Aako Protect BCDMH gran
S-IN-000805

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

1.1 Product identifier

Aako Protect BCDMH gran (S-IN-000805)
BROMOCHLORO-5,5-DIMETHYLIMIDAZOLIDINE-2,4-DIONE ; CAS No. : 32718-18-6 ; EC No. : 251-171-5

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

Relevant identified uses

Biocidal active substance

1.3 Details of the supplier of the safety data sheet

Supplier (manufacturer/importer/only representative/downstream user/distributor)

AAKO B.V.

Street :	Arnhemseweg 87
Postal code/city :	3830 AE Leusden The Netherlands
Telephone :	+31 (0) 33 494 84 94
Telefax :	+31 (0) 33 494 80 44
Information contact :	regulatory@aako.nl

1.4 Emergency telephone number

See supplier (Telephone number is accessible only during business hours).
or
Call local Poison Control Centre for assistance.
BE : +32 70 245 245
NL : +31 30 274 88 88 (This service is only accessible by professional health workers).
LU : +352 800 255 00
DE (Berlin) : +49 30 192 40 / DE (Erfurt) : +49 361 730 730 / DE (Munchen) : +49 30 192 40
FR (Paris) : +33 (0)1 40 05 48 48 / FR (Angers) : +33 (0)2 41 48 21 21 / FR (Bordeaux) : +33 (0)5 56 96 40 80 / FR (Lille) : +33 (0)8 00 59 59 59 / FR (Lyon) : +33 (0)4 72 11 69 11 / FR (Marseille) : +33 (0)4 91 75 25 25 / FR (Nancy) : +33 (0)3 83 22 50 50 / FR (Toulouse) : +33 (0)5 61 77 74 47
SE : 112 (local); +46 (0)10 456 6700

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [CLP]

Acute Tox. 4 ; H302 - Acute toxicity (oral) : Category 4 ; Harmful if swallowed.
Skin Corr. 1B ; H314 - Skin corrosion/irritation : Category 1B ; Causes severe skin burns and eye damage.
Eye Dam. 1 ; H318 - Serious eye damage/eye irritation : Category 1 ; Causes serious eye damage.
Skin Sens. 1 ; H317 - Skin sensitisation : Category 1 ; May cause an allergic skin reaction.
Aquatic Acute 1 ; H400 - Hazardous to the aquatic environment : Acute 1 ; Very toxic to aquatic life.

2.2 Label elements

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

Hazard pictograms

Corrosion (GHS05) · Environment (GHS09) · Exclamation mark (GHS07)

Signal word

Danger

Hazard components for labelling

BROMOCHLORO-5,5-DIMETHYLIMIDAZOLIDINE-2,4-DIONE ; CAS No. : 32718-18-6

Hazard statements

H314	Causes severe skin burns and eye damage.
H302	Harmful if swallowed.
H317	May cause an allergic skin reaction.
H400	Very toxic to aquatic life.

Precautionary statements

P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P310	Immediately call a POISON CENTER or doctor/physician.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P301+P330+P331	IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P362+P364	Take off contaminated clothing and wash it before reuse.
P391	Collect spillage.

Supplemental Hazard information (EU)

EUH031	Contact with acids liberates toxic gas.

2.3 Other hazards

None under normal conditions.
Dust may form explosive mixture in air.

Adverse human health effects and symptoms

May cause an allergic skin reaction.

SECTION 3: Composition/information on ingredients

3.1 Substances

Substance name : BROMOCHLORO-5,5-DIMETHYLIMIDAZOLIDINE-2,4-DIONE

EC No. : 251-171-5

CAS No. : 32718-18-6

Purity : ≥ 96 - < 99,5 % [mass]

SECTION 4: First aid measures

4.1 Description of first aid measures

General information

When in doubt or if symptoms are observed, get medical advice.

Following inhalation

Remove victim out of the danger area.
Remove victim to fresh air.
Remove victim to fresh air and keep at rest in a position comfortable for breathing.
If breathing is irregular or stopped, administer artificial respiration.
Seek medical attention if ill effect or irritation develops.

In case of skin contact

Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.
Seek medical attention immediately.

After eye contact

Continue to rinse eye with clean water for 10 - 15 minutes, retracting eyelids often.
Remove contact lenses, if present and easy to do. Continue rinsing.
Seek medical attention immediately.

After ingestion

Rinse mouth thoroughly with water.
Seek medical attention immediately.
Do NOT induce vomiting.
Never give anything by mouth to an unconscious person.

