

# Tartrazine

sc-215941

Material Safety Data Sheet



The Power is Question

Hazard Alert Code Key:

EXTREME

HIGH

MODERATE

LOW

## Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

### PRODUCT NAME

Tartrazine

### STATEMENT OF HAZARDOUS NATURE

CONSIDERED A HAZARDOUS SUBSTANCE ACCORDING TO OSHA 29 CFR 1910.1200.

### NFPA



### SUPPLIER

Santa Cruz Biotechnology, Inc.  
2145 Delaware Avenue  
Santa Cruz, California 95060  
800.457.3801 or 831.457.3800

### EMERGENCY:

ChemWatch  
Within the US & Canada: 877-715-9305  
Outside the US & Canada: +800 2436 2255  
(1-800-CHEMCALL) or call +613 9573 3112

### SYNONYMS

C16H9N4Na3O9S2, "1H-pyrazole-3-carboxylic acid, 4, 5-dihydro-5-oxo-1-(4-sulfophenyl)-4-", "[2-(4-sulfophenyl)diazenyl]-, sodium salt (1:3)", "Food Yellow No. 4", "FD & C Yellow No. 5", "Food Additive Number 102", trisodium-5-hydroxy-1-(4-sulfonatophenyl-4-(sulfonatophenylazo))-, pyrazole-3-carboxylate, "Mucicarmine stain", Eurocert, Mitsui, "C.I. 640", "Acid Leather Yellow T", Fenazo, Tartraphenxene, "Acilan Yellow GG", "E 102", Necklacid, "A.F. Yellow No. 4", Hexacert, Oxanal, "Bucacid Tartrazine", "Wool Yellow", Sugai, "Tartrazine Yellow", Calcocid, "Hydrazine Yellow", Tartran, "FD & C Yellow #5", Canacert, "Hydroxine Yellow", Naphtocard, "Certicol Tartrazol", Kako, Tartrazol, "Celifa Yellow T", "KCA Foodcol", Tartrine, "C.I. Food Yellow 4", Kiton, Usacert, "Curon Fast Yellow 5G", "Lake Yellow", Vondacid, "FD and C Yellow No. 5", "Lemon Yellow", Tartar, "Dolkwal Tartrazine", "Maple Tartrazol", "C.I. 19140", "IFF Permicol Tartrazine Powder Colour Food Grade 21-2324", "trisodium 3-carboxy-5-hydroxy-1-p-sulfophenyl-4-p-sulfophenylazopyrazol", "pyrazole-3-carboxylic acid, 5-hydroxy-1-(p-sulfophenyl)-4-(p-", "sulfophenyl)azo, trisodium salt", "Tartrazine (for microscopy)"

## Section 2 - HAZARDS IDENTIFICATION

### CHEMWATCH HAZARD RATINGS

	Min	Max
Flammability:	1	
Toxicity:	0	
Body Contact:	2	
Reactivity:	1	
Chronic:	2	

Min/Nil=0  
Low=1  
Moderate=2  
High=3  
Extreme=4



## CANADIAN WHMIS SYMBOLS



### EMERGENCY OVERVIEW

#### RISK

May cause SENSITISATION by inhalation and skin contact.

#### POTENTIAL HEALTH EFFECTS

##### ACUTE HEALTH EFFECTS

##### SWALLOWED

- The material has NOT been classified as "harmful by ingestion". This is because of the lack of corroborating animal or human evidence.

##### EYE

- There is some evidence to suggest that this material can cause eye irritation and damage in some persons.

##### SKIN

- Skin contact is not thought to have harmful health effects, however the material may still produce health damage following entry through wounds, lesions or abrasions.
- There is some evidence to suggest that this material can cause inflammation of the skin on contact in some persons.
- Open cuts, abraded or irritated skin should not be exposed to this material.
- Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.

##### INHALED

- There is some evidence to suggest that this material, if inhaled, can irritate the throat and lungs of some persons.
- The material is not thought to produce adverse health effects or irritation of the respiratory tract (as classified using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting.
- Persons with impaired respiratory function, airway diseases and conditions such as emphysema or chronic bronchitis, may incur further disability if excessive concentrations of particulate are inhaled.

##### CHRONIC HEALTH EFFECTS

- Inhaling this product is more likely to cause a sensitization reaction in some persons compared to the general population.
- Skin contact with the material is more likely to cause a sensitization reaction in some persons compared to the general population.
- Limited evidence suggests that repeated or long-term occupational exposure may produce cumulative health effects involving organs or biochemical systems.
- Long term exposure to high dust concentrations may cause changes in lung function i.e. pneumoconiosis; caused by particles less than 0.5 micron penetrating and remaining in the lung.
- Exposure to small quantities may induce hypersensitivity reactions characterized by acute bronchospasm, hives (urticaria), deep dermal wheals (angioneurotic edema), running nose (rhinitis) and blurred vision . Anaphylactic shock and skin rash (non-thrombocytopenic purpura) may occur.
- There is some evidence that inhaling this product is more likely to cause a sensitization reaction in some persons compared to the general population.

## Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

NAME	CAS RN	%
monoazo dye, as		
C.I. Acid Yellow 23	1934-21-0	>40
diluents as		
<a href="#">sodium chloride</a>	7647-14-5	10-60 ^

## Section 4 - FIRST AID MEASURES

##### SWALLOWED

· Immediately give a glass of water. · First aid is not generally required. If in doubt, contact a Poisons Information Center or a doctor.

##### EYE

- If this product comes in contact with the eyes: · Wash out immediately with fresh running water. · Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.

##### SKIN

- If skin contact occurs: · Immediately remove all contaminated clothing, including footwear · Flush skin and hair with running water (and soap if available).

#### **INHALED**

- If fumes or combustion products are inhaled remove from contaminated area. · Other measures are usually unnecessary.

#### **NOTES TO PHYSICIAN**

- Treat symptomatically.

### **Section 5 - FIRE FIGHTING MEASURES**

Vapour Pressure (mmHG):	Not applicable.
Upper Explosive Limit (%):	Not available.
Specific Gravity (water=1):	> 1
Lower Explosive Limit (%):	Not available.

#### **EXTINGUISHING MEDIA**

- Water spray or fog.
- Foam.

#### **FIRE FIGHTING**

- Alert Emergency Responders and tell them location and nature of hazard.
- Wear breathing apparatus plus protective gloves.

#### **GENERAL FIRE HAZARDS/HAZARDOUS COMBUSTIBLE PRODUCTS**

- Combustible solid which burns but propagates flame with difficulty.
  - Avoid generating dust, particularly clouds of dust in a confined or unventilated space as dusts may form an explosive mixture with air, and any source of ignition, i.e. flame or spark, will cause fire or explosion. Dust clouds generated by the fine grinding of the solid are a particular hazard; accumulations of fine dust may burn rapidly and fiercely if ignited.
- Combustion products include: carbon monoxide (CO), carbon dioxide (CO<sub>2</sub>), nitrogen oxides (NO<sub>x</sub>), sulfur oxides (SO<sub>x</sub>), metal oxides, other pyrolysis products typical of burning organic material.
- May emit poisonous fumes.
- May emit corrosive fumes.

#### **FIRE INCOMPATIBILITY**

- Avoid contamination with oxidizing agents i.e. nitrates, oxidizing acids, chlorine bleaches, pool chlorine etc. as ignition may result.

#### **PERSONAL PROTECTION**

Glasses:  
Chemical goggles.

Gloves:

Respirator:

Particulate

### **Section 6 - ACCIDENTAL RELEASE MEASURES**

#### **MINOR SPILLS**

- Clean up all spills immediately.
- Avoid breathing dust and contact with skin and eyes.

#### **MAJOR SPILLS**

- Moderate hazard.
- CAUTION: Advise personnel in area.
- Alert Emergency Responders and tell them location and nature of hazard.

### **Section 7 - HANDLING AND STORAGE**

#### **PROCEDURE FOR HANDLING**

- Avoid all personal contact, including inhalation.
  - Wear protective clothing when risk of exposure occurs.
- Empty containers may contain residual dust which has the potential to accumulate following settling. Such dusts may explode in the presence of an appropriate ignition source.
- Do NOT cut, drill, grind or weld such containers.
  - In addition ensure such activity is not performed near full, partially empty or empty containers without appropriate workplace safety authorisation or permit.

#### **RECOMMENDED STORAGE METHODS**

- Polyethylene or polypropylene container.
- Check all containers are clearly labelled and free from leaks.

#### **STORAGE REQUIREMENTS**

- Store in original containers.
- Keep containers securely sealed.

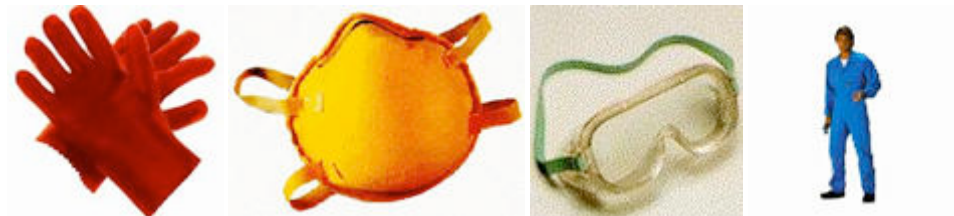
## Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

