

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 28.03.2017

Version number 66

Revision: 28.03.2017

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

- **1.1 Product identifier**
- **Trade name:** ACTICIDE DB 20
- **1.2 Relevant identified uses of the substance or mixture and uses advised against:**
- **Application of the substance/the mixture:** Biocidal product for industrial use.
- **1.3 Details of the supplier of the safety data sheet:**
- **Address and telephone number of the supplier:**
Thor Specialities (UK) LTD.
Wincham Avenue
Wincham Northwich
Cheshire CW9 6GB
United Kingdom
Phone: (UK) +44 (0) 1606 818800
Fax: (UK) +44 (0) 1606 818801
- **Competent person responsible for the Material Safety Data Sheet:**
Regulatory Department: sds@thor.uk.com
- **1.4 Emergency telephone number:**
National Poisons Information Service (24 h service):
Phone: +44 (0) 844-892-0111 (UK only)
Transport Emergency phone number (24 h service):
Phone: +49 621 60-43333 - Fax: +49 621 60-92664

SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008 respectively UN GHS**



GHS05 corrosion

Met. Corr. 1	H290 May be corrosive to metals.
Eye Dam. 1	H318 Causes serious eye damage.



GHS07

Acute Tox. 4	H302 Harmful if swallowed.
Acute Tox. 4	H332 Harmful if inhaled.
Skin Irrit. 2	H315 Causes skin irritation.
Skin Sens. 1	H317 May cause an allergic skin reaction.

Aquatic Chronic 3	H412 Harmful to aquatic life with long lasting effects.

- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008 respectively UN GHS**
The product is labelled according to the CLP regulation.

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Hazard pictograms



GHS05 GHS07

Signal word Danger

Hazard-determining components of labelling:

2,2-Di-Bromo-3-Nitrilo-Propionamide

Hazard statements

- H290 May be corrosive to metals.
- H302+H332 Harmful if swallowed or if inhaled.
- H315 Causes skin irritation.
- H318 Causes serious eye damage.
- H317 May cause an allergic skin reaction.
- H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

- P273 Avoid release to the environment.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P302+P352 IF ON SKIN: Wash with plenty of soap and water.
- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P301+P312 IF SWALLOWED: Call a POISON CENTER if you feel unwell.
- P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

2.3 Other hazards Other hazards have not been identified for this product.

SECTION 3: Composition/information on ingredients

3.2 mixtures

Dangerous components:

CAS: 10222-01-2	2,2-Di-Bromo-3-Nitrilo-Propionamide	20%
EINECS: 233-539-7	Acute Tox. 3, H301; Acute Tox. 2, H330 Eye Dam. 1, H318 Aquatic Acute 1, H400 (M=1); Aquatic Chronic 2, H411 Skin Irrit. 2, H315; Skin Sens. 1B, H317	

Additional information: For the wording of the listed risk/hazard phrases refer to section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General information:

Obtain special instructions from the poison information centre: Phone: +44 (0) 844-892-0111 (UK only) - see as well section 1.4.

Personal protection for the First Aider.

After inhalation: Supply fresh air; consult doctor in case of symptoms.

After skin contact

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation or rash occurs: Get medical advice/attention.

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- **After eye contact:**
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Consult an eye specialist immediately.
- **After swallowing:**
IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
Instantly call for doctor.
- **4.2 Most important symptoms and effects, both acute and delayed** Allergic skin reactions.
- **4.3 Indication of any immediate medical attention and special treatment needed**
If swallowed, gastric irrigation with activated carbon.
Rinse eyes thoroughly with physiological saline.

SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:** Water spray jet, extinguishing powder, CO₂, foam.
- **Unsuitable extinguishing agents for reasons of safety:** None
- **5.2 Special hazards arising from the substance or mixture**
In case of fire, toxic incineration products may be released such as:
Nitrogen oxides (NO_x)
Carbon monoxide (CO)
Bromine compounds such as HBr, Br₂
- **5.3 Advice for firefighters**
- **Protective equipment:** Wear self-contained breathing apparatus.
- **Additional information**
Collect contaminated fire fighting water separately. It must not enter drains.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Wear protective clothing (see item 8).
Keep unprotected persons away.
When selecting the protective suit attention has to be paid to the complete and safe protection of skin and mucous membranes. Impermeable protective clothes, protective boots made of neoprene, complete face protection and nitrile-rubber-gloves with long tops should be worn.
- **6.2 Environmental precautions:**
As the product is hazardous for the aquatic environment, it must be prevented from reaching surface water.
Prevent from spreading (e. g. by enclosing with a ring of chemical absorbent).
Inform authorities in case of contamination of water or sewage system.
- **6.3 Methods and material for containment and cleaning up:**
Collect large amounts in suitable container. Cover the rest with absorbent, mix intensively and collect mechanically.
Suitable binder: multi-purpose absorbent.
Dispose of contaminated material as waste according to item 13.
Clean the accident area carefully; suitable cleaners are:
weak alkaline solution

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- **6.4 Reference to other sections** None

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**

Load carefully, avoid splashes.

