We create chemistry

Safety data sheet

1. Substance/preparation and manufacturer/supplier identification

Adipic Acid - G

Recommended use: for the production of homopolymerisates and copolymerisates, initial product for chemical syntheses
Not recommended use: food additive(s)

Manufacturer/supplier:
BASF Philippines, Inc.
Upper Penthouse CTP ASEAN Tower
Asean Drive, Spectrum District
Filinvest Corporate City, Alabang,
Muntinlupa City, 1781, Metro Manila
PHILIPPINES
Telephone: +63 2 8811-8001
E-mail address: psr.ph@basf.com

Emergency information:
National emergency number:
+63 2 8831 5576
International emergency number:
Telephone: +49 180 2273-112

2. Hazard identification

Classification of the substance and mixture:
Serious eye damage/eye irritation: Cat. 1
Hazardous to the aquatic environment - acute: Cat. 3

Label elements and precautionary statement:

Pictogram:

Signal Word:
Danger

Hazard Statement:

H318	Causes serious eye damage.
H402	Harmful to aquatic life.

Precautionary Statements (Prevention):

P280	Wear eye and face protection.
P273	Avoid release to the environment.

Precautionary Statements (Response):

P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER or physician.

Precautionary Statements (Disposal):

P501	Dispose of contents and container to hazardous or special waste collection point.

Other hazards which do not result in classification:
No specific dangers known, if the regulations/notes for storage and handling are considered.

3. Composition/information on ingredients

Chemical nature

Substance nature: Substance

adipic acid
CAS Number: 124-04-9

Hazardous ingredients

adipic acid

Content (W/W): >= 75 % - <= 100 %	Eye Dam./Irrit.: Cat. 1 Aquatic Acute: Cat. 3

CAS Number: 124-04-9

4. First-Aid Measures

General advice:
Remove contaminated clothing. Avoid contact with the skin, eyes and clothing.

If inhaled:
If difficulties occur after dust has been inhaled, remove to fresh air and seek medical attention.

On skin contact:
Wash thoroughly with soap and water

On contact with eyes:
Immediately wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist.

On ingestion:
Immediately rinse mouth and then drink 200-300 ml of water, seek medical attention.

Note to physician:
Symptoms: Information, i.e. additional information on symptoms and effects may be included in the GHS labeling phrases available in Section 2 and in the Toxicological assessments available in Section 11., (Further) symptoms and / or effects are not known so far
Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote.

5. Fire-Fighting Measures

Suitable extinguishing media:
water spray, dry powder, foam, carbon dioxide

Specific hazards:
No particular hazards known.

Further information:
Collect contaminated extinguishing water separately, do not allow to reach sewage or effluent systems.

6. Accidental Release Measures

Personal precautions:
Avoid dust formation. Sources of ignition should be kept well clear. Use breathing apparatus if exposed to vapours/dust/aerosol. Information regarding personal protective measures, see section 8.

Environmental precautions:
Discharge into the environment must be avoided. Do not empty into drains. Retain and dispose of contaminated wash water.

Methods for cleaning up or taking up:
For large amounts: Sweep/shovel up. Dispose of contaminated material as prescribed.
For residues: Rinse away with water.

7. Handling and Storage

Handling

Ensure thorough ventilation of stores and work areas. Avoid contact with skin and eyes. Wear suitable protective clothing and eye/face protection. Handle in accordance with good industrial hygiene and safety practice.

Protection against fire and explosion:
Avoid dust formation. The product is capable of dust explosion. Sources of ignition should be kept well clear. Take precautionary measures against static discharges.

Dust explosion class: Dust explosion class 2 (Kst-value 200 up to 300 bar m s-1).

Storage

Segregate from alkalies and alkalizing substances.

Suitable materials for containers: Stainless steel 1.4401, Stainless steel 1.4301 (V2), Aluminium, Polyester resin, glass reinforced (Palatal A410), Paper/Fibreboard, High density polyethylene (HDPE), glass, Low density polyethylene (LDPE)
Further information on storage conditions: Containers should be stored tightly sealed in a dry place.

Storage stability:
Tends to cake.

8. Exposure controls and personal protection

Components with occupational exposure limits

adipic acid, 124-04-9;
TWA value 5 mg/m3 (ACGIHTLV)

Personal protective equipment

Respiratory protection:
Breathing protection if breathable aerosols/dust are formed. Particle filter with low efficiency for solid particles (e.g. EN 143 or 149, Type P1or FFP1)

Hand protection:
Chemical resistant protective gloves (EN ISO 374-1)
butyl rubber (butyl) - 0.7 mm coating thickness
Manufacturer's directions for use should be observed because of great diversity of types.

