

## Chemical Safety Data Sheet MSDS / SDS

## Solvent Yellow 2

Revision Date:2025-02-01 Revision Number:1

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

## Product identifier

Product name : Solvent Yellow 2  
CBnumber : CB9261965  
CAS : 60-11-7  
EINECS Number : 200-455-7  
Synonyms : Solvent Yellow 2, methyl yellow

## Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses : For R&D use only. Not for medicinal, household or other use.  
Uses advised against : none

## Company Identification

Company : Chemicalbook  
Address : Building 1, Huihuang International, Shangdi 10th Street, Haidian District, Beijing  
Telephone : 010-86108875

## SECTION 2: Hazards identification

## Classification of the substance or mixture

Acute toxicity - Category 3, Oral  
Carcinogenicity, Category 2

## Label elements

## Pictogram(s)

Signal word : Danger

## Hazard statement(s)

H301 Toxic if swallowed  
H315 Causes skin irritation  
H319 Causes serious eye irritation  
H335 May cause respiratory irritation  
H341 Suspected of causing genetic defects  
H351 Suspected of causing cancer

## Precautionary statement(s)

P201 Obtain special instructions before use.  
P202 Do not handle until all safety precautions have been read and understood.  
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.  
P264 Wash hands thoroughly after handling.  
P264 Wash skin thoroughly after handling.  
P270 Do not eat, drink or smoke when using this product.  
P271 Use only outdoors or in a well-ventilated area.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P308+P313 IF exposed or concerned: Get medical advice/attention.  
P405 Store locked up.  
P403+P233 Store in a well-ventilated place. Keep container tightly closed.  
P501 Dispose of contents/container to.....

#### **Prevention**

P264 Wash ... thoroughly after handling.  
P270 Do not eat, drink or smoke when using this product.  
P203 Obtain, read and follow all safety instructions before use.  
P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/...

#### **Response**

P301+P316 IF SWALLOWED: Get emergency medical help immediately.  
P321 Specific treatment (see ... on this label).  
P330 Rinse mouth.  
P318 IF exposed or concerned, get medical advice.

#### **Storage**

P405 Store locked up.

#### **Disposal**

P501 Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

#### **Other hazards**

no data available

---

## SECTION 3: Composition/information on ingredients

### **Substance**

Product name	: Solvent Yellow 2
Synonyms	: Solvent Yellow 2, methyl yellow
CAS	: 60-11-7
EC number	: 200-455-7
MF	: C <sub>14</sub> H <sub>15</sub> N <sub>3</sub>
MW	: 225.29

---

## SECTION 4: First aid measures

## Description of first aid measures

### If inhaled

Fresh air, rest.

### Following skin contact

Remove contaminated clothes. Rinse and then wash skin with water and soap.

### Following eye contact

First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then refer for medical attention.

### Following ingestion

Give one or two glasses of water to drink.

## Most important symptoms and effects, both acute and delayed

Exposure Routes: inhalation, skin absorption, ingestion, skin and/or eye contact Symptoms: Enlarged liver; liver, kidney disturbance; contact dermatitis; cough, wheezing, dyspnea (breathing difficulty); bloody sputum; bronchial secretions; frequent urination, hematuria (blood in the urine), dysuria; [potential occupational carcinogen] Target Organs: Skin, respiratory system, liver, kidneys, bladder (NIOSH, 2016)

## Indication of any immediate medical attention and special treatment needed

### Absorption, Distribution and Excretion

More than half of bound dye in all liver-cell fractions is assoc with sol proteins; of this, 80% is bound to fraction which accounts for only 15% of sol proteins.

---

## SECTION 5: Firefighting measures

### Extinguishing media

Fires involving this material can be controlled with a dry chemical, carbon dioxide or Halon extinguisher. (NTP, 1992)

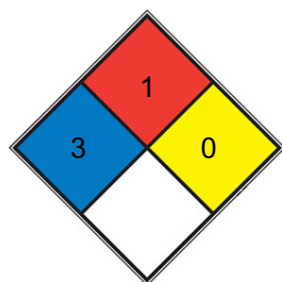
### Specific Hazards Arising from the Chemical

Flash point data for this chemical are not available. It is probably combustible. (NTP, 1992)

### Advice for firefighters

In case of fire in the surroundings, use appropriate extinguishing media.