Ensure good exhaust ventilation at the workplace.

It is preferable to handle the product in a closed system.

Avoid air contamination at the workplace by aerosol formation due to product heating, spraying etc. Risks to the safety and health of workers may not only be created by work involving chemicals but, inter alia by work equipment and the fitting-out of work-places. Those risks shall be identified and evaluated.

- **Information about protection against explosion and fire:** No special measures required.

- **7.2 Conditions for safe storage, including any incompatibilities**

- **Storage**

- **Requirements to be met by storerooms and containers:**

Store only in unopened original containers.

Information about suitable materials for vessels and piping can be requested from our sales department Tel.: +44(0)1606 818800.

- **Information about storage in a common storage facility:** Store away from foodstuffs.

- **Further information about storage conditions:**

The product, as supplied, naturally and very slowly involves carbon dioxide gas. Therefore, to relieve any excess pressure, the product is supplied in specially vented containers which are recommended for the continued storage of the product. In order to prevent spillages, always ensure that these containers are stored and transported in upright position.

Prevent release to the environment by adequate secondary containment design and use of appropriate spill control procedures.

- **Maximum storage temperature:** 35 °C.

- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **8.1 Control parameters**

- **Components with critical values that require monitoring at the workplace:** None established.

- **Additional information:** Information valid at the time of review of safety data sheet.

- **8.2 Exposure controls**

- **Technical protective equipment:**

In case of contamination devices to rinse eyes or skin immediately under running water must be available.

- **Personal protective equipment**

- **General protective and hygienic measures:**

Use skin cream for skin protection.

Avoid contact with the eyes and the skin.

Wash hands during work breaks and at the end of the shift.

Provide skin protection plan.

- **Respiratory protection:**

Filter A/P2.

Use respiratory equipment if aerosol or mist is formed.

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· Protection of hands:



Chemical protective gloves according to DIN EN 374 with CE-labelling.

Check the condition of protective gloves after each use for any damages like holes, cuts or tears.

Do not wear protective gloves longer than necessary.

After use of gloves apply skin-cleaning agents and skin cosmetics.

· Material of gloves Nitrile rubber, NBR

· Penetration time of glove material:

Thickness: 0.4 mm; break-through time: 480 min; material: Nitrile; permeation: level 6

· Gloves made of the following materials are not suitable:

Leather gloves

Gloves for mechanical protection do not provide protection against chemicals.

· Eye protection:



Safety goggles with CE label.

· Body protection:



Protective clothing.

· Risk management measures

The operators shall be instructed adequately.

The workplace shall be inspected regularly by competent personnel e.g. the safety representative.

SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties

· General Information

· Appearance:

Form:

Liquid

Colour:

yellowish

Clear

· Odour:

Type specific

· Odour threshold:

Not relevant for safety

· pH-value at 20 °C:

ca. 2.4

· Change in condition

Melting point/freezing point:

ca. -24 °C

Initial boiling point and boiling range:

100 °C (H₂O)

· Flash point:

Not applicable.

· Auto ignition temperature:

Not applicable

· Decomposition temperature:

Not determined.

· Self-inflammability:

Product is not self-igniting.

· Explosive properties:

Product is not explosive.

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- **Vapour pressure at 20 °C:** 23 hPa (H₂O)
- **Density at 20 °C:** ca. 1.2 g/cm³
- **Solubility in / Miscibility with Water:** Fully miscible
- **9.2 Other information** No further relevant information available.

SECTION 10: Stability and reactivity

- **10.1 Reactivity**
The classification criteria for the property "corrosive to metals" according to Annex I section 2.16 of the CLP Regulation are fulfilled. (S 4394)
- **10.2 Chemical stability**
- **Conditions to be avoided:**
Before handling, the product should not be diluted or mixed with other chemicals, in order to avoid any negative influences on the ingredient(s).
- **Minimum shelf life:** 6 months from production date.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:**
Oxidizing agents
Amines
- **10.6 Hazardous decomposition products:**
Cyanogen bromide
Dibromoacetonitrile

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity**
Harmful if swallowed or if inhaled.

