



According to EC Regulations No. 453/2010 (REACH), 1272/2008 (CLP) & 453/2010

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

1.1. Product identifier

Trade name Damu
Product code
REACH registration No. Not applicable

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

Identified use(s) Plant micronutrient fertiliser concentrate for foliar spray and soil application
Uses advised against Not suitable for use as a ready to use product

1.3. Details of the supplier of the safety data sheet

Supplier name: Levity Crop Science Ltd
Supplier address: Levity Crop Science Ltd
 The Rural Business Centre
 Myerscough College
 Bilsborough
 United Kingdom
 PR3 0RY

Supplier telephone: +44 (0) 1995 642351
Email: info@levitycropscience.com

1.4. Emergency telephone number

Emergency phone No. +44 (0) 1995 642351 (GMT English spoken, Mon-Fri – 08:00 – 17:00)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

2.1.1. Regulation (EC) No.1272/2008 (CLP)	Skin irritation (Category 2) Serious eye irritation (Category 2) Reproductive toxicity (Category 1B)
2.2.2. Directives 67/548/EEC, 1999/45/EC	Causes skin irritation (Xi) Causes eye irritation (Xi) May impair fertility (T) May cause harm to the unborn child (T)

2.2. Label elements

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



CLP Hazard Pictograms:

Signal Word(s): **Danger**
Hazard Statements:

H315 Causes skin irritation
H319 Causes serious eye irritation
H360 May damage fertility or the unborn child

Precautionary Statements:

P280 Wear skin and eye 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
P308 + P313 IF exposed or concerned: Get medical advice/attention
P362 Take off contaminated clothing and wash before reuse
P501 Dispose of contents in accordance with local regulations, triple rinse and dispose of container to appropriate domestic recycling stream

According to European Directive 67/548/EEC as amended.



Hazard symbol(s):

Risk phrases:

Xi; R36/38 Causes eye and skin irritation
T; R60 May impair fertility
T; R61 May cause harm to the unborn child

Safety phrases:

S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice
S27 Take off immediately all contaminated clothing
S28 After contact with skin, wash immediately with plenty of water
S37/39 Wear suitable gloves and eye protection
S53 Avoid exposure – Obtain special instructions before use
S59 Refer to manufacturer on recovery/ recycling

2.3. Other hazards This product has not been tested for PBT or vPvB

SECTION 3: Composition/information on ingredients

3.2. Mixtures

EC Classification No 1272/2008

Hazardous ingredient(s)	%w/w	CAS no	EC no	REACH Registration no	H statements
Water	>50	7732-18-5	231-791-2	-	-
2,2',2''-Nitrilotriethyl borate	>10 – 30	283-56-7	206-003-5	-	H315, H319, H335
Disodium octaborate tetrahydrate	>10 – 30	12008-41-2	234-541-0	01-2119973496-22-####	H360FD 1B

EEC Classification No 67/548/EEC

Hazardous ingredient(s)	%w/w	CAS no	EC no	REACH Registration no	Risk Phrases
Water	>50	7732-18-5	231-791-2	-	-
2,2',2''-Nitrilotriethyl borate	>10 – 30	283-56-7	206-003-5	-	R36/37/38
Disodium octaborate tetrahydrate	>10 – 30	12008-41-2	234-541-0	01-2119973496-22-####	R61, R61

SECTION 4: First aid measures

4.1. Description of first aid measures

4.1.1. First aid instructions.

If inhaled:	Move person into fresh air, rest and seek medical advice if any ill-effects persist
If on skin (or hair):	Wash affected skin with plenty of soap and water. Wash clothes before reuse
If in eyes:	Immediately wash affected eyes for several minutes under running water with eyelids held open. Remove contact lenses if possible. Seek medical advice if pain persists
If swallowed:	Never give anything by mouth to an unconscious person. Rinse mouth and throat. Drink 1-2 glasses of water. Consult a physician
Other first aid advice:	If vomiting occurs spontaneously, keep airways clear. Give more water when vomiting stops. Boric acid and borate salts are known to be reprotoxicants, see medical advice if exposed or concerned



4.2. Most important symptoms and effects, both acute and delayed

If inhaled:	Inhalation of mist or vapours may cause irritation and a burning sensation to mucous membranes and upper respiratory tract. Symptoms may include irritation, coughing and tightness of breath
If on skin (or hair):	Where not washed exposure may result in redness and itchiness. Irritation may occur to skin especially when already sore or dry according to contact time. Harmful components may absorb through abraded or burned skin
If in eyes:	Exposure to eyes will result in pain and tearing. Damage to the eye may occur if not washed promptly
If swallowed:	Ingestion may cause abdominal pain, vomiting and diarrhoea. Ingestion is the main route of exposure that may cause reproductive damage and harm to an unborn child

4.3. Indication of any immediate medical attention and special treatment needed

Medical treatment: Supportive

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media: All extinguishing agents permitted

Unsuitable extinguishing media: None known

5.2. Special hazards arising from the substance or mixture

Hazardous combustion products: Oxides of boron, molybdenum, sodium, carbon and nitrogen

Other special hazards during fire: None known

5.3. Advice for firefighters

Protective actions during firefighting: Wear self-containing breathing apparatus

Special protective equipment for firefighters: No special instructions

Other advice: Not applicable

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Non-emergency personnel PPE See section 8.2

Emergency responders PPE See section 8.2



Controlling risks from accidental release: Do not allow product to dry, the resulting solid may raise dust that would represent an inhalation hazard

Emergency procedures: Evacuate personnel to safe areas.

