

# SAFETY DATA SHEET



International Agro Additive Specialties B.V.

## ArmoBreak®

according to Regulation (EC) No. 1272/2008

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GB/EN

## Section 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

### 1.1 Product Identifier

Trade Name            ArmoBreak

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

Use of the Substance/Mixture:    Adjuvant  
Specific use(s):                        Adjuvant for foliar fertilizer

### 1.3 Details of the supplier of the safety data sheet

Company                    International Agro Additive Specialties  
                                  Godelindeweg 1A-30  
                                  1411 GG Naarden  
                                  the Netherlands  
Telephone                 +31 (0)35 678 2925  
E-mail address            info@iaas.nl

### 1.4 Emergency telephone number

Emergency telephone    +31(0) 653251830

## Section 2. HAZARDS IDENTIFICATION

### 2.1 Classification of the substance or mixture

#### Classification (REGULATION (EC) No 1272/2008)

Acute toxicity,	4,	H302
Acute aquatic toxicity,	1,	H400
Chronic aquatic toxicity,	1,	H410

For the full text of the H-Statements mentioned in this Section, see Section 16.

#### Classification (67/548/EEC, 1999/45/EC)

Harmful, Xn, R22  
Dangerous for the environment, N, R50/53

For the full text of the R-phrases mentioned in this Section, see Section 16.

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### 2.2 Label elements

#### Labelling (REGULATION (EC) No 1272/2008)

Symbol(s)



Signal word :

**Warning**

Hazard statements:

H302 Harmful if swallowed.  
H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements: **Prevention:**

P264 Wash skin thoroughly after handling.  
P270 Do not eat, drink or smoke when using this product.

P273 Avoid release to the environment.

P280 Wear protective gloves.

**Response:**

P301 + P312 IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell.

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.

#### **Hazardous components which must be listed on the label:**

Alkyl<sup>(vegetable oil)</sup> amine alkoxyated 1309787-12-9

### 2.3 Other hazards

No further data available.

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### SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

#### 3.1 Substances

Hazardous substance

Chemical Name	PBT vPvB OEL	CAS-No. EC-No. REACH No.	Classification (REGULATION (EC) No 1272/2008)	Classificati on (67/548/EE C)	Concentration [%]
alkyl <sup>(vegetable oil)</sup> amine alkoxyated		1258305-76-8 (polymer) N.A.(exempt)	Acute Tox. 4; H302 Aquatic Acute 1; H400 Aquatic Chronic 1; H410 M-Factor (Acute): 1	Xn; R22 N; R50/53	100

For the full text of the H-Statements mentioned in this Section, see Section 16.

For the full text of the R-phrases mentioned in this Section, see Section 16.

### SECTION 4: FIRST AID MEASURES

#### 4.1 Description of first aid measures

General advise	Move out of dangerous area. In all cases of doubt, or when symptoms persist, consult a physician. Show this safety data sheet to the doctor in attendance.
If inhaled	If breathed in, move person into fresh air. Consult a physician after significant exposure.
In case of skin contact	Take off contaminated clothing and shoes immediately. Rinse immediately with plenty of water.
In case of eye contact	Rinse with plenty of water. Remove contact lenses. Protect unharmed eye. Keep eye wide open while rinsing. If eye irritation persists, consult a specialist.
If swallowed	Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Obtain medical attention.

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

Symptoms No information available.

Risks No information available.

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

Treatment No information available.

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## Section 5. FIRE- FIGHTING MEASURES

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**5.1. Extinguishing media** Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Treat as an oil fire. Extinguishing media: water mist\*, foam, dry chemical powder or carbon dioxide.  
Unsuitable extinguishing media: water jet.

### 5.2 Special hazards arising from the substance or mixture

Specific hazards during fire fighting / Specific hazards arising from the chemical Do not allow run-off from fire fighting to enter drains or watercourses.

### 5.3 Advice for firefighters

Special protective equipment for firefighters In the event of fire, wear self-contained breathing for fire-fighters.

Further information Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

Non-flammable. If involved in a fire, it will support combustion.

Hazardous decomposition/combustion products. Carbon monoxide, carbon dioxide.

\*Water spray may be ineffective unless used by experienced fire fighters.

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## Section 6. ACCIDENTAL RELEASE MEASURES

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### 6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions	The usual precautions for handling chemicals should be observed. Use personal protective equipment.
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### 6.2 Environmental precautions

Environmental precautions	Do not flush into surface water or sanitary sewer system. If the product contaminates rivers and lakes or rains inform respective authorities.
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### 6.3 Methods and materials for containment and cleaning up

Methods for cleaning up / Methods for containment	Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, vermiculite, sawdust). Keep in suitable, closed containers for disposal.
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### 6.4 Reference to other sections

Additional advice	For personal protection see section 8.
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## Section 7. HANDLING AND STORAGE

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### 7.1 Precautions for safe handling

Advice on safe handling	For personal protection see section 8. Avoid contact with skin and eyes. Smoking, eating and drinking should be prohibited in the application area. Dispose of rinse water in accordance with local and national regulations.
Advice on protection against	Normal measures for preventive fire protection.

