

Product Information Packet

FD&C Yellow No.5 Granular (10087073 / 1G4400)

Product Type

Food / Cosmetic Colorant

DyStar Colours Distribution GmbH

<p>The information contained herein is believed to be reliable, but no representations, guarantees or warranties of any kind are made as to its accuracy for particular applications or the results to be obtained therefrom. The information is based on laboratory work with small scale equipment and does not necessarily indicate end product performance. Because of the variations in methods, conditions and equipment used commercially in processing these materials, no guarantees are made as to the suitability of the products for the applications disclosed.</p>	<p>Full-scale testing and end product performance are the responsibility of the user. Seller shall not be liable for and the customer assumes all risk and liability of any use or handling of any material beyond seller's direct control. THE SELLER MAKES NO WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Nothing contained herein is to be considered as permission, recommendation, nor as an inducement to practice any patented invention without permission of the patent owner.</p>
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Supplier and General Product Information

Supplier in EU:

DyStar Colours Distribution GmbH
Am Prime Park 12, 65479 Raunheim, Germany

Site responsible for last production step and quality control:

DyStar LP (Hilton Davis Site)
2235 Langdon Farm Road
Cincinnati, OH 45237 USA

Site Information:

- DyStar Hilton Davis site was established in 1922
- Employees approximately 130 personnel
- Operates under CGMP and HAACP principles

Emergency Contact:

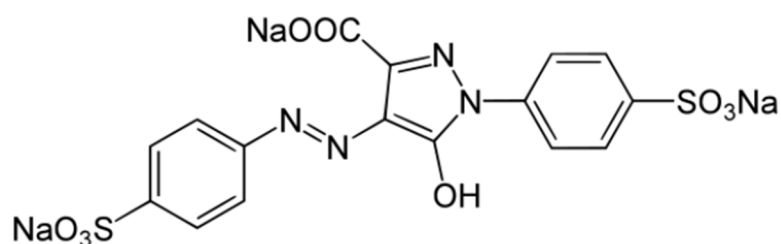
Emergency contact information is located in section 1 of the Safety data sheet for this product. In addition emergency contact can be made directly to the plant at any time using 1-513-841-4000.

Code: 1G4400

General Product Description

Colour Index No.:	19140
Color Index Name:	Food Yellow 4 or Acid Yellow 23
Common Name:	Tartrazine
CAS Reg. No.:	1934-21-0
Molecular Weight:	534.4

Structure:



Description:	Yellow-orange powder
Chemical Name:	Trisodium salt of 4,5-dihydro-5-oxo-1-(4-sulfophenyl)-4-[4-sulfophenylazo]-1H-pyrazole-3-carboxylic acid
Pure Color Assay:	FDA Requirements..... 87% minimum HD Specification..... 89% minimum Meets FDA requirements as set forth in 21CFR74
Heavy Metals:	Lead 10 ppm maximum Arsenic 3 ppm maximum Mercury 1 ppm maximum

Ingredient Declaration:	FD&C Yellow 5 89-94%	
	Water 3-5%	
	Sodium Chloride 3-6%	
Stability to:	Light	Good
	Oxidation	Fair
	Heat	Good
Variations in pH:	pH 3	Stable
	pH 8	Stable
Solubility at 25°C:	Distilled Water	17 oz. per gallon
	Glycerine	28 oz. per gallon
	Propylene Glycol	12 oz. per gallon
	Ethanol (95%)	Tint
Microbiological:	APC	< 1000 col./gram
	Yeast & Mold	< 100 col./gram combined
	Gram Negative	Negative

Allergens: None present

Packaging:

Standard packaging size is 44 lbs. (20 kg) and 11 lbs. (5 kg) cardboard boxes with polyethylene liners.

Shelf Life:

Indefinite when stored as recommended (5 years).

Recommended Storage Conditions:

Store at room temperature in a dry location. Keep container and inner liner tightly closed.

Remarks:

FD&C Yellow No. 5 gives a greenish yellow color in solution. It has good resistance to acids, alkalies, heat and light. Resistance to oxidizing and reducing agents is fair.

