

Chemical Safety Data Sheet MSDS / SDS

AP219

Revision Date:2026-05-30 Revision Number:1

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

Product identifier

Product name : AP219
CBnumber : CB03152548
CAS : 779282-36-9
Synonyms : AP219(solution in dichloromethane);(9-Carboxynonyl)triphenyl-phosphonium

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

Relevant identified uses : For R&D use only. Not for medicinal, household or other use.
Uses advised against : none

Company Identification

Company : Chemicalbook
Address : Building 1, Huihuang International, Shangdi 10th Street, Haidian District, Beijing
Telephone : 010-86108875

SECTION 2: Hazards identification

GHS Label elements, including precautionary statements

Symbol(GHS)



Signal word

Warning

Precautionary statements

No data available

Hazard statements

No data available

SECTION 3: Composition/information on ingredients

Substance

Product name : AP219
Synonyms : AP219(solution in dichloromethane);(9-Carboxynonyl)triphenyl-phosphonium
CAS : 779282-36-9

MF : C28H34O2P+
MW : 433.55

SECTION 4: First aid measures

Description of first aid measures

General information

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

After inhalation

In case of unconsciousness place patient stably in side position for transportation.

After skin contact

Immediately wash with water and soap and rinse thoroughly.

After eye contact

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

After swallowing

If symptoms persist consult doctor.

Information for doctor

Most important symptoms and effects, both acute and delayed

No further relevant information available.

Indication of any immediate medical attention and special treatment needed

No further relevant information available.

SECTION 5: Firefighting measures

Extinguishing media

Suitable extinguishing agents

Use fire fighting measures that suit the environment.

A solid water stream may be inefficient.

Special hazards arising from the substance or mixture

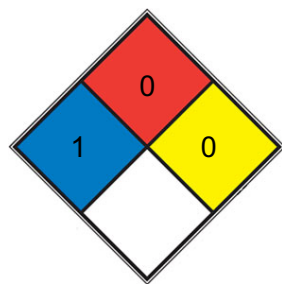
67-56-1 During heating or in case of fire poisonous gases are produced.

Advice for firefighters

Protective equipment

Mouth respiratory protective device.

NFPA 704



■ HEALTH 1 Exposure would cause irritation with only minor residual injury (e.g. [acetone](#), sodium bromate, potassium chloride)

■ FIRE 0 Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand. Materials that will not burn in air when exposed to a temperature of 820 °C (1,500 °F) for a period of 5 minutes.(e.g. Carbon tetrachloride)

■ REACT 0 Normally stable, even under fire exposure conditions, and is not reactive with water (e.g. helium,[N2](#))

□ SPEC.

□ HAZ.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

Mount respiratory protective device.

Environmental precautions

Dilute with plenty of water.

Do not allow to enter sewers/ surface or ground water.

Methods and material for containment and cleaning up

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose contaminated material as waste according to section 13.

Ensure adequate ventilation.

Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

Protective Action Criteria for Chemicals

PAC-1

75-09-2 Dichloromethane 200 ppm

PAC-2

75-09-2 Dichloromethane 560 ppm

PAC-3

SECTION 7: Handling and storage

Handling

Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace.

Open and handle receptacle with care.

Prevent formation of aerosols.

Information about protection against explosions and fires

Keep respiratory protective device available.

Conditions for safe storage, including any incompatibilities

Keep container tightly closed.

Store in accordance with information listed on the product insert.

Storage

Store in accordance with information listed on the product insert.

Requirements to be met by storerooms and receptacles

No special requirements.

Information about storage in one common storage facility

Not required.

Further information about storage conditions

Keep receptacle tightly sealed.

Specific end use(s)

No further relevant information available.

SECTION 8: Exposure controls/personal protection

Additional information about design of technical systems

No further data; see section 7.

Control parameters

Components with limit values that require monitoring at the workplace:

75-09-2 Dichloromethane	
PEL	Short-term value: 125 ppm Long-term value: 25 ppm see 29 CFR 1910.1052
REL	See Pocket Guide App. A
TLV	Long-term value: 50 ppm
BEI	, A3

Ingredients with biological limit values:	
75-09-2 Dichloromethane	
BEI	0.3 mg/L Medium: urine Time: end of shift Parameter: Dichloromethane (semi-quantitative)

Additional information

The lists that were valid during the creation were used as basis.

