

Safety Data Sheet

BASF Safety Data Sheet

Date / Revised: 20.09.2016 (Version: 6.0, Kanesho/EU)

Product: **BASAMID® Granular**

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

1.1. Product identifier

BASAMID® Granular

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

Relevant identified uses: Nematicide, fungicide, herbicide, insecticide for agricultural use

1.3. Details of the supplier of the safety data sheet

Company:

BASF New Zealand Limited

Level 4, 4 Leonard Isitt Drive, Auckland Airport, Auckland 2022

P.O. Box 407, Auckland 1140

Phone: + 64 9 255 4300

Fax: + 64 9 255 4307

E-mail address: reception@basf-nz.co.nz

1.4. Emergency telephone number

National Poisons Centre: 0800 764 766

BASF Emergency Advice Number: 0800 944 955 (24 Hour Advice in an Emergency Only)

SECTION 2. Hazards Identification

2.1. Classification of the substance or mixture

Hazard classification:

6.1C, 6.3B, 6.4A, 6.5B, 6.8B, 6.9A, 9.1A, 9.2C, 9.3B

2.2. Label elements

Pictogram:



Priority Identifier:

Danger. Keep out of reach of children

Hazard Statement:

H319

Causes serious eye irritation.

H315

Causes skin irritation.

H302

Harmful if swallowed.

H317

May cause an allergic skin reaction.

H335

May cause respiratory irritation.

H410

Very toxic to aquatic life with long lasting effects.

Precautionary Statements (Prevention):

P280	Wear protective gloves and eye/face protection.
P273	Avoid release to the environment.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P271	Use only outdoors or in a well-ventilated area.
P260	Do not breathe dust/gas/mist/vapours.
P272	Contaminated work clothing should not be allowed out of the workplace.
P270	Do not eat, drink or smoke when using this product.
P264	Wash with plenty of water and soap thoroughly after handling.

Precautionary Statements (Response):

P333 + P311	If skin irritation or rash occurs: Call a POISON CENTER or doctor/physician.
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 + P352	IF ON SKIN (or hair): Wash with plenty of soap and water.
P301 + P330	IF SWALLOWED: rinse mouth.
P391	Collect spillage.
P332 + P313	If skin irritation occurs: Get medical advice/attention.
P362 + P364	Take off contaminated clothing and wash it before reuse.
P337 + P311	If eye irritation persists: Call a POISON CENTER or doctor/physician.

Precautionary Statements (Storage):

P403 + P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.

Other hazards which do not result in classification:

See section 12 - Results of PBT and vPvB assessment.

If applicable information is provided in this section on other hazards which do not result in classification but which may contribute to the overall hazards of the substance or mixture.

2.3. Other hazards

See section 12 - Results of PBT and vPvB assessment.

SECTION 3. Composition/Information on Ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Chemical nature

crop protection product, nematicide, Microgranule (MG)

Hazardous ingredients

Chemical name (IUPAC)	Common name (ISO)	EC No	CAS-No	Amount (%)	Classification according to Regulation (EC) No 1272/2008 [CLP]		Classification according to 67/548/EEC [DPD]	
					Hazard classes and category codes	Hazard statements	Indication of danger and symbol letters	R-phrases
tetrahydro-3,5-dimethyl-1,3,5-thiadiazine-2-thione (IUPAC)	dazomet (ISO)	208-576-7	533-74-4	> 95 %	Acute Tox. 4, Eye Irrit. 2, STOT SE 3, Skin Irrit. 2, Skin Sens. 1, Aquatic Acute 1, Aquatic Chronic 1	H302, H319, H335, H315, H317, H400, H410	Harmful Xn, Irritant Xi, Dangerous for the environment N	R22, R36/37/38, R43, R50/53

For the classifications not written out in full in this section, including the indication of danger, the hazard symbols, the R phrases, and the hazard statements, the full text is listed in section 16.

SECTION 4. First-Aid Measures

4.1. Description of first aid measures

General advice:

Avoid contact with the skin, eyes and clothing. Remove contaminated clothing. If difficulties occur: obtain medical attention. Show container, label and/or safety data sheet to Doctor

If inhaled:

Keep patient calm, remove to fresh air. Seek medical attention.

On skin contact:

Wash thoroughly with soap and water. If irritation develops, seek medical attention.

