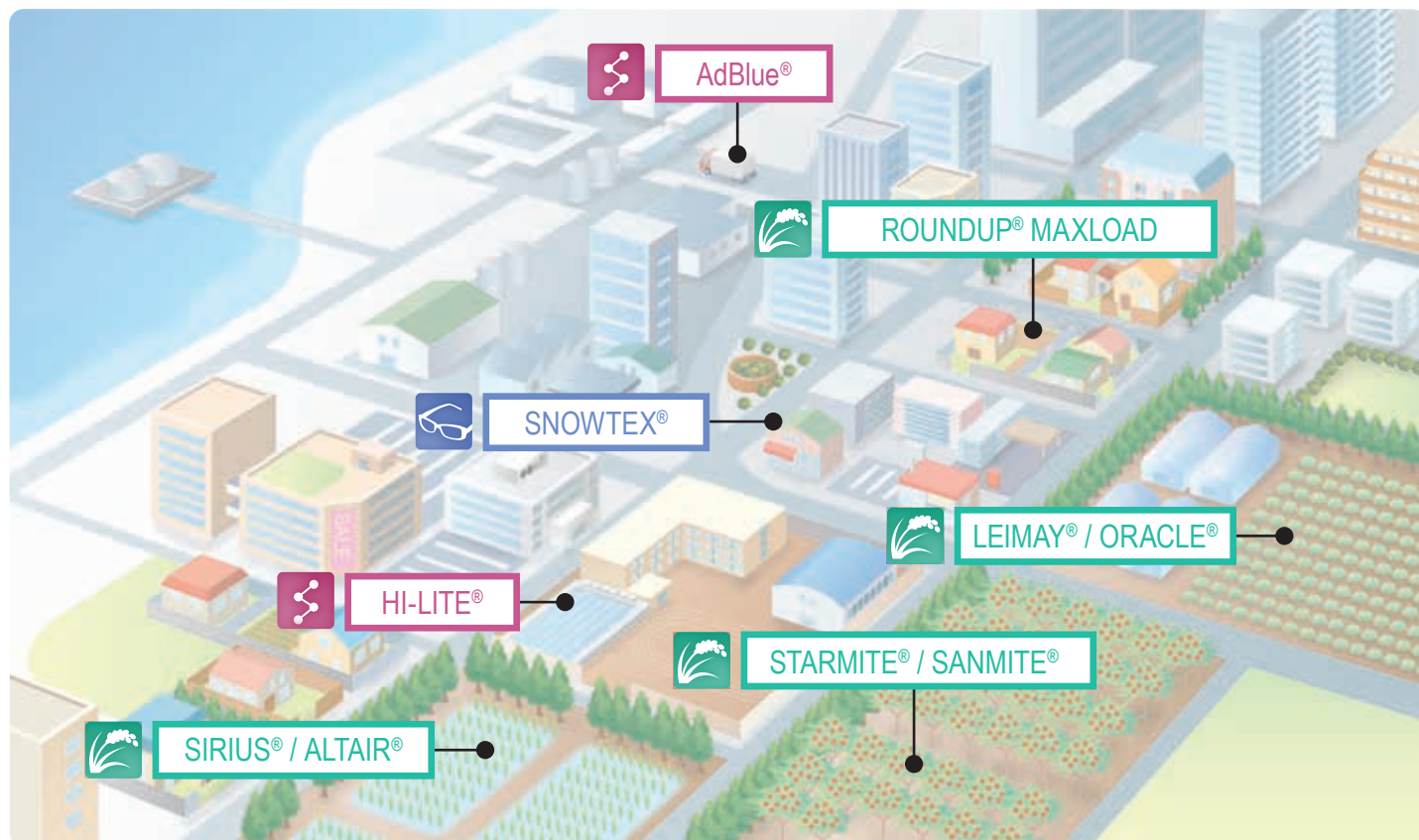


Main Products

Nissan Chemical Products that Play an Active Role in Society

Here we introduce our three business domains and products used in various parts of society.



