

# Approved additives and E numbers

Additives and E numbers for colours, preservatives, antioxidants, sweeteners, emulsifiers, stabilisers, thickeners and other types of additives.

Most additives are only permitted to be used in certain foods and are subject to specific quantitative limits, so it is important to note this list should be used in conjunction with the appropriate legislation:

- [assimilated Regulation \(EU\) 1333/2008](#) on food additives in England and Wales
- [Regulation \(EU\) 1333/2008](#) on food additives and [Commission Regulation \(EU\) 2022/63, amending Annexes II and III to Regulation 1333/2008](#) in Northern Ireland

## Glycerol (E 422)

Glycerol (E 422) is authorised as a food additive in accordance with Annex II of the assimilated Regulation (EU) 1333/2008 on food additives (Commission Regulation 1333/2008 in Northern Ireland).

It is permitted for use at quantum satis in flavoured drinks. Quantum satis means no maximum numerical level is specified and substances must be used in accordance with good manufacturing practice, at a level not higher than is necessary to achieve the intended purpose and provided the consumer is not misled.

Glycerol (E 422) is a key ingredient used in the production of slush ice drinks. It maintains the slush properties, preventing the liquid from freezing solid. However, there have been cases of children becoming unwell following excessive consumption.

We have been working with industry on voluntary guidance to protect vulnerable consumers and have agreed the following four principles. These are not a legal requirement but are considered best practice.

### Industry guidelines for glycerol in Slush ice drinks

1. Brand owners will ensure that their customers are fully aware of the FSA's risk assessment of the use of glycerol in slush ice drinks.
2. Brand owners will formulate products to contain glycerol at the minimum quantity technically necessary to achieve the required 'slush' drink effect.
3. Brand owners will advise their customers that sales of slush ice drinks containing glycerol should be accompanied by a written warning visible at point of sale – "Product contains glycerol. Not recommended for children 4 years of age and under".
4. The business model of free refills is not recommended in venues where children under 10 years of age will consume them.

These industry guidelines are based on a worst-case scenario of a slush ice drink containing the top level of 50,000 mg/L glycerol as potential exposure. If in the future, collectively, industry decide to drop the glycerol levels, these guidelines can be reassessed.

### Explanatory text to consumers about glycerol

We have added the following advice to our [consumer page on food additives](#).

'Slush ice drinks can contain the ingredient glycerol as a substitute for sugar, at a level required to create the 'slush' effect. At this level, we recommend that children four years of age and under should not consume these drinks, due to their potential to cause side-effects such as headaches and sickness, particularly when consumed in excess.'

## Northern Ireland

### Titanium dioxide

From 7 February 2022 the use of titanium dioxide (TiO<sub>2</sub> - E171) as a food additive is no longer permitted in the EU and in Northern Ireland, due to the application of the Northern Ireland Protocol, following the publication of [Commission Regulation \(EU\) 2022/63, amending Annexes II and III to Regulation \(EC\) No 1333/2008](#).

This regulation was published with a 6-month transition period which ends on 7 August 2022. Until the end of this transition period foods produced in accordance with the rules applicable before 7 February 2022 may continue to be placed on the market. After 7 August 2022, food products containing TiO<sub>2</sub> will no longer be able to be placed on the EU/NI market, however, foods already on the market will be able to remain on the market until they reach their date of minimum durability or 'use by' date.

### Colours

E numbers	Additives
E100	Curcumin
E101	(i) Riboflavin
	(ii) Riboflavin-5'-phosphate
E102	Tartrazine
E104	Quinoline yellow
E110	Sunset Yellow FCF; Orange Yellow S
E120	Cochineal; Carminic acid; Carmines
E122	Azorubine; Carmoisine

<b>E numbers</b>	<b>Additives</b>
<b>E123</b>	Amaranth
<b>E124</b>	Ponceau 4R; Cochineal Red A
<b>E127</b>	Erythrosine
<b>E129</b>	Allura Red AC
<b>E131</b>	Patent Blue V
<b>E132</b>	Indigotine; Indigo Carmine
<b>E133</b>	Brilliant Blue FCF
<b>E140</b>	Chlorophylls and chlorophyllins
<b>E141</b>	Copper complexes of chlorophyll and chlorophyllins
<b>E142</b>	Green S
<b>E150a</b>	Plain caramel
<b>E150b</b>	Caustic sulphite caramel
<b>E150c</b>	Ammonia caramel
<b>E150d</b>	Sulphite ammonia caramel
<b>E151</b>	Brilliant Black BN; Black PN
<b>E153</b>	Vegetable carbon
<b>E155</b>	Brown HT
<b>E160a</b>	Carotenes

