

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND THE COMPANY

1.1 Product identifiers

Product Name : DPPH, Free Radical
Product Number : AUR11328
Manufacturer : Aurora Medbiochem
Address : 938 South Andreasen Drive, Suite E
Escondido, CA 92029 USA

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

Identified uses : Laboratory chemicals, Manufacture of substances

1.3 Emergency telephone

Emergency Phone # : +1-760-738-1508
Fax Phone # : +1-760-738-1530

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

Product/ Chemical Name	Description	Safety Information	Concentration
DPPH, Free Radical	Black solid	See below	100%

SECTION 3: HAZARDS IDENTIFICATION

Components	CAS Number	EC-No.	Molecular Weight	Chemical Formula
DPPH, Free Radical	1898-66-4	217-591-8	394.32	C ₁₈ H ₁₂ N ₅ O ₆

Emergency Overview:

Classification according to Regulation (EC) No 1272/2008

Self-reactive substances and mixtures (Type C), H242

Acute toxicity, Oral (Category 4), H302

Acute toxicity, Inhalation (Category 4), H332

Acute toxicity, Dermal (Category 4), H312

Skin irritation (Category 2), H315

Eye irritation (Category 2), H319

Respiratory sensitization (Category 1), H334

Skin sensitization (Category 1), H317

GHS Label elements, including precautionary statements

Pictogram:



Signal word: Danger

Hazard statement(s): H242 Heating may cause a fire.

H302 + H312 + H332 Harmful if swallowed, in contact with skin or if inhaled.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H319 Causes serious eye irritation.

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Precautionary statement(s): P210 Keep away from heat, hot surfaces, sparks, open flames and

other ignition sources. No smoking.
P235 Keep cool.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection/ hearing protection.
P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell.
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.
P403 Store in a well-ventilated place.

HMIS Classification

Health hazard: 2
Chronic health hazard: *
Flammability: 0
Physical hazards: 0

NFPA Rating

Health Hazard: 2
Fire: 0
Reactivity Hazard: 0

Potential Health Effects

Inhalation: May be fatal if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.

Skin: May be harmful if absorbed through skin. May cause skin irritation.

Eyes: May cause eye irritation.

Ingestion: May be harmful if swallowed

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.

SECTION 4: FIRST AID MEASURES

4.1 Description of first-aid measures

General advice

Show this material safety data sheet to the doctor in attendance.

If inhaled: If breathed in, move person into fresh air. If not breathing, give artificial respiration.

In case of skin contact: Wash off with soap and plenty of water.

In case of eye contact: Flush eyes with water as a precaution.

If swallowed: Never give anything by mouth to an unconscious person. Rinse mouth with water.

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 11)

4.3 Indication of any immediate medical attention and special treatment needed No data available.

SECTION 5: FIREFIGHTING MEASURE

5.1 Extinguishing media

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

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 Sulfur oxides
Combustible.
Vapors are heavier than air and may spread along floors.
Forms explosive mixtures with air on intense heating.
Development of hazardous combustion gases or vapors 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

Remove container from danger zone and cool with water. 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

Personal precautions: Advice for non-emergency personnel: Do not breathe vapors, aerosols. Avoid substance contact. Ensure adequate ventilation. Keep away from heat and sources of ignition.

Evacuate the danger area, observe emergency procedures, consult an expert.

Environmental precautions: Do not let product enter drains.

Methods for cleaning up: Sweep up and shovel. Keep in suitable, closed containers for disposal

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Advice on safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed.

Advice on protection against fire and explosion

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

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Keep container tightly closed in a dry and well-ventilated place.

Recommended storage temperature : -20 °C

SECTION 8: EXPOSURE CONTROLS/ PERSONAL PROTECTION

Contains no substances with occupational exposure limit values.

Personal protective equipment

Respiratory protection:

Required when vapours/aerosols are generated. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Recommended Filter type: Filter type ABEK

Hand protection:

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Eye protection:

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

Skin and body protection:

Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific workplace. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Hygiene measures: General industrial hygiene practice.

Control of environmental exposure

Do not let product enter drains.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Property	DPPH, Free Radical
Appearance:	Black Solid
pH:	No data available
Water Solubility:	at 20 °C insoluble
Other Solubility:	DMF or EtOH
Boiling Point (°C):	No data available
Melting Point (°C):	135 °C - lit.
Flash Point (°C):	No data available
Ignition Temperature (°C):	No data available
Density:	No data available

SECTION 10: STABILITY AND REACTIVITY

Property	DPPH, Free Radical
Chemical stability	Stable under recommended storage conditions
Conditions to avoid:	No data available
Materials to avoid:	Strong oxidizing agents, strong bases
Hazardous decomposition products:	Carbon oxides, nitrogen oxides

SECTION 11: TOXICOLOGICAL INFORMATION

DPPH, Free Radical

Acute toxicity: Acute toxicity estimate Oral - 500,1 mg/kg

(Calculation method)

Oral: No data available

Acute toxicity estimate Inhalation - 4 h - 1,6 mg/l

(Calculation method)

Acute toxicity estimate Inhalation - 1,6 mg/l

(Expert judgment)

Acute toxicity estimate Dermal - 1.101 mg/kg

(Calculation method)

Acute toxicity estimate Dermal - 1.100,1 mg/kg

(Expert judgment)

Carcinogenicity: No data available

Skin corrosion/irritation: No data available

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

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Serious eye damage/eye irritation: No data available

Respiratory or skin sensitization: No data available

Cell mutagenicity: No data available

Reproductive toxicity: No data available

Teratogenicity: no data available

Specific target organ toxicity – single exposure (GHS): no data available

Specific target organ toxicity – repeated exposure (GHS): no data available

Aspiration hazard: no data available

Potential Health Effects

Inhalation: May be harmful if inhaled. May cause respiratory tract irritation.

Skin: May be harmful if absorbed through skin. May cause skin irritation.

Eyes: May cause eye irritation.

Ingestion: May be harmful if swallowed.

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

Synergistic effects: no data available

Additional information: RTECS: not available

SECTION 12: ECOLOGICAL INFORMATION

DPPH, Free Radical:

Toxicity: No data available

Persistence and degradability: No data available

Bioaccumulative potential: No data available

Mobility in soil: No data available

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.

Other adverse effects: No data available

SECTION 13: DISPOSAL CONSIDERATION

Product: Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging: Dispose of as unused product.

SECTION 14: TRANSPORT INFORMATION

14.1 UN number

ADR/RID: 3224

IMDG: 3224

IATA: 3224

14.2 UN proper shipping name

