



Trigon Chemicals Pvt. Ltd.

(ISO 9001:2008 Certified Company)

722/AB/15, Nirmal, Laxmi Park Colony, Navi Peth, Pune-411 030. India., Tel: +91 (20) 24530071, Fax: +91 (20) 24530110
Email: aditya@trigon-chemie.com, www.trigon-chemie.com

Safety Data Sheet

ALUMINUM DIETHYL PHOSPHINATE (5040)

Revision date :

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NUMBER

1 IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifiers

Chemical Name Aluminum diethyl phosphinate
CAS NO. 225789-38-8

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

1. It is suited as flame retardant for thermoplastics and thermosets.
2. It has high phosphorus content, good thermal stability and excellent flame retardant efficiency.
3. As a flame retardant, it can be used separately, also can be used together with other flame retardants.

Details of the supplier of the safety data sheet

COMPANY

TRIGON CHEMICALS PVT. LTD.
722/AB/15 Nirmal, Laxmi Park Colony, Navi Peth
Pune - 411030
India
Telephone : 02024530110

2 HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

2.2 Labelling according Regulation (EC) No 1272/2008 [CLP]

2.3 Other hazards None

3 COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Component

Chemical Name Aluminum diethyl phosphinate
CAS NO 225789-38-8
EC Number 607-114-5
Molecular Formula ((C₂H₅)₂PO₂)₃Al
Molecular Weight 390.3
Concentration -

4 FIRST AID MEASURES

4.1 Description of first aid measures

General advice

No data available.

If inhaled

Remove the casualty into fresh air and keep him calm.



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Ensure supply of fresh air.
Take medical treatment.

In case of skin contact

Remove contaminated clothing.
Wash with soap and water.

In case of eye contact

In case of contact with eyes rinse thoroughly with plenty of water and seek medical advice.

If swallowed

Get medical treatment

4.2 Most important symptoms and effects, both acute and delayed

No data available.

4.3 Indication of any immediate medical attention and special treatment needed

No data available.

5 FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media

Water spray, foam

5.2 Special hazards arising from the substance or mixture

Emits carbon monoxide (CO) or Carbon dioxide (CO₂) under fire conditions

5.3 Advice for firefighters

No data available.

5.4 Further information

No data available.

6 ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions protective equipment and emergency procedures

Do not inhale dust.
Avoid contact with skin and eyes.
Wear personal protective equipment.
Unprotected persons must be kept away.
Do not allow to enter drains.
Retain and dispose of contaminated wash water.

6.2 Environmental precautions

No data available.

6.3 Methods and materials for containment and cleaning up

Sweep up, place in a bag and hold for waste disposal.
Avoid raising dust.
Wash spill site after material pickup is complete.

6.4 Reference to other sections

Prevent dispersion of dust.



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7 HANDLING AND STORAGE

7.1 Precautions for safe handling

Avoid dust formation
Provide exhaust ventilation if dust is formed.
Take precautionary measures against electrostatic loading.

7.2 Information about protection against explosions and fires

No data available.

7.3 Conditions for safe storage including any incompatibilities

Store away from highly flammable substances.
Keep in dry Place.

7.4 Specific end use(s)

No data available.

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Ingredients Comments

Do not inhale dust.
Avoid contact with skin.
Avoid contact with eyes.

8.2 Exposure control

Do not eat or drink during work time.
Do not smoke during work time.
Clean skin thoroughly after work; apply skin cream.

Appropriate engineering controls

No data available.

Technical measures/Precautions

No data available.

Personal protective equipment

Dust mask

Eye/face protection

Tightly fitting safety glasses.

Hands protection

Antistatic gloves, PVC or PE gloves

Skin protection



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No data available.

Body Protection

Protective clothing.

Respiratory protection

No data available.

Control of environmental exposure

No data available.

9 PHYSICAL AND CHEMICAL PROPERTIES

a) Appearance	White powder or crystal
b) Odour	Odourless
c) Odour Threshold	No data available.
d) pH (% solution in water)	Approx. 5
pH	No data available.
e) Melting point/freezing point	No data available.
f) Initial boiling point and boiling range	No data available.
g) Flash point	Not applicable
h) Evaporation rate	No data available.
i) Flammability (solid or gas)	No data available.
j) Upper/lower flammability or explosive limits	No data available.
k) Vapour pressure	Not applicable
l) Vapour density	Not applicable
m) Relative density	No data available.
n) Water solubility	< 0.2g/L, Suspension in water
o) Partition coefficient: n-octanol/water	No data available.
p) Autoignition temperature	Not applicable
q) Decomposition temperature	No data available.
r) Viscosity	No data available.
s) Explosive properties	No data available.
t) Oxidizing properties	No data available.