6.2. Environmental precautions

Keep accidental releases away from: Drains, water courses, soil and open ground. Discharge to ground, water courses or drains can cause damage to the aquatic environment

6.3. Methods and material for containment and cleaning up

Containing a spill: Mop up and contain with absorbent materials

Cleaning up a spill: Mop spills, recycle where possible

Other information on spill handling: Dilute with water. Capture with absorbent material. Recycle where possible

6.4. Reference to other sections

References to other sections: See section 8.2 for personal protective equipment. See section 13.1 for disposal considerations

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Safe handling recommendations: Wash hands and exposed skin before meals and after use. Wear gloves when handling the product

Handling incompatibles: Do not use with strong oxidising agents

Reducing environmental risk: Do not discharge into drains or water courses

Occupational hygiene advice: Wash hands after using this product and before eating, drinking or smoking. Remove contaminated clothing and protective equipment before entering eating areas

7.2. Conditions for safe storage, including any incompatibilities

Safe storage: managing risks during storage:

Explosive atmospheres formed during storage: Not applicable

Corrosive conditions during storage: Not applicable

Flammability hazards during storage: Not applicable

Incompatible substances or mixtures: Incompatible with strong oxidising agents



Evaporative conditions: Not applicable

Potential ignition sources, including electrical equipment: Not applicable

Safe storage: controlling effects of ambient conditions:

Weather conditions: Do not store outside uncontained

Ambient pressure: Not applicable

Temperature: Do not allow product to freeze or exceed 30°C, product may irreversibly congeal at near freezing temperatures

Sunlight: Keep out of direct sunlight

Humidity: Not applicable

Vibration: Not applicable

Safe storage: maintaining the integrity of the product:

Stabilisers: Stabilisers are not used in this product

Antioxidants: Antioxidants are not used in this product

Safe storage: other advice:

Ventilation requirements for storage: No specific ventilation requirements

Specific designs for storage rooms or vessels: No specific design criteria on storage areas apart from normal regulatory requirements for substances of this type

Quantity limits under storage conditions: Not applicable

Suitable packaging for the substance: Keep in original container.

7.3. Specific end use(s)

Uses: Use as a micronutrient fertiliser concentrate for plants by foliar, furrow or drip irrigation

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 Occupational exposure limits:

Current workplace exposure limits assigned to individual components according to HSE document EH40/2005

Substance	CAS number	Workplace Exposure Limit (WEL)		Comments
			Short-term exposure limit	
				The Carc... Sen...



		Long-term exposure limit (8-hr TWA reference period)		(15 minute reference period)		and Sk notations are not exhaustive. Notations have been applied to the substances identified in IOELV Directives
		ppm	mg.m ⁻³	ppm	mg.m ⁻³	
Molybdenum compounds (as Mo) soluble compounds	-	-	5	-	10	-

8.1.2 Biological Limit Values: Not applicable

8.1.3 Current recommended monitoring procedures: Not applicable

8.1.4 Air contaminants formed when using the product as intended: Not applicable

8.1.5. PNECs and DNELs Not applicable

8.2. Exposure controls

8.2.1. Appropriate engineering controls: Handle in accordance with good industrial hygiene

8.2.2. Personal Protection Equipment

Eye protection: Use safety glasses tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU)

Face protection: Not required

Hand protection: When handling the product over an extended period of time use nitrile, latex or rubber gloves, which satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it

Other skin protection Do not wear open footwear

Respiratory protection Not required

Thermal hazards Not required

8.2.3. Environmental exposure controls Do not release substance to drains or surface water

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance: Clear purple liquid

Physical state: Minimally viscous liquid

Colour: Clear purple

Odour: Slight amine



Odour threshold:	Data not available
pH:	8.0 – 9.0
Melting point:	Data not available
Freezing point:	<0°C
Initial boiling point:	Aqueous component will boil at 100°C
Boiling range:	Data not available
Flash point:	Data not available
Flash point method:	Data not available
Evaporation rate:	Data not available
Flammability (if solid or gas):	Data not available
Upper and lower flammability or explosive limits:	Data not available
Vapour pressure:	Data not available
Vapour density:	Data not available
Relative density:	1.22 – 1.26 g/cm ³ at 20°C
Solubility(ies)	Completely soluble in water
Partition coefficient: n-octanol/water	Data not available
Auto-ignition temperature	Data not available
Decomposition temperature	Data not available
Viscosity	<100 cPs at 20°C
Explosive properties	Data not available
Oxidising properties	Data not available
9.2. Other information	Data not available

SECTION 10: Stability and reactivity

10.1. Reactivity	Can react with strong oxidising agents
10.2. Chemical stability	Product is stable under anticipated storage and handling conditions
10.3. Possibility of hazardous reactions	Substance not known to react and/or polymerise