### NFPA 704



■ HEALTH 3 Short exposure could cause serious temporary or moderate residual injury (e.g. [liquid hydrogen](#), [sulfuric acid](#), [calcium hypochlorite](#), hexafluorosilicic acid)

---

Materials that require considerable preheating, under all ambient temperature conditions, before ignition and combustion

- ☒ FIRE 1 can occur. Includes some finely divided suspended solids that do not require heating before ignition can occur. Flash point at or above 93.3 °C (200 °F). (e.g. [mineral oil](#), ammonia)
- 
- ☒ REACT 0 Normally stable, even under fire exposure conditions, and is not reactive with water (e.g. helium, [N2](#))
- 
- ☐ SPEC.
- ☐ HAZ.
- 

## SECTION 6: Accidental release measures

### Personal precautions, protective equipment and emergency procedures

Personal protection: particulate filter respirator adapted to the airborne concentration of the substance. Sweep spilled substance into covered containers. If appropriate, moisten first to prevent dusting.

### Environmental precautions

Personal protection: particulate filter respirator adapted to the airborne concentration of the substance. Sweep spilled substance into covered containers. If appropriate, moisten first to prevent dusting.

### Methods and materials for containment and cleaning up

PRECAUTIONS FOR "CARCINOGENS": A high-efficiency particulate arrestor (HEPA) or charcoal filters can be used to minimize amt of carcinogen in exhausted air ventilated safety cabinets, lab hoods, glove boxes or animal rooms . Filter housing that is designed so that used filters can be transferred into plastic bags without contaminating maintenance staff is avail commercially. Filters should be placed in plastic bags immediately after removal . The plastic bag should be sealed immediately . The sealed bag should be labelled properly . Waste liquids ... should be placed or collected in proper containers for disposal. The lid should be secured & the bottles properly labelled. Once filled, bottles should be placed in plastic bags, so that outer surface ... is not contaminated . The plastic bag should also be sealed & labelled. ... Broken glassware ... should be decontaminated by solvent extraction, by chemical destruction, or in specially designed incinerators. Chemical Carcinogens

## SECTION 7: Handling and storage

### Precautions for safe handling

Handling in a well ventilated place. Wear suitable protective clothing. Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Use non-sparking tools. Prevent fire caused by electrostatic discharge steam.

### Conditions for safe storage, including any incompatibilities

PRECAUTIONS FOR "CARCINOGENS": Storage site should be as close as practical to lab in which carcinogens are to be used, so that only small quantities required for ... expt need to be carried. Carcinogens should be kept in only one section of cupboard, an explosion-proof refrigerator or freezer (depending on chemicophysical properties ...) that bears appropriate label. An inventory ... should be kept, showing quantity of carcinogen & date it was acquired . Facilities for dispensing ... should be contiguous to storage area. Chemical Carcinogens

## SECTION 8: Exposure controls/personal protection

### Control parameters

### Occupational Exposure limit values

Component	4-dimethylaminoazobenzene
CAS No.	60-11-7
	NIOSH usually recommends that occupational exposures to carcinogens be limited to the lowest feasible concn. NIOSH considers 4-dimethylaminoazobenzene to be a potential occupational carcinogen.

### Biological limit values

no data available

### Exposure controls

Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Set up emergency exits and the risk-elimination area.

### Individual protection measures

#### Eye/face protection

Wear safety goggles or eye protection in combination with breathing protection.

#### Skin protection

Protective gloves. Protective clothing.

#### Respiratory protection

Use ventilation, local exhaust or breathing protection.

#### Thermal hazards

no data available

---

## SECTION 9: Physical and chemical properties

### Information on basic physicochemical properties

Physical state	Powder
Colour	Yellow
Odour	no data available
Melting point/freezing point	295°C(dec.)(lit.)
Boiling point or initial boiling point and boiling range	193°C(lit.)
Flammability	Not combustible.
Lower and upper explosion limit/flammability limit	no data available
Flash point	170°C(lit.)
Auto-ignition temperature	no data available
Decomposition temperature	no data available
pH	2.9-4.0
Kinematic viscosity	no data available
Solubility	Solubility Insoluble in water; soluble in ethanol, benzene, ether, chloroform,petroleum ether, mineralacids, oils
Partition coefficient n-octanol/water	log Kow= 4.58

Vapour pressure	3 x 10 <sup>-7</sup> mmHg (estimated, NIOSH, 1997)
Density and/or relative density	1.027g/cm <sup>3</sup>
Relative vapour density	7.78 (NTP, 1992) (Relative to Air)
Particle characteristics	no data available

## SECTION 10: Stability and reactivity

### Reactivity

NIOSH considers 4-dimethylaminoazobenzene to be a potential occupational carcinogen.