· LD/LC50 values that are relevant for classification:

Oral	ATE	975 mg/kg (calculated)
Dermal	ATE	> 2000 mg/kg (calculated)
Inhalation	ATE mist/dust	1.4 mg/l, 4h (calculated)

- **Skin corrosion/irritation:**
Causes skin irritation.

· Results of studies:

10222-01-2 2,2-Di-Bromo-3-Nitrilo-Propionamide

Dermal	OECD 404 (acute dermal irritation/corrosion)	irritant (rabbit) (OECD 404) BPR dossier
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- **Serious eye damage/irritation:**
Causes serious eye damage.

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· Results of studies:

10222-01-2 2,2-Di-Bromo-3-Nitrilo-Propionamide

Irritation of eyes	OECD 405 (irritation/corrosion acute eye)	corrosive (rabbit) (OECD 405) BPR dossier
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· Sensitisation:

May cause an allergic skin reaction.

- **Germ cell mutagenicity:** Based on available data, the classification criteria are not met.
- **Carcinogenicity:** Based on available data, the classification criteria are not met.
- **Reproductive toxicity:** Based on available data, the classification criteria are not met.
- **STOT-single exposure:** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure:** Based on available data, the classification criteria are not met.
- **Aspiration hazard:** Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

· 12.1 Toxicity

· Aquatic toxicity:

10222-01-2 2,2-Di-Bromo-3-Nitrilo-Propionamide

EC ₅₀ / 72 h	2.2 mg/l (Selenastrum capricornutum) (OECD 201) BPR dossier
EC ₅₀ / 48 h	0.37 mg/l (Crassostrea virginica) BPR dossier
	> 100 mg/l (Daphnia) (OECD 202) BPR dossier
LC ₅₀ / 96 h	0.943 mg/l (turbot) (OECD 203) S 4002
	3.4 mg/l (Cyprinodon variegatus) (OECD 203) BPR dossier
NOEC / 21 d	0.06 mg/l (Daphnia) (OECD 211) BPR dossier
NOEC / 28 d	0.47 mg/l (rainbow trout) (OECD 215) BPR dossier
NOEC / 72 h	0.36 mg/l (Scenedesmus subspicatus) (OECD 201) BPR dossier

· Evaluation:

Based on the available data the classification criteria for hazard classes aquatic acute (short term) toxicity are not fulfilled.

Harmful to aquatic life with long lasting effects.

· Toxicity on activated sludge organisms:

10222-01-2 2,2-Di-Bromo-3-Nitrilo-Propionamide

EC ₅₀ / 3 h	4.6 mg/l (Activated Sludge) (OECD 209) BPR dossier
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- **Evaluation:** Depending on concentration, toxic effects on activated sludge organisms are possible.

· 12.2 Persistence and degradability

· Biodegradability:

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- **Evaluation:** The component(s) is (are) rapidly degradable.

• Behaviour in sewage treatment plants:

10222-01-2 2,2-Di-Bromo-3-Nitrilo-Propionamide

Activated Sludge Simulation Test	> 80 % (Activated Sludge) (OECD 303 A) literature
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- **Evaluation:** The substances are biodegradable/eliminable in activated sludge units.

• 12.3 Bioaccumulative potential

• BCF / LogKow:

10222-01-2 2,2-Di-Bromo-3-Nitrilo-Propionamide

OECD 305 Bioconcentration factor BCF	13 BCF (Fish) (OECD 305) literature
OECD 117 Log Kow Partition Coefficient	0.52 (n-Octanol/water) (OECD 117) S 3659

- **Evaluation:** Not worth-mentioning accumulating in organisms
- **12.4 Mobility in soil** No further relevant information available.
- **12.5 Results of PBT and vPvB assessment**
 - **PBT:** This mixture does not contain substances that meet the PBT-criteria of REACH, annex XIII.
 - **vPvB:** This mixture does not contain substances that meet the vPvB-criteria of REACH, annex XIII.
- **12.6 Other adverse effects** Any other adverse effects on the environment are not expected.
- **12.7 Additional information**
 - **Chemical Oxygen Demand (COD-value):** 900 mg O₂/g product
 - **Biological oxygen demand (BSB₅-value):** Technically not feasible.
 - **Metals and their compounds according Directive 2006/11/EC:** None
 - **European Water Framework Directive 2000/60/EC (WFD) dated 23.10.2000:**
The product does not contain any priority substances according WFD that require a water monitoring.
 - **Absorbable organic halogen compounds (AOX - DIN EN ISO 9562):**
Can affect the AOX-value of the effluent water.
AOX (DIN 38409 H 14): 0.8 %

SECTION 13: Disposal considerations

• 13.1 Waste treatment methods

• Recommendation

Must be specially treated under adherence to official regulations.
Appropriate disposal operations according to Directive 2008/98/EC on waste: D 10 Incineration on land

• European waste catalogue

16 00 00	WASTES NOT OTHERWISE SPECIFIED IN THE LIST
16 03 00	off-specification batches and unused products
16 03 05*	organic wastes containing hazardous substances
HP 4	Irritant - skin irritation and eye damage
HP 6	Acute Toxicity
HP 13	Sensitising

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- **Contaminated packaging:**
- **Recommendation:** Remove all product from packaging and clean thoroughly before recycling.
- **Recommended cleaning agent:** Water, if necessary with cleaning agent.