9.2 Other safety information



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Bulk Density 400-600 kg/m3

10 STABILITY AND REACTIVITY

- | | | |
|------|------------------------------------|--|
| 10.1 | Reactivity | > 350 °C (Heating rate: 10°C /min) Decomposes before melting |
| 10.2 | Chemical stability | No data available. |
| 10.3 | Possibility of hazardous reactions | No hazardous reactions when stored and handled according to prescribed instructions. |
| 10.4 | Conditions to avoid | Temperatures exceeding thermal stability of the masterbatch. High concentration of powders, Electrostatic charges. |
| 10.5 | Incompatible materials | No data available. |
| 10.6 | Hazardous decomposition products | No data available. |

11 TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

- | | |
|--|---|
| Acute toxicity | No data available. |
| Acute oral toxicity | LD50 > 2000 mg/kg (rat) |
| Acute Inhalation toxicity | No data available. |
| Acute dermal toxicity | LD50 > 2000 mg/kg (rat (female)) |
| Acute Irritation / corrosion toxicity | No data available. |
| Skin corrosion/irritation | Non-irritant (4 h, rabbit) |
| Serious eye damage/eye irritation | Slight irritant effect - does not require labelling (rabbit eye) |
| Respiratory or skin sensitization | non-sensitizing (Guinea pig) |
| Germ cell mutagenicity | Not mutagenic in Ames Test. No experimental indications on genotoxicity in vivo found. |
| Carcinogenicity | No data available. |
| IARC | No data available. |
| Reproductive toxicity | No data available. |
| Specific target organ toxicity - single exposure | No data available. |
| Specific target organ toxicity - repeated exposure | Sub-acute oral toxicity. Route of application: gavage. NOAEL: > 1000 mg/kg (29, Rats (male/female)) |
| Signs and symptoms of exposure | No data available. |



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Route of exposure	No data available.
Aspiration hazard	No data available.
Potential health effects	No data available.
Inhalation	No data available.
Ingestion	No data available.
Skin	No data available.
Eyes	No data available.
RTECS	No data available.

12 ECOLOGICAL INFORMATION

12.1 Toxicity	No data available.
Toxicity to fish	LC50 > 100 mg/L(96 h, zebra fish)
Toxicity to daphnia and other aquatic invertebrates	EC50 > 100 mg/L(48 h, Daphnia magna)
Toxicity to Algae/Aquatic plants	NOEC > 180 mg/L(Scenedesmus subspicatus)
Toxicity to microorganisms	Bacteria- EC50 = 1968 mg/L(3 h, activated sludge)
12.2 Persistence and degradability	
Biodegradation	
not degradable	
12.3 Bio accumulative potential	not degradable
12.4 Mobility in soil	not degradable
12.5 Results of PBT and vPvB assessment	not degradable
12.6 Other adverse effects	not degradable

13 DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product

Contact a licensed professional waste disposal service to dispose of this material.
In accordance with regulations for special waste, must be taken, after pretreatment, to an authorised special waste incineration plant.

Contaminated packaging

No data available.

14 TRANSPORT INFORMATION



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14.1 UN number

ADR/RID

IMDG

IATA

Not restricted

Not restricted

Not restricted

14.2 UN proper shipping name

ADR/RID

IMDG

IATA

Not restricted

Not restricted

Not restricted

14.3 Transport hazard class(es)

ADR/RID

IMDG

IATA

Not restricted

Not restricted

Not restricted

14.4 Packaging group

ADR/RID

IMDG

IATA

Not restricted

Not restricted

Not restricted

14.5 Environmental hazards

ADR/RID

IMDG Marine pollutant

IATA

Not restricted

Not restricted

Not restricted

14.6 Special precautions for user

No data available.

15 REGULATORY INFORMATION

Labelling in accordance with EC-Directives

Hazard warning labelling not compulsory

National regulations

Other regulations

VDI 2263 "Dust fires and explosions; Danger, Evaluation, Protection measures"

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

No data available

15.2 Chemical Safety Assessment

No data available

16 OTHER INFORMATION

Month of Creation

SEPT 2020

Month of Revision

SEPT 2023