

INITIATIVES FOR REDUCING ENVIRONMENTAL IMPACT

Cleaner Emissions

Cleaner Gas Emissions

Mazda is committed to mitigating air pollution from exhaust gas. To this end, the Company is actively developing low-emission vehicles, clearing the emission regulations in each country/region to introduce these vehicles globally.

Development of Unique Single-Nanotechnology

Mazda pays attention to global movements toward tighter control of exhaust emissions and fuel economy, market expansion due to rapidly growing emerging countries, and depletion of scarce resources. The Company has developed its unique single-nanotechnology and soot (PM) oxidation catalyst, promoting reduction of the use of precious metals and cleaning of exhaust gases.

Single-Nanotechnology

Based on the belief that it is important to help catalytic converters exercise excellent catalyst performance after reducing the use of scarce elements, such as rare metals (precious metals) and rare earths (ceria material), Mazda developed the single-nanocatalyst*¹ that achieves both cleaner exhaust characteristics and higher durability.

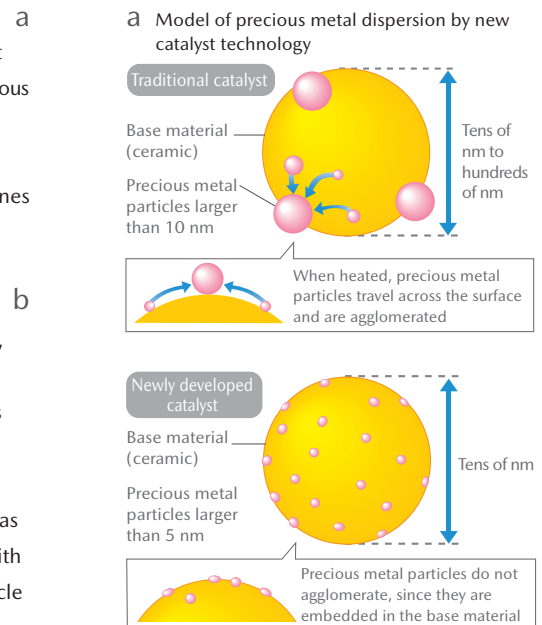
The Company has been progressively introducing the technology into gasoline engines and clean diesel engines on a global basis.

Soot (PM) Oxidation Catalyst

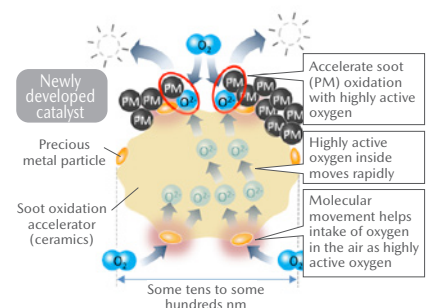
Mazda has developed a unique PM oxidation technology for diesel engine catalysts, which enables rapid combustion and removal of soot (PM) and reduces CO₂ emissions. Compared with conventional catalysts, this technology effectively utilizes oxygen not only on the surfaces of catalyst particles but also of their inside, and enables supply of a larger amount of highly active oxygen for soot (PM), thereby achieving dramatic improvement in functions. The introduction of this technology has reduced the use of precious metals, or rare elements, to around one-tenth, along with the durability sufficient to maintain the catalytic function throughout the entire vehicle life cycle.

Proper Management of Chemical Substances and Heavy Metals

Mazda publishes Management Standards for Environmentally Hazardous Materials, specifying substances and heavy metals whose use in parts and materials it purchases is subject to restrictions (prohibited substances and substances for which reporting is required), to properly control the use of such hazardous materials.



b Mechanism of soot (PM) oxidation catalyst



*1 Catalyst featuring single-nanotechnology to control finer materials structures than nanotechnology

Contribution to Resolving Social Issues

Collection and Management of Automotive Parts Materials

Mazda is working across its entire supply chain to reduce the use of environmentally hazardous materials such as lead, mercury, hexavalent chromium and cadmium. Using the standardized IMDS,*¹ international system, the Company gathers information on the materials from suppliers (Met all of the voluntary targets of the Japan Automobile Manufacturers Association, Inc. (JAMA) (reduction of the use of lead and mercury, and prohibition of the use of hexavalent chromium and cadmium) by February 2007, earlier than the scheduled deadlines).

Measures Related to Application of IMDS

- To ensure that suppliers enter IMDS data appropriately, the Company publishes and distributes guidelines each year.
- The data gathered through IMDS is used to calculate the Company's vehicle recycling rate and to comply with various regulatory regimes for chemical materials, such as REACH*² in Europe.

VOC Reductions in Vehicle Cabins

To maintain a comfortable cabin environment, Mazda is committed to reducing VOCs*³ such as formaldehyde, toluene and xylene, which have been implicated as possible causes of sick building syndrome.