<b>E numbers</b>	<b>Additives</b>
<b>E160b(i)</b>	Annatto, bixin
<b>E160b(ii)</b>	Annatto, norbixin
<b>E160c</b>	Paprika extract; Capsanthin; Capsorubin
<b>E160d</b>	Lycopene
<b>E160e</b>	Beta-apo-8'-carotenal (C30)
<b>E161b</b>	Lutein
<b>E161g</b>	Canthaxanthin
<b>E162</b>	Beetroot Red; Betanin
<b>E163</b>	Anthocyanins
<b>E170</b>	Calcium carbonate
<b>E171</b>	Titanium dioxide; <a href="#">not permitted for use in Northern Ireland</a>
<b>E172</b>	Iron oxides and hydroxides
<b>E173</b>	Aluminium
<b>E174</b>	Silver
<b>E175</b>	Gold
<b>E180</b>	Litholrubine BK

## Preservatives

<b>E numbers</b>	<b>Additives</b>
------------------	------------------

<b>E200</b>	Sorbic acid
<b>E202</b>	Potassium sorbate
<b>E210</b>	Benzoic acid
<b>E211</b>	Sodium benzoate
<b>E212</b>	Potassium benzoate
<b>E213</b>	Calcium benzoate
<b>E214</b>	Ethyl p-hydroxybenzoate
<b>E215</b>	Sodium ethyl p-hydroxybenzoate
<b>E218</b>	Methyl p-hydroxybenzoate
<b>E219</b>	Sodium methyl p-hydroxybenzoate
<b>E220</b>	Sulphur dioxide
<b>E221</b>	Sodium sulphite
<b>E222</b>	Sodium hydrogen sulphite
<b>E223</b>	Sodium metabisulphite
<b>E224</b>	Potassium metabisulphite
<b>E226</b>	Calcium sulphite
<b>E227</b>	Calcium hydrogen sulphite
<b>E228</b>	Potassium hydrogen sulphite
<b>E234</b>	Nisin

<b>E235</b>	Natamycin
<b>E239</b>	Hexamethylene tetramine
<b>E242</b>	Dimethyl dicarbonate
<b>E243</b>	Ethyl lauroyl arginate
<b>E249</b>	Potassium nitrite
<b>E250</b>	Sodium nitrite
<b>E251</b>	Sodium nitrate
<b>E252</b>	Potassium nitrate
<b>E280</b>	Propionic acid
<b>E281</b>	Sodium propionate
<b>E282</b>	Calcium propionate
<b>E283</b>	Potassium propionate
<b>E284</b>	Boric acid
<b>E285</b>	Sodium tetraborate; borax
<b>E1105</b>	Lysozyme

## Antioxidants

<b>E numbers</b>	<b>Additives</b>
<b>E300</b>	Ascorbic acid
<b>E301</b>	Sodium ascorbate

<b>E numbers</b>	<b>Additives</b>
<b>E302</b>	Calcium ascorbate
<b>E304</b>	Fatty acid esters of ascorbic acid
<b>E306</b>	Tocopherols
<b>E307</b>	Alpha-tocopherol
<b>E308</b>	Gamma-tocopherol
<b>E309</b>	Delta-tocopherol
<b>E310</b>	Propyl gallate
<b>E315</b>	Erythorbic acid
<b>E316</b>	Sodium erythorbate
<b>E319</b>	Tertiary-butyl hydroquinone (TBHQ)
<b>E320</b>	Butylated hydroxyanisole (BHA)
<b>E321</b>	Butylated hydroxytoluene (BHT)
<b>E392</b>	Extracts of rosemary
<b>E586</b>	4-Hexylresorcinol

## **Sweeteners**

### **Northern Ireland**

#### **E960d glucosylated steviol glycosides**

The European Commission have authorised an additional steviol glycoside, E 960d glucosylated steviol glycosides, Commission Regulation (EU) No 2023/447 was published on 1 March 2023 and came into force on 20 March 2023. This regulation applies in Northern Ireland but not GB.