4.2 Most important symptoms and effects, both acute and delayed

After eye contact:
Causes serious eye damage. After skin contact:
Causes burns.
May cause an allergic skin reaction.
After inhalation:
Irritating to respiratory system.
Breathing difficulties.
After ingestion:
Harmful if swallowed.

4.3 Indication of any immediate medical attention and special treatment needed

Give supportive therapy.
Treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Carbon dioxide (CO2).
Water spray.

5.2 Special hazards arising from the substance or mixture

Dust may form explosive mixture in air.
May intensify fire; oxidiser.

Hazardous combustion products

Thermal decomposition generates:
Toxic or corrosive fumes.
Hydrogen bromide.
Hydrogen chloride (HCl) Chlorine (Cl2)
Carbon oxides.
Nitrogen oxides.

5.3 Advice for firefighters

Do not allow run-off from fire-fighting to enter drains or water courses.
Cool endangered containers with water in case of fire.

Special protective equipment for firefighters

Wear a self-contained breathing apparatus and chemical protective clothing.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Wear personal protection equipment. (see chapter 8).
Do not breathe dust.
Avoid ingestion and inhalation.
Avoid contact with skin and eyes.
Evacuate personnel to safe area.
Provide adequate ventilation.
Remove all sources of ignition.
Avoid generation of dust.

6.2 Environmental precautions

Do not allow to enter into surface water or drains.
Prevent entry to sewers and public waters.
Avoid release to the environment.
Do not allow to enter into ground-water, surface water or drains.

6.3 Methods and material for containment and cleaning up

Take up mechanically, placing in appropriate containers for disposal.
Dispose in a safe manner in accordance with local/national regulations.

6.4 Reference to other sections

See protective measures under point 8 and 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Wear personal protection equipment. (see chapter 8).
Do not breathe dust.
Avoid ingestion and inhalation.
Good ventilation of the workplace required.
Avoid contact with skin and eyes.
Avoid dust production.

Protective measures

Measures to prevent fire

Dust may form explosive mixture in air.
Take precautionary measures against static discharges.
Avoid dust production.
Keep away from sources of ignition. - No smoking.

7.2 Conditions for safe storage, including any incompatibilities

Keep away from food, drink and animal feedingstuffs.
Keep in original containers.
Keep container tightly closed.
Store in dry, cool, well-ventilated area.

Hints on joint storage

Storage class (TRGS 510) : 5.1B

Materials to avoid

Bases.
Oxidising agent
Combustible materials

Further information on storage conditions

Recommended storage temperature : Do not store at temperatures above 30°C

7.3 Specific end use(s)

None

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

None

8.2 Exposure controls

Appropriate engineering controls

Provide adequate ventilation as well as local exhaust ventilation at critical locations.

Personal protection equipment

Eye/face protection

Wear appropriate personal eye protection depending on the work to be performed in accordance with EN166.
Chemical goggles.

Skin protection

Hand protection

Wear appropriate chemical resistant gloves according EN 374 also with prolonged, direct contact (Recommended: Protective index 6).
Long-term exposure:

Breakthrough time: 480 min
Thickness of the material: 0,7 mm
Short-term exposure:
Breakthrough time: 30 min
Thickness of the material: 0,4 mm
Material:
Neoprene

Body protection

Wear chemical protective clothing (overalls with long sleeves, two-piece suit resistant to chemical splashes, or chemical resistant disposable coveralls) according to EN 14605 in the event of splashes and EN ISO 13982 in the event of dust.
Wear chemical resistant safety shoes according to EN 13832.

Respiratory protection

Wear approved full face mask dust respirator in accordance with DIN EN 136/140.
B: (Gray) Inorganic gases and vapors (chlorine, hydrogen sulphide, hydrocyanic acid).
P2

General information

When using do not eat, drink, smoke, sniff.
Wash hands before breaks and after work.
Avoid ingestion and inhalation.
Good ventilation of the workplace required.
Remove contaminated clothing.
Wash clothing before re-using.
Avoid contact with skin and eyes.
Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Safety characteristics

Physical state :			solid	
Appearance :			Granulate	
Colour :			White - Off-white.	
Odour :			Characteristic	
Melting point/freezing point :			Decomposition.	
Initial boiling point and boiling range :			Decomposes.	
Flash point :			not applicable	
Decomposition temperature :		>	160	°C
Auto-ignition temperature:			No data available	
pH :			No data available	
Flammability:			No data available.	
Oxidising properties:			Oxidizer.	
Explosive properties :			No data available.	
Density :	(20 °C)		1800 - 2000	kg/m³
Bulk density :			No data available	
Water solubility :	(25 °C)		2,2	g/L

Log POW		<=	1
Viscosity :	(20 °C)		not applicable
Kinematic viscosity :	(40 °C)		not applicable

9.2 Other information

None

SECTION 10: Stability and reactivity

10.1 Reactivity

No information available.

