

# SAFETY DATA SHEETS

According to the UN GHS revision 10

Version: 1.1  
Creation Date: July 15, 2024  
Revision Date: January 05, 2025

## SECTION 1: Identification

### 1.1 GHS Product identifier

Product name Acetaminophen EP impurity D

### 1.2 Other means of identification

Product number C4X-12115  
Other names N-Phenylacetamide; Acetanilide; usafek-3

### 1.3 Recommended use of the chemical and restrictions on use

Identified uses For laboratory and Industrial use only.  
Uses advised against no data available

### 1.4 Supplier's details

Company CATO Research Chemicals Inc.  
Address 3/F,Building B,No.179 BASIGO, Guangpu Rd East,Huangpu Dist,Guangzhou  
Telephone +86-20-81960175

### 1.5 Emergency phone number

Emergency phone number +86-20-81960175  
Service hours 'Monday to Friday, 9am-5pm (Standard time zone: UTC/GMT +8 hours).

## SECTION 2: Hazard identification

### 2.1 Classification of the substance or mixture

Acute toxicity - Category 4, Oral

### 2.2 GHS label elements, including precautionary statements

Pictogram(s)



Signal word Warning  
Hazard statement(s) H302 Harmful if swallowed

Precautionary statement(s)

Prevention P264 Wash ... thoroughly after handling.  
P270 Do not eat, drink or smoke when using this product.  
Response P301+P317 IF SWALLOWED: Get medical help.  
P330 Rinse mouth.

Storage none

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.

### 2.3 Other hazards which do not result in classification

no data available

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

| Chemical name               | Common names and synonyms | CAS number | EC number | Concentration |
|-----------------------------|---------------------------|------------|-----------|---------------|
| Acetaminophen EP impurity D | Acetanilide               | 103-84-4   | 203-150-7 | ≈ 99%         |

## SECTION 4: First-aid measures

### 4.1 Description of necessary first-aid measures

#### **If inhaled**

Move the victim into fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration and consult a doctor immediately. Do not use mouth to mouth resuscitation if the victim ingested or inhaled the chemical.

#### **Following skin contact**

Take off contaminated clothing immediately. Wash off with soap and plenty of water. Consult a doctor.

#### **Following eye contact**

Rinse with pure water for at least 15 minutes. Consult a doctor.

#### **Following ingestion**

Rinse mouth with water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Call a doctor or Poison Control Center immediately.

### **4.2 Most important symptoms/effects, acute and delayed**

**SYMPTOMS:** Symptoms of exposure to this compound may include contact dermatitis and eczematous skin eruptions; anemia and cyanosis. **ACUTE/CHRONIC HAZARDS:** This compound is an irritant. It emits toxic fumes when heated to decomposition. (NTP, 1992)

### **4.3 Indication of immediate medical attention and special treatment needed, if necessary**

#### **Minimum/Potential Fatal Human Dose**

Between 4 & 5/: 4= very toxic: probable oral lethal dose (human) 50-500 mg/kg, between 1 teaspoonful & 1 oz for a 70 kg person (150 lb). 5= extremely toxic: probable oral lethal dose (human) 5-50 mg/kg, between 7 drops & 1 teaspoonful for 70 kg person (150 lb).

#### **Absorption, Distribution and Excretion**

It is readily excreted in the urine as sulfate or glucuronate conjugate of the phenol /n-acetyl-p-aminophenol/.

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## **SECTION 5: Fire-fighting measures**

### **5.1 Suitable extinguishing media**

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

### **5.2 Specific hazards arising from the chemical**

This chemical is combustible. (NTP, 1992)

### **5.3 Special protective actions for fire-fighters**

Wear self-contained breathing apparatus for firefighting if necessary.