<b>E numbers</b>	<b>Additives</b>
<b>E420</b>	(i) Sorbitol
	(ii) Sorbitol syrup
<b>E421</b>	Mannitol
<b>E950</b>	Acesulfame K
<b>E951</b>	Aspartame
<b>E952</b>	Cyclamic acid and its Na and Ca salts
<b>E953</b>	Isomalt
<b>E954</b>	Saccharin and its Na, K and Ca salts
<b>E955</b>	Sucralose
<b>E957</b>	Thaumatococcus
<b>E959</b>	Neohesperidine DC
<b>E960a</b>	Steviol glycosides from stevia
<b>E960c</b>	Enzymatically produced steviol glycosides
<b>E961</b>	Neotame
<b>E962</b>	Salt of aspartame-acesulfame
<b>E964</b>	Polyglycitol syrup
<b>E965</b>	(i) Maltitol
	(ii) Maltitol syrup



<b>E numbers</b>	<b>Additives</b>
<b>E966</b>	Lactitol
<b>E967</b>	Xylitol
<b>E968</b>	Erythritol
<b>E969</b>	Advantame

## **Emulsifiers, stabilisers, thickeners and gelling agents**

<b>E numbers</b>	<b>Additives</b>
<b>E322</b>	Lecithins
<b>E400</b>	Alginic acid
<b>E401</b>	Sodium alginate
<b>E402</b>	Potassium alginate
<b>E403</b>	Ammonium alginate
<b>E404</b>	Calcium alginate
<b>E405</b>	Propane-1,2-diol alginate
<b>E406</b>	Agar
<b>E407</b>	Carrageenan
<b>E407a</b>	Processed eucheuma seaweed
<b>E410</b>	Locust bean gum; carob gum

<b>Enumbers</b>	<b>Additives</b>
<b>E412</b>	Guar gum
<b>E413</b>	Tragacanth
<b>E414</b>	Acacia gum; gum arabic
<b>E415</b>	Xanthan gum
<b>E416</b>	Karaya gum
<b>E417</b>	Tara gum
<b>E418</b>	Gellan gum
<b>E425</b>	Konjac
<b>E426</b>	Soybean hemicellulose
<b>E427</b>	Cassia gum
<b>E432</b>	Polyoxyethylene sorbitan monolaurate; Polysorbate 20
<b>E433</b>	Polyoxyethylene sorbitan mono-oleate; Polysorbate 80
<b>E434</b>	Polyoxyethylene sorbitan monopalmitate; Polysorbate 40
<b>E435</b>	Polyoxyethylene sorbitan monostearate; Polysorbate 60
<b>E436</b>	Polyoxyethylene sorbitan tristearate; Polysorbate 65
<b>E440</b>	Pectins
<b>E442</b>	Ammonium phosphatides
<b>E444</b>	Sucrose acetate isobutyrate

<b>Enumbers</b>	<b>Additives</b>
<b>E445</b>	Glycerol esters of wood rosins
<b>E460</b>	Cellulose
<b>E461</b>	Methyl cellulose
<b>E462</b>	Ethyl cellulose
<b>E463</b>	Hydroxypropyl cellulose
<b>E464</b>	Hydroxypropyl methyl cellulose
<b>E465</b>	Ethyl methyl cellulose
<b>E466</b>	Carboxy methyl cellulose
<b>E468</b>	Crosslinked sodium carboxy methyl cellulose
<b>E469</b>	Enzymatically hydrolysed carboxy methyl cellulose
<b>E470a</b>	Sodium, potassium and calcium salts of fatty acids
<b>E470b</b>	Magnesium salts of fatty acids
<b>E471</b>	Mono- and diglycerides of fatty acids
<b>E472a</b>	Acetic acid esters of mono- and diglycerides of fatty acids
<b>E472b</b>	Lactic acid esters of mono- and diglycerides of fatty acids
<b>E472c</b>	Citric acid esters of mono- and diglycerides of fatty acids
<b>E472d</b>	Tartaric acid esters of mono- and diglycerides of fatty acids
<b>E472e</b>	Mono- and diacetyltartaric acid esters of mono- and diglycerides of fatty acids

