification of compliance.

This directive makes no allowance for the use of these items to demonstrate the meeting of the law. We will keep all of our customers up to date on this subject.

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## Thermochromatic paints .....



Thermochromic paints are designed to change colour at selected temperatures and have a seemingly endless list of uses. With a number of colour combinations and transition temperatures available they can be tailored to suit the customer's requirements.

A very successful application is their use as a safety coating on saucepan handles.

In this example the handles can be virtually any colour at temperatures up to 47°C. At this point the thermochromic effect kicks in, the colour starts to change and becomes bright red at by the time 50°C is reached. (See photograph.)

Less critical applications currently being evaluated include coatings for mobile phones, children's toothbrushes and computer mice.

Available as two-coat systems, either stoving or air-drying, photochromic paints can also be formulated for spray application or brushing.

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## CCC's for Oz .....

The company's experience of 2-pack acrylics on the unusual plastic CAP, used for making toothbrushes, brought the Australians all the way to Indestructible in Birmingham.

Originally developed for Boots The Chemists, for use on toothbrushes in the UK, Indestructible's 'Childsafe Chewable Coatings' are now used in vast quantities on children's toothbrushes Down Under.

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## Hardcoat for aircraft canopies .....

An order for a clear, smooth, hard coating for use on military aircraft canopies was received recently by Indestructible Paint Ltd. Made in the UK, the canopies are supplied to aircraft manufacturers worldwide.

Although extremely tough, the polycarbonate canopies used on military aircraft are easily scratched. Hardcoat, supplied and manufactured by Indestructible is, as its name suggests, very hard. It resists this type of damage and provides excellent protection for the canopies.

A UV cured material, Hardcoat is an acrylic urethane formulation and is applied by conventional spraying methods.

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## Heat, rust, impact - no problem .....

Totally resistant to operating temperatures up to 800°C and the very corrosive conditions

that exhaust pipes and manifolds are often subjected to, IPex is a new coating system from Indestructible.

The IPex system, based on Indestructible's inorganic high temperature, corrosion and erosion resistant Ipcote range, widely used in jet aircraft engines and other aerospace applications, has now successfully completed field trials.

Comprising a silver coloured base coat with black topcoat, the new system outperforms all organic heat resisting materials, while its chip resistance, far superior to that of vitreous enamels, makes it, literally, proof against hammer blows.



**Coated exhaust part**

As a result it has been adopted by a major manufacturer of powered agricultural vehicles for use on exhaust pipes.

The extended life and long term cosmetic benefits achieved by coating exposed exhausts pipes with IPex, protects the re-sale value of tractors and other powered agricultural equipment.

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## Engineering coatings .....



**Ipslip Low Friction Coatings.** Aimed principally at the engineering sector, Indestructible's range of low friction coatings were developed from an existing range of specialised aerospace lubricants. Incorporating several new organic and inorganic binders, they are used on cars, earth moving equipment, offshore equipment and in many other applications.

Ipslip products employ a variety of dry lubricants including graphite, molybdenum disulphide, PTFE, boron nitride and others, depending on the application.

Applied by conventional spray or spin-dip methods, Ipslip products can be tailor-made to suit many diverse applications. They can, for example, be made to function at cryogenic temperatures at one extreme, or 700° C plus at the other.

Ipslip products also provide excellent corrosion protection when required. One particular example easily passes 3000 hours ASTM salt spray.

When formulated as high slip finishes, they also provide decorative or marking properties as well as corrosion resistance. One example, unique amongst low friction coatings, is a bright red, code IP9286. This is now specified by a major brake manufacturer and is currently being used on the brake units of the new MG F Trophy 150, illustrated above.

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## 'Green' Epoxy .....

A low VOC epoxy system comprising primer plus silver finish for use over jet engines, has been formulated for a major US aerospace company's Canadian operation.

Now in the late stages of its final testing programme, the materials will provide corrosion protection and moderate heat resistance in a harsh environment.

The new epoxy coating is designed to meet all current and foreseeable North American regulations regarding permitted solvents

When formally approved, the new products will be available for other users.

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## **New marine distributor .....**

Indestructible Paint Ltd., first entered the marine sector in 1996 when it took-over the long established marine paint business of Llewellyn Rylands Ltd.

The original Ryland range is still available with the addition of a number of new materials based on some of the latest resin technology.

Indestructible have now appointed Mainline Building Products Ltd., as an additional distributor for its marine paints.

Mainline, who own a chain of ship's chandlers, specialise in products for canal cruisers and other narrow boats.

A 'new' range of the traditional colours favoured by narrow boat users, has been introduced for distribution by Mainline.



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**Indian aircraft on display at  
Aero India 2001**

Indestructible Paint Ltd., has been a supplier of aerospace coatings, although not in large volumes, to Indian companies for about 20 years.

However, following the downturn of the last two or three years, the industrial recovery now taking place in India is expected to produce a growth rate of over 6% in the year 2000-01.

Demand for aerospace coatings is now rapidly increasing, particularly for military aircraft, while the country's new civil aviation policy is formulated to maintain a competitive environment for the industry.

General industrial growth in India is also producing a mass of interest in finishing products of all types. Indestructible's agent Dr R Gopalakrishnan, of Matcon, Bangalore, is now inundated with enquiries.

In addition, the widespread use of the English language in India has always been a plus point when dealing with that country.

He said: "Indestructible received 150 enquires for a variety of aerospace products, at the exhibition, including specialised dry film lubricants, erosion resistant paints, conductive coatings for radomes and aircraft interior flame resistant coatings.

"There were also enquiries for coatings for use on Russian built heat exchangers, a product that we already supply to Hamilton Standard and other major US companies."

Other products in demand include electrically conductive paint for FRP structures, high temperature coatings, paints for use in wind tunnels, epoxy materials for magnesium helicopter gearboxes, polyurethane finishes and numerous others.

Indestructible products are also being introduced into sectors of Indian industry other than aerospace.

A good example of this is Ipcote, a very high temperature and erosion resistant inorganic based coating normally used in gas turbine engines. This is currently being introduced into foundry and other refractory applications.

A bonus, from Indestructible's point of view, is the number of enquiries it received from Chinese, Indonesian, Japanese, Russian and US companies.

There is, no doubt, increasing scope for trade with India, as delegates from the above mentioned countries are also obviously aware. This is particularly, or perhaps solely, so for manufacturers of high tech products.

Indestructible are already benefiting from this situation and Brian Norton felt that his, and his company's, presence was well received at Aero India.

Following the exhibition Brian was invited to give a talk to 150 guests at the Bangalore Aeronautical Society, at the end of which he was presented with a very large brass bull!

All this persuaded Brian Norton, Managing Director of Indestructible, that the company should exhibit at Aero India 2001.

As a result Indestructible, with about 20 other British companies including Dowty, Rolls-Royce and Smiths Industries, shared the SBAC (Society of British Aircraft Constructors ) stand.

The Indian equivalent of 'Farnborough', Aero India, held at Bangalore, is organised by the Indian International Aero Congress.

Brian Norton, who attended the exhibition, was delighted with the interest in British products.



**Kabibi and Kaveri engines**

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