### EXPOSURE CONTROLS

Source	Material	TWA ppm	TWA mg/m <sup>3</sup>	STEL ppm	STEL mg/m <sup>3</sup>	Peak ppm	Peak mg/m <sup>3</sup>	TWA F/CC	Notes
US - California Permissible Exposure Limits for Chemical Contaminants	C.I. Acid Yellow 23 (Particulates not otherwise regulated Respirable fraction)		5						(n)
US - Tennessee Occupational Exposure Limits - Limits For Air Contaminants	C.I. Acid Yellow 23 (Particulates not otherwise regulated Respirable fraction)		5						
US - Wyoming Toxic and Hazardous Substances Table Z1 Limits for Air Contaminants	C.I. Acid Yellow 23 (Particulates not otherwise regulated (PNOR)(f)-Respirable fraction)		5						
US - Michigan Exposure Limits for Air Contaminants	C.I. Acid Yellow 23 (Particulates not otherwise regulated, Respirable dust)		5						
Canada - Prince Edward Island Occupational Exposure Limits	C.I. Acid Yellow 23 (Particles (Insoluble or Poorly Soluble) [NOS] Inhalable particles)		10						See Appendix B current TLV/BEI Book

### ENDOELTABLE

### PERSONAL PROTECTION



#### RESPIRATOR

Particulate

Consult your EHS staff for recommendations

#### EYE

- Safety glasses with side shields.
- Chemical goggles.

#### HANDS/FEET

■ NOTE: The material may produce skin sensitization in predisposed individuals. Care must be taken, when removing gloves and other protective equipment, to avoid all possible skin contact.

Suitability and durability of glove type is dependent on usage. Important factors in the selection of gloves include: such as:

- frequency and duration of contact,
- chemical resistance of glove material,
- glove thickness and
- dexterity

Select gloves tested to a relevant standard (e.g. Europe EN 374, US F739).

- When prolonged or frequently repeated contact may occur, a glove with a protection class of 5 or higher (breakthrough time greater than 240 minutes according to EN 374) is recommended.
- When only brief contact is expected, a glove with a protection class of 3 or higher (breakthrough time greater than 60 minutes according to EN 374) is recommended.

- Contaminated gloves should be replaced.

Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturiser is recommended.

Experience indicates that the following polymers are suitable as glove materials for protection against undissolved, dry solids, where abrasive particles are not present.

- polychloroprene
- nitrile rubber
- butyl rubber
- fluorocarbon
- polyvinyl chloride

Gloves should be examined for wear and/ or degradation constantly.

#### OTHER

- Overalls.
- P.V.C. apron.
- Barrier cream.
- Skin cleansing cream.
- Eye wash unit.

#### ENGINEERING CONTROLS

- Local exhaust ventilation is required where solids are handled as powders or crystals; even when particulates are relatively large, a certain proportion will be powdered by mutual friction.
- Exhaust ventilation should be designed to prevent accumulation and recirculation of particulates in the workplace.

## Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

### PHYSICAL PROPERTIES

Solid.

Mixes with water.

State	Divided solid	Molecular Weight	534.38 (pure)
Melting Range (°F)	Not available.	Viscosity	Not Applicable
Boiling Range (°F)	Not applicable.	Solubility in water (g/L)	Miscible
Flash Point (°F)	>210.2	pH (1% solution)	Not available.
Decomposition Temp (°F)	Not available.	pH (as supplied)	Not applicable
Autoignition Temp (°F)	Not available.	Vapour Pressure (mmHG)	Not applicable.
Upper Explosive Limit (%)	Not available.	Specific Gravity (water=1)	> 1
Lower Explosive Limit (%)	Not available.	Relative Vapor Density (air=1)	Not applicable.
Volatile Component (%vol)	Not applicable.	Evaporation Rate	Not applicable

### APPEARANCE

Bright orange-yellow odourless powder; mixes with water. Solubility in water is 140 g/l. The aqueous solution becomes redder in sodium hydroxide but is not changed by hydrochloric acid.

## Section 10 - CHEMICAL STABILITY

### CONDITIONS CONTRIBUTING TO INSTABILITY

- Presence of incompatible materials.
- Product is considered stable.

### STORAGE INCOMPATIBILITY

- Avoid strong bases.
- Avoid reaction with oxidizing agents.

For incompatible materials - refer to Section 7 - Handling and Storage.

## Section 11 - TOXICOLOGICAL INFORMATION

C.I. ACID YELLOW 23

### TOXICITY AND IRRITATION

C.I. ACID YELLOW 23:

■ unless otherwise specified data extracted from RTECS - Register of Toxic Effects of Chemical Substances.