### 7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage	Keep container tightly closed in a dry and well-ventilated areas and containers place.
Other data	No decomposition if stored and applied as directed.

### 7.3 Specific end use(s)

Specific use(s)	No information available.
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### Section 8. EXPOSURE CONTROLS PERSONAL PROTECTION

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#### 8.1 Control parameters

Components with workplace control parameters.

Contains no substances with occupational exposure limit values.

#### 8.2. Exposure controls

Engineering Controls                      Provide eyewash station.

##### Personal protective equipment

Respiratory protection                  No specific advise: vapour pressure < 10 Pa<sup>(20°C)</sup>,

Hand protection                          Neoprene.  
Nitrile rubber.

Eye protection                            Tightly fitting safety goggles.

Skin and body protection                Protective suit.

Hygiene measures                        Handle in accordance with good industrial hygiene  
and safety practice.  
When using do not eat or drink.  
When using do not smoke.  
Wash hands before breaks and at the end of  
workday.

##### Environmental exposure controls

General advice                            Do not flush into surface water or sanitary sewer  
system. If the product contaminates rivers and  
lakes or drains inform respective authorities.

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### Section 9. PHYSICAL AND CHEMICAL PROPERTIES

#### 9.1 Information on basic physical and chemical properties

##### Appearance

Form (20°C)	liquid
Colour	amber
Odour	amine-like
Odour Threshold	no data available

<b>Boiling point/range</b>	> 300°C
<b>Melting point / range</b>	< -10°C (Pour Point, ASTM D97, °C)
<b>Flash point</b>	> 178°C , Pensky-Martens closed cup [ISO 2719]
<b>Flammability</b>	not determined
<b>Auto-ignition temperature</b>	not determined
<b>Explosive properties</b>	Not explosive
<b>Explosion limits</b>	not determined
<b>Oxidizing properties</b>	Not classified as oxidising
<b>Vapour pressure</b>	< 10 Pa (20°C), < 100 Pa (345°C)
<b>Density</b>	990 kg/m <sup>3</sup> (20°C)
<b>Bulk density</b>	not applicable
<b>Solubility in water</b>	Soluble / dispersible
<b>Cloud Point in Water (1%)</b>	19 °C (AB-46-1203, 20°C)
<b>Solubility in other solvents</b>	soluble in ethanol and octanol. Soluble in xylene
<b>pH value</b>	6-10 (100 g/l, in water)
<b>Partition coefficient (logP<sub>ow</sub>) (n-octanol/water)</b>	none known
<b>Relative vapour density<sup>(air = 1)</sup></b>	not determined
<b>Viscosity</b>	235 mPa.s (20°C, Newtonian) (Haake RV 2)

#### 9.2 Other information

This safety datasheet only contains information relating to safety and does not replace any product information or product specification.

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### Section 10. STABILITY AND REACTIVITY

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#### 10.1 Reactivity

Weak base. Exothermic (reversible) reaction with strong acids.

#### 10.2 Chemical stability

Stable under recommended storage conditions.

No dangerous reaction(s) known under conditions of normal use (see 10.1).

#### 10.4 Conditions to avoid

Conditions to avoid None known (see 10.1).

#### 10.5 Incompatible materials

Materials to avoid None known (see 10.1).

#### 10.6 Hazardous decomposition products

Hazardous decomposition products No hazardous decomposition products are known.

Thermal decomposition No data available.



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### Section 11. TOXICOLOGICAL INFORMATION

No experimental ecological data are available on the preparation as such.  
From structurally related products the following may be expected:

#### Product information

##### Hazard Summary

Inhalation :	Inhalation of (aqueous) aerosols may cause irritation to mucous membranes.
Skin	May cause skin irritation.
Eyes	May cause irritation to the eyes, respiratory system.
Ingestion	Harmful if swallowed. May cause irritation of the mucous membranes.

#### Toxicology Assessment

Acute toxicity	
Oral LD <sub>50</sub>	500-2000 mg/kg (rat) ( <i>IAAS E-file</i> ).
Dermal LD <sub>50</sub>	> 2000 mg/kg (rat) ( <i>IAAS E-file</i> ).
Inhalation	Vapour pressure product low; inhalation: not relevant.
Irritation	
Skin	Non-irritating ( <i>IAAS E-file</i> )
Eye	Mildly-irritating ( <i>IAAS E-file</i> )
Sensitization	Not sensitising ( <i>IAAS E-file</i> )
Genotoxicity	Not mutagenic (Ames test) ( <i>IAAS E-file</i> ). In vitro cell gene mutation test (in V79 cells): not mutagenic. In vitro cytogenetic test in human lymphocytes: not mutagenic.
Other toxicological information.	sub-acute (28 days) oral toxicity ( rat): No Observed Adverse Effect Level; NOEL I= 15 mg/kg/day ( <i>IAAS E-file</i> ).