Decomposes on heating. This produces nitrogen oxides.

### Chemical stability

no data available

### Possibility of hazardous reactions

4-DIMETHYLAMINOAZOBENZENE can detonate, particularly if sensitized by the presence of metal salts or strong acids. May form toxic gases with acids, aldehydes, amides, carbamates, cyanides, inorganic fluorides, halogenated organics, isocyanates, ketones, metals, nitrides, peroxides, phenols, epoxides, acyl halides, and strong oxidizing or reducing agents. May form flammable gases with alkali metals. May react explosively with strong oxidizing agents, metal salts, peroxides, and sulfides. May react explosively with strong oxidizing agents, metal salts, peroxides, and sulfides.

### Conditions to avoid

no data available

### Incompatible materials

STABILITY: This chemical is sensitive to heat and light. Solutions of this chemical in water, DMSO, 95% ethanol or acetone should be stable for 24 hours under normal lab conditions. REACTIVITY: This chemical is incompatible with strong oxidizing agents and strong acids. (NTP, 1992)

### Hazardous decomposition products

no data available

## SECTION 11: Toxicological information

### Acute toxicity

- Oral: no data available
- Inhalation: no data available
- Dermal: no data available

### Skin corrosion/irritation

no data available

### Serious eye damage/irritation

no data available

### **Respiratory or skin sensitization**

no data available

### **Germ cell mutagenicity**

no data available

### **Carcinogenicity**

The Human Health Assessment Group in EPA's Office of Health and Environmental Assessment has evaluated dimethylaminoazobenzene for carcinogenicity. According to their analysis, the weight-of-evidence for dimethylaminoazobenzene is group B2, which is based on no evidence in humans and sufficient evidence in animals. As a group B2 chemical, dimethylaminoazobenzene is considered to be probably carcinogenic to humans.

### **Reproductive toxicity**

No information is available on the reproductive or developmental effects of 4-dimethylaminoazobenzene in humans. Animal studies have reported birth defects in the offspring of mice exposed to 4-dimethylaminoazobenzene.

### **STOT-single exposure**

The substance is irritating to the eyes, skin and respiratory tract.

### **STOT-repeated exposure**

Repeated or prolonged contact with skin may cause dermatitis. This substance is possibly carcinogenic to humans.

### **Aspiration hazard**

Evaporation at 20°C is negligible; a harmful concentration of airborne particles can, however, be reached quickly when dispersed.

---

## **SECTION 12: Ecological information**

### **Toxicity**

Toxicity to fish: no data available

Toxicity to daphnia and other aquatic invertebrates: no data available

Toxicity to algae: no data available

Toxicity to microorganisms: no data available

### **Persistence and degradability**

Recovery of 0.29 ppm N,N-dimethyl-p-(phenylazo)aniline incubated with an original culture of settled domestic wastewater after 7 days was at trace levels and it was not detected following 1st, 2nd, and 3rd subcultures after 7 days each(1).

### **Bioaccumulative potential**

Using a reported log octanol/water partition coefficient of 4.58(1), an estimated BCF of 1780 was calculated(2, SRC). Based on this estimated BCF, N,N-dimethyl-p-(phenylazo)aniline should bioconcentrate in aquatic organisms(SRC).

### **Mobility in soil**

Using a reported log octanol/water partition coefficient of 4.58(1), an estimated Koc of 7390 was calculated(2, SRC). Based on this estimated Koc, N,N-dimethyl-p-(phenylazo)aniline should adsorb to soils and sediment. Since N,N-dimethyl-p-(phenylazo)aniline has a pKa of 3.226 at 25 deg C(3), and it exists partially as a cation, the extent of its adsorption to soils and sediments may be affected by the pH of the medium.

