

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



DEFY

Version 3.0	Revision Date: 16.01.2019	SDS Number: S00040338009	This version replaces all previous versions.
----------------	------------------------------	-----------------------------	--

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

1.1 Product identifier

Trade name	: DEFY
Design code	: A8545H
Product Registration Number	: MAPP 16202

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

Use of the Sub- stance/Mixture	: Herbicide
-----------------------------------	-------------

1.3 Details of the supplier of the safety data sheet

Company	: Syngenta UK Limited CPC4, Capital Park Fulbourn, Cambridge CB21 5XE United Kingdom
Telephone	: +44 (0) 1223 883400
Telefax	: +44 (0) 1223 882195
E-mail address of person responsible for the SDS	: customer.services@syngenta.com

1.4 Emergency telephone number

Emergency telephone number	: +44 1484 538444
-------------------------------	-------------------

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Skin irritation, Category 2	H315: Causes skin irritation.
Eye irritation, Category 2	H319: Causes serious eye irritation.
Skin sensitisation, Category 1	H317: May cause an allergic skin reaction.

Aspiration hazard, Category 1	H304: May be fatal if swallowed and enters air-ways.
-------------------------------	--

Short-term (acute) aquatic hazard, Category 1	H400: Very toxic to aquatic life.
---	-----------------------------------

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



DEFY

Version 3.0 Revision Date: 16.01.2019 SDS Number: S00040338009 This version replaces all previous versions.

Long-term (chronic) aquatic hazard, Category 1

H410: Very toxic to aquatic life with long lasting effects.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms



Signal word

: Danger

Hazard statements

: H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H410 Very toxic to aquatic life with long lasting effects.

Supplemental Hazard Statements

: EUH401 To avoid risks to human health and the environment, comply with the instructions for use.

Precautionary statements

Prevention:

P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P264 Wash skin thoroughly after handling.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:

P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician.
P331 Do NOT induce vomiting.
P391 Collect spillage.

Disposal:

P501 Dispose of contents/container to a licensed hazardous-waste disposal contractor or collection site except for empty triple rinsed clean containers which can be disposed of as non-hazardous waste.

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Components

Chemical name	CAS-No.	Classification	Concentration
---------------	---------	----------------	---------------

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



DEFY

Version
3.0

Revision Date:
16.01.2019

SDS Number:
S00040338009

This version replaces all previous versions.

	EC-No. Index-No. Registration number		(% w/w)
prosulfocarb (ISO)	52888-80-9 401-730-6 006-072-00-X	Acute Tox. 4; H302 Skin Sens. 1; H317 Aquatic Acute 1; H400 Aquatic Chronic 2; H411	$\geq 70 - < 90$
Solvent naphtha (petroleum), light arom.; Low boiling point naphtha - unspecified	64742-95-6 265-199-0 649-356-00-4 01-2119455851-35	Flam. Liq. 3; H226 STOT SE 3; H336 STOT SE 3; H335 Asp. Tox. 1; H304 Aquatic Chronic 2; H411	$\geq 10 - < 20$
calcium dodecylbenzene sulpho-nate	26264-06-2 247-557-8 01-2119560592-37	Skin Irrit. 2; H315 Eye Dam. 1; H318 Aquatic Chronic 3; H412	$\geq 3 - < 10$
2-ethylhexan-1-ol	104-76-7 203-234-3 01-2119487289-20	Acute Tox. 4; H332 Skin Irrit. 2; H315 Eye Irrit. 2; H319 STOT SE 3; H335	$\geq 1 - < 10$

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

- General advice : Have the product container, label or Safety Data Sheet with you when calling the emergency number, a poison control center or physician, or going for treatment.
- If inhaled : Move the victim to fresh air.
If breathing is irregular or stopped, administer artificial respiration.
Keep patient warm and at rest.
Call a physician or poison control centre immediately.
- In case of skin contact : Take off all contaminated clothing immediately.
Wash off immediately with plenty of water.
If skin irritation persists, call a physician.
Wash contaminated clothing before re-use.
- In case of eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
Remove contact lenses.
Immediate medical attention is required.
- If swallowed : If swallowed, seek medical advice immediately and show this container or label.
Do not induce vomiting: contains petroleum distillates and/or

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



DEFY

Version	Revision Date:	SDS Number:	This version replaces all previous versions.
3.0	16.01.2019	S00040338009	

aromatic solvents.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms : Aspiration may cause pulmonary oedema and pneumonitis.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : There is no specific antidote available.
Treat symptomatically.
Do not induce vomiting: contains petroleum distillates and/or aromatic solvents.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Extinguishing media - small fires
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Extinguishing media - large fires
Alcohol-resistant foam

Unsuitable extinguishing media : Do not use a solid water stream as it may scatter and spread fire.