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### Section 12. ECOLOGICAL INFORMATION

No experimental ecological data are available on the preparation as such. From structurally related products the following may be expected:

#### 12.1 Toxicity

Eco toxicity fish	96h-LC50 : 0.34 mg/l. (Oncorhynchus mykiss) (IAAS E-file).
daphnia	48 h-EC50 : 0.26 mg/l (IAAS E-file).
M-Factor	1

#### 12.2 Persistence and degradability

Biodegradability	Not readily biodegradable. SCAS test: Biodegradable (IAAS E-file).
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#### 12.3 Bio-accumulative potential

Bioaccumulation	No data available (No classification expected).
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#### 12.4 Mobility in soil

Mobility	No data available (No classification expected).
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#### 12.5 Results of PBT and vPvB assessment

PBT / vPvB	No data available (No classification expected).
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#### 12.6 Other information

Biochemical Oxygen Demand <sup>(BOD)</sup>	No data available.
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### Section 13. DISPOSAL CONSIDERATIONS

#### 13.1 Waste treatment methods

**Product** The product should not be allowed to enter drains, water courses or the soil.  
Do not contaminate ponds, waterways or ditches with chemical or used container.  
Hazardous waste.

**Contaminated packaging** Empty remaining contents.  
Dispose of as unused product.

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### Section 14. TRANSPORT INFORMATION

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#### 14.1 UN number

ADR 3082  
RID 3082  
IMDG 3082  
IATA 3082

#### 14.2 Proper shipping name

ADR ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,  
N.O.S. (Polymer: alkylamine alkoxyate).  
RID ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,  
N.O.S. (Polymer: alkylamine alkoxyate).  
IMDG ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,  
N.O.S. (Polymer: alkylamine alkoxyate).  
IATA : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,  
N.O.S. (Polymer: alkylamine alkoxyate).

#### 14.3 Transport hazard class

ADR 9  
RID 9  
IMDG 9  
IATA 9

#### 14.4 Packing group

ADR

Packaging group	III
Classification Code	M6
Hazard identification No	90
Labels	9
Tunnel restriction code	(E)

RID

Packaging group	III
Classification Code	M6
Hazard identification No	90
Labels	9

IMDG

Packaging group	III
Labels	9
EmS number	F-A, S-F

IATA

Packing instruction (cargo aircraft)	964
Packaging group	III
Labels	9

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### 14.5 Environmental hazards

ADR  
Environmentally hazardous: yes

RID  
Environmentally hazardous: yes

IMDG  
Marine pollutant: yes

IATA  
Environmentally hazardous: yes

### 14.6 Special precautions for user

### 14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

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## Section 15. REGULATORY INFORMATION

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

Major Accident Hazard 96/82/EC Update: 2003  
Legislation Dangerous for the environment  
Quantity 1: 100 t  
Quantity 2: 200 t

#### Notification status

EINECS	YES. On the inventory, or in compliance with the inventory
TSCA	NO. Not On TSCA Inventory
AICS	NO. Not in compliance with the inventory
DSL	NO. Not in compliance with the inventory
ENCS	NO. Not in compliance with the inventory
KECI	NO. Not in compliance with the inventory
PICCS	NO. Not in compliance with the inventory
IECSC	NO. Not in compliance with the inventory
ISHL	NO. Not in compliance with the inventory

For explanation of abbreviation see section 16.

#### Further information

This product is to be considered as a substance according to EU-legislation.

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### 15.2 Chemical Safety Assessment

Product (polymer) a Chemical Safety Assessment is not required for this alkoxylated polymer substance.

### 16. OTHER INFORMATION

#### Full text of H-Statements referred to under sections 2 and 3.

H302	Harmful if swallowed.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

#### Full text of R-phrases referred to under sections 2 and 3

R22	Harmful if swallowed.
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

#### Explanations for possible abbreviations mentioned in section 2

PBT	PBT: Persistent, bio-accumulative and toxic.
vPvB	vPvB: Very persistent and very bio-accumulative.
OEL	OEL: Occupational exposure limit.

#### Notification status explanation

EINECS	European Inventory of Existing Commercial Chemical Substances (EINECS).
TSCA	United States TSCA Inventory.
AICS	Australia Inventory of Chemical Substances (AICS).
DSL	Canadian Domestic Substances List (DSL).
ENCS Japan	ENCS - Existing and New Chemical Substances Inventory.
KECI Korea	Korean Existing Chemicals Inventory (KECI).
PICCS	Philippines Inventory of Chemicals and Chemical Substances (PICCS).
IECSC China	Inventory of Existing Chemical Substances in China (IECSC)
ISHL	Industrial Safety and Health Law OEL.

#### Further information

The information provided in this Safety Data Sheet is correct to the best of our knowledge and is given in good faith but without warranty. It remains the user's own responsibility to make sure that the information is appropriate and complete for his special use of this product.

The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. Furthermore the information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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### History

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**Composed by** Drs. R.J. Butselaar

**Changes were made in Section(s)** major revision

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