The major uses of FD&C Yellow No. 5 are in beverages, bakery goods, pet foods, dessert powders, candy confections and cereals.

Composition for Cosmetic Ingredient Lists (INCI composition)

INCI composition

CI 19140 (100%)

Additives

DyStar's FD&C Yellow No.5 Granular does not contain any other ingredients or additives that need to be listed on Cosmetic Ingredient Lists.

Substrates of lakes and minor non-dangerous impurities (e.g. salt and water) are considered as part of the Color Index and do not need to be listed separately as ingredients for cosmetic products (e.g. in the EU acc. to Art. 19, 1.(g) of Regulation (EC) No 1223/2009). In our specifications we provide additional information concerning the chemical composition of our products, which is an indicator for the purity. However, this level of detailed information does not need to be transferred to cosmetic products.

Chemical Inventories

USA	Listed on TSCA inventory (active substances) or TSCA confidential section	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
	Is any intentionally added ingredient in this material subject to any TSCA Section 4, 5, 6 7 or 8 test rule?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
	Is any ingredient in this material subject to TSCA Export Notification Reporting under section 12(b)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
	Does this material contain any chemicals listed on the most recent California Prop 65 list for carcinogens or developmental/reproductive toxicants?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Canada	All components listed on DSL All components listed on NDSL	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Japan	All components listed on ENCS All components listed on ISHL	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Australia	All components listed on AIC	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
EU	See chapter REACH	
Korea	All components listed on KECI (ECL)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Republic Philippines	All components listed on PICCS	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
PR China	All components listed on IECSC	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
New Zealand	All components listed on NZIoC	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Russian Federation	All components listed on Unified list of chemicals (June 2021)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Taiwan	All components listed on TCSI	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Vietnam	All components listed on National Chemical Database	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Please note that some economic areas have additional import requirements other than positive inventory listing status.

Specification / Certificate of Analysis

DyStar's FD&C Yellow No.5 Granular complies with the specification and purity requirements for E 102 (Tartrazine) according to Commission Regulation (EU) No 231/2012 (current version incl. amendments), specifically:

Assay	Content not less than 85% total colouring matters, calculated as the sodium salt
Water insoluble matter	Not more than 0,2%
Subsidiary colouring matters	Not more than 1,0%
Organic compounds other than colouring matters:	Total not more than 0,5 %
- 4-hydrazinobenzene sulfonic acid	
- 4-aminobenzene-1-sulfonic acid	
- 5-oxo-1-(4-sulfophenyl)-2-pyrazoline-3-carboxylic acid	
- 4,4'-diazaminodi(benzene sulfonic acid)	
- Tetrahydroxysuccinic acid	
Unsulphonated primary aromatic amines	Not more than 0,01% (calculated as aniline)
Ether extractable matter	Not more than 0,2% at pH7
Arsenic	Not more than 3 mg/kg
Lead	Not more than 2 mg/kg
Mercury	Not more than 1 mg/kg
Cadmium	Not more than 1 mg/kg

Compliance with the above-mentioned limits is ensured through regular testing. A certificate of Analysis (CoA) is available on request.

The information provided does not release the user from inspection of the goods received.

For purity requirements of regulations of other countries (e.g. USA FDA, China, etc.) see chapter "International Cosmetic Regulations"

EU regulations

REACH – Regulation (EC) 1907/2006

- Registration Obligations:

All obligations concerning registration of substances according to Regulation (EC) 1907/2006 (REACH) have been fulfilled for FD&C Yellow No.5 Granular, either by DyStar or by DyStar's suppliers. This means that every substance in this product is either registered in the appropriate tonnage band, exempted from registration or not produced/imported in the EU in volumes exceeding 1 t/a.

If customer demand exceeds the current import/production volume limits, DyStar will consider to register more substances and/or increase the relevant tonnage bands.

- SVHC-Candidate List – REACH Annex XIV - REACH Annex XVII

DyStar's FD&C Yellow No.5 Granular does not contain Substances of Very High Concern (SVHC) as mentioned in the current SVHC-Candidate list; substances as mentioned in REACH Annex XIV (Authorisation List); or substances as mentioned in REACH Annex XVII (Restricted Substances) as intentionally added substances or exceeding 0.1 % (w/w).