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## **SECTION 6: Accidental release measures**

### **6.1 Personal precautions, protective equipment and emergency procedures**

Avoid dust formation. Avoid breathing mist, gas or vapours. Avoid contacting with skin and eye. Use personal protective equipment. Wear chemical impermeable gloves. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

### **6.2 Environmental precautions**

Prevent further spillage or leakage if it is safe to do so. Do not let the chemical enter drains. Discharge into the environment must be avoided.

### **6.3 Methods and materials for containment and cleaning up**

Collect and arrange disposal. Keep the chemical in suitable and closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment. Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.

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## **SECTION 7: Handling and storage**

### **7.1 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.

### **7.2 Conditions for safe storage, including any incompatibilities**

Store the container tightly closed in a dry, cool and well-ventilated place. Store apart from foodstuff containers or incompatible materials.

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## **SECTION 8: Exposure controls/personal protection**

### **8.1 Control parameters**

#### **Occupational Exposure limit values**

no data available

#### **Biological limit values**

no data available

## 8.2 Appropriate engineering controls

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

## 8.3 Individual protection measures, such as personal protective equipment (PPE)

### Eye/face protection

Wear tightly fitting safety goggles with side-shields conforming to EN 166(EU) or NIOSH (US).

### Skin protection

Wear fire/flame resistant and impervious clothing. Handle with gloves. Gloves must be inspected prior to use. Wash and dry hands. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

### Respiratory protection

If the exposure limits are exceeded, irritation or other symptoms are experienced, use a full-face respirator.

### Thermal hazards

no data available

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## SECTION 9: Physical and chemical properties and safety characteristics

|                                                          |                                                        |
|----------------------------------------------------------|--------------------------------------------------------|
| Physical state                                           | PHYSICAL DESCRIPTION: White to gray solid. (NTP, 1992) |
| Colour                                                   | ORTHORHOMBIC PLATES OR SCALES FROM WATER               |
| Odour                                                    | ODORLESS                                               |
| Melting point/freezing point                             | 114 °C                                                 |
| Boiling point or initial boiling point and boiling range | 303.8 °C                                               |
| Flammability                                             | no data available                                      |
| Lower and upper explosion limit/flammability limit       | no data available                                      |
| Flash point                                              | 173 °C                                                 |
| Auto-ignition temperature                                | 1004° F (NTP, 1992)                                    |
| Decomposition temperature                                | no data available                                      |
| pH                                                       | no data available                                      |
| Kinematic viscosity                                      | no data available                                      |
| Solubility                                               | Miscible with water                                    |
| Partition coefficient n-octanol/water                    | Log Kow= 1.16                                          |
| Vapour pressure                                          | 1 mm Hg ( 114 °C)                                      |
| Density and/or relative density                          | 1.21                                                   |
| Relative vapour density                                  | 4.65 (vs air)                                          |
| Particle characteristics                                 | no data available                                      |

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## SECTION 10: Stability and reactivity

### 10.1 Reactivity

This compound is sensitive to prolonged exposure to air (NTP, 1992). Water insoluble.

### 10.2 Chemical stability

Rearranges under influence of uv light; acetyl group forms new bond on ring in ortho or para position

### 10.3 Possibility of hazardous reactions

ACETANILIDE is an amide. Flammable gases are formed by the reaction of organic amides with strong reducing agents. Amides are very weak bases (weaker than water). Imides are less basic yet and in fact react with strong bases to form salts. That is, they can react as acids. Mixing amides with dehydrating agents such as P2O5 or SOCl2 generates the corresponding nitrile. The combustion of these compounds generates mixed oxides of nitrogen (NOx).

### 10.4 Conditions to avoid

no data available

### 10.5 Incompatible materials

See aniline...can react vigorously with oxidizing materials.

### 10.6 Hazardous decomposition products

See aniline. ...when heated to decomp, emits highly toxic fumes.

