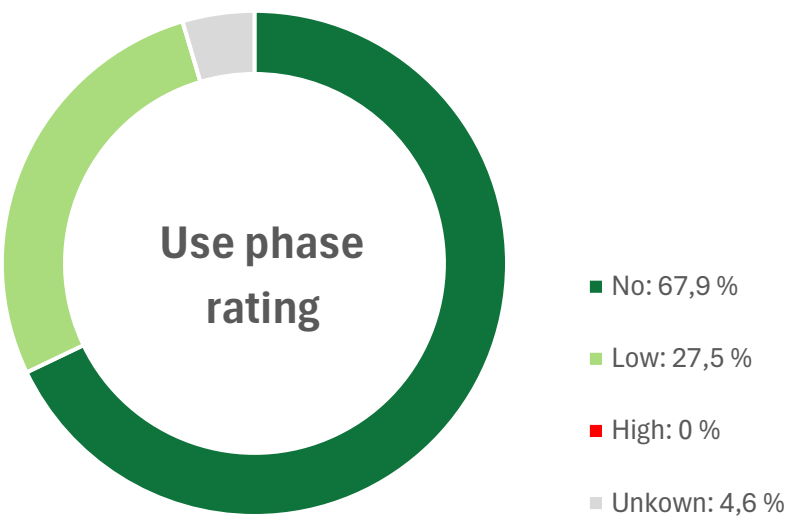
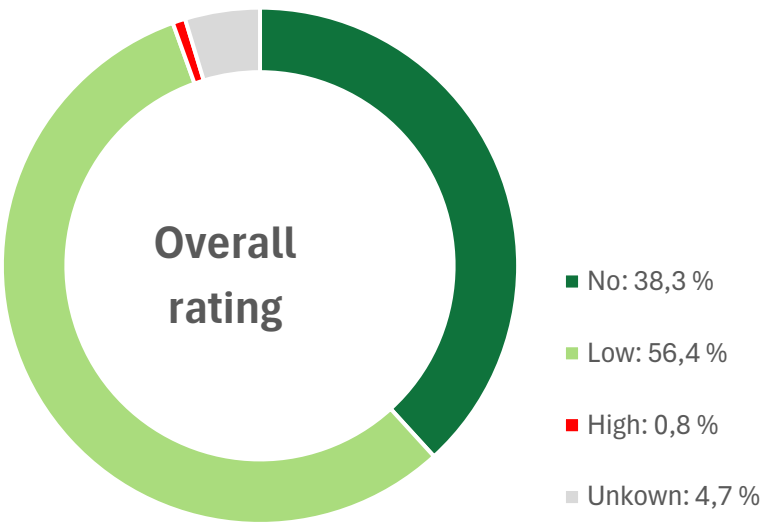


SAFETRED

Company	TARKETT
Product specifications	Safetred Natural, Safetred Ion Linen, Safetred Wood, Safetred Spectrum, Safetred Serenity, Safetred Universal, Safetred Universal R11, Safetred Universal R12, Safetred Sound
Issue date:	12. February 2025
Expiration date:	11. February 2027
Declaration and evaluation threshold:	At least 100 ppm of the final product
After-use scenario:	ReStart® recycling and take-back programme <sup>(a)</sup>
EPEA Registry No:	39944.3
MHS Version:	3.0

Chemicals Risk Assessment: Concern level



This summary presents the average mass weighted distribution of material health ratings presented on next pages. Ratings address benefits and risks of chemical components of the product for humans and the living environment:

\* during the phase of use of the product.

\* overall while taking into account

- a) the last manufacturing step using raw materials leading to them in the product’s composition,
- b) the production of raw materials in the supply chain as far as information is attainable from suppliers or from generic literature,
- c) the intended management scenario after use.

The benefit and risk analysis follows a qualitative and quantitative breakdown of the product’s chemical composition from the chemical composition of raw materials, a reconstruction of chemical transformation pathways and an anticipation of the chemical’s behaviour during the intended after-use processing. This information is combined with physical and (eco)toxicological properties of pure chemicals obtained from governmental and non-governmental scientific organisations to derive a level of concern. The MHS is making transparent at a point in time results of the company’s activities for developing benefits of the product, including environmental and health benefits, with its purchasing and commercialization practices.


