

# OTTO CHEMIE PVT LTD

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-----ISO 9001: 2015-----

## MATERIAL SAFETY DATA SHEET

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

#### 1.1 Product identifiers

Product name : 2,4-Dinitrophenol, GR 99% +

Product Code : D 2195

CAS-No. : 51-28-5

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Flammable solids (Category 1), H228

Acute toxicity, Oral (Category 3), H301

Acute toxicity, Inhalation (Category 3), H331

Acute toxicity, Dermal (Category 3), H311

Specific target organ toxicity - repeated exposure (Category 2), H373

Short-term (acute) aquatic hazard (Category 1), H400

For the full text of the H-Statements mentioned in this Section, see Section 16.

#### 2.2 Label elements

Labelling according Regulation (EC) No 1272/2008

Pictogram

Signal word Danger

Hazard statement(s)

H228 Flammable solid.

H301 + H311 + H331 Toxic if swallowed, in contact with skin or if inhaled.

H373 May cause damage to organs through prolonged or repeated exposure.

H400 Very toxic to aquatic life.

Precautionary statement(s)

P210 Keep away from heat, hot surfaces, sparks, open flames and ignition sources. No smoking.

P273 Avoid release to the environment.

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection/ hearing protection.

P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.

P302 + P352 + P312 IF ON SKIN: Wash with plenty of water. Call a POISON CENTER/ doctor if you feel unwell.

P304 + P340 + P311 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor.

Supplemental Hazard

Statements

none

Reduced Labeling (<= 125 ml)

Pictogram

Signal word Danger

Hazard statement(s)

H301 + H311 + H331 Toxic if swallowed, in contact with skin or if inhaled.

Precautionary statement(s)

P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.

P302 + P352 + P312 IF ON SKIN: Wash with plenty of water. Call a POISON CENTER/ doctor if you feel unwell.

P304 + P340 + P311 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor.

Supplemental Hazard

Statements none

#### 2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Desensitized explosive

### SECTION 3: Composition/information on ingredients

#### 3.2 Mixtures

Synonyms :  $\alpha$ -Dinitrophenol

Formula : C<sub>6</sub>H<sub>4</sub>N<sub>2</sub>O<sub>5</sub>

Molecular weight : 184,11 g/mol

Component	Classification	Concentration
2,4-Dinitrophenol	Expl. 1.1; Acute Tox. 3; >= 70 - < 90	
CAS-No. 51-28-5	STOT RE 2; Aquatic Acute	%
EC-No. 200-087-7	1; H201, H301, H331,	
Index-No. 609-041-00-4	H311, H373, H400	
	M-Factor - Aquatic Acute:	

\*A registration number is not available for this substance as the substance or its use are exempted from registration according to Article 2 REACH Regulation (EC) No 1907/2006, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

For the full text of the H-Statements mentioned in this Section, see Section 16.

### SECTION 4: First aid measures

#### 4.1 Description of first-aid measures

##### General advice

First aider needs to protect himself. Show this material safety data sheet to the doctor in attendance.

##### If inhaled

After inhalation: fresh air. Immediately call in physician. If breathing stops: immediately apply artificial respiration, if necessary also oxygen.

##### In case of skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Call a physician immediately.

##### In case of eye contact

After eye contact: rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses.

##### If swallowed

If swallowed: give water to drink (two glasses at most). Seek medical advice immediately. In exceptional cases only, if medical care is not available within one hour, induce vomiting (only in persons who are wide awake and fully conscious), administer activated charcoal (20 - 40 g in a 10% slurry) and consult a doctor as quickly as possible.

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

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

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

No data available

### SECTION 5: Firefighting measures

#### 5.1 Extinguishing media

Suitable extinguishing media

Water Foam Carbon dioxide (CO<sub>2</sub>) Dry powder

Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

#### 5.2 Special hazards arising from the substance or mixture

Carbon oxides

Nitrogen oxides (NO<sub>x</sub>)

Mixture with combustible ingredients.

Development of hazardous combustion gases or vapours possible in the event of fire.

#### 5.3 Advice for firefighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

#### 5.4 Further information

Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

### SECTION 6: Accidental release measures

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

Advice for non-emergency personnel: Avoid generation and inhalation of dusts in all circumstances. Avoid substance contact. Ensure adequate ventilation. Keep away from heat and sources of ignition. Evacuate the danger area, observe emergency procedures, consult an expert.

For personal protection see section 8.

#### 6.2 Environmental precautions

Do not let product enter drains. Risk of explosion.

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

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up carefully. Dispose of properly. Clean up affected area. Avoid generation of dusts.

6.4 Reference to other sections

For disposal see section 13.

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

7.1 Precautions for safe handling

Advice on safe handling

Work under hood. Do not inhale substance/mixture.

Advice on protection against fire and explosion

Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge.

Hygiene measures

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Tightly closed. Keep away from heat and sources of ignition. Keep locked up or in an area accessible only to qualified or authorized persons.

Light sensitive. Heat sensitive.

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

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

8.1 Control parameters

Ingredients with workplace control parameters

8.2 Exposure controls

Personal protective equipment

Eye/face protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses

Body Protection

Flame retardant antistatic protective clothing.

Respiratory protection

required when dusts are generated.

Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

Recommended Filter type: Filter type P3

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer.

These measures have to be properly documented.

Control of environmental exposure

Do not let product enter drains. Risk of explosion.

### **SECTION 9: Physical and chemical properties**

9.1 Information on basic physical and chemical properties

a) Appearance Form: crystalline

Color: yellow

b) Odor sweet

c) Odor Threshold No data available

d) pH 2,6 - 4,4

e) Melting

point/freezing point

Melting point/range: 108 - 112 °C - lit.

f) Initial boiling point

and boiling range

No data available

g) Flash point No data available

h) Evaporation rate No data available

i) Flammability (solid,gas)

The substance or mixture is a flammable solid with the category

j) Upper/lower

flammability or

explosive limits

No data available

k) Vapor pressure 1,99 hPa at 18 °C

l) Vapor density No data available

m) Relative density 1,683 g/cm<sup>3</sup> at 24 °C  
n) Water solubility 5,6 g/l at 18 °C - soluble  
o) Partition coefficient:  
n-octanol/water  
log Pow: 1,54  
p) Autoignition  
temperature  
No data available  
q) Decomposition  
temperature  
No data available  
r) Viscosity Viscosity, kinematic: No data available  
Viscosity, dynamic: No data available  
s) Explosive properties Explosive when dry.  
t) Oxidizing properties No data available  
9.2 Other safety information  
Dissociation constant 4,09

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

The following applies in general to flammable organic substances and mixtures: in correspondingly fine distribution, when whirled up a dust explosion potential may generally be assumed.

### 10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature).

### 10.3 Possibility of hazardous reactions

No data available

### 10.4 Conditions to avoid

Heat. Explosive when dry.

no information available

### 10.5 Incompatible materials

Strong oxidizing agents, Strong bases, Acid chlorides, Acid anhydrides

### 10.6 Hazardous decomposition products

In the event of fire: see section 5

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

Mixture

Acute toxicity

No data available

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

No data available

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

IARC: No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

Mixture may cause damage to organs through prolonged or repeated exposure.

Aspiration hazard

No data available

### 11.2 Additional Information

RTECS: Not available

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Other dangerous properties can not be excluded.

Handle in accordance with good industrial hygiene and safety practice.

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard

No data available

## SECTION 12: Ecological information

### 12.1 Toxicity

Mixture

No data available

### 12.2 Persistence and degradability

No data available

### 12.3 Bioaccumulative potential

No data available

### 12.4 Mobility in soil

No data available

### 12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

### 12.6 Other adverse effects

No data available

Components

2,4-Dinitrophenol

Toxicity to fish LC50 - *Cyprinodon variegatus* (sheepshead minnow) - 13,0 - 36,3 mg/l - 96,0 h

LC50 - *Lepomis macrochirus* (Bluegill) - 1,76 - 5,9 mg/l - 96,0h

NOEC - *Cyprinodon variegatus* (sheepshead minnow) - 10,0 mg/l - 96,0 h

static test LC50 - *Oncorhynchus mykiss* (rainbow trout) - 0,39 mg/l - 96 h

Toxicity to daphnia and other aquatic invertebrates

EC50 - *Daphnia magna* (Water flea) - 6,10 - 7,00 mg/l - 24 h

LC50 - *Daphnia magna* (Water flea) - 4,1 mg/l - 48 h

Toxicity to algae EC50 - *Desmodesmus subspicatus* (green algae) - 40,00 mg/l - 48 h

EC50 - SELENASTRUM - 5,55 - 17,40 mg/l - 72 h

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

Product

## SECTION 14: Transport information

### 14.1 UN number

ADR/RID: 1320 IMDG: 1320 IATA: 1320

### 14.2 UN proper shipping name

ADR/RID: DINITROPHENOL, WETTED

IMDG: DINITROPHENOL, WETTED

IATA: Dinitrophenol, wetted

### 14.3 Transport hazard class(es)

ADR/RID: 4.1 (6.1) IMDG: 4.1 (6.1) IATA: 4.1 (6.1)

### 14.4 Packaging group

ADR/RID: I IMDG: I IATA: I

### 14.5 Environmental hazards

ADR/RID: yes IMDG Marine pollutant: yes IATA: no

### 14.6 Special precautions for user

No data available

## SECTION 15: Regulatory information

### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.

National legislation

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.

H2 ACUTE TOXIC

E1 ENVIRONMENTAL

HAZARDS

Other regulations

Observe work restrictions regarding maternity protection in accordance to Dir 92/85/EEC or stricter national regulations where applicable.

Take note of Dir 94/33/EC on the protection of young people at work.  
15.2 Chemical Safety Assessment  
For this product a chemical safety assessment was not carried out

**Section 16: Other Information**

This safety data sheet should be used in conjunction with technical sheets. It does not replace them. The information given is based on our knowledge of this product, at the time of publication. It is given in good faith. The attention of the user is drawn to the possible risks incurred by using the product for any other purpose other than that for which it was intended. This does not in any way excuse the user from knowing and applying all the regulations governing his activity. It is the sole responsibility of the user to take all precautions required in handling the product. The aim of the mandatory regulations mentioned is to help the user to fulfill his obligations regarding the use of hazardous products.