Purity / Heavy Metals

See chapter "Specification / Certificate of Analysis".

EU Cosmetic Regulation

DyStar's FD&C Yellow No.5 Granular is not a cosmetic product itself, but can be used as raw material for cosmetic products. It is in compliance with the following raw material requirements of Regulation (EC) No 1223/2009 on cosmetic products (incl. amendments):

- The product is in compliance with Annex IV (List of Colorants allowed in Cosmetic Products). The Colorant is listed under CI 19140 and the product fulfils the purity criteria for this Color Index ("Purity criteria as set out in Commission Directive 95/45/EC (E 102)"). Please note that Directive 95/45/EC has been repealed and the current version of these requirements is stated in Commission Regulation (EU) No 231/2012 (see also chapter "Specification/Certificate of Analysis" above).

- The product does not contain substances listed on Annex II (prohibited substances) of Regulation (EC) No 1223/2009 as intentionally added ingredients and those substances are not expected to be present.

- Restrictions according to Annex III:

The following restrictions apply for CI 19140 when used as Hair dye substance in non-oxidative hair dye products: Maximum concentration in ready for use preparation: 0,5 %

- The product does not contain any of the 26 cosmetic fragrance allergens (currently listed in Annex III, entries 67-92) as intentionally added ingredients and those substances are not expected to be present.

Animal Testing Statement

DyStar does not conduct or sponsor any animal testing for any cosmetic purposes (e.g. Regulation (EC) No 1223/2009 or others).

DyStar's FD&C Yellow No.5 Granular has not been animal tested for any reason by DyStar.

The date 11.03.2013 can be considered as fixed cut-off date (FCOD) if required for various cosmetic animal testing certifications (e.g. leaping bunny/cruelty free international, etc.).

Registration according to the European REACH regulation requires toxicological studies on all chemical substances that are produced in, or imported into, the European Union. Without registration, these substances cannot be sold in the European Union by any supplier in amounts exceeding 1 t/a. To minimize animal testing, these studies are to be shared between registrants of the same substance. Due to these requirements we have acquired rights of access to studies which are conducted outside the scope of the EU Cosmetic Regulation. It is understood that if these studies involved animal testing they have not been used to justify the fitness of use of our products under the Cosmetic Regulation.

Any animal testing that will be conducted in the future would only be for toxicological studies if required by the registering authorities (e.g. for REACH or TSCA) and only if no alternatives exist. DyStar itself generally does not perform any animal testing, such studies would only be performed by certified toxicology laboratories, using humane procedures, Good Laboratory Practices (GLP), and following the strict guidelines of the Animal Welfare Act.

International Cosmetic Regulations

ASEAN Cosmetics Directive

DyStar's FD&C Yellow No.5 Granular is described by CI 19140.

CI 19140 is positively listed in ANNEX IV - Part 1- List of colouring agents allowed for use in cosmetic products. It is classified in category 1 (Colouring agents allowed in all cosmetic products).

DyStar's FD&C Yellow No.5 Granular does not contain any ingredients listed in Annex II Part 1 (forbidden substances).

CI 19140 has the following restrictions according to Annex III – Part 1 (restricted substances).

When used as hair dye substance in non-oxidative hair dye products - Maximum authorised concentration in the ready for use preparation: 0.5%. Use for dyeing eyelashes and eyebrows is not permitted.

Canada

DyStar's FD&C Yellow No.5 Granular is described by CI 19140.

TARTRAZINE (FD & C Yellow No. 5; C.I. No. 19140) is permitted in drugs for internal and external use (including cosmetics) according to the Canadian Food and Drug Regulation C.R.C.; c. 870; C.01.040.2.

DyStar's FD&C Yellow No.5 Granular does not contain any ingredients that are currently listed on the Canadian Cosmetic Ingredient Hotlist (2019) as prohibited or restricted.

China / IECIC

Cosmetic Raw Material Submission

This product has been submitted as Cosmetic Raw Material to the Chinese NMPA platform.

