



# Policies for Acquiring and Administering Intellectual Property

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Hitachi Chemical has established its “Rules for Handling Inventions,” which are in-company rules related to the acquisition and administration of intellectual property, and is working to implement them appropriately. Hitachi Chemical subsequently changed these rules to bring them in line with Article 35 (“Employees’ Inventions”) of the revised Japanese Patent Law, enacted in April 2005. Under the rules, the right to file patents for employees’ inventions upon their completion has been transferred from employee inventors to the Company. In addition, under its “Invention Awards and Incentive Regulations” and “Invention Awards and Incentive Standards,” the Company pays rewards to employee inventors when patent applications are filed, when they are registered, when products incorporating them are launched and when royalty income is realized. Rewards at the time of patent filing and registration are fixed, while the remainder is paid in the form of an ongoing performance reward during the validity of the patent, the yearly amount being based on overall consideration of various factors, including annual sales of products incorporating the invention, the invention’s quality and degree of contribution, and the amount of royalty income received from other companies under patent licenses. The Company has placed no upper limit on the performance reward amount.

In the case of patent rights that contribute significantly to business, the Company has also established an award system under which not only inventors but employees who have assisted in the application of such rights will also be eligible to receive awards and monetary rewards. The aim is to raise the incentive for everyone in the Company, not just inventors, to become involved in applying patent rights. “Rules for Handling Inventions,” “Invention Awards and Incentive Regulations” and “Invention Awards and Incentive Standards” are available to employees via the Company’s intranet and other internal communications.

Moreover, Hitachi Chemical introduced a system that allows employees to apply for performance rewards for their inventions via the Company’s intranet. The system facilitates feedback both the amount of performance reward of application by inventors and results of evaluations by the Intellectual Property Office to the inventors. It also allows inventors to express their opinions on the results of the evaluation and to reapply, if necessary.

## Aggressively Pursuing New Environmental Products and Technologies

Dealing with global warming is becoming an increasingly important issue in corporate activities. Hitachi Chemical is actively conducting research to develop products and technologies that preserve the environment.

### • Promoting the Development and Spread of Environmental Technologies

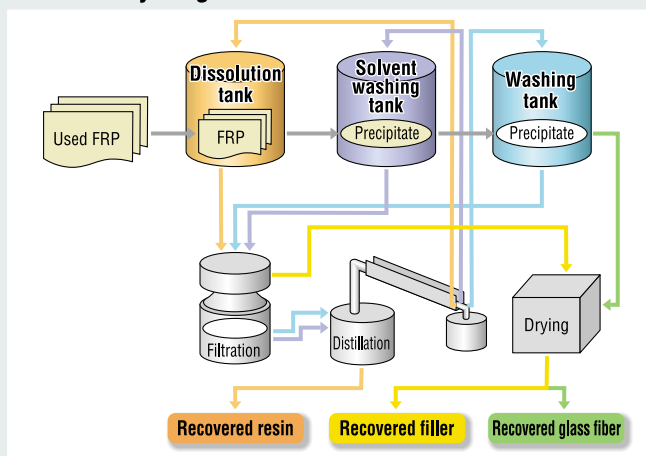
The conventional methods for dealing with waste fiber reinforced plastics (FRP) are incineration and landfill disposal. However, the bulkiness of FRP created a need for recycling technologies that would decompose and separate it into its components for reuse. Hitachi Chemical responded by developing a new recycling technology to accomplish this task. Using a solvent developed in-house, we apply a chemical depolymerization process to dissolve FRP at a relatively low temperature (below 200°C) under ordinary pressure. This technology, for which we have filed a patent application, enables the recovery of FRP’s principal components – glass fiber, filler (mainly calcium carbonate) and resin – in a recyclable form. Because this technology obviates the need for pulverization, it facilitates the recovery of long glass fibers, as illustrated in the diagram below.

Intending to spread this technology as a way to help deal with disposal of waste FRP, Hitachi Chemical is positioned to conduct extensive licensing. In fact, some licenses are already in effect and FRP recovery plants are operating. Please contact us via our website if you have any questions regarding this technology.

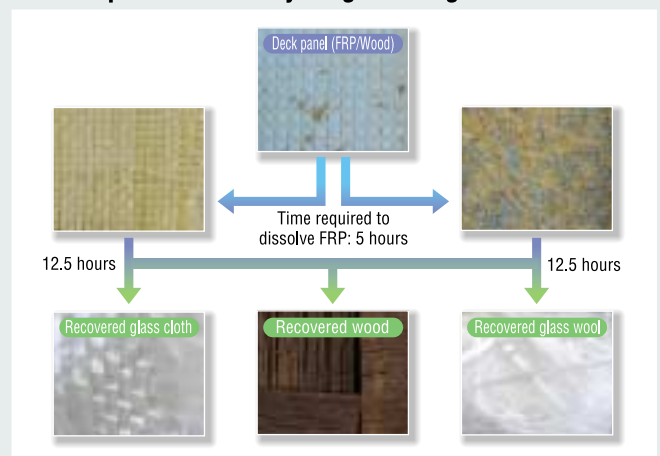
### • Creating Environmentally Friendly Products