- In new models, starting with the Demio (Mazda2 overseas) launched in 2007, Mazda reduced VOCs in the main materials used in the cabin, such as plastics, paints, and adhesives, thereby conforming with the indoor aerial concentration guidelines established by Japan's Ministry of Health, Labour and Welfare. (The MX-30, introduced in FY March 2021, followed the above guidelines.)

Reduction of Vehicle Noise

Mazda has established its own noise standards which are even stricter than the most recent legal requirements. In compliance with the above in-house standards, the Company has been working to reduce the road traffic noise of all the passenger vehicles and commercial vehicles it produces. The Company has also been actively addressing the development of technologies to reduce the three major vehicle noises: engine noise, air intake/exhaust system noise, and tire noise.

【Manufacturing】Air Pollution Prevention: Actively Adopting Fuels that Reduce Environmental Burdens

Mazda is continuing efforts to reduce the emission of sulfur oxides (SOx), nitrogen oxides (NOx), dust and soot, fine particles, vapors, and volatile organic compounds (VOCs). In addition, Mazda is shifting the use of fuel oil to that of city gas and makes other efforts to actively adopt materials that reduce the environmental burden.

VOC Reductions: Body-Painting Lines

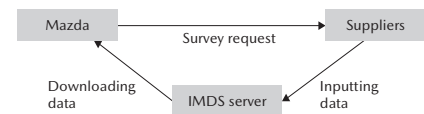
In FY March 2021, Mazda made steady progress toward achieving the target of reducing VOC emissions from vehicle body paint in body-painting lines to 20.0 g/m² or less. The target was achieved as a result of various measures. Such measures include the Three Layer Wet Paint System introduced as the standard process in all plants in Japan and major plants overseas, the Aqua-Tech Paint System (see p. 35) that delivers world-leading environmental performance, a low-VOC paint that the Company developed and introduced, and improved efficiency in thinner recovery in cleaning operations.

【Manufacturing】Reducing Emissions of PRTR-Listed Substances

With various efforts, such as the introduction of the Aqua-Tech Paint System into the painting process and improvements to the efficiency of thinner recovery for cleaning operation, in FY March 2021 the amounts of substances that are designated under the PRTR Law*⁴ released into the water system and the atmosphere decreased by 77% from FY March 1999 levels to 639 tons. Mazda will continue working to reduce emissions of PRTR-designated substances.

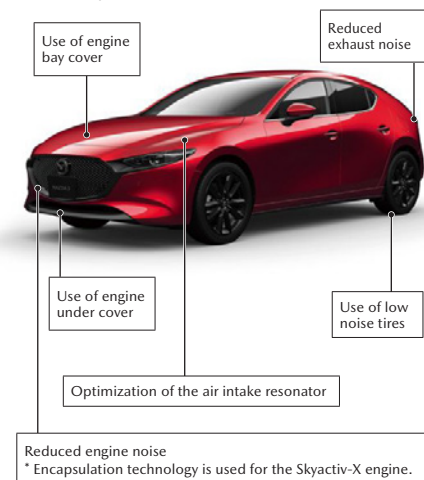
C

C How IMDS Works



d

d Example of Anti-Noise Measures (Mazda3)



*1 International Material Data System

*2 Registration, Evaluation, Authorization and Restriction of Chemicals

*3 Volatile Organic Compounds

*4 Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof. PRTR: Pollutant Release and Transfer Register

Contribution to Resolving Social Issues

Environmental Communication

Under the Mazda Global Environmental Charter, Mazda carries out a wide variety of environmental protection activities related to products and technologies; manufacturing, logistics, and office operations; and social contributions. The Company appropriately discloses information on each of these activities, and ensures opportunities for dialogue with the stakeholders, thereby striving to respond promptly and appropriately to social problems.*1

Participation in Environmental Exhibits and Events

Mazda actively participates in various environment-related exhibitions and events, for the purpose of gaining stakeholders' understanding regarding its environmental initiatives and hearing their broad range of opinions. Mazda adopts a wide range of approaches to communicate about the environment, such as introducing its advanced environmental technologies at motor shows all over the world and offering test-drives of its vehicles equipped with Skyactiv Technology at various events held in and outside Japan. In FY March 2021, many exhibitions and events were canceled due to the impact of the novel coronavirus (COVID-19), but the Company is trying new approaches in FY March 2022, such as participating in online events.

Reducing Environmental Impact Generated by Communication Activities

Mazda has been working to reduce the environmental impact generated by its communication activities.