Exposure controls

Personal protective equipment

General protective and hygienic measures

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Store protective clothing separately.

Avoid contact with the eyes and skin.

Breathing equipment

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

Protection of hands

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye protection

Safety glasses

Tightly sealed goggles

SECTION 9: Physical and chemical properties**Information on basic physicochemical properties****Appearance****Physical State**

Liquid

Color

Not determined.

Odor

Characteristic

Structural Formula

C₂₈H₃₄O₂P

Molecular Weight

433.6 g/mol

Odor Threshold

Not determined.

Formulation

A solution in dichloromethane

pH

Not determined.

Change in condition**Melting point/Melting range**

-95.1 °C (-139.2 °F)

Boiling point/Boiling range

40 °C (104 °F)

Flash point

Not applicable.

Flammability (solid,gas)

Not applicable.

Auto igniting

605 °C (1,121 °F)

Decomposition temperature

Not determined.

Ignition temperature

Product is not selfigniting.

Danger of explosion

Product does not present an explosion hazard.

Explosion limits

Lower: 13 Vol %

Upper: 22 Vol %

Vapor Pressure at 20 °C (68 °F)

453 hPa (339.8 mm Hg)

Density at 20 °C (68 °F)

1.33 g/cm³ (11.09885 lbs/gal)

Relative Density

Not determined.

Vapor Density

Not determined.

Evaporation Rate

Not determined.

Solubility in / Miscibility with

DMF: 10 mg/ml; DMSO: 20 mg/ml; Ethanol: 15 mg/ml; PBS (pH 7.2): 1 mg/ml

Water at 20 °C (68 °F)

20 g/l

Partition coefficient (n-octanol/water)

Not determined.

Viscosity**Dynamic**

Not determined.

Kinematic

Not determined.

SOLUBILITY

DMF: 10 mg/ml; DMSO: 20 mg/ml; Ethanol: 15 mg/ml; PBS (pH 7.2): 1 mg/ml

Organic solvents

95.0 %

VOC content

0.00 % 0.0 g/l / 0.00 lb/gal

Solids content

0.0 %

Other information

No information available

SECTION 10: Stability and reactivity

Reactivity

No further relevant information available.

Chemical stability

Thermal decomposition / conditions to be avoided

No decomposition if used according to specifications.

Possibility of hazardous reactions

No dangerous reactions known.

Conditions to avoid

No further relevant information available.

Incompatible materials

plastics, rubber, metal, oxidizing agents

Hazardous decomposition products

carbon oxides, hydrogen chloride

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity

LD/LC50 values that are relevant for classification:

Substance / Estimate	Route	Endpoint	Value
ATE (Acute Toxicity Estimate)	Oral	LD50	1,684 mg/kg (rat)
75-09-2 Dichloromethane	Oral	LDLO	357 mg/kg (hmn)
75-09-2 Dichloromethane	Oral	LD50	1,600 mg/kg (rat)
75-09-2 Dichloromethane	Oral	TDLO	1,429 µL/kg (man)
75-09-2 Dichloromethane	Inhalative	LC50/4 h	88 mg/l (rat)
75-09-2 Dichloromethane	Intraperitoneal	LD50	916 mg/kg (rat)
75-09-2 Dichloromethane	Subcutaneous	LD50	6,460 mg/kg (mouse)

Primary irritant effect

on the skin

Irritant to skin and mucous membranes.

on the eye

Irritating effect.

Sensitization

No sensitizing effects known.

Additional toxicological information

The product shows the following dangers according to internally approved calculation methods for preparations

Irritant

Carcinogenic categories

IARC (International Agency for Research on Cancer)

75-09-2 Dichloromethane 2A

NTP (National Toxicology Program)

75-09-2 Dichloromethane R

OSHA-Ca (Occupational Safety & Health Administration)

75-09-2 Dichloromethane

SECTION 12: Ecological information

Toxicity

Aquatic toxicity

No further relevant information available.

Persistence and degradability

No further relevant information available.

Behavior in environmental systems

Bioaccumulative potential

No further relevant information available.

Mobility in soil

No further relevant information available.