Product Name (Chinese) : 食品&化妆品黄 5 颗粒

Composition: 100% CI 19140

Submission Code : 000281-01544-2269

Chinese Safety and Technical Standards for Cosmetics (2015 Version)

DyStar's FD&C Yellow No.5 Granular is described by CI 19140 (Food Yellow 4).

CI 19140 (Food Yellow 4) is positively listed as permitted colorant for cosmetics (Table 6) in the Chinese Safety and Technical Standards for Cosmetics (2015 Version). It is classified in Category 1 (Various/General Cosmetics), no special restrictions apply.

DyStar's FD&C Yellow No.5 Granular complies with the purity requirements of the Chinese Safety and Technical Standards for Cosmetics (2015 Version) for this Color Index, specifically:

- 4-Hydrazinobenzene sulfonic acid), (4-Aminobenzene-1-sulfonic acid), 5-Oxo 1-(4-sulphophenyl)-2-pyrazoline-3-carboxylic acid), Diazoaminodi(benzene sulfonic acid) and Tetrahydroxy succinic acid: The total amount does not exceed 0.5%;
- Unulfonated primary aromatic amines not more than 0.01% (calculated as aniline).

USA / FDA

Every batch of DyStar's FD&C Yellow No.5 Granular is tested and certified by the FDA.

DyStar's FD&C Yellow No.5 Granular complies with the specifications for FD&C Yellow No. 5 of CFR Title 21 Chapter I Subpart A – Foods §74.705 / Subpart B – Drugs §74.1705 / Subpart C – Cosmetics §74.2705, specifically with the following purity requirements:

- Sum of volatile matter at 135 °C (275 °F) and chlorides and sulfates (calculated as sodium salts), not more than 13 percent.
- Water-insoluble matter, not more than 0.2 percent.
- 4,4'-[4,5-Dihydro-5-oxo-4-[(4-sulfophenyl)hydrazono]-1H-pyrazol-1,3-diyl]bis[benzenesulfonic acid], trisodium salt, not more than 1 percent.
- 4-[(4',5-Disulfo[1,1'-biphenyl]-2-yl)hydrazono]-4,5-dihydro-5-oxo-1-(4-sulfophenyl)-1H-pyrazole-3-carboxylic acid, tetrasodium salt, not more than 1 percent.
- Ethyl or methyl 4,5-dihydro-5-oxo-1-(4-sulfophenyl)-4-[(4-sulfophenyl)hydrazono]-1H-pyrazole-3-carboxylate, disodium salt, not more than 1 percent.
- Sum of 4,5-dihydro-5-oxo-1-phenyl-4-[(4-sulfophenyl)azo]-1H-pyrazole-3-carboxylic acid, disodium salt, and 4,5-dihydro-5-oxo-4-(phenylazo)-1-(4-sulfophenyl)-1H-pyrazole-3-carboxylic acid, disodium salt, not more than 0.5 percent.
- 4-Aminobenzenesulfonic acid, sodium salt, not more than 0.2 percent.
- 4,5-Dihydro-5-oxo-1-(4-sulfophenyl)-1H-pyrazole-3-carboxylic acid, disodium salt, not more than 0.2 percent.
- Ethyl or methyl 4,5-dihydro-5-oxo-1-(4-sulfophenyl)-1H-pyrazole-3-carboxylate, sodium salt, not more than 0.1 percent.
- 4,4'-(1-Triazene-1,3-diyl)bis[benzenesulfonic acid], disodium salt, not more than 0.05 percent.
- 4-Aminoazobenzene, not more than 75 parts per billion.
- 4-Aminobiphenyl, not more than 5 parts per billion.
- Aniline, not more than 100 parts per billion.
- Azobenzene, not more than 40 parts per billion.
- Benzidine, not more than 1 part per billion.

- 1,3-Diphenyltriazene, not more than 40 parts per billion.
- Lead (as Pb), not more than 10 parts per million.
- Arsenic (as As), not more than 3 parts per million.
- Mercury (as Hg), not more than 1 part per million.
- Total color, not less than 87 percent.

The following Uses and restrictions apply for the different applications.

Foods: "FD&C Yellow No. 5 may be safely used for coloring foods (including dietary supplements) generally in amounts consistent with good manufacturing practice, except that it may not be used to color foods for which standards of identity have been promulgated under section 401 of the act unless added color is authorized by such standards."

