



## SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

**Thrust**

Version 4 (UK)

Issuing date: 2011/09/01

### 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

#### 1.1. Product identifier

Trade name : **Thrust**

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

Use : Herbicide

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

Nufarm UK Limited  
Wyke Lane  
Wyke  
Bradford  
West Yorkshire BD12 9EJ  
United Kingdom  
Telephone: +44 (0)1274 691234  
Telefax: +44 (0)1274 691176  
E-mail address: infouk@uk.nufarm.com

#### 1.4. Emergency telephone number

**+44 (0)1274 696603**

### 2. HAZARDS IDENTIFICATION

#### 2.1. Classification of the substance or mixture

EEC/99/45 :	Xn	R22 - Harmful if swallowed.
	Xi	R37 - Irritating to respiratory system.
	Xi	R41 - Risk of serious damage to eyes.
	Xi	R43 - May cause sensitization by skin contact.
	N	R51/53 - Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

#### 2.2. Label elements

according directive 1999/45/EG

Pictogram:



Xn



N

- R22 - Harmful if swallowed.  
 R37 - Irritating to respiratory system.  
 R41 - Risk of serious damage to eyes.  
 R43 - May cause sensitization by skin contact.  
 R51/53 - Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- S23 - Do not breathe spray.  
 S24 - Avoid contact with skin.  
 S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
- S37/39 - Wear suitable gloves and eye/face protection.  
 S35 - This material and its container must be disposed of in a safe way.  
 S57 - Use appropriate container to avoid environmental contamination.  
 SP 1 - Do not contaminate water with the product or its container (Do not clean application equipment near surface water/Avoid contamination via drains from farmyards and roads).

### 2.3. Other hazards

This mixture contains no substance considered to be persistent, bioaccumulating nor toxic (PBT).

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Chemical nature** : Aqueous solution of dimethylammonium salts  
 Contains 344 g/L 2,4-D and 120 g/L Dicamba

### 3.2. Mixtures

Components	CAS-No.	EINECS-No. ELINCS No.	REACH No.	Symbol(s) R-phrases(s)	Concentration (w/w)
2,4-D DMA	2008-39-1	217-915-8		Xn, N R22, R41, R43, R51/53	35.7 %
Dicamba DMA	2300-66-5	218-951-7		Xi R36, R52/53	12.4 %
2,4-Dichlorophenol	120-83-2	204-429-6	01- 2119513326-47	T, N R22, R24, R34, R51/53	0.1 %



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### 4. FIRST AID MEASURES

#### 4.1. Description of first aid measures

- Eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If eye irritation persists, consult a specialist.
- Skin contact : Take off all contaminated clothing immediately. Wash off immediately with soap and plenty of water. If symptoms persist, call a physician. Wash contaminated clothing before re-use.
- Inhalation : Move to fresh air. If symptoms persist, call a physician.
- Ingestion : Do NOT induce vomiting. Rinse mouth. If conscious, drink plenty of water. If symptoms persist, call a physician.

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

- Hazards : No information available.

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

- Treatment : Treat symptomatically.

### 5. FIRE-FIGHTING MEASURES

#### 5.1. Extinguishing media

- Suitable extinguishing media : Water spray, Carbon dioxide (CO<sub>2</sub>), Dry powder, Alcohol-resistant foam
- Extinguishing media which shall not be used for safety reasons : High volume water jet

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

- Specific hazards during fire fighting : In the event of fire (HCl, Cl<sub>2</sub>, CO) may be formed.

#### 5.3. Advice for firefighters

- Special protective equipment for fire-fighters : Use personal protective equipment. Wear self contained breathing apparatus for fire fighting if necessary.



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Further Information : Standard procedure for chemical fires. Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

## 6. ACCIDENTAL RELEASE MEASURES

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

Wear personal protective equipment. (see Chapter 8)

### 6.2. Environmental precautions

Do not flush into surface water or sanitary sewer system.

### 6.3. Methods and materials for containment and cleaning up

Methods for cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder). Sweep up and shovel into suitable containers for disposal.

Additional advice : Never return spills in original containers for re-use.

### 6.4. Reference to other sections

see Chapter 13

## 7. HANDLING AND STORAGE

### 7.1. Precautions for safe handling

Safe handling advice : Wear personal protective equipment.

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

Requirements for storage areas and containers : Store in original container. Keep containers tightly closed in a cool, well-ventilated place.

Advice on common storage : Keep out of reach of children. Keep away from food, drink and animal feeding stuffs.

### 7.3. Specific end uses

none

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION



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## 8.1. Control parameters

Components with workplace control parameters  
(EH40/2005 Workplace exposure limits)

Components	CAS-No.	National occupational exposure limits	Note
2,4-D DMA	2008-39-1		no classification available
Dicamba DMA	2300-66-5		no classification available
2,4-Dichlorophenol	120-83-2		no classification available

## 8.2. Exposure controls

### Personal protective equipment

- Respiratory protection : No special protective equipment required.
- Hand protection : PVC or nitrile-rubber gloves
- Eye protection : Safety glasses, , or:, Goggles
- Skin and body protection : lightweight protective clothing
- Hygiene measures : Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash hands before breaks and immediately after handling the product. When using, do not eat, drink or smoke.
- Protective measures : Avoid contact with skin, eyes and clothing. Keep working clothes separately.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