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:

Rinse mouth immediately and then drink plenty of water, seek medical attention. Do not induce vomiting unless told to by a poison control centre or doctor. Never induce vomiting or give anything by mouth if the victim is unconscious or having convulsions.

Most important symptoms and effects, both acute and delayed

Symptoms: Epidemiological evidence after accidents: rapid (< 24h) onset of chiefly upper- but also lower airway irritation consistent with RADS (Reactive Airway Dysfunction Syndrome), and potential to aggravate pre-existing asthma. Symptoms include nose and throat irritation, shortness of breath, chest tightness, cough, wheezing. Early symptoms also include eye irritation, or skin rash and itching. Clinical data indicate skin sensitizing potential (human patch test). Dazomet may cause bullous eruption, sore itching, erythema, oedema and scaling after skin contact, most probably caused by MITC. Systemic effects like hepatotoxicity (increase of transaminases) are possible, as well as gastro-intestinal dysfunction (nausea, irritation, vomiting), and more general symptoms (headache, dizziness).

Indication of any immediate medical attention and special treatment needed

Information for doctors: Treat according to symptoms (decontamination, vital functions), no known specific antidote.

SECTION 5. Fire-Fighting Measures

5.1 Extinguishing media

Suitable extinguishing media:
Water spray, dry powder, foam.

Collect contaminated extinguishing water separately; do not allow reaching sewage or effluent systems. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

5.2 Special hazards arising from the substance or mixture

Carbon dioxide, carbon monoxide, nitrogen oxides, sulphur dioxide.
The substances/groups of substances mentioned can be released in case of fire.

5.3 Advice for fire-fighters

Special protective equipment:
Wear self-contained breathing apparatus and chemical-protective clothing.
In case of fire and/or explosion do not breathe fumes.

Further information:
In case of fire and/or explosion do not breathe fumes. Collect contaminated extinguishing water separately, do not allow to reach sewage or effluent systems. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

SECTION 6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid dust formation. Use personal protective clothing (see Section 8). Bystanders are requested to leave the emergency site.

6.2 Environmental precautions

Do not discharge into the subsoil/soil. Do not discharge into drains/surface waters/groundwater.

6.3 Methods and material for containment and cleaning up

Collect with broom and shovel or preferably vacuum cleaner. Use damp cloth to clean floors and other objects after removal of the product and/or contaminated adsorbent. Adding a detergent will enhance the cleaning process. Avoid raising dust. Cleaning operations should be carried out while wearing breathing apparatus. Place recovered material, contaminated adsorbent and used cleaning materials into suitable containers, which can be labeled and sealed. Dispose of material in accordance with regulations.

6.4 Reference to other sections

Information regarding exposure controls/personal protection and disposal considerations can be found in section 8 and 13.

SECTION 7. Handling and Storage

APPROVED HANDLER:

This product must be under the control of an approved handler or secured.

TRACKING:

Location and movement of this product must be recorded at each stage of its lifecycle.

7.1. Precautions for safe handling

Ensure thorough ventilation of stores and work areas. Protect against moisture. Avoid dust formation. Avoid deposition of dust. Dust can form an explosive mixture with air. Prevent electrostatic charge.

Sources of ignition should be kept clear. When using do not eat, drink or smoke. Hands and/or face should be washed before breaks and at the end of the shift.

Protection against fire and explosion:
The substance/product is non-combustible. Product is not explosive.

7.2. Conditions for safe storage, including any incompatibilities

Store in a dry place under lock and key. Segregate from foods and animal feedstuff.
Further information on storage conditions: Keep away from heat and direct sunlight. Protect against moisture. Keep away from sources of ignition.

Storage stability:
Storage duration: 24 Months

Protect from temperatures below: -10 °C
Protect from temperatures above: 40 °C
Change in the properties of the product may occur if it is stored above or below above indicated temperatures for extended periods of time.

AGGREGATE STORAGE VOLUME THRESHOLDS:

When stored with substances of the same hazard the aggregate quantity must be considered. For full details refer to the current standard NZS8409 Management of Agrichemicals or the HSNO Regulations.

Location Certificate*:	Hazardous Atmosphere Zone*:	Fire Extinguishers:	Signage [Hazard Class & Emergency Action]:	Emergency Information:	Emergency Response Plan:	Secondary Containment:
NA	NA	NA	100 kg	1 kg	100 kg	100 kg

* Note: Farms $\geq$ 4 ha are exempt but with controls.