5.2 Special hazards arising from the substance or mixture

Specific hazards during fire-fighting : As the product contains combustible organic components, fire will produce dense black smoke containing hazardous products of combustion (see section 10).
Exposure to decomposition products may be a hazard to health.
Flash back possible over considerable distance.

5.3 Advice for firefighters

Special protective equipment for firefighters : Wear full protective clothing and self-contained breathing apparatus.

Further information : Do not allow run-off from fire fighting to enter drains or water courses.
Cool closed containers exposed to fire with water spray.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Refer to protective measures listed in sections 7 and 8.

6.2 Environmental precautions

Environmental precautions : Prevent further leakage or spillage if safe to do so.
Do not flush into surface water or sanitary sewer system.
If the product contaminates rivers and lakes or drains inform

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



DEFY

Version 3.0 Revision Date: 16.01.2019 SDS Number: S00040338009 This version replaces all previous versions.

respective authorities.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).
Clean contaminated surface thoroughly.
Clean with detergents. Avoid solvents.
Retain and dispose of contaminated wash water.

6.4 Reference to other sections

For disposal considerations see section 13., Refer to protective measures listed in sections 7 and 8.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling : No special protective measures against fire required.
Avoid contact with skin and eyes.
When using do not eat, drink or smoke.
For personal protection see section 8.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : No special storage conditions required. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children. Keep away from food, drink and animal feedingstuffs.

7.3 Specific end use(s)

Specific use(s) : For proper and safe use of this product, please refer to the approval conditions laid down on the product label.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
prosulfocarb (ISO)	52888-80-9	TWA	4 mg/m ³	Syngenta
Solvent naphtha (petroleum), light arom.; Low boiling point naphtha - unspecified	64742-95-6	TWA	19 ppm 100 mg/m ³	Supplier
2-ethylhexan-1-ol	104-76-7	TWA	1 ppm 5.4 mg/m ³	2017/164/EU
Further information	Indicative			

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



DEFY

Version
3.0

Revision Date:
16.01.2019

SDS Number:
S00040338009

This version replaces all previous versions.

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Substance name	End Use	Exposure routes	Potential health effects	Value
Solvent naphtha (petroleum), light arom.; Low boiling point naphtha -unspecified	Workers	Inhalation	Long-term systemic effects	150 mg/m3
	Workers	Dermal	Long-term systemic effects	25 mg/kg
	Consumers	Inhalation	Long-term systemic effects	32 mg/m3
	Consumers	Dermal	Long-term systemic effects	11 mg/kg
	Consumers	Oral	Long-term systemic effects	11 mg/kg
	Workers	Dermal	Long-term systemic effects	1.7 mg/kg
	Consumers	Oral	Short-term exposure, Systemic effects	89 mg/kg
	Consumers	Dermal	Long-term systemic effects	85 mg/kg
2-ethylhexan-1-ol	Consumers	Ingestion	Long-term systemic effects	1.1 mg/kg
	Workers	Dermal	Long-term systemic effects	23 mg/kg
	Consumers	Dermal	Long-term systemic effects	11.4 mg/kg
	Workers	Inhalation	Acute local effects	106.4 mg/m3
	Consumers	Inhalation	Acute local effects	53.2 mg/m3
	Workers	Inhalation	Long-term systemic effects	53.2 mg/m3
	Consumers	Inhalation	Long-term systemic effects	2.3 mg/m3

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Substance name	Environmental Compartment	Value
calcium dodecylbenzene sulpho-nate	Fresh water	0.023 mg/l
	Marine water	0.0023 mg/l
	Fresh water sediment	0.174 mg/kg
	Marine sediment	0.0174 mg/kg
	Soil	0.62 mg/kg
	Sewage treatment plant	3 mg/l
	Intermittent use/release	0.01 mg/l
2-ethylhexan-1-ol	Fresh water	0.017 mg/l
	Marine water	0.0017 mg/l
	Intermittent use/release	0.17 mg/l
	Fresh water sediment	28 mg/kg
	Marine sediment	0.028 mg/kg
	Sewage treatment plant	10 mg/kg
	Soil	0.047 mg/kg

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



DEFY

Version	Revision Date:	SDS Number:	This version replaces all previous versions.
3.0	16.01.2019	S00040338009	

8.2 Exposure controls

Engineering measures

Containment and/or segregation is the most reliable technical protection measure if exposure cannot be eliminated.