FUNCTION	CHEMICAL	CAS	CONTENT	EPEA RATING		GS-LT GS-BM <sup>(c)</sup>	REACH
				USE PHASE	OVERALL		
PVC	Polyvinyl chloride	9002-86-2	≤ 47,6%			LT-P1	✓
	Polymerization auxiliaries	Proprietary	≤ 2,5%			N.I.	-
	Transitional use of PVC is tolerated in durable applications designed with good materials and a collection and recycling program in place(a). Vinyl chloride content is below 1 ppm in purchased products. Tarkett proposes to take back your installation residues and plans to propose to take back your products after use, thanks to the ReStart® program. The PVC resin products are produced with chlorine originating from membrane-based chloralkali processes according to today best available technologies. Suppliers of the PVC resin products do not disclose the identity of polymerization auxiliaries. Mentioned amounts are estimate maxima based on scientific literature and the knowledge of the polymerization process type. <b>Check Tarkett national websites for Restart® program availability.</b>						
	Nanomaterials: No						
Fillers	Calcium carbonate	471-34-1	≤ 86,9%			LT-UNK	✓
	Magnesite (Mg(CO3))	546-93-0				LT-UNK	✓
	Dolomite	16389-88-1				LT-UNK	✓
	Kaolin	1332-58-7				LT-UNK	✓
	Quartz (SiO2)	14808-60-7				LT-1	✓
	Cristobalite	14464-46-1				LT-1	✓
	Glass, oxide, chemicals	65997-17-3				LT-1	✓
	Silicon carbide	409-21-2				LT-1	✓
	Fillers consist of pulverized stones (calcium carbonate, dolomite and kaolin) of virgin and recycled origin as well as of other mineral inclusions conveyed by recycled flooring. Low levels of quartz. No concern in the finished product, also with silicon carbide. Silicon carbide is conveyed by recycled content and presents no concern during thermoplastic reprocessing.						
Nanomaterials: No							
Plasticizers	1,2-Cyclohexanedicarboxylic acid, diisononyl ester (DINCH)	166412-78-8	≤ 27%			LT-UNK	✓
	1,2-Cyclohexanedicarboxylic acid, 1-methyl, 2-iisononyl ester	Not available				N.I.	✓
	Bis(2-ethylhexyl) adipate	103-23-1				LT-P1	✓
	Dibutyl terephthalate	1962-75-0				None	✓
	Tributyl O-acetylcitrate	77-90-7				LT-P1	✓
	Diocetyl terephthalate (= DOTP,	4654-26-6				None	✓
	1,4-benzenedicarboxylic acid, butyl methyl ester	52392-55-9				N.I.	✓
	Alternatives to phthalate plasticizers approved for food contact applications with high migration limit reflecting a much better safety profile. No concern with DOTP, especially no disruption of developmental pathways observed with metabolic products of DEHT. With DINCH no toxicity is identifiable, especially no mutagenicity, carcinogenicity or reproductive toxicity observed in animal tests. DBT is an equivocal sensitizer. No concern with synthesis impurities MBT and MINCH irrespective of their amount < 0.1% in the total composition.						
Nanomaterials: No							


Heat stabilizers	Soybean oil, epoxidized	8013-07-8	≤ 1,8%			LT-P1	✓
	Zinc bis(2-ethylhexanoate)	136-53-8				LT-1	✓
	Zinc neodecanoate	27253-29-8				LT-P1	✓
	Zinc dibenzoate	553-72-0				LT-P1	✓
	Triisotridecyl phosphite	77745-66-5				LT-P1	✓
	Triisodecyl phosphite	25448-25-3				LT-P1	✓
	Other heat stabilizer components	Proprietary				LT-P1	✓
						LT-P1	✓
						LT-UNK	✓
<i>ESBO is a scavenger of hydrochloric acid that may be formed during the flooring use period. It has a plasticizing effect in addition.</i>							
<i>Zinc, an essential trace element for life, belongs to a calcium/zinc based heat stabilizing system. The migration potential of the different components of the heat stabilization system is unknown but expected low. No concern in the finished product.</i>							
<i>Nanomaterials: No</i>							
Reinforcement	Glass, oxide, chemicals	65997-17-3	≤1,5%			LT-1	✓
	<i>A glass fibre veil enhances the dimension stability. It is encapsulated in the flooring matrix. The glass fibre based veil consists of fibres with a diameter of 13 µm. No information on the specific binder composition (About 25% of the reinforcement system) but no concern seen.</i>						
	<i>Nanomaterials: No</i>						
Coloration agents	Titanium dioxide	13463-67-7	≤ 1%			LT-1	✓
	Carbon black	1333-86-4				BM1	✓
	Magnetite	1309-38-2				LT-UNK	✓
	Diiron oxide (Fe2O3)	1309-37-1				BM1	✓
	C.I. Pigment Yellow 42	51274-00-1				LT-UNK	✓
	C.I. Pigment Blue 15	147-14-8				LT-UNK	✓
	C.I. Pigment Red 144	5280-78-4				LT-UNK	✓
	C.I. Pigment Yellow 93	5580-57-4				LT-P1	✓
	<i>Potential health issue related to dust inhalation during mining/production of titanium dioxide. No concern in the finished product. Copper containing pigments are not recommended in the context of PVC because of the catalytic activity of copper for the formation of dioxins in case of fire. Chlorinated pigments are not recommended for reasons explained in "EPEA's position on PVC and chlorine management"(a). They are labelled red for these reasons.</i>						
<i>Nanomaterials: Not verified, yet for other pigments than titanium dioxide</i>							