DO NOT STORE OR LOAD WITH:
Class 1 Explosive

SEGREGATE FROM:
Foodstuffs or food containers and animal feedstuff

Segregation: In store separate by at least 5 metres, on transport separate by at least 3 metres, in both cases horizontally. On vehicles a segregation device may be used: Check the Land Transport Rule Dangerous Goods, Rule 45001 for additional information. Sea transport may require additional segregation. Refer to NZS5433 Sea Segregation for details.

7.3. Specific end use(s)

For the relevant identified use(s) listed in Section 1 the advice mentioned in this section 7 is to be observed. Refer to the product label.

Record Keeping

Records of use must be kept.

NOTE: Storage, application and record keeping must be as described in the current version of the New Zealand Standard for the Management of Agrichemicals NZS8409.

SECTION 8. Exposure Controls/Personal Protection

8.1. Control parameters

Components with occupational exposure limits

Not established for the product. Use adequate exhaust ventilation to keep airborne concentration to a minimum.

8.2. Exposure controls

8.2.1 Appropriate engineering controls

Make available local exhaust ventilation.

Make available washing face/hands equipment.
General hygienic measures: see Section 7.
Remove contaminated clothing. Store work clothing separately.

8.2.2 Personal protective equipment

Respiratory protection:
Wear suitable respiratory protection (A1P2 combi-filter).

Hand protection:
Suitable chemical resistant safety gloves (EN 374) also with prolonged, direct contact (Recommended: Protective index 6, corresponding > 480 minutes of permeation time according to EN 374): E.g. nitrile rubber (0.4 mm), chloroprene rubber (0.5 mm), polyvinylchloride (0.7 mm) and other.

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

Body protection:
Body protection must be chosen depending on activity and possible exposure, e.g. apron, protecting boots, chemical-protection suit (according to EN 14605 in case of splashes or EN ISO 13982 in case of dust).

Personal protective equipment (PPE) should be to European (EN) standards.

8.2.3 Environmental exposure controls

Do not discharge the product into the environment without control.

General safety and hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Wearing of closed work clothing is recommended. Store work clothing separately. Keep away from food, drink and animal feeding stuffs. Hands and/or face should be washed before breaks and at the end of the shift.

SECTION 9. Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance:	White, fine granular solid (MG)
Odour:	Characteristic moderate fishy odour
Odour threshold:	Not available
pH:	7.2 (as a 1% watery dispersion)
Melting point/freezing point:	105°C (dazomet active ingredient)
Initial boiling point:	Decomposition before boiling (dazomet active ingredient)
Flash point:	Not applicable
Evaporation rate:	Not applicable
Flammability (solid, gas):	Not highly flammable
Upper/lower flammability or explosive limits:	Not relevant
Vapour pressure:	2.1×10^{-3} Pa (25°C) (dazomet active ingredient)
Vapour density:	Not applicable
Relative density:	1.34 g cm ⁻³ (20°C)
Solubility(s):	3.5 g L ⁻¹ in distilled water at 20°C (dazomet active ingredient)
Partition coefficient n-octanol/water:	log Pow = 0.63 at 20°C (dazomet active ingredient)
Auto-ignition temperature:	Not auto-flammable
Decomposition temperature:	150°C (dazomet active ingredient)
Viscosity:	Not applicable (solid)
Explosive properties:	Not explosive (theoretical consideration)
Oxidising properties:	Not oxidising (theoretical consideration)

9.2. Other information

Other Information:

Bulk density: 0.678 kg L-1

SECTION 10. Stability and Reactivity

10.1. Reactivity

No hazardous reactions if stored and handled as prescribed/indicated.

10.2. Chemical stability

The product is stable if stored and handled as prescribed/indicated.

10.3. Possibility of hazardous reactions

Contact with water or moisture liberates toxic gases.

Dust explosion hazard: The substance itself is not considered to be an explosive due to its chemical composition. The potential for dust explosion hazard was not evaluated but it is mentioned as a precautionary measure.

10.4. Conditions to avoid

Avoid moisture.

10.5. Incompatible materials

Water.