The extent of these protection measures depends on the actual risks in use.

Maintain air concentrations below occupational exposure standards.
Where necessary, seek additional occupational hygiene advice.

Personal protective equipment

Eye protection : Tightly fitting safety goggles
Always wear eye protection when the potential for inadvertent eye contact with the product cannot be excluded.

Equipment should conform to EN 166

Hand protection

Material : Nitrile rubber
Break through time : > 480 min
Glove thickness : 0.5 mm

Remarks : Wear protective gloves. The choice of an appropriate glove does not only depend on its material but also on other quality features and is different from one producer to the other.
Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time. The break through time depends amongst other things on the material, the thickness and the type of glove and therefore has to be measured for each case. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.
The selected protective gloves have to satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it.

Skin and body protection : Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place.
Remove and wash contaminated clothing before re-use.
Wear as appropriate:
Impervious clothing

Respiratory protection : No personal respiratory protective equipment normally required.
When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

Protective measures : The use of technical measures should always have priority

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



DEFY

Version	Revision Date:	SDS Number:	This version replaces all previous versions.
3.0	16.01.2019	S00040338009	

over the use of personal protective equipment.
When selecting personal protective equipment, seek appropriate professional advice.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	:	clear
Colour	:	pale yellow
Odour	:	aromatic
Odour Threshold	:	No data available
pH	:	6 Concentration: 1 % w/v
Melting point/range	:	No data available
Boiling point/boiling range	:	No data available
Flash point	:	73 °C Method: Pensky-Martens closed cup
Evaporation rate	:	No data available
Flammability (solid, gas)	:	No data available
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Relative vapour density	:	No data available
Density	:	1,012 g/cm ³ (25 °C)
Solubility(ies)		
Solubility in other solvents	:	No data available
Partition coefficient: n-octanol/water	:	No data available
Auto-ignition temperature	:	380 °C
Decomposition temperature	:	No data available
Viscosity		

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



DEFY

Version	Revision Date:	SDS Number:	This version replaces all previous versions.
3.0	16.01.2019	S00040338009	

Viscosity, dynamic : No data available

Explosive properties : Not explosive

Oxidizing properties : The substance or mixture is not classified as oxidizing.

9.2 Other information

No data available

SECTION 10: Stability and reactivity

10.1 Reactivity

None reasonably foreseeable.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

Hazardous reactions : No dangerous reaction known under conditions of normal use.

10.4 Conditions to avoid

Conditions to avoid : No decomposition if used as directed.

10.5 Incompatible materials

Materials to avoid : None known.

10.6 Hazardous decomposition products

Hazardous decomposition products : No hazardous decomposition products are known.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Information on likely routes of exposure : Ingestion
Inhalation
Skin contact
Eye contact

Acute toxicity

Product:

Acute oral toxicity : LD50 (Rat, male and female): > 2,000 mg/kg
Assessment: The substance or mixture has no acute oral toxicity
Remarks: The toxicological data has been taken from products of similar composition.

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



DEFY

Version 3.0	Revision Date: 16.01.2019	SDS Number: S00040338009	This version replaces all previous versions.
----------------	------------------------------	-----------------------------	--

Acute inhalation toxicity	: Acute toxicity estimate: > 5 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: Calculation method
Acute dermal toxicity	: LD50 (Rat, male and female): > 4,000 mg/kg Assessment: The substance or mixture has no acute dermal toxicity Remarks: The toxicological data has been taken from products of similar composition.

Components:

prosulfocarb (ISO):

Acute oral toxicity	: LD50 (Rat, female): 1,958 mg/kg LD50 (Rat, male): 1,820 mg/kg
Acute inhalation toxicity	: LC50 (Rat): > 4.7 mg/l Exposure time: 4 h Test atmosphere: dust/mist Assessment: The substance or mixture has no acute inhalation toxicity
Acute dermal toxicity	: LD50 (Rat): > 2,000 mg/kg Assessment: The substance or mixture has no acute dermal toxicity

Solvent naphtha (petroleum), light arom.; Low boiling point naphtha -unspecified:

Acute oral toxicity	: LD50 (Rat): 3,952 mg/kg
---------------------	---------------------------

2-ethylhexan-1-ol:

Acute oral toxicity	: LD50 (Rat): 2,047 mg/kg
Acute inhalation toxicity	: LC50 (Rat): > 0.89 - 5.3 mg/l Exposure time: 4 h Test atmosphere: dust/mist Assessment: The component/mixture is moderately toxic after short term inhalation.