Performance Materials

Display Materials

- SUNEVER® (LCD alignment coating)
- NHC® (inorganic coating materials)

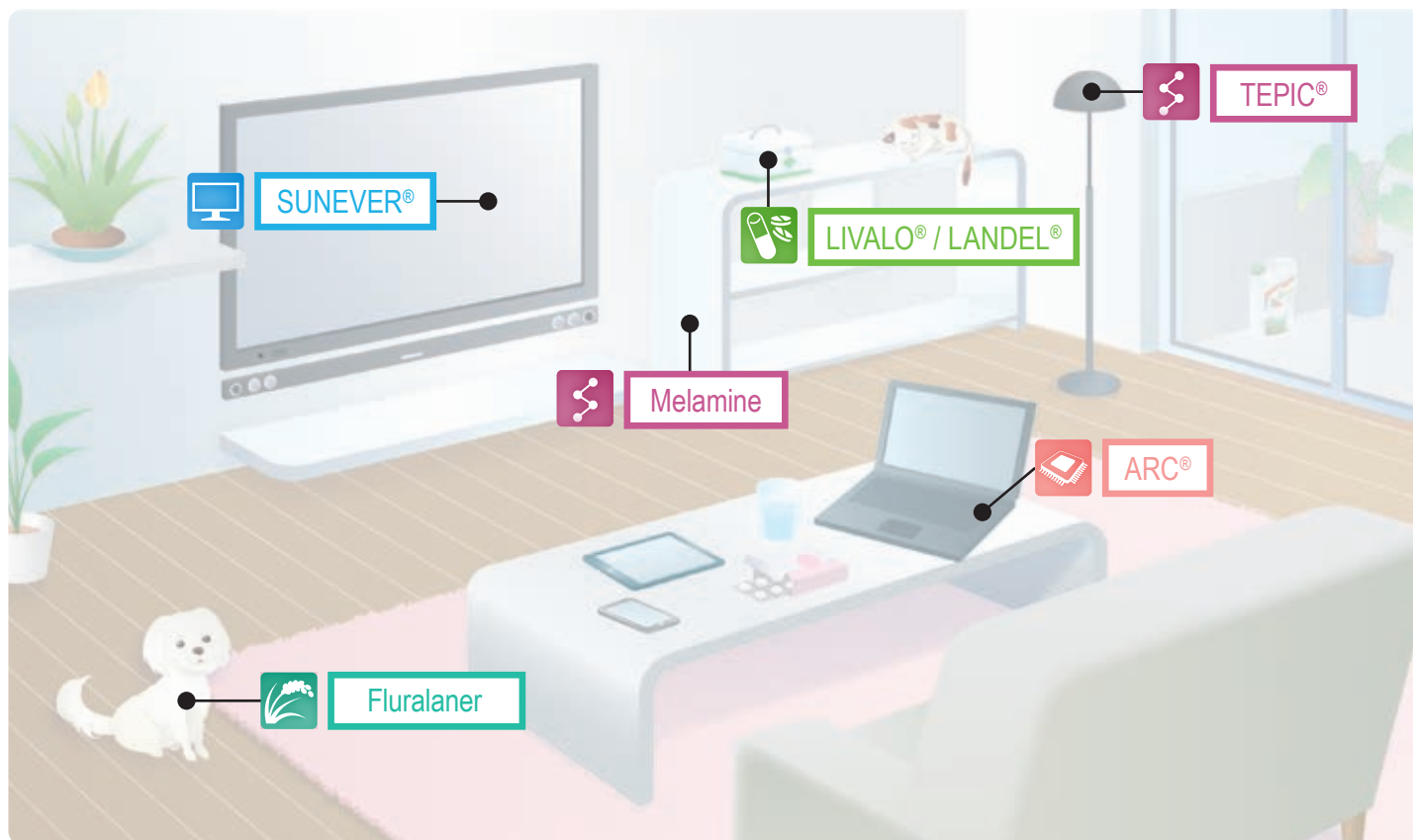
Semiconductor Materials

- ARC® (bottom anti-reflective coating)

Inorganic Materials

- SNOWTEX® (semiconductor polishing, hard coating, etc.)
- Organo silica sol (coating for anti-scratch, insulation, CTE reduction)





Life Sciences

Agricultural Chemicals

- | Herbicide | Insecticide | Fungicide |
|--------------------|-------------|-----------|
| • SIRIUS® | • STARMITE® | • LEIMAY® |
| • ALTAIR® | • SANMITE® | • ORACLE® |
| • ROUNDUP® MAXLOAD | | • PULSOR® |
| • TARGA® | | |
| • PERMIT® | | |

Active ingredients for veterinary pharmaceuticals

- Fluralaner

Pharmaceuticals

- LIVALO® (anti-cholesterol agent)
- LANDEL® (anti-hypertension agent)

Novel agent under development

- NIP-022 (thrombocytopenia treatment agent)
- NT-702 (asthma care, arteriosclerosis obliterans treatment agent)
- NTC-801 (anti-arrhythmic agent)

Chemicals

Chemicals

- Melamine (adhesive agent for particle board)
- High purity chemicals
- AdBlue® (High-grade urea solution)
- FINEOXOCOL®
- TEPIC® (epoxy compound for LED sealants, solder resist, painting)
- Melamine cyanurate (flame retardant)
- HI-LITE® (chlorinated isocyanuric acid for sterilizing)
- Nissan Reishi (health food)

Environmentally Friendly Products

We define environmentally friendly products as products that reduce environmental impact across each of the processes below, from manufacture to distribution, use and disposal, or that play an important role in achieving that goal. We have set ourselves the goal of improving the percentage of our products that are environmentally friendly.