10.4. Conditions to avoid	Excessive heat and cold
10.5. Incompatible materials	Oxidising materials
10.6. Hazardous decomposition products	No known hazardous decomposition products known

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity	Data not available
Skin corrosion/irritation	Classified as irritating to skin
Serious eye damage/irritation	Classified as irritating to the eyes
Respiratory or skin sensitisation	Data not available
Germ cell mutagenicity	Data not available
Carcinogenicity	Data not available
Reproductive toxicity	Classified as reprotoxic
STOT-repeated exposure;	Data not available
11.2. Other information	No other information

SECTION 12: Ecological information

12.1. Toxicity	Data not available
12.2. Persistence and degradability	Data not available
12.3. Bioaccumulative potential	Data not available
12.4. Mobility in soil	Data not available
12.5. Results of PBT and vPvB assessment	Data not available
12.6. Other adverse effects	
Environmental fate	Data not available
Photochemical ozone creation potential	Data not available
Ozone depletion potential	Data not available
Endocrine disrupting potential	Data not available
Global warming potential	Data not available



SECTION 13: Disposal considerations

13.1. Waste treatment methods

This material, if discarded as produced, is not classified as a hazardous waste

Waste treatment containers to be used for product include IBCs or drums
Recycle material where possible. If heavily soiled or disposal judged as necessary dispose to landfill in accordance with the Directive on waste 2008/98/EC

No specific waste treatment containers to be used for contaminated packaging, packaging should be recycled where possible. Waste treatment method for contaminated packaging should include a rinse with water. Dilute washings should be recycled where possible

SECTION 14: Transport information

14.1. UN number	Not applicable	
14.2. UN proper shipping name	ADR/RID	Not dangerous goods
	IMDG	Not dangerous goods
	IATA	Not dangerous goods
14.3. Transport hazard class(es)	Not applicable	
14.4. Packing group	Not applicable	
14.5. Environmental hazards	Not applicable	
14.6. Special precautions for user	Not applicable	
14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable	

SECTION 15: Regulatory information

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

Ozone depleting substance (EC No 2037/2000):	Not applicable
Persistent organic pollutants (EC No 850/2004)	Not applicable
Export and import of dangerous chemicals (EC No 689/2008)	Not applicable
COMAH/ Seveso II categories or named substance	Not applicable
REACH Authorisations and/or Restrictions	Not applicable
Any other relevant Safety, health and environmental regulations:	Not applicable



15.2. Chemical safety assessment

A chemical safety assessment has not been carried out for this product

SECTION 16: Other information

a) Changes made to SDS:

New safety datasheet

b) Key (or legend)

PPE	Personal Protective Equipment
IOELV	Indicative Occupational Exposure Limit Values
TWA	Time Weighted Average
WEL	Workplace Exposure Limit

c) Literature references

European Chemicals Agency:

<http://echa.europa.eu/web/guest/information-on-chemicals/registered-substances>

HSE – EH40:2005 Workplace Exposure Limits:

<http://www.hse.gov.uk/pubns/priced/eh40.pdf>

NLM – Toxicology Data Network:

<https://www.nlm.nih.gov/>

Alkanolamine Borates Consortium

<http://www.alkanolamineborates.eu/>

Last accessed (07/06/2016)

Some physical properties reported from direct laboratory testing performed at Grotech Production Ltd
Some data has been derived from constituent safety datasheets

d) Details of relevant hazard information

H315	Causes skin irritation
H319	Causes serious eye irritation
H335	May cause respiratory irritation
H360	May damage fertility or the unborn child
P201	Obtain special instructions before use
P202	Do not handle until all safety precautions have been read and understood
P264	Wash hands thoroughly after handling
P280	Wear skin and eye protection
P281	Use personal protective equipment as required
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
P308 + P313	IF exposed or concerned: Get medical advice/attention
P310	Immediately call a POISON CENTER or doctor/physician
P321	Specific treatment (see on this label)
P332 + P313	If skin irritation occurs: Get medical advice/attention
P337 + P313	If eye irritation persists: Get medical advice/attention
P362	Take off contaminated clothing and wash before reuse
P405	Store locked up



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P501	Dispose of contents in accordance with local regulations, dispose of container to appropriate domestic recycling stream
R36/37/38	Irritating to eyes, respiratory system and skin
R60	May impair fertility
R61	May cause harm to the unborn child
S1	Keep locked up
S2	Keep out of the reach of children
S20	When using do not eat or drink
S24/25	Avoid contact with skin and eyes
S26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice
S27	Take off immediately all contaminated clothing
S28	After contact with skin, wash immediately with plenty of water
S37/39	Wear suitable gloves and eye protection
S45	In case of accident or if you feel unwell seek medical advice immediately (show the label where possible)
S53	Avoid exposure – Obtain special instructions before use
S59	Refer to manufacturer on recovery/ recycling

e) Appropriate training for workers

Training for spillage handling and chemical handling is recommended

f) Classification method:

CLP classification, CHIP classification