Environmental considerations in event operation

- Reusing/recycling booth decorating items
- Decreasing the amount of handouts to reduce CO₂ emissions

Environmental considerations in publishing materials

- Adopting FSC-certified paper, waterless printing, and vegetable oil ink

Use of Website and Publishing Materials

Mazda ensures environmental communication in a wide variety of ways in consideration of matters of interest that each stakeholder may have and media that he/she may frequently use.

Mazda uses images and computer graphics on its website in order to provide easy-to-understand explanations of environmental technologies. Reinforcing the use of social media, the Company disseminates information in a timely manner, and uses the comments provided to the Company for its daily operations. For the Mazda Sustainability Report, the Company has prepared in-depth/digest versions, as well as PDF/Website/booklet versions, in consideration of stakeholders' needs regarding the edition method/media to be used. The results of the collected questionnaires and the number of visitors to the website are provided to the executive officer in charge of related affairs, as well as to cooperating sections, as feedback, and used for planning the next fiscal year's version.

*1 Refer to the following URL for social contribution activities regarding environmental communications by the Mazda Group:
<https://www.mazda.com/en/sustainability/social/>

Contribution to Resolving Social Issues

In-House Awareness-Raising Activities

To raise environmental awareness among its employees, Mazda conducted a wide range of activities in FY March 2021, including the following.

Eco Walk Commuting Program

In order to raise employees' environmental consciousness and encourage them to take better care of their health, employees who walk two kilometers or more as part of their daily commute to work are rewarded with an addition of 1,500 yen per month to their commuting allowance.

Lunchtime Lighting Halved

Efforts to reduce lighting in Mazda offices and plants during lunch breaks to half the normal levels have continuously been promoted.

Light-Down Campaign

(Participation by companies/facilities)

■ Mazda Light-Down Campaign

To raise environmental awareness, Mazda and its domestic Group companies participated in the Light-Down (i.e., lights-off) Campaign, in which they turned off their signboards and indoor lighting.

These participating sites shut off lighting for two hours from 20:00 to 22:00 on June 21 (summer solstice) and July 7 (Tanabata, or the Star Festival), 2020. This campaign saved 12 thousand kWh of electricity, equivalent to around 6 tons of CO₂ emissions.

(No. of participants) Mazda Motor Corporation: 14 sites, Domestic Group companies: 717 sites of 104 companies

This campaign started in 2011 with turning off lights at Mazda's six sites. In 2020, when it was in the 10th year, the campaign was expanded with the participation of 731 production/business sites, involving Mazda Group across Japan.

■ WWF's Earth Hour 2021

Mazda and its domestic Group companies supported and participated in Earth Hour 2021 organized by the World Wildlife Fund (WWF), which is the world's largest global warming campaign.

They turned off the lighting of their signboards and indoor lighting for one hour from 20:30 to 21:30 on March 27, 2021.

(No. of participants) Mazda Motor Corporation: 13 sites, Domestic Group companies: 768 sites of 102 companies (record number of companies)

Mazda also participated in an Earth Hour promotional event held online as a partner company.

(Participation by individuals)

■ Employees' private participation in the Light-Down campaign

Mazda encouraged its employees to continue practicing actions to prevent global warming according to their daily lifestyles.

Environmental Education during Environment Month

To encourage every employee to think about and take action for the environment in all aspects of their work and personal life, educational programs regarding global environmental issues and trends in Japan and overseas, Mazda's environmental initiatives, and environmental conservation activities in the workplace have been implemented as part of environmental education and training on ISO 14001.