Additives, processing aids, impurities	Polyethylene terephthalate	25038-59-9	≤ 11,8%			LT-P1	✓
	1-methoxypropan-2-ol	107-98-2				LT-P1	✓
	Ethanol	64-17-5				BM2	✓
	2-(2-butoxyethoxy)ethanol	112-34-5				LT-P1	✓
	2,6-di-tert-butyl-p-cresol	128-37-0				BM1	✓
	Poly(oxy-1,4-butanediyl), .alpha.-[[4-benzoylphenoxy) acetyl]-.omega.-[[2-(4-benzoylphenoxy)acetyl]oxy]-	515136-48-8				None	✓
	2,2-bis[[(1-oxoallyl)oxy]methyl]-1,3-propanediyl diacrylate	4986-89-4				LT-UNK	✓
	C,C'-azodi(formamide)	147-14-8				LT-UNK	✓
	Fumes, silica	69012-64-2				LT-P1	✓
	Silicon dioxide	7631-86-9				BM1	✓
	Aluminium oxide	90669-62-8				LT-1	✓
	Zinc oxide	91315-44-5				N.I.	✓
	1,3-diphenylpropane-1,3-dione	120-46-7				LT-UNK	✓
	Alcohols, C11-14-iso-, C13-rich	68526-86-3				LT-P1	✓
	Polynoxylin	9011-05-6				LT-P1	✓
	Urea, polymer with formaldehyde and 1,3,5-triazine-2,4,6-triamine	25036-13-9				LT-UNK	✓
	(octahydro-4,7-methano-1H-indenediyl)bis(methylene) diacrylate	42594-17-2				LT-P1	✓
	Hexane, 1,6-diisocyanato-, homopolymer, 2-hydroxyethyl acrylate- and propylene glycol monoacrylate-blocked	1392411-89-0				LT-P1	✓
	Oxybis(methyl-2,1-ethanediyl) diacrylate	57472-68-1				LT-P1	✓
	Hexamethylene diacrylate	13048-33-4				LT-P1	✓
	Other additives, processing aids and impurities	Proprietary				LT-UNK	✓
						LT-P1	✓
						None	✓
						BM2	✓
						LT-P1	✓
Chemicals in this section consist of 1.) formulation auxiliaries for coloration agents, 2.) chemicals of the recycled input that do not recover functionality after recycling like a series of chemicals originating from chemically defined surface treatments and not present as such but as polymer after curing in the former use of materials, 3.) decomposition products of the foaming agent azodicarbonamide and foaming reaction activator. No concern in the final product.							
Nanomaterials: Not verified							

