

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

Product form : Mixture
Trade name : KASKARA
Product code : CA701553
Synonyms : 2,4-D EHE 300 g/L + Dicamba 85 g/L + Triclopyr BEE 90 g/L EC

1.2. Relevant identified uses of the substance or mixture and uses advised against**1.2.1. Relevant identified uses**

Main use category : Industrial use
Industrial/Professional use spec. : Herbicide.

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

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1.4. Emergency telephone number

Emergency number : +32 (0)4 385 97 11 (8h - 16h35)

Country	Official advisory body	Address	Emergency number
UNITED KINGDOM	National Poisons Information Service (Birmingham Centre) City Hospital	Dudley Road B18 7QH Birmingham	0870 600 6266 (UK only)
Worldwide	WHO	http://www.who.int/ipcs/poisons/centre/directory/en/	

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture****Classification according to Directive 67/548/EEC or 1999/45/EC**

Xn; R22
Xn; R65
Xi; R36/37/38
N; R50/53
R10
R67

Full text of R-phrases: see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements**Labelling according to Directive 67/548/EEC or 1999/45/EC**

Hazard symbols :



Xn - Harmful



N - Dangerous for the environment

Hazardous ingredients : Triclopyr butoxy ethyl ester, 2,4-D 2-EHE, Solvent

R-phrases : R10 - Flammable.
R22 - Harmful if swallowed.
R36/37/38 - Irritating to eyes, respiratory system and skin.
R50/53 - Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R65 - Harmful: may cause lung damage if swallowed.
R67 - Vapours may cause drowsiness and dizziness.

2.3. Other hazards

No additional information available

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SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Directive 67/548/EEC
2,4-D 2-EHE	(CAS No.)1928-43-4 (EC no)217-673-3 (EC index no)607-308-00-X	21,6 - 23,7	Xn; R22 R43 N; R50/53
Solvent	(CAS No.)111-90-0 (EC no)203-919-7	>= 20	Xi; R36
Dicamba (ISO)	(CAS No.)1918-00-9 (EC no)217-635-6 (EC index no)607-043-00-X	8,8 - 10,5	Xn; R22 Xi; R41 R52/53
Solvent	(CAS No.)64742-95-6 (EC no)265-199-0 (EC index no)649-356-00-4 (REACH-no)01-2119455851-35	>= 10	Xn; R65 Xi; R37 N; R51/53 R10 R66 R67
Triclopyr butoxy ethyl ester	(CAS No.)64700-56-7 (EC no)265-024-8	6,566 - 8	Xn; R22 Xi; R43 N; R50/53

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
2,4-D 2-EHE	(CAS No.)1928-43-4 (EC no)217-673-3 (EC index no)607-308-00-X	21,6 - 23,7	Acute Tox. 4 (Oral), H302 Skin Sens. 1, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Solvent	(CAS No.)111-90-0 (EC no)203-919-7	>= 20	Eye Irrit. 2, H319
Dicamba (ISO)	(CAS No.)1918-00-9 (EC no)217-635-6 (EC index no)607-043-00-X	8,8 - 10,5	Acute Tox. 4 (Oral), H302 Eye Dam. 1, H318 Aquatic Chronic 3, H412
Solvent	(CAS No.)64742-95-6 (EC no)265-199-0 (EC index no)649-356-00-4 (REACH-no)01-2119455851-35	>= 10	Flam. Liq. 3, H226 STOT SE 3, H335 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 2, H411
Triclopyr butoxy ethyl ester	(CAS No.)64700-56-7 (EC no)265-024-8	6,566 - 8	Acute Tox. 4 (Oral), H302 Skin Sens. 1, H317 Aquatic Chronic 1, H410 Aquatic Acute 1, H400

Full text of R-, H- and EUH-phrases: see section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

- First-aid measures general : If medical advice is needed, have product container or label at hand.
- First-aid measures after inhalation : IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. In case of breathing difficulties administer oxygen. In case of irregular breathing or respiratory arrest provide artificial respiration. In all cases of doubt, or when symptoms persist, seek medical advice.
- First-aid measures after skin contact : After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water and soap. If skin irritation occurs: Get medical advice/attention.
- First-aid measures after eye contact : Rinse immediately carefully and thoroughly with eye-bath or water. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
- First-aid measures after ingestion : If swallowed, rinse mouth with water (only if the person is conscious). Do not induce vomiting. Immediately get medical attention.