10.6 Hazardous decomposition products

Methyl isothiocyanate (MITC). Exposure to moisture induces the decomposition of dazomet into methyl isothiocyanate. Methyl isothiocyanate is toxic by inhalation and if swallowed, irritant to eyes and respiratory system, corrosive and sensitizing by skin contact.

SECTION 11. Toxicological Information

11.1. Information on toxicological effects

Acute toxicity

(dazomet active ingredient)

	Effect dose	Species	Remark
Acute oral toxicity	LD ₅₀ = 596 mg/kg (males) and 415 mg/kg (females)	Rat	Acute Tox. 4; H302
Acute dermal toxicity	LD ₅₀ > 2000 mg/kg	Rat	Based on available data, the classification criteria are not met.
Acute inhalation toxicity (dust)	LC ₅₀ > 8.4 mg/L (males) – 7.3 mg/L (females)	Rat	Based on available data, the classification criteria are not met.

Skin corrosion/Irritation:

	Exposure time	Species	Evaluation	Remark
Skin irritation	4h	Rabbit	Non skin-irritant, non skin-corrosive	Based on human-case studies, Skin Irrit. 2; H315

Serious eye damage/irritation:

Species	Evaluation	Remark
Rabbit	Not irritant	Based on human-case studies, Eye irrit. 2; H319

Respiratory or skin sensitisation:

Species	Evaluation	Method	Remark
Guinea-pig	Not skin-sensitising	Magnusson and Kligman method	Based on human-case studies, Skin Sens. 1; H317

Germ cell mutagenicity: No mutagenic potential (dazomet active ingredient)

Carcinogenicity:

Exposure time	Species	Specific effects	Remark
2 years	Rat	Not carcinogenic	Based on available data, the classification criteria are not met.
2 years	Mouse	Not carcinogenic	

Reproductive toxicity

Study	Species	Specific effects	Remark
Two-generation	Rat	No effects on reproduction function or on offsprings	Based on available data, the classification criteria are not met.
Teratogenicity	Rat	No developmental toxicity	
Teratogenicity	Rabbit	No developmental toxicity	

STOT-single exposure:

Based on human-case studies (upper airway irritant),
Basamid should be classified as STOT SE 3; H335

STOT-repeated exposure:

The classification is not possible because the data are inconclusive.

Aspiration hazard:

The classification is not possible because the data are lacking.

SECTION 12. Ecological Information

12.1. Toxicity

Acute fish toxicity (dazomet active ingredient): LC50 = 0.3 mg/L (96h; bluegill)

Acute daphnia toxicity: EC50=0.427 mg/L (48h; Daphnia magna)

Acute algae toxicity (dazomet active ingredient): EbC50 =0.16 mg/L; ErC50 =0.59 mg/L (72h; Pseudokirchneriella subcapitata)

Acute bird oral toxicity: LD50 =498 mg/kg (Colinus virginianus)

Acute honey bee toxicity: Not relevant. No exposure expected due to the specific application of the product according to the label.

Acute earthworm toxicity: LC50 = 6.7 mg /kg (14d; Eisenia foetida)

Activated sludge respiration inhibition: EC50(30 min) = ca. 160 mg/L

12.2. Persistence and degradability

Dazomet active substance:

Soil (Field and lab studies) DT50 = < 2 days

Air (Atkinson method of calculation) DT50 = 0.85 hours

Water/sediment (Laboratory study) DT50 (whole system) = 0.4-0.63 days

Biodegradability: dazomet active substance: not readily biodegradable

12.3. Bioaccumulative potential

Dazomet active substance: Low, log Pow = 0.63.

12.4. Mobility in soil

Known or predicted distribution to environmental compartments:

Potential risk for contamination of groundwater by MITC. To protect groundwater, do not apply the product more than once every 3 years (EU Directive 2011/53/EU).

Dazomet active ingredient:

Surface tension (20°C, 1.0% w/w): 69.9 mN/m

Adsorption value: Koc = 260 mL/g

12.5. Results of PBT and vPvB assessment

Not relevant.

12.6. Other adverse effects

No specific adverse effects known.

12.7. Additional information

Other ecotoxicological advice:

Do not discharge product into the environment without control.

SECTION 13. Disposal Considerations

To avoid disposal all attempts should be made to use this product completely, in accordance with its registered use. If this is not possible handle with care and dispose of in a safe manner. Follow all applicable community, regional and national regulations regarding waste management methods.