With the increasing shift in society toward sustainable development in recent years, efforts in the electric or electronic industry to achieve harmony with the environment are gaining momentum. In Europe, the Waste Electrical and Electronic Equipment (WEEE) and Restriction

## ■ FRP Recycling Process



## ■ Example of FRP Recycling: Fishing Boat



of Hazardous Substances (RoHS) directives as an environmental controls on electrical and electronic equipment came into effect. The WEEE Directive defines plastics, including bromine-based fire retardants, as materials to be removed from collectible wastes.

Responding to these conditions, Hitachi Chemical is actively promoting the creation of environmentally friendly products such as halogen-free molding compounds for semiconductor packaging and materials for PWBs.

Hitachi Chemical's original CEL-HF10 series of epoxy molding compounds for semiconductor packaging achieved a UL-94 V-0 flame resistance designation without using a fire retardant. Patent applications related to this product line are increasing in step with product development.

Hitachi Chemical's MCL-BE-67G (H) and MCL-E-679FG materials for PWBs also achieved a UL94V-0 designation without using bromide- or chlorine-based halogen fire retardants, antimony or red phosphorus. In addition, because these environmentally responsible materials are also compatible with higher solder temperatures, they are ready for lead-free processes.

With high thermal resistance, high modulus at high temperatures and low thermal expansion compared with conventional FR-4 glass epoxy copper-clad laminates, MCL-BE-67G (H) is a material that protects the environment.

Applying a special process to filler surfaces, MCL-E-679FG achieves high thermal resistance, high modulus and low thermal expansion. The resulting such favorable character make it suitable for use in semiconductor package substrates, liquid crystal driver substrates and inner layer core materials for buildup wiring boards.

By filing patent applications for inventions related to these materials not only in Japan but also in countries where the materials are produced and used, Hitachi Chemical is promoting the establishment of patent rights and the development of its patent network.

## Intellectual Property Administration

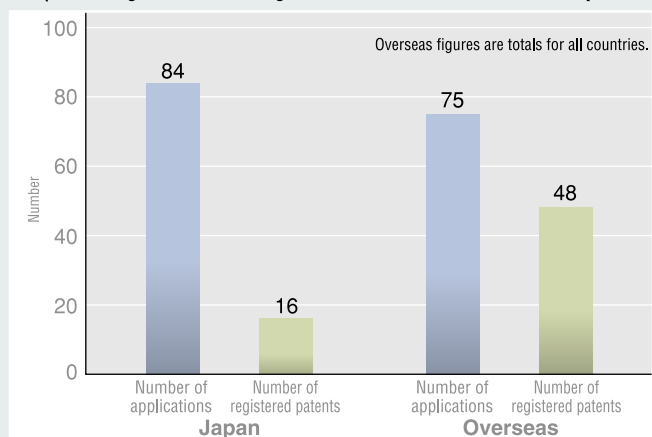
Hitachi Chemical developed and began operating its unique Strategic Intellectual Property System (patent pending) in April 2002 and updates it as needed to increase usability. Under this system, relevant personnel in the Intellectual Property Office, R&D divisions, business divisions and sales divisions have ready access to a wide range of information regarding intellectual property, including an explanation of intellectual property, detailed instructions and samples for preparing patent specifications, procedures for using patent rights, and information on patents of the Company and others. The system has unified all concerned divisions and departments and allowed them to implement a flexible intellectual property strategy that is linked with our business strategy. In addition, employees can access the system by computer at any time to search databases of our and other companies' patents, make submissions of inventions and other matters, or review and download information regarding specific patent histories and rejections. This is helping to increase the efficiency of inventors' work. Moreover, the system facilitates communication between the Intellectual Property Office and employee inventors because the Office personnel can query inventors via the Company's intranet regarding the need for substantive examination requests and the necessity of maintaining rights. This has made Intellectual Property Office activities much more efficient.

## Policies Regarding Administration of Trade Secrets and Prevention of Technology Outflow

Hitachi Chemical has set down its "Rules for Handling of Company Trade Secrets" and "Rules for Handling of Other Companies Trade Secrets" to protect its trade secrets and ensure those of other companies are handled appropriately. The Company is working to raise awareness of these rules through workshops targeting the R&D divisions, business divisions and sales divisions, and by distributing brochures that explain why and how trade secrets should be protected.

Moreover, Hitachi Chemical maintains a technological "black box" to prevent the outflow of technology by divulging the least possible amount of information regarding key elements of its R&D and production activities, including material names, compounds, compositions and production technologies.

### Patent Applications for Halogen-Free Multilayer Materials (Including Those with High Modulus and Low Thermal Expansion)



### Overview of Interface Control Technology Employing MCL-E-679FG