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

No additional information available

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

No additional information available

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5.2. Special hazards arising from the substance or mixture

Reactivity : When exposed to heat, may decompose liberating hazardous gases.

5.3. Advice for firefighters

No additional information available

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : When leaks or spills occur, only properly protected personnel should remain in the area.

6.1.1. For non-emergency personnel

Protective equipment : Wear suitable protective clothing, gloves and eye or face protection. In case of insufficient ventilation, wear suitable respiratory equipment.

Emergency procedures : Evacuate area. Eliminate ignition sources. Provide adequate ventilation to minimize dust and/or vapour concentrations. Call in an expert.

6.1.2. For emergency responders

Protective equipment : Wear a self-contained breathing apparatus and chemical protective clothing.

6.2. Environmental precautions

Do not empty into drains, dispose of this material and its container at hazardous or special waste collection point. Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

For containment : Prevent spreading in sewers. Impound and recover large spill by mixing it with inert granular solids.

Methods for cleaning up : Collect spills and put it into appropriated container.

Other information : Special danger of slipping by leaking/spilling product.

6.4. Reference to other sections

Exposure controls/personal protection. Disposal considerations.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Handle in accordance with good industrial hygiene and safety procedures. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Do not allow to enter into surface water or drains.

Handling temperature : at room temperature

Hygiene measures : Do no eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Wash hands and other exposed areas with mild soap and water before eat, drink or smoke and when leaving work.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Ground well. Use explosion-proof machinery, apparatus, ventilation facilities, tools etc.

Storage conditions : Protect against direct sunlight.

Incompatible products : Strong acid. Strong bases. Oxidizing agents, strong.

Maximum storage period : 3 year(s)

Storage area : Keep container tightly closed in a cool, well-ventilated place. Provide for retaining containers, eg. floor pan without outflow.

Packaging materials : Keep only in the original container. Keep locked up.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

2,4-D 2-EHE (1928-43-4)		
Austria	MAK (mg/m ³)	1 mg/m ³ Aerosol
Austria	MAK Short time value (mg/m ³)	4 mg/m ³ Aerosol
Belgium	Limit value (mg/m ³)	10 mg/m ³
France	VME (mg/m ³)	10 mg/m ³
Germany	TRGS 900 Occupational exposure limit value (mg/m ³)	1 mg/m ³ Aerosol
Germany	TRGS 900 Limitation of exposure peaks (mg/m ³)	8 mg/m ³ Aerosol
Spain	VLA-ED (mg/m ³)	10 mg/m ³
Switzerland	VLE (mg/m ³)	8 mg/m ³
Switzerland	VME (mg/m ³)	1 mg/m ³

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2,4-D 2-EHE (1928-43-4)

United Kingdom	WEL TWA (mg/m ³)	10 mg/m ³
United Kingdom	WEL STEL (mg/m ³)	20 mg/m ³
Denmark	Grænseværdie (langvarig) (mg/m ³)	1 mg/m ³
Denmark	Grænseværdie (kortvarig) (mg/m ³)	2 mg/m ³
Hungary	AK-érték	1 mg/m ³
Hungary	CK-érték	4 mg/m ³

Solvent (64742-95-6)

Belgium	Limit value (ppm)	19 ppm
Belgium	Short time value (mg/m ³)	100 mg/m ³
France	VME (mg/m ³)	150 mg/m ³

8.2. Exposure controls

Personal protective equipment : Gloves. Gas mask. Safety glasses.



- Hand protection : Wear suitable gloves resistant to chemical penetration. NBR (Nitrile rubber). For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.
- Eye protection : Face protection umbrella. Chemical goggles or safety glasses.
- Skin and body protection : Skin protection appropriate to the conditions of use should be provided.
- Respiratory protection : If technical exhaust or ventilation measures are not possible or insufficient, respiratory protection must be worn.
- Environmental exposure controls : Notify authorities if product enters sewers or public waters.
- Other information : Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

- Physical state : Liquid
- Appearance : clear.
- Colour : brown.
- Odour : Aromatic.
- Odour threshold : No data available
- pH : 2,67 (1%, 20°C)
- Relative evaporation rate (butylacetate=1) : No data available
- Melting point : No data available
- Solidification point : No data available
- Boiling point : No data available
- Flash point : > 41 °C
- Self ignition temperature : No data available
- Decomposition temperature : No data available
- Flammability (solid, gas) : No data available
- Vapour pressure : No data available
- Relative vapour density at 20 °C : No data available
- Relative density : No data available
- Density : 1,033 g/cm³ (20°C)
- Solubility : No data available
- Log Pow : No data available
- Log Kow : No data available
- Viscosity, kinematic : 3,36 mm²/s (40°C)
- Viscosity, dynamic : No data available
- Explosive properties : No data available
- Oxidising properties : No data available
- Explosive limits : No data available

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9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

When exposed to heat, may decompose liberating hazardous gases.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

None under normal conditions. Refer to section 10.1 on Reactivity.