10.2 Chemical stability

Stable under recommended storage and handling conditions.
Decomposes on heating.

10.3 Possibility of hazardous reactions

May intensify fire; oxidiser. Contact with acids liberates toxic gas.

10.4 Conditions to avoid

Heat.
Moisture.
Dust formation.

10.5 Incompatible materials

Bases.
Oxidising agent
Combustible materials

10.6 Hazardous decomposition products

Thermal decomposition generates:
Hydrogen bromide.
Hydrogen chloride (HCl) Chlorine (Cl2)
Carbon oxides.
Nitrogen oxides.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Acute oral toxicity

Parameter :	LD50
Exposure route :	Oral
Species :	Rat
Effective dose :	929 mg/kg

Acute dermal toxicity

Parameter :	LD50
Exposure route :	Dermal
Result :	No information available.

Acute inhalation toxicity

Parameter :	LC50
Exposure route :	Inhalation
Species :	Rat
Effective dose :	1,1 mg/l
Exposure time :	4 h

Powder.

Corrosion

Skin corrosion/irritation

Parameter :	Skin corrosion/irritation
Result :	Corrosive.

Serious eye damage/eye irritation

Parameter :	Serious eye damage/irritation
Result :	Corrosive. Causes serious eye damage.

Respiratory or skin sensitisation

Skin sensitisation

Parameter :	Skin sensitisation
Result :	Sensitising. May cause an allergic skin reaction.

Sensitisation to the respiratory tract

Parameter :	Sensitisation to the respiratory tract
Result :	No information available.

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

No information available.

STOT-single exposure

No information available.

STOT-repeated exposure

No information available.

Aspiration hazard

No information available.

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity

Acute (short-term) fish toxicity

Parameter :	LC50
Species :	Oncorhynchus mykiss (Rainbow trout)
Effective dose :	0,4 mg/l
Exposure time :	96 h

Acute (short-term) daphnia toxicity

Parameter :	EC50
Species :	Daphnia magna (Big water flea)

Effective dose : 0,75 mg/l
Exposure time : 48 h

12.2 Persistence and degradability

Biodegradation

Parameter : Biodegradation
Evaluation : Biodegradable.

12.3 Bioaccumulative potential

Based on the n-octanol/water partition coefficient accumulation in organisms is not expected.

12.4 Mobility in soil

High mobility
No adsorption in soil or sediment expected.

12.5 Results of PBT and vPvB assessment

This substance does not meet the PBT/vPvB criteria of REACH, annex XIII.

12.6 Other adverse effects

No information available.

12.7 Additional ecotoxicological information

None

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Dispose in a safe manner in accordance with local/national regulations.
Handle contaminated packages in the same way as the substance itself.

SECTION 14: Transport information

14.1 UN number

UN 3085

14.2 UN proper shipping name

Land transport (ADR/RID)

UN3085 OXIDIZING SOLID, CORROSIVE, N.O.S. (BROMOCHLORO-5,5-DIMETHYLIMIDAZOLIDINE-2,4-DIONE) , 5.1 (8) , III, (E)

Sea transport (IMDG)

OXIDIZING SOLID, CORROSIVE, N.O.S. (BROMOCHLORO-5,5-DIMETHYLIMIDAZOLIDINE-2,4-DIONE)

14.3 Transport hazard class(es)

Land transport (ADR/RID)

Class(es) :	5.1
Classification code :	OC2
Hazard identification number (Kemler No.) :	58
Tunnel restriction code :	E
Special provisions :	LQ 5 kg · E 1

Hazard label(s) :

Sea transport (IMDG)

Class(es) : 5.1
EmS-No. : F-A / S-Q
Special provisions : LQ 5 kg · E 1
Hazard label(s) :

14.4 Packing group

III

14.5 Environmental hazards

Land transport (ADR/RID) : Yes
Sea transport (IMDG) : Yes (P)

14.6 Special precautions for user

None

SECTION 15: Regulatory information

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

Ensure all national/local regulations are observed.

EU legislation

Regulation (EU) No. 528/2012 on biocides

Authorisations and/or restrictions on use

Restrictions on use

Use restriction according to REACH annex XVII, no. : 3

National regulations

Water hazard class (WGK)

Class : 2 (Obviously hazardous to water)

15.2 Chemical safety assessment

For this substance a chemical safety assessment is not required.