Skin corrosion/irritation

Product:

Species	: Rabbit
Result	: Irritating to skin.
Remarks	: The toxicological data has been taken from products of similar composition.

Components:

prosulfocarb (ISO):

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



DEFY

Version	Revision Date:	SDS Number:	This version replaces all previous versions.
3.0	16.01.2019	S00040338009	

Species	:	Rabbit
Result	:	No skin irritation

calcium dodecylbenzene sulphonate:

Result	:	Irritating to skin.
--------	---	---------------------

2-ethylhexan-1-ol:

Species	:	Rabbit
Result	:	Irritating to skin.

Serious eye damage/eye irritation

Product:

Species	:	Rabbit
Result	:	Irritation to eyes, reversing within 21 days
Remarks	:	The toxicological data has been taken from products of similar composition.

Components:

prosulfocarb (ISO):

Species	:	Rabbit
Result	:	No eye irritation

calcium dodecylbenzene sulphonate:

Result	:	Risk of serious damage to eyes.
--------	---	---------------------------------

2-ethylhexan-1-ol:

Species	:	Rabbit
Result	:	Irritation to eyes, reversing within 21 days

Respiratory or skin sensitisation

Product:

Test Type	:	Buehler Test
Species	:	Guinea pig
Result	:	May cause sensitisation by skin contact.
Remarks	:	The toxicological data has been taken from products of similar composition.

Components:

prosulfocarb (ISO):

Species	:	Guinea pig
Result	:	May cause sensitisation by skin contact.

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



DEFY

Version	Revision Date:	SDS Number:	This version replaces all previous versions.
3.0	16.01.2019	S00040338009	

Germ cell mutagenicity

Components:

prosulfocarb (ISO):

Germ cell mutagenicity- Assessment : Animal testing did not show any mutagenic effects.

Solvent naphtha (petroleum), light arom.; Low boiling point naphtha -unspecified:

Germ cell mutagenicity- Assessment : Classified based on benzene content < 0.1% (Regulation (EC) 1272/2008, Annex VI, Part 3, Note P)

Carcinogenicity

Components:

prosulfocarb (ISO):

Carcinogenicity - Assessment : No evidence of carcinogenicity in animal studies.

Solvent naphtha (petroleum), light arom.; Low boiling point naphtha -unspecified:

Carcinogenicity - Assessment : Classified based on benzene content < 0.1% (Regulation (EC) 1272/2008, Annex VI, Part 3, Note P)

Reproductive toxicity

Components:

prosulfocarb (ISO):

Reproductive toxicity - Assessment : No toxicity to reproduction

STOT - single exposure

Components:

Solvent naphtha (petroleum), light arom.; Low boiling point naphtha -unspecified:

Assessment : The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with respiratory tract irritation., The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with narcotic effects.

2-ethylhexan-1-ol:

Assessment : The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with respiratory tract irritation.

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



DEFY

Version 3.0	Revision Date: 16.01.2019	SDS Number: S00040338009	This version replaces all previous versions.
----------------	------------------------------	-----------------------------	--

Repeated dose toxicity

Components:

prosulfocarb (ISO):

Remarks : No adverse effect has been observed in chronic toxicity tests.

Aspiration toxicity

Components:

Solvent naphtha (petroleum), light arom.; Low boiling point naphtha -unspecified:

May be fatal if swallowed and enters airways.

SECTION 12: Ecological information

12.1 Toxicity

Product:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 3 mg/l
Exposure time: 96 h
Remarks: Based on test results obtained with similar product.

Toxicity to daphnia and other : EC50 (Daphnia magna (Water flea)): 2.2 mg/l
aquatic invertebrates Exposure time: 48 h
Remarks: Based on test results obtained with similar product.

Toxicity to algae/aquatic : ErC50 (Pseudokirchneriella subcapitata (green algae)): 0.18
plants mg/l
Exposure time: 96 h
Remarks: Based on test results obtained with similar product.

NOEC (Pseudokirchneriella subcapitata (green algae)): 0.010
mg/l
End point: Growth rate
Exposure time: 96 h
Remarks: Based on test results obtained with similar product.