10.4. Conditions to avoid

Protect against direct sunlight. Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

10.5. Incompatible materials

Strong acid. Strong bases. Strong oxidizing agents.

10.6. Hazardous decomposition products

When heated to decomposition, emits dangerous fumes. Carbon dioxide (CO₂). Carbon monoxide. Nitrogen oxides (NO_x).

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Harmful if swallowed. Harmful: may cause lung damage if swallowed.

Triclopyr butoxy ethyl ester (64700-56-7)	
LD50 oral rat	803 mg/kg
LD50 dermal rabbit	> 2000 mg/kg
LC50 inhalation rat (mg/l)	> 4,8 mg/l/4h (MATC)

2,4-D 2-EHE (1928-43-4)	
LD50 oral rat	720 - 982 mg/kg
LD50 dermal rat	> 2000 mg/kg
LC50 inhalation rat (mg/l)	> 5,39 mg/l/4h

Dicamba (ISO) (1918-00-9)	
LD50 oral rat	1581 mg/kg
LD50 dermal rat	> 2000 mg/kg
LC50 inhalation rat (mg/l)	4,46 mg/l/4h

Solvent (111-90-0)	
LD50 oral rat	> 5000 mg/kg
LD50 dermal rabbit	> 8000 mg/kg

Solvent (64742-95-6)	
LD50 oral rat	3492 mg/kg
LD50 dermal rat	> 3160 mg/kg
LC50 inhalation rat (mg/l)	> 6193 mg/m ³

Irritation : Irritating to eyes, respiratory system and skin.
pH: 2,67 (1%, 20°C)

Corrosivity : Not classified
pH: 2,67 (1%, 20°C)

Sensitisation : Not classified

Repeated dose toxicity : Not classified

Carcinogenicity : Not classified

Mutagenicity : Not classified

Reproductive toxicity : Not classified

SECTION 12: Ecological information

12.1. Toxicity

Triclopyr butoxy ethyl ester (64700-56-7)	
LC50 fishes 1	0,31 mg/l (96h)
EC50 Daphnia 1	0,66 mg/l (48h)
ErC50 (algae)	0,193 mg/l

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Triclopyr butoxy ethyl ester (64700-56-7)	
ErC50 (other aquatic plants)	2,2 mg/l
2,4-D 2-EHE (1928-43-4)	
LC50 fishes 1	> 1,9 mg/l (96h Menidia beryllina)
EC50 Daphnia 1	> 1,91 mg/l (96h Daphnia magna)
ErC50 (algae)	0,23 mg/l (120d Skeletonema constatum)
ErC50 (other aquatic plants)	0,5 mg/l (14d Lemna Gibba)
Dicamba (ISO) (1918-00-9)	
LC50 fishes 1	> 100 mg/l (96h Cyprinus carpio)
ErC50 (algae)	> 4,1 mg/l (72h Skeletonema costatum)
Solvent (64742-95-6)	
LC50 fishes 1	9,2 mg/l (96h Oncorhynchus mykiss)
EC50 Daphnia 1	3,2 mg/l (48h Daphnia magna)
ErC50 (algae)	2,9 mg/l (72h Pseudokirchneriella subcapitata)
NOEC (chronic)	2,14 mg/l (21d Daphnia magna)

12.2. Persistence and degradability

Solvent (111-90-0)	
Persistence and degradability	Easily biodegradable (concerning to the criteria of the OECD).
Solvent (64742-95-6)	
Persistence and degradability	Easily biodegradable (concerning to the criteria of the OECD).
Biodegradation	78 % (28d OECD 301F)

12.3. Bioaccumulative potential

Triclopyr butoxy ethyl ester (64700-56-7)	
BCF fishes 1	110
Log Pow	4,31 - 4,75 (5<pH<9)
2,4-D 2-EHE (1928-43-4)	
BCF fishes 1	Not required.
Log Pow	5,78 (25°C)
Dicamba (ISO) (1918-00-9)	
Log Pow	-1,8 (pH: 6,8 ; 25°C ; 99,6%)
Solvent (111-90-0)	
Log Pow	-0,08 - -1,19
Bioaccumulative potential	There is no bioaccumulation.