SECTION 16: Other information

16.1 Indication of changes

None

16.2 Abbreviations and acronyms

a.i. = Active ingredient
ACGIH = American Conference of Governmental Industrial Hygienists (US)
ADR = European Agreement concerning the International Carriage of Dangerous Goods by Road
AFFF = Aqueous Film Forming Foam
AISE = International Association for Soaps, Detergents and Maintenance Products (joint project of AISE and CEFIC)
AOAC = AOAC International (formerly Association of Official Analytical Chemists)
aq. = Aqueous
ASTM = American Society of Testing and Materials (US)
atm = Atmosphere(s)
B.V. = Beperkt Vennootschap (Limited)
BCF = Bioconcentration Factor
bp = Boiling point at stated pressure
bw = Body weight
ca = (Circa) about
CAS No = Chemical Abstracts Service Number (see ACS - American Chemical Society)
CEFIC = European Chemical Industry Council (established 1972)
CIPAC = Collaborative International Pesticides Analytical Council
CLP = REGULATION (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures.
Conc = Concentration
cP = CentiPoise
cSt = Centistokes
d = Day(s)
DIN = Deutsches Institut für Normung e.V.
DNEL = Derived No-Effect Level
DT50 = Time for 50% loss; half-life
EbC50 = Median effective concentration (biomass, e.g. of algae)
EC = European Community; European Commission
EC50 = Median effective concentration
EINECS = European Inventory of Existing Commercial Chemical Substances (EU, outdated, now replaced by EC Number)
ELINCS = European List of Notified (New) Chemicals (see Tab 7, Background - Guide)
ErC50 = Median effective concentration (growth rate, e.g. of algae)
EU = European Union
EWC = European Waste Catalogue
FAO = Food and Agriculture Organization (United Nations)
GIFAP = Groupement International des Associations Nationales de Fabricants de Produits Agrochimiques (now CropLife International)
h = Hour(s)
hPa = HectoPascal (unit of pressure)
IARC = International Agency for Research on Cancer
IATA = International Air Transport Association
IC50 = Concentration that produces 50% inhibition
IMDG Code = International Maritime Dangerous Goods Code
IMO = International Maritime Organization
ISO = International Organization for Standardization
IUCLID = International Uniform Chemical Information Database
IUPAC = International Union of Pure and Applied Chemistry
kg = Kilogram
Kow = Distribution coefficient between n-octanol and water
kPa = KiloPascal (unit of pressure)
LC50 = Concentration required to kill 50% of test organisms
LD50 = Dose required to kill 50% of test organisms

LEL = Lower Explosive Limit/Lower Explosion Limit
LOAEL = Lowest observed adverse effect level
mg = Milligram
min = Minute(s)
ml = Milliliter
mmHg = Pressure equivalent to 1 mm of mercury (133.3 Pa)
mp = Melting point
MRL = Maximum Residue Limit
MSDS = Material Safety Data Sheet
n.o.s. = Not Otherwise Specified
NIOSH = National Institute for Occupational Safety and Health (US)
NOAEL = No Observed Adverse Effect Level
NOEC = No observed effect concentration
NOEL = No Observable Effect Level
NOx = Oxides of Nitrogen
OECD = Organization for Economic Cooperation and Development
OEL = Occupational Exposure Limits
Pa = Pascal (unit of pressure)
PBT = Persistent, Bioaccumulative or Toxic
pH = -log10 hydrogen ion concentration
pKa = -log10 acid dissociation constant
PNEC = Previsible Non Effect Concentration
POPs = Persistent Organic Pollutants
ppb = Parts per billion
PPE = Personal Protection Equipment
ppm = Parts per million
ppt = Parts per trillion
PVC = Polyvinyl Chloride
QSAR = Quantitative Structure-Activity Relationship
REACH = Registration, Evaluation and Authorization of CHemicals (EU, see NCP)
SI = International System of Units
STEL = Short-Term Exposure Limit
STOT se = Specific Target Organ Toxicity after single exposure
STOT re = Specific Target Organ Toxicity after repeated exposure
tech. = Technical grade
TSCA = Toxic Substances Control Act (US)
TWA = Time-Weighted Average
vPvB = Very Persistent and Very Bioacccumulative
WHO = World Health Organization = OMS
y = Year(s)

16.3 Key literature references and sources for data

None

16.4 Classification for mixtures and used evaluation method according to regulation (EC) No 1272/2008 [CLP]

No information available.

16.4 Relevant H- and EUH-phrases (Number and full text)

None

16.5 Training advice

None

16.6 Additional information

None

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.