

According to Regulation (EC) No 1907/2006

According to Regulation (EC) No 2020/878

Picric acid moistened with 33% water



Version number: 3.0

Issued: 2024-04-09

Replaces SDS: 2022-10-26

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

1.1. Product identifier

Trade name

Picric acid moistened with 33% water

Article No.

89968237

CAS number

88-89-1

EC number

201-865-9

1.2. Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses

Research and development. Laboratory Chemicals. Manufacture of substances.

Not suitable for use in

Not suitable for human consumption or veterinary purposes.

1.3. Details of the supplier of the safety data sheet

Supplier

Molekula Group

Address

Molekula Ltd, Lingfield Way, Darlington,
DL1 4XX Darlington
United Kingdom

Telephone

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Email

info@molekula.com

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1.4. Emergency telephone number

Poison center/Additional emergency number

0344 892 0111 - National Poisons Information Service (Newcastle Centre)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Classification

Desensitised explosives, Category 1
 Acute toxicity, oral, hazard category 3
 Acute toxicity, dermal, hazard category 3
 Acute toxicity, inhalation, hazard category 3
 Skin sensitisation, hazard category 1
 Eye irritation, hazard category 2
 Specific Target Organ Toxicity — Single exposure, hazard category 3 - respiratory tract irritation

Hazard statements

H206, H301 + H311 + H331, H317, H319, H335

2.2. Label elements

Labelling according to Regulation (EC) No 1272/2008

Hazard pictograms



Signal word

Danger

Hazard statements

H206 Fire, blast or projection hazard; increased risk of explosion if desensitising agent is reduced.
 H301 + H311 + H331 Toxic if swallowed, in contact with skin or if inhaled.
 H317 May cause an allergic skin reaction.
 H319 Causes serious eye irritation.
 H335 May cause respiratory irritation.

Supplemental hazard statements

EUH001 Explosive when dry.

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Precautionary statements

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

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

P230 Keep wetted with Water..

P233 Keep container tightly closed.

P250 Do not subject to grinding/shock/friction.

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

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

P302 + P352 IF ON SKIN: Wash with plenty of water/.

P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P314 Get medical advice/attention if you feel unwell.

P370 + P380 + P375 In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion.

P405 Store locked up.

P501 Dispose of contents/container to .

2.3. Other hazards

No data available

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Chemical name	CAS No. EC No. REACH No. Index No.	Concentration	Classification	H-pharse M factor acute M factor chronic	Note
2,4,6-Trinitrophenol	88-89-1 201-865-9 - 609-009-00-X	>65 - <70%	Expl. 1.1, Acute Tox. 3 - oral, Acute Tox. 3 - dermal, Acute Tox. 3 - inhala- tion, Skin Sens. 1, Eye Irrit. 2	H201, H301 + H311 + H331, H317, H319 - -	-
Distilled Water	7732-18-5 686-299-4 - -	>30 - <35%	-	- - -	-

Substance additional information

For the complete text of H- / EUH-statements mentioned in this section, see section 16.

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SECTION 4: First aid measures

4.1. Description of first aid measures

IF exposed or concerned: Get medical advice/attention. First aiders/ medical personnel need to protect themselves. Show this Safety Data Sheet (SDS) to medical personnel.

Inhalation

Toxic if inhaled. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Maintain an open airway. Loosen any tight clothing, such as a collar, tie or belt. Immediately call a POISON CENTER/doctor. If breathing stops, provide artificial respiration. For breathing difficulties oxygen may be necessary.

Skin contact

In case of skin contact: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]. Immediately call a POISON CENTER/doctor.

Eye contact

Remove contact lenses if present. Rinse eyes with water. Continue to rinse for at least 15 minutes and seek medical attention.

Ingestion

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 if the persons are fully conscious and awake).

Information for doctors

No data available.

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

The severity of the symptoms described will vary dependant of the concentration and the length of exposure. See section 11 for more detailed information on health effects and symptoms.

Inhalation

Single exposure may cause the following adverse effects: Difficulty in breathing. High concentrations may be fatal.

Skin contact

Single exposure may cause the following adverse effects: High concentrations may be fatal.

Eye contact

Single exposure may cause the following adverse effects: Severe irritation. High concentrations may be fatal.

Ingestion

Single exposure may cause the following adverse effects: Severe abdominal pain. May cause severe internal injury. High concentrations may be fatal.