Drugs: "FD&C Yellow No. 5 may be safely used for coloring drugs generally, including drugs intended for use in the area of the eye, in amounts consistent with current good manufacturing practice."

Cosmetics: "FD&C Yellow No. 5 may be safely used for coloring cosmetics generally, including cosmetics intended for use in the area of the eye, in amounts consistent with current good manufacturing practice."

South Korea

DyStar's FD&C Yellow No.5 Granular is described by CI 19140.

CI 19140 (Tartazine) is positively listed as colorant for cosmetics in the South Korean Cosmetics Act. No special restrictions apply.

Information related to plant and animal origin

Origin (plant, animal, synthetic, mineral)

DyStar's FD&C Yellow No.5 Granular is a synthetic colorant. It is not of plant or animal origin.

GMO Statement

DyStar's FD&C Yellow No.5 Granular does not contain any genetically modified organisms and is not made from any materials that are made by or with genetically modified organisms.

Vegan / Kosher / Halal

DyStar's FD&C Yellow No.5 Granular does not contain substances from animal origin or Ethanol as intentionally added ingredients.

For information on which products are kosher and/or halal certified please see our respective certificates.

BSE/TSE

DyStar's FD&C Yellow No.5 Granular and its raw materials are not derived from animals or animal by-products. Therefore, we have no reason to suspect any BSE (Bovine Spongiform Encephalopathy) or TSE (Transmittable Spongiform Encephalopathy) concerns related to this product.

Nagoya Protocol / CITES

Not applicable, DyStar's FD&C Yellow No.5 Granular is not of plant or animal origin.

COSMOS Standard V3.1 (1 June 2020)

DyStar's FD&C Yellow No.5 Granular is a synthetic dye and as such not suitable for Cosmetics Organic and Natural Certification.

Naturality Index – ISO 16128 standard

Not applicable, DyStar's FD&C Yellow No.5 Granular is of synthetic origin and not from (renewable) plant origin.

RSPO (Roundtable on Sustainable Palm Oil)

Not applicable, DyStar's FD&C Yellow No.5 Granular does not contain any palm oil or palm oil derivatives as intentionally added ingredient.

Toxicological Information

DyStar's FD&C Yellow No.5 Granular is an allowed food additive and as such has been evaluated and considered to be safe for various uses including food and cosmetics by several authorities (e.g. FDA in USA and EFSA in EU).

The detailed toxicological evaluation of the EU REACH dossier is publicly available on the ECHA website:

<https://echa.europa.eu/de/registration-dossier/-/registered-dossier/17292/7/1>

Information on Substances of Concern

Allergens

Food and Cosmetic allergens are not intentionally added and not expected to be present in DyStar's FD&C Yellow No.5 Granular, including:

- Food allergens as listed in Annex II of Regulation (EU) No. 1169/2011 (current version incl. amendments).
- Food allergens from the eight major allergenic foods or food groups (milk, eggs, fish, Crustacean shellfish, tree nuts, peanuts, wheat, and soybeans) as listed in USA Food Allergen Labeling and Consumer Protection Act of 2004 (FALCPA).
- The 26 cosmetic fragrance allergens (currently listed in Annex III, entries 67-92 in Regulation (EC) No 1223/2009 on Cosmetic Products).

Aflatoxins

Aflatoxins are toxins produced by certain molds and can occasionally be found as contaminants in improperly stored foods.

DyStar's FD&C Yellow No.5 Granular is made from synthetic ingredients and produced and stored under cGMP conditions. Testing for microbiological contamination (incl. yeast and molds) is part of the quality control. While specific testing for Aflatoxins is not part of the standard routine analysis program, due to the measures described, there is no reason to expect relevant Aflatoxin contaminations.

CMR substances

DyStar's FD&C Yellow No.5 Granular does not contain substances as intentionally added ingredients that are classified as CMR (carcinogenic, mutagenic or toxic to reproduction) according to CLP Regulation 1272/2008/EC (current version including amendments).