#### Other adverse effects

no data available

---

## SECTION 13: Disposal considerations

### Disposal methods

#### Product

The material can be disposed of by removal to a licensed chemical destruction plant or by controlled incineration with flue gas scrubbing. Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewer systems.

#### Contaminated packaging

Containers can be triply rinsed (or equivalent) and offered for recycling or reconditioning. Alternatively, the packaging can be punctured to make it unusable for other purposes and then be disposed of in a sanitary landfill. Controlled incineration with flue gas scrubbing is possible for combustible packaging materials.

---

## SECTION 14: Transport information

### UN Number

ADR/RID: UN2811 (For reference only, please check.)

IMDG: UN2811 (For reference only, please check.)

IATA: UN2811 (For reference only, please check.)

### UN Proper Shipping Name

ADR/RID: TOXIC SOLID, ORGANIC, N.O.S. (For reference only, please check.)

IMDG: TOXIC SOLID, ORGANIC, N.O.S. (For reference only, please check.)

IATA: TOXIC SOLID, ORGANIC, N.O.S. (For reference only, please check.)

### Transport hazard class(es)

ADR/RID: 6.1 (For reference only, please check.)

IMDG: 6.1 (For reference only, please check.)

IATA: 6.1 (For reference only, please check.)

### Packing group, if applicable

ADR/RID: I (For reference only, please check.)

IMDG: I (For reference only, please check.)

IATA: I (For reference only, please check.)

### Environmental hazards

ADR/RID: No

IMDG: No



IATA: No

### **Special precautions for user**

no data available

### **Transport in bulk according to IMO instruments**

no data available

---

## **SECTION 15: Regulatory information**

### **Safety, health and environmental regulations specific for the product in question**

#### **European Inventory of Existing Commercial Chemical Substances (EINECS)**

Listed.

#### **EC Inventory**

Listed.

#### **United States Toxic Substances Control Act (TSCA) Inventory**

Listed.

#### **China Catalog of Hazardous chemicals 2015**

Not Listed.

#### **New Zealand Inventory of Chemicals (NZIoC)**

Listed.

#### **PICCS**

Listed.

#### **Vietnam National Chemical Inventory**

Listed.

#### **IECSC**

Listed.

#### **Korea Existing Chemicals List (KECL)**

Listed.

---

## **SECTION 16: Other information**

### **Abbreviations and acronyms**

CAS: Chemical Abstracts Service

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

RID: Regulation concerning the International Carriage of Dangerous Goods by Rail

IMDG: International Maritime Dangerous Goods

IATA: International Air Transportation Association

TWA: Time Weighted Average

STEL: Short term exposure limit

LC50: Lethal Concentration 50%

LD50: Lethal Dose 50%

EC50: Effective Concentration 50%

## References

IPCS - The International Chemical Safety Cards (ICSC), website: <http://www.ilo.org/dyn/icsc/showcard.home>

HSDB - Hazardous Substances Data Bank, website: <https://toxnet.nlm.nih.gov/newtoxnet/hsdb.htm>

IARC - International Agency for Research on Cancer, website: <http://www.iarc.fr/>

eChemPortal - The Global Portal to Information on Chemical Substances by OECD, website: [http://www.echemportal.org/echemportal/index?pagelD=0&request\\_locale=en](http://www.echemportal.org/echemportal/index?pagelD=0&request_locale=en)

CAMEO Chemicals, website: <http://cameochemicals.noaa.gov/search/simple>

ChemIDplus, website: <http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp>

ERG - Emergency Response Guidebook by U.S. Department of Transportation, website: <http://www.phmsa.dot.gov/hazmat/library/erg>

Germany GESTIS-database on hazard substance, website: <http://www.dguv.de/ifa/gestis/gestis-stoffdatenbank/index-2.jsp>

ECHA - European Chemicals Agency, website: <https://echa.europa.eu/>

### Disclaimer:

The information in this MSDS is only applicable to the specified product, unless otherwise specified, it is not applicable to the mixture of this product and other substances. This MSDS only provides information on the safety of the product for those who have received the appropriate professional training for the user of the product. Users of this MSDS must make independent judgments on the applicability of this SDS. The authors of this MSDS will not be held responsible for any harm caused by the use of this MSDS.