a Companies that Participated in the Light-Down Campaign

1. Mazda Motor Corporation	64. Mazda Autozam
2. Toyo Advanced Technologies Co., Ltd.	Fukuchiyama
3. Mazda Engineering & Technology Co., Ltd.	65. Mazda Autozam Katsuragi
4. Kurashiki Kako Co., Ltd.	66. Mazda Autozam Matsue
5. Yoshiwa Kogyo Co., Ltd.	67. Mazda Autozam Oda
6. Toho Industrial Co., Ltd.	68. Mazda Autozam Iwase
7. Delta Kogyo Co., Ltd.	69. Mazda Autozam Fuchu
8. Mazda Processing Chugoku Co., Ltd.	70. Mazda Autozam Mihara
9. Mazda Logistics Co., Ltd.	71. Mazda Autozam Kaita
10. Hakodate Mazda Co., Ltd.	72. Mazda Autozam Takehara
11. Hohoku Mazda Co., Ltd.	73. Mazda Autozam Kusunoki
12. Fukushima Mazda Co., Ltd.	74. Mazda Autozam Yasufuruichi
13. Kitakanto Mazda Co., Ltd.	75. Mazda Autozam Bairin
14. Koshin Mazda Co., Ltd.	76. Mazda Autozam Uchiko
15. Kanto Mazda Co., Ltd.	77. Mazda Autozam Kanoya
16. Shizuoka Mazda Co., Ltd.	78. Mazda Parts Sales Hiroshima Co., Ltd.
17. Tokai Mazda Co., Ltd.	79. Mazda Parts Sales Yamaguchi Co., Ltd.
18. Hokuriku Mazda Co., Ltd.	80. Mazda Parts Sales Chiba Co., Ltd.
19. Kansai Mazda Co., Ltd.	81. Mazda Parts Co., Ltd.
20. Nishi Shikoku Mazda Co., Ltd.	82. Mazda Ace Co., Ltd.
21. Kyushu Mazda Co., Ltd.	83. Nishikawa Rubber Co., Ltd.
22. Minami Kyushu Mazda Co., Ltd.	84. Yowa Inc.
23. Okinawa Mazda Corporation	85. Sugihara Co., Ltd.
24. Mazda Chuhan Co., Ltd.	86. Tokyo Mazda Corporation
25. Aomori-Mazda Automobile Corporation	87. Mazda Autozam DATE Obihiro
26. Mazda Odawara Co., Ltd.	88. Mazda Autozam Miyamoto Nishi
27. Eunos Sansho Co., Ltd.	89. Mazda Autozam Heiwa
28. Kobe Mazda Co., Ltd.	90. Mazda Autozam Yamagata-Nishi
29. Nara Mazda Co., Ltd.	91. Mazda Autozam Funehiki
30. Tottori Mazda Co., Ltd.	92. Mazda Autozam Omiya
31. Shimane Mazda Co., Ltd.	93. Mazda Autozam Sado
32. Okayama Mazda Co., Ltd.	94. Mazda Autozam Tonami
33. Hiroshima Mazda Co., Ltd.	95. Mazda Autozam Kikugawa
34. Enfini Hiroshima Co., Ltd.	96. Mazda Autozam Shimizu
35. Mazda Autozam Ebetsu	97. Mazda Autozam Minakuchi
36. Mazda Autozam Asahikawa	98. Mazda Autozam Ayabe
37. Mazda Autozam Koriyama-Minami	99. Mazda Autozam Izumo-Hirata
38. Mazda Autozam Sukagawa	100. Mazda Autozam Tsuyama
39. Mazda Autozam 17	101. Maps Co., Ltd.
40. Mazda Autozam Maebashi-Chuo	102. Hiroshima Seimitsu Co., Ltd.
41. Mazda Autozam Nagaoka-Nishi	103. Mazda Autozam Hofu-Chuo
42. Mazda Autozam Ojiya	104. Mazda Autozam Iyotetsu-Matsuyama
43. Mazda Autozam Kyosai	105. Mazda Autozam Kokura
44. Mazda Autozam Higashi	106. Japan Climate Systems Corporation
45. Mazda Autozam Ueda	107. Maps Co., Ltd.
46. Mazda Autozam Fukaya	108. Hiroshima Seimitsu Co., Ltd.
47. Mazda Autozam Honjo	109. Keiji Mazda Co., Ltd.
48. Mazda Autozam Kumagaya	110. Eunos Horie Co., Ltd.
49. Mazda Autozam Sugito	111. Saga Mazda Co., Ltd.
50. Mazda Autozam Kashiwa	112. Nagasaki Mazda Co., Ltd.
51. Mazda Autozam Kamogawa	113. Mazda Enfini Tomiseki Co., Ltd.
52. Mazda Autozam Tateyama	114. Mazda Autozam Tanagura
53. Mazda Autozam Mobarra	115. Mazda Autozam Shin-Shirakawa
54. Mazda Autozam Ichihara-Kita	116. Mazda Autozam Sakata
55. Mazda Autozam Isumi	117. Mazda Autozam Hokuso
56. Mazda Autozam Funabashi-Kita	118. Mazda Autozam Tohi
57. Mazda Autozam Nichido-Funabashi	119. Mazda Autozam Ishikawa
58. Mazda Autozam Kashiwanoha-Campus	120. Mazda Autozam Kitami
59. Mazda Autozam Ogaki-Higashi	121. Mazda Autozam Tanabe
60. Mazda Autozam Toki	122. Mazda Autozam Kumamoto-Kita
61. Mazda Autozam Ito (Saitama)	123. Mazda Autozam Harajuku
62. Mazda Autozam Fukuroi	124. Mazda Autozam Toyonaga-Iseaki
63. Mazda Autozam Sena (Kanagawa)	125. Mazda Autozam Konan (Saitama)
	126. Mazda Autozam Konan (Kanagawa)

* Companies No. 83 to 105 participated only in the Mazda Light-Down Campaign.
Companies No. 106 to 126 participated only in the WWF's Earth Hour 2021.