Identification of the substance: Nanoclays

Substance name	Nanoclays
EC	215-288-0
CAS	1318-93-0
IUPAC	Nanoclays
Molecular formula	(Na,Ca)0,3(Al, Mg)2Si4O10
Forms in the market	Modified nanoclays, nanocrystals, platelets

Physical and chemical properties

Shape	No data
Size (nm)	No data

Toxicological information

Inhalation acute toxicity	No data
Dermal acute toxicity	No data
Oral acute toxicity	Nontoxic
Genotoxicity	Negative
Cytotoxicity	Positive

Ecotoxicological information

Freshwater Acute toxicity (Daphnia)	NOEC = 100 mg/L (Nontoxic)
Freshwater Acute toxicity (Alga)	EC50 = 39.23 mg/L (Practically nontoxic)
Freshwater Acute toxicity (Fish)	NOEC = 100 mg/L (Nontoxic)
Soil invertebrates (worms)	No data
BAF-Bioaccumulation	No data

Application

Industrial uses	Packaging Plastic Additives
Improved properties	Gas and moisture barrier Strength Toughness Abrasion resistance Chemical resistance Mechanical properties Thermal properties Structural properties Suitability for injection molding and extrusion Flame retardant Degree of dispersion Antimicrobial properties Tensile

Polymeric matrix	Polyamide (PA), polypropylene (PP), polyethylene terephthalate (PET), polyamides nylon, polyisobutylene (PIB), nylon nanoblends, poly(lactic acid) (PLA), epoxy, nitrile rubber (NBR), low density polyethylene (LDPE), EVA/PE compound, polyvinyl chloride (PVC)
Recommendations, comments	Incorporated in PET and used as additive for rubbers in combination with, for instance, TPO As additive in architectural coatings, met to high PVC; and in other non-polymeric building materials As additive in elastomeric substrates and PET substrates