RADICAL
INNOVATION IN MATERIALS

TECHNICAL DATA SHEET

SUMNA023

Issue Date: 8th November 2022
Revision: 1

SUMNA023 masterbatch is comprised of metal/X-ray detectable additives encapsulated in a polymer carrier.

CHEMICAL & PHYSICAL CHARACTERISTICS

Composition	Polymer plus detectable additives
Appearance	Solid natural (grey) pellet, approx. 3mm diameter
Odour:	None

Metal detectability (guideline ferrous ball equivalent):

	Sample size (mm)		
Dilution rate (into PE/PP)	2 x 2 x 2.5	3 x 3 x 2.5	4 x 4 x 2.5
20%	1.0	1.3	1.5
25%	1.0	1.4	1.6
30%	1.05	1.5	1.7

Notes: Conducted on a Safeline Signature balanced coil detector with a 300mm x 150mm aperture and a speed of 42m/min. The machine was balanced using the phase control and sensitivity to allow optimised detection of the samples as well as standard ferrous balls. Detection results can only be related to the specific conditions utilised for this testing and should be used as a guide. Detectability of material/products on an individual case basis can only be proven by testing against specific food products under actual operating conditions and machine settings.

APPLICATIONS / USE LEVELS

SUMNA023 is suitable for injection moulding and extrusion into a range of base polymers.

Normal use concentrations are in the range of 20% - 30%, depending on the host material, the nature of the application and the environment in which the finished article will be used.

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COMPATIBILITY

SUMNA023 can be blended with the host polymer prior to moulding/extrusion, or can be introduced to the polymer using appropriate dosing equipment e.g. gravimetric feeder.

SUMNA023 exhibits no compatibility problems in most practical applications. However due to the large range of possible applications, it is recommended that the stability of the active ingredients, system compatibility & any influences on the product properties during production, storage, transport and in the application are tested prior to use.

It is generally recommended that where the masterbatch is employed in a food contact application that migration testing is carried out of the article containing **SUMNA023**.

PACKAGING / STORAGE / TRANSPORT / REGULATORY APPROVALS

Packaging	Foil bag: 1 kg, 5 kg
	Bag in carton: 25 kg
Shelf Life	Indefinite when stored in cool dry area avoiding direct sunlight
Storage	Use original containers
	Recommended storage temperature 5°C - 40°C
	Protect against heat and direct sunlight
Transportation	**SUMNA023** is classified as non-hazardous for transport.

SAFETY / LABELLING / TOXICOLOGY

For detailed information on the toxicology and handling of **SUMNA023** & advice on the labelling of products in which it may be used, please refer to the separate Material Safety Data Sheet or seek specific advice from Radical Materials.

Notes: These characteristics do not constitute a sales specification. The information contained in this document is intended to be of assistance to users but is without guarantee. Variations can occur in application and users are advised to conduct their own tests. Suggestions for use neither give nor imply any freedom from patent infringement.

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