Components:

prosulfocarb (ISO):

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 0.84 mg/l
Exposure time: 96 h

Toxicity to daphnia and other : EC50 (Daphnia magna (Water flea)): 0.51 mg/l
aquatic invertebrates Exposure time: 48 h

Toxicity to algae/aquatic : ErC50 (Pseudokirchneriella subcapitata (green algae)): 0.120
plants mg/l
Exposure time: 72 h

NOEC (Pseudokirchneriella subcapitata (green algae)): 0.009

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



DEFY

Version	Revision Date:	SDS Number:	This version replaces all previous versions.
3.0	16.01.2019	S00040338009	

mg/l
End point: Growth rate
Exposure time: 72 h

ErC50 (Navicula pelliculosa (Freshwater diatom)): 0.68 mg/l
Exposure time: 72 h

NOEC (Navicula pelliculosa (Freshwater diatom)): 0.2 mg/l
End point: Growth rate
Exposure time: 72 h

Toxicity to fish (Chronic toxicity) : NOEC: 0.31 mg/l
Exposure time: 21 d
Species: Oncorhynchus mykiss (rainbow trout)

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 0.045 mg/l
Exposure time: 21 d
Species: Daphnia magna (Water flea)

Solvent naphtha (petroleum), light arom.; Low boiling point naphtha -unspecified:

Toxicity to fish : LL50 (Oncorhynchus mykiss (rainbow trout)): 9.2 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EL50 (Daphnia magna (Water flea)): 3.2 mg/l
Exposure time: 48 h

Toxicity to algae/aquatic plants : ErC50 (Pseudokirchneriella subcapitata (green algae)): 2.6 - 2.9 mg/l
Exposure time: 72 h
Test Type: Growth inhibition

NOEC (Pseudokirchneriella subcapitata (green algae)): 1 mg/l
Exposure time: 72 h

Toxicity to fish (Chronic toxicity) : NOEC: 1.23 mg/l
Exposure time: 28 d
Species: Oncorhynchus mykiss (rainbow trout)

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 2.14 mg/l
Exposure time: 28 d
Species: Daphnia magna (Water flea)

Ecotoxicology Assessment

Chronic aquatic toxicity : Toxic to aquatic life with long lasting effects.

calcium dodecylbenzene sulphonate:

Ecotoxicology Assessment

Chronic aquatic toxicity : Harmful to aquatic life with long lasting effects.

2-ethylhexan-1-ol:

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



DEFY

Version	Revision Date:	SDS Number:	This version replaces all previous versions.
3.0	16.01.2019	S00040338009	

Toxicity to fish	:	LC50 (Leuciscus idus (Golden orfe)): 17.1 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 39 mg/l Exposure time: 48 h
Toxicity to algae/aquatic plants	:	EC50 (Desmodesmus subspicatus (green algae)): 16.6 mg/l Exposure time: 72 h

12.2 Persistence and degradability

Components:

prosulfocarb (ISO):

Biodegradability	:	Result: Not readily biodegradable.
Stability in water	:	Degradation half life: 159 - 279 d Remarks: Persistent in water.

Solvent naphtha (petroleum), light arom.; Low boiling point naphtha -unspecified:

Biodegradability	:	Result: Readily biodegradable.
------------------	---	--------------------------------

2-ethylhexan-1-ol:

Biodegradability	:	Result: Readily biodegradable.
------------------	---	--------------------------------

12.3 Bioaccumulative potential

Components:

prosulfocarb (ISO):

Bioaccumulation	:	Remarks: Prosulfocarb bioaccumulates.
-----------------	---	---------------------------------------

12.4 Mobility in soil

Components:

prosulfocarb (ISO):

Distribution among environmental compartments	:	Remarks: Slightly mobile in soils
Stability in soil	:	Dissipation time: 35 d Percentage dissipation: 50 % (DT50) Remarks: Product is not persistent.

12.5 Results of PBT and vPvB assessment

Product:

Assessment	:	This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher..
------------	---	---

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



DEFY

Version 3.0	Revision Date: 16.01.2019	SDS Number: S00040338009	This version replaces all previous versions.
----------------	------------------------------	-----------------------------	--

Components:

prosulfocarb (ISO):

Assessment : This substance is not considered to be persistent, bioaccumulating and toxic (PBT).. This substance is not considered to be very persistent and very bioaccumulating (vPvB)..

Solvent naphtha (petroleum), light arom.; Low boiling point naphtha -unspecified:

Assessment : This substance is not considered to be persistent, bioaccumulating and toxic (PBT).. This substance is not considered to be very persistent and very bioaccumulating (vPvB)..

2-ethylhexan-1-ol:

Assessment : This substance is not considered to be persistent, bioaccumulating and toxic (PBT).. This substance is not considered to be very persistent and very bioaccumulating (vPvB)..