Eye protection:
Safety glasses with side-shields (frame goggles) (e.g. EN 166)

General safety and hygiene measures:
Handle in accordance with good industrial hygiene and safety practice. Take off immediately all contaminated clothing. At the end of the shift the skin should be cleaned and skin-care agents applied.

9. Physical and Chemical Properties

Form:	crystalline	
Colour:	white	
Odour:	odourless	
Odour threshold:	No data available.	
pH value:	2.7 (23 g/l, 25 °C)	
pKA:	4.43 (20 °C)	
Melting point:	150.85 °C	(Directive 92/69/EEC, A.1)
Boiling point:	337.5 °C (1,013 hPa) Literature data.	
Sublimation point:	No applicable information available.	
Flash point:	196 °C Literature data.	(closed cup)
Evaporation rate:	The product is a non-volatile solid.	
Flammability (solid/gas):	not highly flammable	(Directive 92/69/EEC, A.10)
Lower explosion limit:	No data available.	
Upper explosion limit:	No data available.	
Ignition temperature:	405 °C	(DIN 51794)
Thermal decomposition:	No data available.	
Self ignition:	not self-igniting	Test type: Spontaneous self-ignition at room-temperature.
	Temperature: > 400 °C	Test type: Self-ignition at high temperatures. (Method: Directive 92/69/EEC, A.16)
Self heating ability:	It is not a substance capable of spontaneous heating.	
Minimum ignition energy:	10 - 30 mJ	(DIN EN 13821)
Explosion hazard:	Product is not explosive, however a dust explosion could result from an air / dust mixture.	(Directive 92/69/EEC, A.14)
Fire promoting properties:	Based on its structural properties the product is not classified as oxidizing.	

Vapour pressure:	0.097 hPa (18.5 °C) Literature data.
Density:	1.36 g/cm3 (25 °C) Literature data.
Relative density:	1.36 (25 °C) Literature data.
Bulk density:	approx. 700 kg/m3
Relative vapour density (air):	No data available.
Solubility in water:	Literature data. 23 g/l (25 °C)
Solubility (qualitative) solvent(s):	organic solvents soluble
Partitioning coefficient n-octanol/water (log Pow):	0.093 (measured) (25 °C; pH value: 3.3)
Adsorption/water - soil:	KOC: 1.61; log KOC: 0.21 (calculated)
Surface tension:	Based on chemical structure, surface activity is not to be expected.
Viscosity, dynamic:	No data available.
Viscosity, kinematic:	No data available.
Molar mass:	146.14 g/mol

10. Stability and Reactivity

Conditions to avoid:
Avoid dust formation. Avoid deposition of dust. See SDS section 7 - Handling and storage.

Thermal decomposition: No data available.

Substances to avoid:
alkaline reactive substances

Corrosion to metals: No corrosive effect on metal.

Hazardous reactions:
Reacts with basic components to generate heat. Dust explosion hazard.

Thermal decomposition products:
No hazardous decomposition products if stored and handled as prescribed/indicated., Incomplete combustion results in formation of toxic gases, containing mainly carbon monoxide and carbon dioxide.

11. Toxicological Information

Acute toxicity

Assessment of acute toxicity:
Virtually nontoxic after a single ingestion. Virtually nontoxic by inhalation. Virtually nontoxic after a single skin contact.

Experimental/calculated data:
LD50 rat (oral): approx. 5,560 mg/kg (BASF-Test)

LC50 rat (by inhalation): > 7.7 mg/l 4 h (BASF-Test)
An aerosol was tested.

LD50 rabbit (dermal): > 7,940 mg/kg (other)

Irritation

Assessment of irritating effects:
Not irritating to the skin. May cause severe damage to the eyes.

Experimental/calculated data:
Skin corrosion/irritation rabbit: non-irritant (BASF-Test)

Serious eye damage/irritation rabbit: irreversible damage (OECD Guideline 405)

Respiratory/Skin sensitization

Assessment of sensitization:
Skin sensitizing effects were not observed in animal studies. A sensitizing effect on particularly sensitive individuals cannot be excluded.

Experimental/calculated data:
guinea pig: Non-sensitizing. (other)

Germ cell mutagenicity

Assessment of mutagenicity:
The substance was not mutagenic in mammalian cell culture. No mutagenic effect was found in various tests with microorganisms and mammals.

Carcinogenicity

Assessment of carcinogenicity:
In long-term animal studies in which the substance was given in high concentrations by feed, a carcinogenic effect was not observed.