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

Treat symptomatically. No special treatment requirement.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

In case of fire: Use foam, carbon dioxide, dry powder or water fog to extinguish.

Unsuitable extinguishing media

No specific fire fighting procedure given.

5.2. Special hazards arising from the substance or mixture

Dust may form explosive mixture with air.

Specific hazards: Toxic.

Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours. Carbon monoxide (CO). Carbon dioxide (CO₂). Nitrous gases (NO_x).

Forms explosive mixtures with air on intense heating. Explosive decomposition possible on heating.

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

Vapours are heavier than air and may spread near ground to sources of ignition.

Do not subject to shock.

5.3. Advice for firefighters

Special protective equipment for fire-fighters

Evacuate area. Avoid breathing gas, fume, vapours or spray. Cool containers exposed to heat with water spray and remove container, if no risk is involved.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Avoid breathing dust/fume/gas/mist/vapours/spray. Provide adequate ventilation. Avoid contact with skin and eyes. Avoid dust formation. For personal protection, see section 8.

6.2. Environmental precautions

Avoid discharge into drains, water courses or onto the ground. Risk of explosion.

6.3. Methods and material for containment and cleaning up

Collect spillage with shovel, broom or the like and reuse, if possible. Dispose of large amounts of spillage/waste according to agreement with local authorities.

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6.4. Reference to other sections

For personal protection, see section 8. For waste disposal, see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Preventive handling precautions

For precautions see section 2.2. Do not handle until all safety precautions have been read and understood. Do not handle broken packages without protective equipment. This product is toxic. Keep containers tightly closed. Immediate first aid is necessary. Wear protective clothing, gloves, eye and face protection. Avoid contact with skin and eyes. Do not breathe dust/fume/gas/mist/vapours/spray. Avoid ingestion and inhalation. Keep away from food, drink and animal feeding stuffs. Do not eat, drink or smoke when using this product. Do not reuse empty containers.

General hygiene

Observe good chemical hygiene practices. Remove contaminated clothing immediately and wash skin with soap and water. Remove contaminated clothing and launder thoroughly before re-use. Wash skin thoroughly after handling.

7.2. Conditions for safe storage, including any incompatibilities

Store at room temperature. Store in a dry place. Store in a closed container.

Keep wetted with water.

7.3. Specific end use(s)

No specific usage precautions noted.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

National occupational exposure limits

Ingredient	CAS No. EC No.	Exposure limit ppm / mg/m ³	Short-term exposure limit ppm / mg/m ³	Source	Remark	Year
2,4,6-Trinitrophenol	88-89-1	-	-	-	UK. EH40 WEL	-
	201-865-9	-	0.3			

8.2. Exposure controls

Personal Protective Equipment Symbols



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Eye / face protection

Wear eye protection.

Hand protection

Wear protective gloves.

Always inspect gloves before use. If signs of wear and tear are noticed then the gloves should be replaced.

No specific hygiene procedures noted, but good personal hygiene practices are always advisable, especially when working with chemicals. Wash contaminated skin thoroughly after handling.

Other skin protection

Wash skin thoroughly after handling.

Respiratory protection

Provide adequate ventilation. If ventilation is insufficient, suitable respiratory protection must be provided.

Environmental exposure controls

Avoid discharge into drains.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state

Solid

Colour

Yellow.

Odour

Not known.

Melting point / freezing point

120 - 125 °C

Boiling point or initial boiling point and boiling range

No data available

Flammability

No data available

Lower and upper explosion limit

No data available

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Flash point

150 °C

Method

CC (Closed cup).

Auto-ignition temperature

300 °C

Decomposition temperature

No data available

pH

No data available

Kinematic viscosity

No data available

Solubility

No data available

Partition coefficient n-octanol/water

No data available

Vapour pressure

No data available

Density and/or relative density

No data available

Relative vapour density

No data available

Particle characteristics

No data available

9.2. Other information

No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

Shock sensitive. Heat sensitive. Risk of dust explosion.

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10.2. Chemical stability

Stable under normal temperature conditions. Stable under the prescribed storage conditions.

Contains the following stabiliser: 30 - 40% Water.
 Heat sensitive.