Conflict Minerals

- EU: Regulation (EU) 2017/821
- USA: SEC. 1502. "CONFLICT MINERALS" of the Dodd-Frank Wall Street Reform Act

DyStar's FD&C Yellow No.5 Granular does not contain any conflict minerals or the metals derived from them (Gold, Tantalum, Niobium, Tin, Tungsten) as intentionally added ingredients.

Dioxins

The term „dioxins“ refers to two groups of compounds: Polychlorinated dibenzo-p-dioxins (PCDDs) and dibenzofurans (PCDFs). They have no technological or other use but are generated in a number of thermal and industrial processes as unwanted and often unavoidable by-products.

Based on the chemical process and the raw materials used, no Dioxin is expected to be present in DyStar's FD&C Yellow No.5 Granular. Testing for Dioxins is therefore not part of the standard routine analysis program.

Formaldehyde / Formaldehyde Releasers

DyStar's FD&C Yellow No.5 Granular does not contain Formaldehyde or Formaldehyde Releasers as intentionally added ingredients and these substances are not expected to be present.

Glycol Ethers

DyStar's FD&C Yellow No.5 Granular does not contain any glycol ethers as intentionally added ingredients. This includes, but is not limited to, the following substances that are restricted under REACH.

- 2-(2-methoxyethoxy)ethanol (DEGME, CAS No 111-77-3)
- 2-(2-butoxyethoxy)ethanol (DEGBE, CAS No 112-34-5)
- 2-Methoxyethanol (EGME, CAS 109-86-4)
- 2-Ethoxyethanol (EGEE, CAS 110-80-5)
- 2-Methoxypropanol (1PG2ME, CAS 1589-47-5)
- 2-Methoxypropyl acetate (1PG2MEA, CAS 70657-70-4)
- 2-Methoxyethyl acetate (EGMEA, CAS 110-49-6)
- 2-Ethoxyethyl acetate (EGEEA, CAS 111-15-9)

Nanomaterials Statement

- COMMISSION RECOMMENDATION 2011/696/EU

DyStar's FD&C Yellow No.5 Granular is not a nanomaterial according to the definition of Commission Recommendation 2011/696/EU:

'Nanomaterial' means a natural, incidental or manufactured material containing particles, in an unbound state or as an aggregate or as an agglomerate and where, for 50 % or more of the particles in the number size distribution, one or more external dimensions is in the size range 1 nm-100 nm.

- French Decree no. 2012-232 of 17 February 2012 („R-Nano“)

DyStar's FD&C Yellow No.5 Granular is not a nanomaterial according to the definition of the French decree no. 2012-232 of 17 February 2012. No annual declaration according to this decree is necessary.

Nitrosamines

N-Nitrosamines based on di-alkyl secondary amines have gained notoriety as possible carcinogens in the media and in science. Improving modern analytical methods have detected traces of them in many foods like beer, fish, meat, cheese, potato products, cereals and vegetables as well as in cosmetics. Recently, authorities have also reported contaminations of N-Nitrosamines in certain pharmaceutical products due to side reactions in their production process. These substances can be formed under certain conditions from di-alkyl secondary amines (which are natural components of above-mentioned foods and certain chemicals) in the presence of nitrosating agents (e.g. nitrites or just atmospheric NO_x).

Some FD&C dyes (e.g. FD&C Red 40, Yellow 5, and Yellow 6) are azo dyes. The chemical synthesis of azo dyes includes a diazotisation reaction which forms nitrosamines from primary aromatic amines as temporary intermediates. But unlike the above-mentioned N-nitrosamines from secondary di-alkyl amines, such substances are extremely unstable and only present for a very short time during the production process. Likewise, sodium nitrite is a reagent used in the synthetic process to prepare azodyes. Sodium nitrite is consumed in those processes and trace residual quantities are removed during the subsequent purification steps.

There is no reason to expect that N-nitrosamines will be present in the final product and therefore N-Nitrosamines are not part of their regulatory specifications by FDA or European regulations (e.g. regulation EU 231/2012) and why neither the FDA nor we test for them in our products.