Additional ecological information

General notes

Water hazard class 2 (Self-assessment) hazardous for water

Do not allow product to reach ground water, water course or sewage system.

Danger to drinking water if even small quantities leak into the ground.

Results of PBT and vPvB assessment

PBT

Not applicable.

vPvB

Not applicable.

PBT:

Not applicable.

vPvB:

Not applicable.

Other adverse effects

No further relevant information available.

SECTION 13: Disposal considerations

Waste treatment methods

Recommendation

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

Uncleaned packagings

Recommendation

Disposal must be made according to official regulations.

Recommended cleansing agent

Water, if necessary with cleansing agents.

SECTION 14: Transport information

UN-Number

DOT, IMDG, IATA UN1593

UN proper shipping name

DOT, IATA Dichloromethane

IMDG DICHLOROMETHANE

Transport hazard class(es)

DOT

Class: 6.1 Toxic substances

Label: 6.1

IMDG, IATA

Class: 6.1 Toxic substances

Label: 6.1

Packing group

DOT, IMDG, IATA III

Environmental hazards

Not applicable.

Special precautions for user

Warning: Toxic substances

Hazard identification number (Kemler code)

60

EMS Number

F-A,S-A

Segregation groups

(SGG10) Liquid halogenated hydrocarbons

Stowage Category

A

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not applicable.

Transport/Additional information

DOT:

Quantity limitations

On passenger aircraft/rail: 60 L

On cargo aircraft only: 220 L

IMDG:

Limited quantities (LQ)

5L

Excepted quantities (EQ)

Code: E1

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 1000 ml

IATA:

Remarks

When sold in quantities of less than or equal to 1 mL, or 1 g, with an Excepted Quantity Code of

E1, E2, E4, or E5, this item meets the De Minimis

Quantities exemption, per IATA 2.6.10.

Therefore packaging does not have to be labeled as

Dangerous Goods/Excepted Quantity.

UN "Model Regulation"

UN 1593 DICHLOROMETHANE, 6.1, III

SECTION 15: Regulatory information

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

This chemical/product is not and cannot be distributed in commerce (as defined in TSCA section 3(5))

Sara

Section 355 (extremely hazardous substances):	None of the ingredients is listed.
Section 313 (Specific toxic chemical listings):	75-09-2 Dichloromethane
TSCA (Toxic Substances Control Act):	This chemical/product is not and cannot be distributed in commerce (as defined in TSCA section 3(5))
or processed (as defined in TSCA section 3(13)) for consumer paint or coating removal.	

75-09-2 Dichloromethane ACTIVE
Hazardous Air Pollutants 75-09-2 Dichloromethane

Proposition 65

Chemicals known to cause cancer:	75-09-2 Dichloromethane
Chemicals known to cause reproductive toxicity for females:	None of the ingredients is listed.
Chemicals known to cause reproductive toxicity for males:	None of the ingredients is listed.
Chemicals known to cause developmental toxicity:	None of the ingredients is listed.

Carcinogenic categories

EPA (Environmental Protection Agency):
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75-09-2

Dichloromethane L

TLV (Threshold Limit Value)

75-09-2

Dichloromethane A3

75-09-2

Dichloromethane

Chemical safety assessment

A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

Abbreviations and acronyms

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

BEI: Biological Exposure Limit

Skin Irritation 2: Skin corrosion/irritation – Category 2

Eye Irritation 2A: Serious eye damage/eye irritation – Category 2A

Germ Cell Mutagenicity 2: Germ cell mutagenicity – Category 2

Carcinogenicity 2: Carcinogenicity – Category 2

Specific Target Organ Toxicity - Single Exposure 3: Specific target organ toxicity (single exposure) – Category 3

Specific Target Organ Toxicity - Repeated Exposure 1: Specific target organ toxicity (repeated exposure) – Category 1

Disclaimer:

The information in this MSDS is only applicable to the specified product, unless otherwise specified, it is not applicable to the mixture of this product and other substances. This MSDS only provides information on the safety of the product for those who have received the appropriate professional training for the user of the product. Users of this MSDS must make independent judgments on the applicability of this SDS. The authors of this MSDS will not be held responsible for any harm caused by the use of this MSDS.