10.3. Possibility of hazardous reactions

May react violently with: oxidising agents

10.4. Conditions to avoid

Can form salts with some metals. These salts should be considered dangerously sensitive to heat, friction and shock. Generally, ammonia/ amine salts and aromatic hydrocarbon complexes of the product can be considered to be less sensitive than the metal salts/ complexes. Dry mixtures of picric acid and aluminium powder are inert, but the addition of water causes ignition after a delay dependent upon the quantity added. Material older than two years should be disposed. Inspect and add water every six months as needed. Rotate containers to distribute water every three months.

Avoid heat, flames and other sources of ignition.
 Static electricity and formation of sparks must be prevented.
 Do not subject to shock.

10.5. Incompatible materials

Acids, oxidising.
 Ammonia or amines.
 Metals.
 oxidising agents
 Reducing Agents.
 May attack some plastics, rubber and coatings.

10.6. Hazardous decomposition products

See section 5.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity

Product / Substance name CAS / EC no.	Dose descriptor	Value / Dose	Exposure route	Duration of exposure	Test animals	Method / Guideline	Remarks
2,4,6-Trinitrophenol 88-89-1 / 201-	Acute Toxicity (Oral LD50):	200mg/kg	-	-	Rat	-	(External MSDS)

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Product / Substance name CAS / EC no.	Dose descriptor	Value / Dose	Exposure route	Duration of exposure	Test animals	Method / Guideline	Remarks
865-9							
2,4,6-Trinitrophenol 88-89-1 / 201-865-9	ATE = Acute Toxicity Estimate.	300mg/kg	ATE (Dermal)	-	-	Expert judgement.	(External MSDS)
2,4,6-Trinitrophenol 88-89-1 / 201-865-9	ATE = Acute Toxicity Estimate.	0.51 mg/l (dust/mist)	ATE (Inhalation)	4 hours	-	Expert judgement.	(External MSDS)
Distilled Water 7732-18-5 / 686-299-4	LD50	mg/kg >90,000	Oral	-	Rat	-	-

Aspiration hazard

Based on available data, the classification criteria are not met.

11.2. Information on other hazards

No data available

SECTION 12: Ecological information

12.1. Toxicity

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

No data available

12.6. Endocrine disrupting properties

This product does not contain any known or suspected endocrine disruptors.

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12.7. Other adverse effects

No data available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal considerations

Dispose of contents/container in accordance with local/regional/national/international regulations.

SECTION 14: Transport information

14.1. UN number

1344

14.2. UN proper shipping name

ADR / RID / ADN proper shipping name

TRINITROPHENOL (PICRIC ACID), WETTED with not less than 30% water, by mass

IMDG proper shipping name

TRINITROPHENOL (PICRIC ACID), WETTED with not less than 30% water, by mass

IATA proper shipping name

Trinitrophenol, wetted with 30% or more water, by weight

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14.3. Transport hazard class(es)

Label

ADR/RID/ADN



4.1

IMDG



4.1

IATA



4.1

ADR / RID Class

4.1

ADR / RID Classification code

D

IMDG Class

4.1

IATA Class

4.1

ADN Class

4.1

ADN Class Code

D

14.4. Packing group

ADR / RID / ADN: I

IMDG: I

IATA: I

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14.5. Environmental hazards

Not applicable

14.6. Special precautions for user

Special precautions for user

Tunnel restriction code: B

Transport category: 1

IMDG EmS

F-B, S-J

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

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

EU regulations

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

This material safety data sheet complies with the requirements of Regulation (EU) 2020/878.

National regulations

No data available

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

SECTION 16: Other information

Phrase meaning

Desen. Expl. 1 - Desensitised explosives, Category 1

Acute Tox. 3 - oral - Acute toxicity, oral, hazard category 3

Acute Tox. 3 - dermal - Acute toxicity, dermal, hazard category 3

Acute Tox. 3 - inhalation - Acute toxicity, inhalation, hazard category 3

Skin Sens. 1 - Skin sensitisation, hazard category 1

Eye Irrit. 2 - Eye irritation, hazard category 2

STOT SE 3 - resp. tract irrit. - Specific Target Organ Toxicity — Single exposure, hazard category 3 - respiratory tract irritation

Expl. 1.1 - Explosives of Divisions 1.1

H201 Explosive; mass explosion hazard.

H206 Fire, blast or projection hazard; increased risk of explosion if desensitising agent is reduced.

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

H317 May cause an allergic skin reaction.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

EUH001 Explosive when dry.