3.5 Management of Chemical Substance

3.5.1 Basic Approach

Because the Fujifilm Group manufactures a wide range of products including chemical products, functional materials, optical devices, office equipment, and medical equipment, we have established management rules for the different assembly and manufacturing processes of our products from two perspectives: management of the handling of chemical substances and management of information on chemical substances in our products. We have implemented global operations management across the Group and we have established a system to acquire accurate information on the laws and regulations in each country and region around the world to start a prompt preparation in an early stage. This has allowed us to maintain comprehensive and efficient management of chemical substances.

3.5.2 Management of Chemical Substance

Based on international goals of minimizing the adverse effects of chemical substances on human health and the environment, the Fujifilm Group manages such substances according to the hazard risk and degree of permitted exposure during use. We assess the risks for all chemical substances handled, and stipulate handling methods within the permitted risk.

3.5.3 Safety Evaluation

It is important to assess the safety of chemical substances in order to handle them appropriately. Fujifilm built a facility to conduct safety tests on chemical substances in 1975. We evaluate safety in terms of the global environment and human health from the early development to commercialization of various chemicals, materials, and products. Using the Chemical Library where previous safety test results are stored, we utilize and employ materials of a high safety level developed in-house.

3.5.4 Promotion of Non-Animal Testing

From the viewpoint of animal welfare*, the Fujifilm Group is actively engaged in joint research and development in alternative methods for sensitization and corrosive tests to be used when assessing the safety of chemical substances. Our exclusive skin sensitization test, Amino acid Derivative Reactivity Assay (ADRA), was evaluated as skin sensitization more accurately than conventional methods and was included in the OECD Guidelines in June 2019. ADRA is now partially adopted for intra-company safety evaluations and we are also working to reduce the number of animal tests.

* 3Rs of animal protection (Replacement: Use of alternative method; Reduction: Reduction of the number of animals used; and Refinement: Relief of animal pain)

3.5.5 Management of Chemical Substances in Products

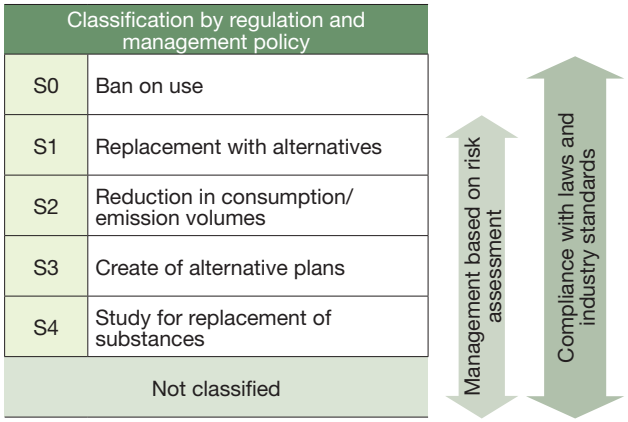
The Fujifilm Group has established standards for chemical substances contained in products and manages chemical substances in raw materials, parts, and members in collaboration with our business partners. We are taking a lead in initiatives in disseminating the mechanism of the chemSHERPA system, which distributes chemical substance information for products between companies. We have been participating since the creation of this system, and since it came into full operation we hold twice-yearly briefings for business partners. We individually respond to clients' consultations and contribute to improving chemical substance management throughout the supply chain.

3.5.6 Efforts in Hazardous Substance Management

The current chemical substance regulations permit usage of certain substances that may be regulated in the future, or those that may have a social impact. We voluntarily set up our own additional chemical substance classifications, defined as the “S category,” to limit the usage of such chemical substances. For those substances classified within the S category due to their potential hazard level, each user department searches for safer alternative chemicals, and creates and implements plans to limit usage in products.

With regard to chemical substances contained in molded products, Fujifilm categorizes those restricted by laws and regulations as “L substances,” and those for which we are obligated to transmit information by laws or industry standards as “I substances.” This enables us to manage chemicals consistently in molded products made directly from chemical substances and in products comprising components and members that may contain specified substances.

New Classification Chart for Chemical Substance Management



3.5.7 Perfluorocarbons (PFC) Emissions/ Volatile Organic Compounds (VOC) Emissions

We are introducing measures to reduce perfluorocarbons (PFC), one of the greenhouse gases, according to the regulations in each country. We have set a target to reduce VOC emissions to less than half the previous year’s level.

PFC and VOC Emissions

	Unit	FY2014	FY2015	FY2016	FY2017	FY2018
Direct PFC emissions	kg PFC/ metric tons produced	0	0	1,257	62	112
Direct VOC emissions	metric tons	838	834	750	800	812

* Data coverage (ratio to total profit or total employees) is 100% of the production volume.
* PFC emissions data has been verified by a third-party organization, SGS Japan, Inc.; however, the production volume used in the calculations is out of certification.

Response to the PRTR Law (Fujifilm and its domestic affiliates/Fuji Xerox and its domestic affiliates)

Fujifilm controls substances that must be reported under the PRTR Law (Pollutant Release and Transfer Register Law) and another substances on a voluntary basis, and has been endeavoring to reduce those emission. Data (usage volume, atmospheric emissions volume, emission into public water, volume going into sewage water, volume moved outside of facilities, and volume recycled) on substances used in amounts of one ton or more per year by Fujifilm and its domestic affiliates may be found on the following Fujifilm website.

URL: https://www.fujifilm.co.jp/corporate/environment/preservation/site/atmosphere/prtr.html (in Japanese only)
URL: https://www.fujixerox.com/eng/company/csr/sr2018/environment/reduce.html

Annual Changes in Atmospheric Emissions of VOCs

Unit: hundred tons/year

	FY2014	FY2015	FY2016	FY2017	FY2018
Japan	6.8	6.5	5.9	6.4	6.4
Overseas	1.6	1.8	1.6	1.6	1.7
Group total	8.4	8.3	7.5	8.0	8.1