We can confirm that the following substances are either not intentionally added, and/or not expected to be present in the final product:

- N-nitrosodimethylamine (NDMA), N-nitrosodiethylamine (NEMA), Other N-nitrosamines from di-alkyl secondary amines
- Dimethylamine, Diethylamine or other primary, secondary or tertiary alkyl-amines
- Sodium nitrite or other nitrites
- Amide solvents: [N,N dimethylformamide (DMF), N-methylpyrrolidone (NMP) or N,N-Dimethylacetamide (DMA)]

Pesticides

DyStar's FD&C Yellow No.5 Granular does not contain Pesticides as intentionally added ingredients. The product is not plant- or animal-derived, therefore no residual pesticides from the raw materials are to be expected.

A pest control contractor checks our plant buildings on a regular basis, spraying when necessary and leaving bait traps for rodents. We do not keep pesticides on site. The products we manufacture and/or supply do not come into contact with any pesticide.

Phthalates

DyStar's FD&C Yellow No.5 Granular does not contain Phthalates as intentionally added ingredients. Based on the chemical process, the raw materials used, and purification methods, no Phthalates are expected to be present.

This statement is valid for all phthalates, but also specifically for the following restricted substances:

- Butyl Benzyl Phthalate (BBP, CAS 85-68-7)
- Dibutyl Phthalate (DBP, CAS 84-74-2)
- Diethylhexyl Phthalate (DEHP, CAS 117-81-7)
- Diisobutyl phthalate (DIBP, CAS 84-69-5)
- Diisononyl Phthalate (DINP, CAS 28553-12-0)
- Di-n-octyl Phthalate (DNOP, CAS 117-84-0)
- Diisodecyl Phthalate (DIDP, CAS 26761-40-0)

Residual Solvents

No Class 1, Class 2, Class 3 or Table 4 solvents as listed in European ICH guideline Q3C (R6) or USP general chapter 467 or any other residual solvent is used in the manufacturing process of the FD&C, D&C Colors, Carmine, Titanium Dioxide and Iron Oxides (incl. FD&C Yellow No.5 Granular) sold by DyStar.

VOC (Volatile Organic Compounds)

DyStar's FD&C Yellow No.5 Granular does not contain VOC as intentionally added ingredients.

'Volatile organic compound (VOC)' means any organic compound having either an initial boiling point less than or equal to 250°C measured at a standard pressure of 101,3 kPa; or is a fluid with a vapor pressure of 0,01 kPa or higher at 20°C.

This also includes all VOC listed in Swiss Ordinance 814.018 (current version) that are subject to taxation.

Other Substances of Concern

None of the following substances are intentionally added or are expected to be part of the raw materials or present in the final product:

- Acrylamide
- Alkylphenol Ethoxylates (APEO), including nonylphenol ethoxylate and octylphenol ethoxylate
- Asbestos

- Bisphenol A (BPA, CAS 80-05-7)
- Biocides according to Biocidal Products Regulation (BPR) 528/2012/EU
- Butylated Hydroxytoluene (BHT, CAS 128-37-0) and Butylated Hydroxyanisole (BHA, mixture of isomers, CAS 25013-16-5)
- Epoxy derivatives as listed in EU Directive 2002/16/EC (BADGE, BFDGE, NOGE)
- Melamine (CAS 108-78-1) or Cyanuric acid (CAS 108-80-5)
- Natural rubber latex and dry natural rubber
- Ozone Depleting Substances (ODS) as listed in regulation (EC) 1005/2009
- Polycyclic Aromatic Hydrocarbons (PAH)
- Polybrominated Diphenyl Ethers (PBDEs)
- Polychlorinated and Polybrominated Biphenyls (PCBs and PBBs)
- Polychlorinated and Polybrominated Terphenyls (PCTs and PBTs)
- Radioactive Substances
- Organo-Tin Compounds
- Vinyl Chloride Monomer (VCM) and Polymers based on VCM (e.g. PVC, PVDC)

DyStar Code of Conduct, Social Accountability and Sustainability

For information about DyStar's Code of Conduct, Social Accountability and current Sustainability Report please refer to our website:

<https://www.dystar.com/corporate-social-responsibility/>

<https://www.dystar.com/sustainability-reports/>

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