13.1. Waste treatment methods

The recommended method of waste treatment is controlled incineration in a licensed incinerator.

Dispose of product containers and waste containers and residues according to the local health and environmental regulations. Contaminated packaging should be emptied as far as possible and disposed of in the same manner as the substance/product.

Container:

Packaging: Ensure bag is completely empty. Crush and bury in a suitable landfill.

Product:

Dispose of this product only by using according to the label or at an approved landfill. DO NOT burn product. For information on disposal of unused, unwanted product, contact the local council.

DO NOT contaminate surface or ground water with chemical or empty container.

SECTION 14. Transport Information

Commercial transport:

Classified as Dangerous Goods for Land/rail (ADR/RID), sea (IMDG/GGVSee) and air transport (ICAO/IATA):

UN number	UN3077
UN proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (contains DAZOMET 96.5%)
Transport hazard class(es):	9, EHSM



Packing group:	III
Environmental hazards:	Yes
Special precautions for user:	Tunnel code: E (Land Transport EU)
Marine pollutant:	Yes IMDG: Marine pollutant (P)
HAZCHEM:	2X

14.1. UN number

See corresponding entries for “UN number” for the respective regulations in the tables above.

14.2. UN proper shipping name

See corresponding entries for “UN proper shipping name” for the respective regulations in the tables above.

14.3. Transport hazard class(es)

See corresponding entries for “Transport hazard class(es)” for the respective regulations in the tables above.

14.4. Packing group

See corresponding entries for “Packing group” for the respective regulations in the tables above.

14.5. Environmental hazards

See corresponding entries for “Environmental hazards” for the respective regulations in the tables above.

14.6. Special precautions for user

See corresponding entries for “Special precautions for user” for the respective regulations in the tables above.

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

Regulation:	Not evaluated
Shipment approved:	Not evaluated
Pollution name:	Not evaluated
Pollution category:	Not evaluated
Ship Type:	Not evaluated

SECTION 15. Regulatory Information

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

NZ Regulations

Approved pursuant to the HSNO Act 1996, Code HSR000790.
See www.epa.govt.nz for approval conditions.

Registered pursuant to the ACVM Act 1997, No. P1446.
See www.foodsafety.govt.nz for registration conditions.

15.2 Chemical Safety Assessment

Advice on product handling can be found in sections 7 and 8 of this safety data sheet.

SECTION 16. Other Information

Abbreviations explanations:

MG: micro granule;

PBT, persistent, bioaccumulative and toxic; vPvB, very persistent and very bioaccumulative;

BCF: bioconcentration factor.

ADR: Accord européen relatif au transport international des marchandises Dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

RID: Règlement International concernant le transport des marchandises Dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

IMDG: International Maritime Dangerous Goods Code

ICAO : International Civil Aviation Organization

IATA: International Air Transport Association

Main Source for data: Conclusion on the peer review of the pesticide risk assessment of the active substance dazomet, EFSA Journal (2010); 8(10):1833.

Risk phrases explanations: R22, Harmful if swallowed; R36/37/38, Irritating to eyes, respiratory system and skin; R43, May cause sensitization by skin contact; R50/53, Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Hazard statements explanations: H302, Harmful if swallowed; H315, Causes skin irritation; H317, May cause an allergic skin reaction; H319, Causes serious eye irritation; H335, May cause respiratory irritation; H400, Very toxic to aquatic life; H410, Very toxic to aquatic life with long lasting effects.

Precautionary statements explanations: P261, avoid breathing dust; P262, do not get in eye, on skin, or on clothing; P280, wear protective gloves/protective clothing/eye protection/face protection; P284, wear respiratory system; P312, Call a POISON CENTER or doctor/physician if you feel unwell; P501, dispose of contents/container in accordance with local regulation.

Supplemental information explanations: EUH401, to avoid risks to human health and the environment, comply with the instructions for use.

This SDS is prepared by Japan Agro Services S.A., avenue de Tervueren 270, 1150 Brussels (Tel : +32 (0)2 776 83 90)

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. The data do not describe the product's properties (product specification). Neither should any agreed property nor the suitability of the product for any specific purpose be deduced from the data contained in the safety data sheet. It is the responsibility of the recipient of the product to ensure any proprietary rights and existing laws and legislation are observed.