TOXICITY	IRRITATION
Oral (Human) TDLo: 0.014 mg/kg	Nil Reported
Oral (Mouse) LD50: 12750 mg/kg	

Oral (Rat) LD50: >2000 mg/kg

Intravenous (Rat) LD50: >2000 mg/kg

■ Contact allergies quickly manifest themselves as contact eczema, more rarely as urticaria or Quincke's edema. The pathogenesis of contact eczema involves a cell-mediated (T lymphocytes) immune reaction of the delayed type.

<|p>.

Allergic reactions involving the respiratory tract are usually due to interactions between IgE antibodies and allergens and occur rapidly. Allergic potential of the allergen and period of exposure often determine the severity of symptoms.

<|p>.

Attention should be paid to atopic diathesis, characterized by increased susceptibility to nasal inflammation, asthma and eczema.

Exogenous allergic alveolitis is induced essentially by allergen specific immune-complexes of the IgG type; cell-mediated reactions (T lymphocytes) may be involved. Such allergy is of the delayed type with onset up to four hours following exposure.

Suspected allergen "[Hawley's]

## Section 12 - ECOLOGICAL INFORMATION

No data

### Ecotoxicity

Ingredient	Persistence: Water/Soil	Persistence: Air	Bioaccumulation	Mobility
C.I. Acid Yellow 23	HIGH		LOW	HIGH

## Section 13 - DISPOSAL CONSIDERATIONS

### Disposal Instructions

All waste must be handled in accordance with local, state and federal regulations.

! Puncture containers to prevent re-use and bury at an authorized landfill.

Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area. In some areas, certain wastes must be tracked.

A Hierarchy of Controls seems to be common - the user should investigate:

- Reduction
- Reuse
- Recycling
- Disposal (if all else fails)

This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use. Shelf life considerations should also be applied in making decisions of this type. Note that properties of a material may change in use, and recycling or reuse may not always be appropriate.

DO NOT allow wash water from cleaning equipment to enter drains. Collect all wash water for treatment before disposal.

- Recycle wherever possible.
- Consult manufacturer for recycling options or consult Waste Management Authority for disposal if no suitable treatment or disposal facility can be identified.

## Section 14 - TRANSPORTATION INFORMATION

NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS: DOT, IATA, IMDG

## Section 15 - REGULATORY INFORMATION

**C.I. Acid Yellow 23 (CAS: 1934-21-0, 642-62-6, 1342-47-8, 1342-53-6, 12000-64-5, 50809-64-8, 84842-94-4, 117209-34-4, 134240-82-7, 139601-06-2, 154881-98-8, 183808-13-1, 191807-79-1, 389057-90-3, 469888-21-9) is found on the following regulatory lists;**

"Canada Domestic Substances List (DSL)", "Canada Toxicological Index Service - Workplace Hazardous Materials Information System - WHMIS (English)", "International Fragrance Association (IFRA) Survey: Transparency List", "OECD Representative List of High Production Volume (HPV) Chemicals", "US EPA High Production Volume Program Chemical List", "US FDA CFSA Color Additive Status List 1", "US FDA Listing of Color Additives Subject to Certification - Foods", "US Food Additive Database", "US Toxic Substances Control Act (TSCA) - Inventory"

## Section 16 - OTHER INFORMATION

### LIMITED EVIDENCE

■ Cumulative effects may result following exposure\*.

■ May produce discomfort of the eyes, respiratory tract and skin\*.

\* (limited evidence).

## ND

Substance CAS Suggested codes C.I. Acid Yellow 23 1934- 21- 0 C.I. Acid Yellow 23 642- 62- 6 C.I. Acid Yellow 23 1342- 47- 8 C.I. Acid Yellow 23 1342- 53- 6 C.I. Acid Yellow 23 12000- 64- 5 C.I. Acid Yellow 23 50809- 64- 8 C.I. Acid Yellow 23 84842- 94- 4 C.I. Acid Yellow 23 117209- 34- 4 C.I. Acid Yellow 23 134240- 82- 7 C.I. Acid Yellow 23 139601- 06- 2 C.I. Acid Yellow 23 154881- 98- 8 C.I. Acid Yellow 23 183808- 13- 1 C.I. Acid Yellow 23 191807- 79- 1 C.I. Acid Yellow 23 389057- 90- 3 C.I. Acid Yellow 23 469888- 21- 9

## Ingredients with multiple CAS Nos

Ingredient Name CAS C.I. Acid Yellow 23 1934-21-0, 642-62-6, 1342-47-8, 1342-53-6, 12000-64-5, 50809-64-8, 84842-94-4, 117209-34-4, 134240-82-7, 139601-06-2, 154881-98-8, 183808-13-1, 191807-79-1, 389057-90-3, 469888-21-9

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■ Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

A list of reference resources used to assist the committee may be found at:

[www.chemwatch.net/references](http://www.chemwatch.net/references).

■ The (M)SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

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