Reproductive toxicity

Assessment of reproduction toxicity:
No effects have been reported in reproductive organs in long term animal studies.

Developmental toxicity

Assessment of teratogenicity:
No indications of a developmental toxic / teratogenic effect were seen in animal studies.

Specific target organ toxicity (single exposure):

Assessment of STOT single:
Causes temporary irritation of the respiratory tract.

Repeated dose toxicity and Specific target organ toxicity (repeated exposure)

Assessment of repeated dose toxicity:
Repeated oral uptake of the substance did not cause substance-related effects.

Aspiration hazard

No aspiration hazard expected.

12. Ecological Information

Ecotoxicity

Toxicity to fish:
LC0 (96 h) >= 1,000 mg/l, Brachydanio rerio (other, static)
Nominal values (confirmed by concentration control analytics)

Aquatic invertebrates:
LC50 (48 h) 46 mg/l, Daphnia magna (OECD Guideline 202, part 1)
Nominal concentration.

Aquatic plants:
EC50 (72 h) 64.5 mg/l (growth rate), Pseudokirchneriella subcapitata (OECD Guideline 201, static)
Nominal concentration.

No observed effect concentration (72 h) 40.6 mg/l (growth rate), Pseudokirchneriella subcapitata (OECD Guideline 201, static)
Nominal concentration.

Microorganisms/Effect on activated sludge:
EC50 (3 h) > 100 mg/l, activated sludge (OECD Guideline 209, aerobic)

Chronic toxicity to fish:
Study scientifically not justified.

Chronic toxicity to aquatic invertebrates:
No observed effect concentration (21 d), 6.3 mg/l, Daphnia magna (OECD Guideline 211)

Nominal concentration.

Assessment of terrestrial toxicity:
Study scientifically not justified.

Mobility

Assessment transport between environmental compartments:
The substance will not evaporate into the atmosphere from the water surface.
Adsorption to solid soil phase is not expected.

Persistence and degradability

Elimination information:
83 % BOD of the ThOD (30 d) (OECD 301D; EEC 92/69, C.4-E) (aerobic, domestic sewage)
Literature data.

Assessment of stability in water:
According to structural properties, hydrolysis is not expected/probable.

Bioaccumulation potential

Assessment bioaccumulation potential:
Because of the n-octanol/water distribution coefficient (log Pow) accumulation in organisms is not to be expected.

Bioaccumulation potential:
Bioconcentration factor: 3.16 (calculated)
Accumulation in organisms is not to be expected.

Additional information

Other ecotoxicological advice:
Do not release untreated into natural waters.

13. Disposal Considerations

Incinerate in suitable incineration plant, observing local authority regulations.

Contaminated packaging:
Uncleaned empties should be disposed of in the same manner as the contents.

14. Transport Information

Domestic transport:

Not classified as a dangerous good under transport regulations

Sea transport
IMDG

Not classified as a dangerous good under transport regulations

Air transport
IATA/ICAO

Not classified as a dangerous good under transport regulations

15. Regulatory Information

Hazard determining component(s) for labelling: ADIPIC ACID

Other regulations

as in Annex I of Directive 67/548/EEC

If other regulatory information applies that is not already provided elsewhere in this safety data sheet, then it is described in this subsection.

1. Joint DTI-DENR-DA-DOF-DOH-DILG-DOLE-DOTC Administrative Order No. 01 Series of 2009 on “The Adoption and Implementation of the Globally Harmonized System of Classification and Labeling of Chemicals (GHS)”

2. DAO 2015-09 "Rules and Procedures for the Implementation of the Globally Harmonized System (GHS) of Classification and Labelling of Chemicals in Prepration of Safety Data Sheet (SDS) and Labelling Requirements of Toxic Chemical Substances”

3. Republic Act No. 6969, “Toxic Substances and Hazardous and Nuclear Wastes Control Act of 1990”

The regulatory information is not intended to be comprehensive. Other regulations may apply to the material

Registration status:

PICCS, PH	released / listed

16. Other Information

Vertical lines in the left hand margin indicate an amendment from the previous version.

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The data contained in this safety data sheet are based on our current knowledge and experience and describe the product only with regard to safety requirements. This safety data sheet is neither a Certificate of Analysis (CoA) nor technical data sheet and shall not be mistaken for a specification agreement. Identified uses in this safety data sheet do neither represent an agreement on the corresponding contractual quality of the substance/mixture nor a contractually designated use. It is the responsibility of the recipient of the product to ensure any proprietary rights and existing laws and legislation are observed.