<b>Enumbers</b>	<b>Additives</b>
<b>E472f</b>	Mixed acetic and tartaric acid esters of mono- and diglycerides of fatty acids
<b>E473</b>	Sucrose esters of fatty acids
<b>E474</b>	Sucroglycerides
<b>E475</b>	Polyglycerol esters of fatty acids
<b>E476</b>	Polyglycerol polyricinoleate
<b>E477</b>	Propane-1,2-diol esters of fatty acids
<b>E479b</b>	Thermally oxidised soya bean oil interacted with mono and diglycerides of fatty acids
<b>E481</b>	Sodium stearyl-2-lactylate
<b>E482</b>	Calcium stearyl-2-lactylate
<b>E483</b>	Stearyl tartrate
<b>E491</b>	Sorbitan monostearate
<b>E492</b>	Sorbitan tristearate
<b>E493</b>	Sorbitan monolaurate
<b>E494</b>	Sorbitan monooleate
<b>E495</b>	Sorbitan monopalmitate
<b>E1103</b>	Invertase

## Others

Acid, acidity regulators, anti-caking agents, anti-foaming agents, bulking agents, carriers and carrier solvents, emulsifying salts, firming agents, flavour enhancers, flour treatment agents, foaming agents, glazing agents, humectants, modified starches, packaging gases, propellants, raising agents and sequestrants.

<b>E numbers</b>	<b>Additives</b>
<b>E260</b>	Acetic acid
<b>E261</b>	Potassium acetate
<b>E262</b>	Sodium acetate
<b>E263</b>	Calcium acetate
<b>E270</b>	Lactic acid
<b>E290</b>	Carbon dioxide
<b>E296</b>	Malic acid
<b>E297</b>	Fumaric acid
<b>E325</b>	Sodium lactate
<b>E326</b>	Potassium lactate
<b>E327</b>	Calcium lactate
<b>E330</b>	Citric acid
<b>E331</b>	Sodium citrates
<b>E332</b>	Potassium citrates
<b>E333</b>	Calcium citrates
<b>E334</b>	Tartaric acid (L-(+))
<b>E335</b>	Sodium tartrates

E numbers	Additives
<b>E336</b>	Potassium tartrates
<b>E337</b>	Sodium potassium tartrate
<b>E338</b>	Phosphoric acid
<b>E339</b>	Sodium phosphates
<b>E340</b>	Potassium phosphates
<b>E341</b>	Calcium phosphates
<b>E343</b>	Magnesium phosphates
<b>E350</b>	Sodium malates
<b>E351</b>	Potassium malate
<b>E352</b>	Calcium malates
<b>E353</b>	Metatartaric acid
<b>E354</b>	Calcium tartrate
<b>E355</b>	Adipic acid
<b>E356</b>	Sodium adipate
<b>E357</b>	Potassium adipate
<b>E363</b>	Succinic acid
<b>E380</b>	Triammonium citrate
<b>E385</b>	Calcium disodium ethylene diamine tetra-acetate; calcium disodium EDTA

E numbers	Additives
<b>E422</b>	Glycerol
<b>E423</b>	Octenyl succinic acid modified gum Arabic
<b>E450</b>	Diphosphates
<b>E451</b>	Triphosphates
<b>E452</b>	Polyphosphates
<b>E459</b>	Beta-cyclodextrin
<b>E499</b>	Stigmasterol-rich plant sterols
<b>E500</b>	Sodium carbonates
<b>E501</b>	Potassium carbonates
<b>E503</b>	Ammonium carbonates
<b>E504</b>	Magnesium carbonates
<b>E507</b>	Hydrochloric acid
<b>E508</b>	Potassium chloride
<b>E509</b>	Calcium chloride
<b>E511</b>	Magnesium chloride
<b>E512</b>	Stannous chloride
<b>E513</b>	Sulphuric acid
<b>E514</b>	Sodium sulphates

<b>E numbers</b>	<b>Additives</b>
<b>E515</b>	Potassium sulphates
<b>E516</b>	Calcium sulphate
<b>E517</b>	Ammonium sulphate
<b>E520</b>	Aluminium sulphate
<b>E521</b>	Aluminium sodium sulphate
<b>E522</b>	Aluminium potassium sulphate
<b>E523</b>	Aluminium ammonium sulphate
<b>E524</b>	Sodium hydroxide
<b>E525</b>	Potassium hydroxide
<b>E526</b>	Calcium hydroxide
<b>E527</b>	Ammonium hydroxide
<b>E528</b>	Magnesium hydroxide
<b>E529</b>	Calcium oxide
<b>E530</b>	Magnesium oxide
<b>E535</b>	Sodium ferrocyanide
<b>E536</b>	Potassium ferrocyanide
<b>E538</b>	Calcium ferrocyanide
<b>E541</b>	Sodium aluminium phosphate
<b>E551</b>	Silicon dioxide