Surface Treatment	2,6-di-tert-butyl-p-cresol	128-37-0	≤ 0,9%			BM1	✓
	Poly(oxy-1,4-butanediyl), .alpha.- [(4-benzoylphenoxy) acetyl]- .omega.-[[2-(4-benzoylphenoxy)acetyl]oxy]-	515136-48-8				None	✓
	Silicon dioxide	7631-86-9				BM1	✓
	Polynoxylin	9011-05-6				LT-P1	✓
	(octahydro-4,7-methano-1H-indenediyl)bis(methylene) diacrylate	42594-17-2				LT-P1	✓
	Hexane, 1,6-diisocyanato-, homopolymer, 2-hydroxyethyl acrylate- and propylene glycol monoacrylate-blocked	1392411-89-0				LT-P1	✓
	Oxybis(methyl-2,1-ethanediyl)	57472-68-1				LT-P1	✓
	Other surface treatment precursors	Proprietary				N.I.	-
						None	✓
	<p>Complex coating macropolymer based on polyurethane acrylate that is UV cured during application. It fulfils a double function as protection of the flooring against abrasion during use and barrier against migration of mobile chemicals to the indoor environment. Most of chemicals listed in this section are not present as such in the finished product anymore and have lost properties that lead to specification for hazard labelling of raw materials. While recycling within the ReStart® process, surface treatment lose their function and contribute as a filler without detrimental impacts to the safety properties of flooring products of the next generation.</p> <p>Nanomaterials: Not verified</p>						
RESOURCE ORIGIN							
Content sourced from abundant minerals			47%	Dolomite is a primary mineral involved in the production. Other fillers are originating from the recycled content and counted there.			
Recycled content	- Internal post-industrial		35%	The recycled content originates from materials recovered from flooring applications.			
	- Post-installation		-				
	- Post-use source		-				
Biologically renewable content	- Animal		-	No materials in the production are identifiable with an animal origin.			
	- Vegetal		0,6%				





EPEA's rating methodology<sup>(d)</sup> is based on the Cradle-to-Cradle approach with the European Precautionary principle. It is made in relation with a quality target, an after-use scenario and on the background of the specific supply chain materials used by the article's manufacturer. The assessment of hazard/safety properties of chemicals is made at the best of our knowledge at the date of MHS™ issue. EPEA believes the data forth herein are accurate as of the date hereof. EPEA makes no warranty with respect thereto and expressly denies all liability for reliance thereon. Such data are offered solely for your consideration, investigation, and verification.

  
Dr. Jan Christoph von der Lancken  
Managing Director EPEA Industry

  
Dr. Alain Rivière  
Scientific Supervisor



Legend:

EPEA RATINGS	REACH compliance	GS-LT / GS- BM <sup>(a)</sup>
 No concern	✓: Substance is listed neither in Annex XIV nor in Annex XVII nor as SVHC and complies with European Union Regulation EC 1907/2006 applicable to this article	<b>LT-1:</b> Chemical is found on an authoritative list of the most-toxic chemicals <b>LT-P1:</b> Chemical may be a serious hazard, but the confidence level is lower
 low concern	<b>XVII or XIV:</b> Substance listed in Annex XVII (Restriction) or Annex XIV (Authorisation) of REACH regulation applicable to this article	<b>LT-UNK:</b> Unknown (no data on List Translator Lists) <b>BM1:</b> Avoid: Chemical of High Concern
 High concern. Task for material optimization	<b>SVHC:</b> Substance of Very High Concern. Candidate for listing in Annex XIV (Authorization list) of REACH Regulation at a concentration above 0.1%	<b>BM2:</b> Use but search for Safer Substitutes <b>BM3:</b> Use but still opportunity for improvement
 Risk cannot be verified. Task for knowledge development	- : Not applicable due to missing CAS#	<b>BM4:</b> Prefer: Safer Chemical <b>BMU:</b> "Unspecified"; insufficient data <b>N.I.:</b> (No GS rating): Chemical is not listed in the source of GS and GS-LT ratings

- (a) ReStart® recycling and take-back programme(a)  
[https://professionals.tarkett.com/en\\_EU/node/restart-recycling-take-back-programme-9721](https://professionals.tarkett.com/en_EU/node/restart-recycling-take-back-programme-9721)
- (b) Charter for a responsible use of PVC and chlorine management  
<https://www.epea.com/en/news/pvc-chlorine-management>
- (c) GreenScreen List Translator Score and GreenScreen Benchmark Score according to 3E Exchange  
<https://exchange.3eco.com/Substances/Search>
- (d) EPEA MHS V3.0 Development Guidance  
[https://epea.com/fileadmin/user\\_upload/2.0\\_Leistungen/MHS\\_Guidance\\_document\\_V3.0\\_EPEA\\_15.09.2023.pdf](https://epea.com/fileadmin/user_upload/2.0_Leistungen/MHS_Guidance_document_V3.0_EPEA_15.09.2023.pdf)
- (e) VOC regulation compliance
- ✓ AgBB 2024
  - ✓ Belgian VOC regulation
  - ✓ French regulation of April and May 2009 DEVP0908633A and DEVP0910046A (CMR components)
  - ✓ French regulations DEVL 1101903 D and DEVL1104875 A 1101903D.