

December 14, 2020

ADEKA CORPORATION

## **ADEKA Develops *ADK CYCLOAID*, a New Brand of Polymer Additives** ~Promoting sustainable manufacturing in the resins industry and contributing to a recycling-oriented society~

ADEKA Corporation (President and Chief Executive Officer: Hidetaka Shirozume) announces that it has developed *ADK CYCLOAID*, a new brand of environment-friendly polymer additive. With this brand, ADEKA has developed and begun supplying samples of one-pack additives for recycled resins and bio-based plasticizers for PVC.

Going forward, ADEKA will actively introduce its products onto the market for recycled resins, bioplastics, \* and other environment-friendly plastic products, with the goal of truly becoming a top global manufacturer of polymer additives through its contributions to a plastic material recycling-oriented society.

ADEKA's polymer additives, our *SOZAI* (our Excellent Value; products, technologies and services), enable plastics to take on more functionality; e.g. the prevention of thermal or light-induced degradation and increased strength, transparency and flame retardancy. ADEKA's polymer additives, our *SOZAI*, are vital in many parts of our lives, accomplishing vital tasks such as improving fuel economy by enabling automobiles to be lighter, and increasing the flame retardancy of electrical appliances. As a leading global manufacturer, ADEKA also contributes to the extension of the life of plastics.

Meanwhile, environmental pollution from plastic garbage has become a global issue. Visible from the development of recycling technologies and bioplastics, efforts to reduce the burden on the environment have been undertaken, and the functions of plastics must continue to be enhanced to realize a recycling-oriented society.

Under these circumstances, ADEKA has developed the *ADK CYCLOAID* brand of products to ensure that environment-friendly plastics have functionality equal to or better than conventional plastics, but also place a minimal burden on the environment and help increase people's prosperity.

Aiming to expand its lineup of *ADK CYCLOAID* products and expand sales globally, ADEKA continues its efforts to establish a new market for polymer additives in the environment-friendly plastic industry, thereby contributing to a sustainable society.

\* A general term for biodegradable plastics and biomass plastics made from renewable biological resources.

## ADK CYCLOAID

Origin of the brand name:

ADEKA supplies its *SOZA* to promote resource recycling and support the functions necessary for recycling, to contribute to a sustainable society.



### Supplement 1: New ADK CYCLOAID series products

ADK CYCLOAID series web site : <https://www.adeka.co.jp/en/chemical/pickup/pickup15.html>

#### 1. One-pack additives for recycled resins

— *enabling recycled resins to reach the standards of virgin resins*

: **ADK CYCLOAID UPR-001 / ADK CYCLOAID UPR-011**

One-pack additives adding functionality to recycled polyolefin composites such as polypropylene. Two types are available: UPR-001 adding stability against oxidation and heat resistant properties and UPR-011 improving mechanical properties as well, due to the addition of a nucleating agent. These products can also be used to increase the ratio of the recycled resin in the composites to maintain equal level of properties, contributing to a reduction of plastic waste.

Applications: The recycling of plastic containers, automotive interior/exterior parts, pallets, etc.

#### 2. Bio-based plasticizers for PVC — *Polymeric Plasticizers for environment-friendly PVC*

: **ADK CYCLOAID PNB series**

This plasticizer uses 90% or more biomass raw materials\*. Compared to general-purpose plasticizers such as phthalates or dibasic esters, PNB Series exhibit equal or better performance in terms of oil resistance (resistance to oil extraction), heat aging stability, and less-migration to other plastics. ADK CYCLOAID PNB Series produced from biomass materials that are well-suited to a sustainability-oriented society and contribute to the realization of a low-carbon society.

Applications: PVC Film, Sheet, and daily-use industrial products, etc.

\* Currently in the process of acquiring the Biomass Mark certification from the Japan Organics Recycling Association.

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## Supplement 2: ADEKA's polymer additives business

In 1954, ADEKA began producing and selling the *ADK CIZER* plasticizers for PVC that are essential for the practical use of synthetic resins, in line with the increasing demand for PVC products during the era of high economic growth in Japan. ADEKA is now a comprehensive manufacturer of polymer additives, offering a full range of products from general-purpose to high functionality products used in various resins, including general-purpose resins and engineering plastics. Supporting our core brand *ADK STAB* and our other products, we have global production, development, and sales bases enabling ADEKA to be the second largest in the world in terms of market share for polymer additives.

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