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## 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**

no data available

**Reproductive toxicity**

no data available

**STOT-single exposure**

no data available

**STOT-repeated exposure**

no data available

**Aspiration hazard**

no data available

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## SECTION 12: Ecological information

### 12.1 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

### 12.2 Persistence and degradability

Several tests indicate that acetanilide biodegrades rapidly under aerobic conditions(1-3). One screening test, based on COD measurements, using an activated sludge seed and an initial chemical concentration of 200 ppm, reported a 94% COD removal after 5 days(1). A screening test using an acclimated riverwater seed, based on BOD measurements, reported an 80% BODT after 8 days(2). A grab sample test from the Nile River, using an initial chemical concentration of 6-7 ppm, reported 100% degradation after 43 days incubation(3).

### 12.3 Bioaccumulative potential

An estimated BCF value of 4.5 was calculated for acetanilide(SRC), using an experimental log Kow of 1.16(1,SRC) and a recommended regression-derived equation(2). According to a classification scheme(3), this BCF value suggests that bioconcentration in aquatic organisms is low(SRC).

### 12.4 Mobility in soil

The Koc of acetanilide is estimated as approximately 38(SRC), using an experimental log Kow of 1.16(1,SRC) and a regression-derived equation(2,SRC). A Koc of 27 was experimentally determined for acetanilide, using silt loam and sandy loam, with % organic matter ranging from 1.09-5.92 (K<sub>om</sub> was converted to K<sub>oc</sub> by multiplying by 1.724), and pH ranging from 5.9-7.5(4). According to a recommended classification scheme(3), the estimated and measured Koc values suggest that acetanilide has very high mobility in soil(SRC).

### 12.5 Other adverse effects

no data available

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## SECTION 13: Disposal considerations

### 13.1 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

### 14.1 UN Number

ADR/RID: Not dangerous goods. (For reference only, please check.)

IMDG: Not dangerous goods. (For reference only, please check.)

IATA: Not dangerous goods. (For reference only, please check.)

### 14.2 UN Proper Shipping Name

ADR/RID: Not dangerous goods. (For reference only, please check.)

IMDG: Not dangerous goods. (For reference only, please check.)

IATA: Not dangerous goods. (For reference only, please check.)

### 14.3 Transport hazard class(es)

ADR/RID: Not dangerous goods. (For reference only, please check.)

IMDG: Not dangerous goods. (For reference only, please check.)

IATA: Not dangerous goods. (For reference only, please check.)

### 14.4 Packing group, if applicable

ADR/RID: Not dangerous goods. (For reference only, please check.)

IMDG: Not dangerous goods. (For reference only, please check.)

IATA: Not dangerous goods. (For reference only, please check.)

### 14.5 Environmental hazards

ADR/RID: No

IMDG: No

IATA: No

### 14.6 Special precautions for user

no data available

### 14.7 Transport in bulk according to IMO instruments

no data available

## SECTION 15: Regulatory information

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

| Chemical name                                                            | Common names and synonyms | CAS number | EC number |
|--------------------------------------------------------------------------|---------------------------|------------|-----------|
| Acetanilide                                                              | Acetanilide               | 103-84-4   | 203-150-7 |
| 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                                |                           |            | Listed.   |
| New Zealand Inventory of Chemicals (NZIoC)                               |                           |            | Listed.   |
| Philippines Inventory of Chemicals and Chemical Substances (PICCS)       |                           |            | Listed.   |
| Vietnam National Chemical Inventory                                      |                           |            | Listed.   |
| Chinese Chemical Inventory of Existing Chemical Substances (China IECSC) |                           |            | Listed.   |
| Korea Existing Chemicals List (KECL)                                     |                           |            | Listed.   |

## SECTION 16: Other information

#### Information on revision

Creation Date July 15, 2024  
Revision Date January 05, 2025

#### 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:



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- [http://www.echemportal.org/echemportal/index?pageID=0&request\\_locale=en](http://www.echemportal.org/echemportal/index?pageID=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/>

**Any questions regarding this SDS, Please send your inquiry to [info@cato-chem.com](mailto:info@cato-chem.com)**

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