KETJENFLEX® 12 - BECAUSE PLASTICIZERS MIGRATE

- Approved with a TDI of 1.0 mg/kg by the European Food Safety Authority
- An overall performance in PVC and many other resin systems similar to the common phthalate plasticizers
- A low volatile, non-VOC compound for products such as cables and tins

Ketjenflex® 12, the phthalate replacement of choice in food packaging inks, coatings, films, cosmetics and toys where exposure could be a concern.

axcentive introduces a high performance citric acid ester plasticizer for use in sensitive applications such as food contact materials and baby toys where safety is, more than usual, a concern.

KETJENFLEX® 12

Renewable and sustainable

Ketjenflex® 12 is produced by fermentation of renewable resources and is readily biodegradable. It has even shown to speed up the degradation of biodegradable polymers!

Safe

The relatively low migration into oily food substances in combination with the low toxicity explains why authorities consider Ketjenflex® 12 residues of no concern.

Extraction of some plasticizers from PVC (48 hours at 25°C).

	EXTRACTED FRACTION (%)		
Solvent	DEHP	DEHA	**KETJENFLEX® 12**
Water	0.7	1.5	**1.2**
Soapy water	2.7	11.0	**9.5**
Oil	11.4	34.7	**10.9**

The total allowed daily intake (TDI) of Ketjenflex® 12 is established by EFSA at 1.0 mg/kg body weight, which is much higher and thus safer than adipate and phthalate based plasticizers with comparable performances.

PLASTICIZER	TDI (MG/KG BODY WEIGHT)
Ketjenflex® 12	**1.0**
DINP	0.15
DEHA	0.3
DEHP	0.05

The US FDA has approved Ketjenflex® 12 for relevant indirect food applications and as a direct food additive for specific uses. EPA has exempted Ketjenflex® 12 from a tolerance for use as adjuvant in pesticide formulations.

Inks and Coatings

In today's sophisticated food packaging the plasticizer is a multifunctional ingredient acting also as viscosity modifier, solvating agent, film former and adhesion promoter. Ketjenflex® 12 offers superior performance even in combination with a classical and brittle resin such as nitrocellulose. It is also compatible with for example PVC/PVdC, PVB, CAP/CAB or acrylic resins.

Plastisols

Ketjenflex® 12 is up to 60 % part of resin-plasticizer dispersions used for instance in the manufacturing of (hollow) dolls, medical vinyl gloves and food lid gaskets. The large amount of plasticizer and the sensitive final use prescribe a safe and high performing plasticizer. Ketjenflex® 12, alone or in combination with other safe plasticizers, stands out due to its high SP (solubility parameter) and excellent plasticizing effect.

50 PHR in PVC	DEHP	DEHA	**KETJENFLEX® 12**
Hardness, shore A durometer 10 sec	79	78	**78**
Tensile strength (MPa)	19.0	12.4	**19.7**
Ultimate elongation (%)	395	414	**400**

Metal treatment

A thin layer of Ketjenflex® 12 protects metal sheets and improves paint adhesion in the production of tins. The safety of Ketjenflex®12 in food contact applications makes it the perfect product.

Please contact us for further technical information, safety and product data sheets or samples.

axcentive

Axcentive SARL
Chemin de Champouse
13320 Bouc Bel Air
France, Tel +33 442 694 090
info@axcentive.com
www.axcentive.com/KETJENFLEX_12