12.4. Mobility in soil

KASKARA	
Surface tension	32,6 mN/m (25°C)
Dicamba (ISO) (1918-00-9)	
Surface tension	63,7 mN/m
Solvent (111-90-0)	
Surface tension	0,036 N/m

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional legislation (waste)	: Disposal must be done according to official regulations.
Waste treatment methods	: Dispose of this material and its container to hazardous or special waste collection point.
Additional information	: 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). Notify authorities if product enters sewers or public waters.

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SECTION 14: Transport information

In accordance with ADR / RID / ADNR / IMDG / ICAO / IATA

14.1. UN number

UN-No. : 3295

14.2. UN proper shipping name

Proper Shipping Name : HYDROCARBONS, LIQUID, N.O.S.
Transport document description : UN 3295 HYDROCARBONS, LIQUID, N.O.S. (Solvent naphtha (petroleum), light aromatic(64742-95-6)), 3, III, (D/E)

14.3. Transport hazard class(es)

Class (UN) : 3
Hazard labels (UN) : 3



14.4. Packing group

Packing group (UN) : III

14.5. Environmental hazards

Dangerous for the environment :



Other information : No supplementary information available.

14.6. Special precautions for user

14.6.1. Overland transport

Hazard identification number (Kemler No.) : 30
Classification code : F1
Orange plates :



Tunnel restriction code : D/E
Limited quantities (ADR) : LQ07
Excepted quantities (ADR) : E1
EAC code : 3Y

14.6.2. Transport by sea

EmS-No. (1) : F-E
EmS-No. (2) : S-D

14.6.3. Air transport

Instruction "cargo" (ICAO) : 366/220L
Instruction "passenger" (ICAO) : 355/60L
Instruction "passenger" - Limited quantities (ICAO) : Y344/10L

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

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

No Annex XVII restrictions
Contains no REACH candidate substance

15.1.2. National regulations

No additional information available

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15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

Classification according to Regulation (EC) No. 1272/2008 [CLP]:

Flam. Liq. 3	H226
Acute Tox. 4 (Oral)	H302
Skin Irrit. 2	H315
Eye Irrit. 2	H319
STOT SE 3	H335
STOT SE 3	H336
Asp. Tox. 1	H304
Aquatic Acute 1	H400
Aquatic Chronic 1	H410

Full text of R-, H- and EUH-phrases:

Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Aquatic Acute 1	Hazardous to the aquatic environment - Acute Hazard Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment - Chronic Hazard Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment - Chronic Hazard Category 2
Aquatic Chronic 3	Hazardous to the aquatic environment - Chronic Hazard Category 3
Asp. Tox. 1	Aspiration hazard Category 1
Eye Dam. 1	Serious eye damage/eye irritation Category 1
Eye Irrit. 2	Serious eye damage/eye irritation Category 2
Flam. Liq. 3	Flammable liquids Category 3
Skin Sens. 1	Skin sensitisation Category 1
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
H226	Flammable liquid and vapour
H302	Harmful if swallowed
H304	May be fatal if swallowed and enters airways
H317	May cause an allergic skin reaction
H318	Causes serious eye damage
H319	Causes serious eye irritation
H335	May cause respiratory irritation
H336	May cause drowsiness or dizziness
H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects
H411	Toxic to aquatic life with long lasting effects
H412	Harmful to aquatic life with long lasting effects
R10	Flammable.
R22	Harmful if swallowed.
R36	Irritating to eyes.
R36/37/38	Irritating to eyes, respiratory system and skin.
R37	Irritating to respiratory system.
R41	Risk of serious damage to eyes.
R43	May cause sensitisation by skin contact.
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R52/53	Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R65	Harmful: may cause lung damage if swallowed.
R66	Repeated exposure may cause skin dryness or cracking.
R67	Vapours may cause drowsiness and dizziness.
N	Dangerous for the environment
Xi	Irritant
Xn	Harmful

SDS EU (REACH Annex II)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.