Manufacture

- i. Saving energy
- iv. Reducing waste and environmental pollutants



Distribution

- ii. Reducing CO₂
- v. Purifying air and water



Use

- iii. Conserving resources (water, raw materials)
- vi. Renewable (new) energy



Disposal

Performance Materials

HYPERTECH®

Nucleating agents for electroless plating

Nucleating agents make it possible to reduce the amount of metal used for wiring in items such as flexible printed substrates or touch panels by more than 90%.

Metal wiring is made by forming a metal film across the entire surface of the substrate in a vacuum, and then removing unwanted parts with acid. HYPERTECH® makes it possible to draw wiring patterns, meaning that metal only adheres to drawn lines. This in turn minimizes the amount of metal plating required.



▲ Touch panel

Coating materials with ultra-high refractive index

OLED lighting already has a low environmental impact. By applying a film between the electrodes and substrates, or between the electrodes and light source, however, it is possible to improve light efficiency from the light source by up to 20%. HYPERTECH® is transparent, heat resistant and offers excellent adhesion to different substrate materials. Ease of application can also help to reduce manufacturing costs.



▲ OLED lighting

Inorganic Materials

SNOWTEX®, Aluminasol, Organo silica sol, NanoUse®ZR

Materials can be used for a wide range of purposes, including saving energy from transformers, improving the efficiency of natural energy, purifying emissions, and extending the life of motors.



▲ Purifying emissions (illustration purposes only)

Agricultural Chemicals

Compact agrochemical formulations

We supply lightweight, compact agrochemical formulations that contain a high concentration of active ingredients, including WG (Water dispersible) and Jumbo (floating granules, containing active ingredients, wrapped in a soluble film). This helps in ways such as reducing packaging materials, waste products, and CO₂ emissions from manufacturing and shipping.



▲ Comet WG



▲ Tenku Jumbo

Chemicals

AdBlue®

AdBlue® is a high-grade urea solution used in “urea SCR system”, a technology for purifying emissions. When sprayed onto emissions from diesel vehicles, it breaks down nitrogen oxide (NO_x) into harmless nitrogen and water, which helps to reduce environmental impact. We supply AdBlue® in line with each customer’s needs, in tank trucks, 200L drums, 1m³ containers, or BIB (bag-in-box, 20L, 10L).



▲ AdBlue®

HI-LITE®

HI-LITE® is widely used to assist with environmental sanitation, for purposes such as disinfecting and sterilizing pools and septic tanks. Having obtained certification under NSF/ANSI-60 (the standard for chemicals intentionally added to drinking water), there is new scope to expand the range of applications for HI-LITE® for sterilizing drinking water. Such as applying in areas where standards of sanitation are insufficient, particularly in developing countries.

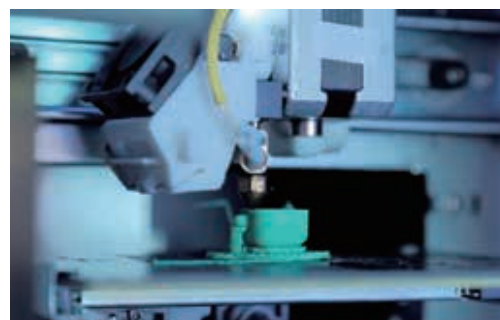


▲ Hygienic water supplies (illustration purposes only)

Advanced Materials & Planning

ECOPROMOTE® Series

ECOPROMOTE® is a crystal nucleating agent for polylactate. Combining the properties of a bioplastic, made from plant instead of oil, and a biodegradable plastic that is broken down into water and carbon dioxide by microorganisms, polylactate is the foremost carbon neutral synthetic resin in terms of practical application. Uses are nonetheless limited due to issues relating to moldability and heat resistance. ECOPROMOTE® stimulates the growth of polylactate crystals, and can be used for high speed injection molding or extrusion molding without affecting transparency. As a result, it is increasingly being used for durable purposes such as electronic devices, printers and filaments in 3D printers.



▲ 3D printer