E numbers	Additives
<b>E552</b>	Calcium silicate
<b>E553a</b>	(i) Magnesium silicate
	(ii) Magnesium trisilicate
<b>E553b</b>	Talc
<b>E554</b>	Sodium aluminium silicate
<b>E555</b>	Potassium aluminium silicate
<b>E570</b>	Fatty acids
<b>E574</b>	Gluconic acid
<b>E575</b>	Glucono delta-lactone
<b>E576</b>	Sodium gluconate
<b>E577</b>	Potassium gluconate
<b>E578</b>	Calcium gluconate
<b>E579</b>	Ferrous gluconate
<b>E585</b>	Ferrous lactate
<b>E620</b>	Glutamic acid
<b>E621</b>	Monosodium glutamate
<b>E622</b>	Monopotassium glutamate
<b>E623</b>	Calcium diglutamate
<b>E624</b>	Monoammonium glutamate

<b>E numbers</b>	<b>Additives</b>
<b>E625</b>	Magnesium diglutamate
<b>E626</b>	Guanylic acid
<b>E627</b>	Disodium guanylate
<b>E628</b>	Dipotassium guanylate
<b>E629</b>	Calcium guanylate
<b>E630</b>	Inosinic acid
<b>E631</b>	Disodium inosinate
<b>E632</b>	Dipotassium inosinate
<b>E633</b>	Calcium inosinate
<b>E634</b>	Calcium 5'-ribonucleotides
<b>E635</b>	Disodium 5'-ribonucleotides
<b>E640</b>	Glycine and its sodium salt
<b>E641</b>	L-leucine
<b>E650</b>	Zinc acetate
<b>E900</b>	Dimethylpolysiloxane
<b>E901</b>	Beeswax, white and yellow
<b>E902</b>	Candelilla wax
<b>E903</b>	Carnauba wax
<b>E904</b>	Shellac

<b>E numbers</b>	<b>Additives</b>
<b>E905</b>	Microcrystalline wax
<b>E907</b>	Hydrogenated Poly-1-Decene
<b>E914</b>	Oxidised Polyethylene wax
<b>E920</b>	L-Cysteine
<b>E927b</b>	Carbamide
<b>E938</b>	Argon
<b>E939</b>	Helium
<b>E941</b>	Nitrogen
<b>E942</b>	Nitrous oxide
<b>E943a</b>	Butane
<b>E943b</b>	Iso-butane
<b>E944</b>	Propane
<b>E948</b>	Oxygen
<b>E949</b>	Hydrogen
<b>E999</b>	Quillaia extract
<b>E1200</b>	Polydextrose
<b>E1201</b>	Polyvinylpyrrolidone
<b>E1202</b>	Polyvinylpolypyrrolidone
<b>E1203</b>	Polyvinyl alcohol

E numbers	Additives
<b>E1204</b>	Pullulan
<b>E1205</b>	Basic methacrylate copolymer
<b>E1206</b>	Neutral methacrylate copolymer
<b>E1207</b>	Anionic methacrylate copolymer
<b>E1208</b>	Polyvinylpyrrolidone-vinyl acetate copolymer
<b>E1209</b>	Polyvinyl alcohol-polyethylene glycol-graft- co-polymer
<b>E1404</b>	Oxidised starch
<b>E1410</b>	Monostarch phosphate
<b>E1412</b>	Distarch phosphate
<b>E1413</b>	Phosphated distarch phosphate
<b>E1414</b>	Acetylated distarch phosphate
<b>E1420</b>	Acetylated starch
<b>E1422</b>	Acetylated distarch adipate
<b>E1440</b>	Hydroxyl propyl starch
<b>E1442</b>	Hydroxy propyl distarch phosphate
<b>E1450</b>	Starch sodium octenyl succinate
<b>E1451</b>	Acetylated oxidised starch
<b>E1452</b>	Starch aluminium Octenyl succinate

<b>E numbers</b>	<b>Additives</b>
<b>E1505</b>	Triethyl citrate
<b>E1517</b>	Glyceryl diacetate (diacetin)
<b>E1518</b>	Glyceryl triacetate; triacetin
<b>E1519</b>	Benzyl alcohol
<b>E1520</b>	Propan-1,2-diol; propylene glycol
<b>E1521</b>	Polyethylene glycol