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

#### Appearance

- Physical state : liquid at 20 °C ,
- Form : Soluble concentrate
- Colour : brown
- Odour : fish-like
- Start of crystallisation : ca.0 °C  
Aqueous solution
- Boiling point/boiling range : ca.100 °C  
at 1,013 hPa  
Aqueous solution
- Flash point : > 100 °C



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Ignition temperature	: 425 °C
Vapour pressure	: Active ingredient as salt in aqueous solution. Vapour pressure is negligibly low.
Density	: 1.16 g/cm <sup>3</sup> at 20 °C
Water solubility	: completely miscible
pH	: 6.8 - 8.5

### 9.2. Other information

none

## 10. STABILITY AND REACTIVITY

### 10.1. Reactivity

no data available, not applicable

### 10.2. Chemical stability

No decomposition if stored and applied as directed.

### 10.3. Possibility of hazardous reactions

no data available

### 10.4. Conditions to avoid

No decomposition if stored and applied as directed.

### 10.5. Incompatible materials to avoid

Strong acids and strong bases

### 10.6. Hazardous decomposition products

none

## 11. TOXICOLOGICAL INFORMATION



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### 11.1. Information on toxicological effects

Acute oral toxicity	:	LD50 rat Dose: 1,127 mg/kg
Acute dermal toxicity	:	LD50 rat Dose: > 2,000 mg/kg
Skin irritation	:	rabbit Result: Mild skin irritation
Eye irritation	:	rabbit Classification: Risk of serious damage to eyes. Result: Severe eye irritation
Sensitisation	:	Result: May cause sensitization by skin contact.

### 12. ECOLOGICAL INFORMATION

#### 12.1. Toxicity

Toxicity to birds	:	Practically non toxic.
Toxicity to bees	:	LD50 (oral) Apis mellifera (Honey bee) Testing period: 72 h Value ( $\mu\text{g}/\text{Species}$ ): 95.9
	:	LD50 (contact) Apis mellifera (Honey bee) Testing period: 96 h Value ( $\mu\text{g}/\text{Species}$ ): > 200
Toxicity to fish	:	LC50 Oncorhynchus mykiss (rainbow trout) Dose: > 1,000 mg/l Testing period: 96 h
	:	LC50 Cyprinus carpio (Common carp) Dose: > 1,000 mg/l Testing period: 96 h
Toxicity to daphnia	:	EC50 Daphnia magna (Water flea)



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Dose: > 1,000 mg/l  
Testing period: 48 h

Toxicity to algae : LC50 *Desmodesmus subspicatus* (green algae)  
Dose: 204.6 mg/l  
Exposure time: 72 h

### 12.2. Persistence and degradability

Biodegradability : Readily biodegradable, according to appropriate OECD test.

Stability in soil : DT50: 2.1 - 8 d  
(Dicamba)

DT50: 2 - 59 d  
(2,4-D)

### 12.3. Potential bioaccumulation

Bioaccumulation : Does not bioaccumulate.

### 12.4. Mobility in soil

Koc= 5 - 212 (2,4-D)  
Kfoc = 3.45 - 21.2 (dicamba)

### 12.5. Results of PBT and vPvB assessment

This mixture contains no substance considered to be persistent, bioaccumulating nor toxic (PBT).

### 12.6. Other adverse effects

none

## 13. DISPOSAL CONSIDERATIONS

According to European Directive 2000/532/EC as amended :

Waste Code : 02 01 08 (agrochemical waste containing dangerous substances)

### 13.1. Waste treatment methods

Product : Dispose of product and packaging in accordance with The Green Code. (The Code of Practice for the safe use of Pesticides on Farms and Holdings.) A MAFF Publication.





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Contaminated packaging : Do not dispose with household waste. Do not re-use empty containers. Dispose at licensed waste disposal site capable of accepting pesticides in compliance with applicable regulations. according to EC directive 94/62/EC

## 14. TRANSPORT INFORMATION

### 14.1. UN number

### 14.2. Proper shipping name

not applicable

### 14.3. Transport hazard class(es)

ADR/RID :

Not a dangerous substance as defined in the above regulations.

IMDG :

Not a dangerous substance as defined in the above regulations.

IATA-DGR :

Not a dangerous substance as defined in the above regulations.

### 14.4. Packaging group

not applicable

### 14.5. Environmental hazards

not applicable

### 14.6. Special precautions for user

none

## 15. REGULATORY INFORMATION



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

Other regulations : The product is classified and labelled in accordance with EC directives or respective national laws.

### 15.2. Chemical Safety Assessment

none

## 16. OTHER INFORMATION

Print Date : 2011/09/01

The date format YYYY/MM/DD is used according to ISO 8601.  
(Alterations are indicated in the left hand margin by: || )

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

- R22 - Harmful if swallowed.
- R41 - Risk of serious damage to eyes.
- R43 - May cause sensitization by skin contact.
- R51/53 - Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- R36 - Irritating to eyes.
- R52/53 - Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- R22 - Harmful if swallowed.
- R24 - Toxic in contact with skin.
- R34 - Causes burns.
- R51/53 - Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. 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. 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.

The information contained herein is based on the present state of our knowledge and does therefore not guarantee certain properties.