SECTION 14: Transport information

- **14.1 UN-Number**
- **ADR, IMDG, IATA** UN3265
- **14.2 UN proper shipping name**
- **ADR, IMDG, IATA** CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.
(2,2-Di-Bromo-3-Nitrilo-Propionamide)
- **14.3 Transport hazard class(es)**
- **ADR**
- 
- **Class** 8 (C3) Corrosive substances.
- **Label** 8
- **IMDG, IATA**
- 
- **Class** 8 Corrosive substances.
- **Label** 8
- **14.4 Packing group**
- **ADR, IMDG, IATA** III
- **14.5 Environmental hazards:**
- **Marine pollutant:** No
- **14.6 Special precautions for user** Warning: Corrosive substances.
- **Kemler Number:** 80
- **EMS Number:** F-A,S-B
- **Segregation groups** Acids
- **Stowage Category** A
- **Stowage Code** SW2 Clear of living quarters.
- **14.7 Transport in bulk according to Annex II of Marpol and the IBC Code** Not applicable.
- **Transport/Additional information:**
- **ADR**
- **Limited quantities (LQ)** 5L

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· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· Transport category	3
· Tunnel restriction code	E
· 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:	It is forbidden to airfreight the package if it is ventilated (IATA-DGR 5.0.2.13.2). For samples up to 1 litre ventilated packages are not required. Packing Instructions / max. net weight: Passenger aircraft: 852 / 5 L; Cargo aircraft: 856 / 60 L
· UN "Model Regulation":	UN 3265 CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (2,2-DI-BROMO-3-NITRILOPROPIONAMIDE), 8, III

SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3
- **National regulations:**
- **Information about limitation of use:**
Take note of Directive 94/33/EC on the protection of young people at work.
Take note of Directive 92/85/EC on the safety and health of pregnant women at work.
- **Regulations which may apply in event of accident: Control of Major Accident Hazards (COMAH)**
This substance/mixture is not subject to ordinance on industrial accidents (Seveso Directive; substance list, Annex I).
- **Indication of VOC:**
- **VOC according to Directive 2010/75/EC:**
This product does not contain any relevant amounts of "Volatile Organic Compounds" (VOC).
- **VOC according to Decopaint Directive (2004/42/EC):**
The product does not contribute significantly to the total content of VOCs in paints and varnishes.
- **SVOC according to EU-Ecolabel for interior and exterior paints (2014/312/EU):**
This product does not contain any Semi Volatile Organic Compounds in the definition of the 2014/312/EU.
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

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SECTION 16: Other information

This data is based on our current knowledge. However, it does not constitute a guarantee for any specific product features and does not establish a legally valid contractual relationship.

• Relevant phrases

H301 Toxic if swallowed.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H330 Fatal if inhaled.
H400 Very toxic to aquatic life.
H411 Toxic to aquatic life with long lasting effects.

• Training hints

Further information regarding the directions for use can be found in the Product Data Sheet.

• Classification according to Regulation (EC) No 1272/2008

The classification includes the relevant available information about the mixture or the substances contained therein.

The evaluation of the available information within the scope of classification refers to the forms and aggregate states in which the mixture has been placed on the market and will be used most likely.

• Contact for technical information Biocides: info@thor.uk.com**• Abbreviations and acronyms:**

PBT: persistent, bioaccumulative, toxic
vPvB: very persistent, very bioaccumulative
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
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)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
Met. Corr. 1: Corrosive to metals – Category 1
Acute Tox. 3: Acute toxicity – Category 3
Acute Tox. 4: Acute toxicity – Category 4
Acute Tox. 2: Acute toxicity – Category 2
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Dam. 1: Serious eye damage/eye irritation – Category 1
Skin Sens. 1: Skin sensitisation – Category 1
Skin Sens. 1B: Skin sensitisation – Category 1B
Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2
Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

• Key literature references and sources for data:

Data source(s): Biocidal product dossier(s)
Own studies (reference to S-number).

• * Data altered since the previous version.