12.6 Other adverse effects

No data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product : Do not contaminate ponds, waterways or ditches with chemical or used container.
Do not dispose of waste into sewer.
Where possible recycling is preferred to disposal or incineration.
If recycling is not practicable, dispose of in compliance with local regulations.

Contaminated packaging : Empty remaining contents.
Triple rinse containers.
Empty containers should be taken to an approved waste handling site for recycling or disposal.
Do not re-use empty containers.

Waste Code : 15 01 10, packaging containing residues of or contaminated by hazardous substances

SECTION 14: Transport information

14.1 UN number

ADN	: UN 3082
ADR	: UN 3082
RID	: UN 3082

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



DEFY

Version 3.0	Revision Date: 16.01.2019	SDS Number: S00040338009	This version replaces all previous versions.
----------------	------------------------------	-----------------------------	--

IMDG : UN 3082

IATA : UN 3082

14.2 UN proper shipping name

ADN : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,
N.O.S.
(PROSULFOCARB AND SOLVENT NAPHTHA)

ADR : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,
N.O.S.
(PROSULFOCARB AND SOLVENT NAPHTHA)

RID : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,
N.O.S.
(PROSULFOCARB AND SOLVENT NAPHTHA)

IMDG : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,
N.O.S.
(PROSULFOCARB AND SOLVENT NAPHTHA)

IATA : Environmentally hazardous substance, liquid, n.o.s.
(PROSULFOCARB AND SOLVENT NAPHTHA)

14.3 Transport hazard class(es)

ADN : 9

ADR : 9

RID : 9

IMDG : 9

IATA : 9

14.4 Packing group

ADN
Packing group : III
Classification Code : M6
Hazard Identification Number : 90
Labels : 9

ADR
Packing group : III
Classification Code : M6
Hazard Identification Number : 90
Labels : 9
Tunnel restriction code : (-)

RID
Packing group : III
Classification Code : M6
Hazard Identification Number : 90
Labels : 9

IMDG
Packing group : III
Labels : 9

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



DEFY

Version 3.0	Revision Date: 16.01.2019	SDS Number: S00040338009	This version replaces all previous versions.
----------------	------------------------------	-----------------------------	--

EmS Code : F-A, S-F

IATA (Cargo)

Packing instruction (cargo aircraft) : 964
Packing instruction (LQ) : Y964
Packing group : III
Labels : Miscellaneous

IATA (Passenger)

Packing instruction (passenger aircraft) : 964
Packing instruction (LQ) : Y964
Packing group : III
Labels : Miscellaneous

14.5 Environmental hazards

ADN

Environmentally hazardous : yes

ADR

Environmentally hazardous : yes

RID

Environmentally hazardous : yes

IMDG

Marine pollutant : yes

IATA (Passenger)

Environmentally hazardous : yes

IATA (Cargo)

Environmentally hazardous : yes

14.6 Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable for product as supplied.

SECTION 15: Regulatory information

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

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59) : Not applicable

REACH - List of substances subject to authorisation (Annex XIV) : Not applicable

Regulation (EC) No 1005/2009 on substances that deplete the ozone layer : Not applicable

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



DEFY

Version	Revision Date:	SDS Number:	This version replaces all previous versions.
3.0	16.01.2019	S00040338009	

Regulation (EC) No 850/2004 on persistent organic pollutants : Not applicable

Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals : Not applicable

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII) : Conditions of restriction for the following entries should be considered: Number on list 3

Solvent naphtha (petroleum), light arom.; Low boiling point naphtha - unspecified (Number on list 29, 28)

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.

E1	ENVIRONMENTAL HAZARDS	Quantity 1 100 t	Quantity 2 200 t
----	--------------------------	---------------------	---------------------

Other regulations:

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.

Use plant protection products safely. Always read the label and product information before use.

Take note of Directive 94/33/EC on the protection of young people at work or stricter national regulations, where applicable.

15.2 Chemical safety assessment

A Chemical Safety Assessment is not required for this substance when it is used in the specified applications.

SECTION 16: Other information

Full text of H-Statements

H226	: Flammable liquid and vapour.
H302	: Harmful if swallowed.
H304	: May be fatal if swallowed and enters airways.
H315	: Causes skin irritation.
H317	: May cause an allergic skin reaction.
H318	: Causes serious eye damage.
H319	: Causes serious eye irritation.
H332	: Harmful if inhaled.
H335	: May cause respiratory irritation.
H336	: May cause drowsiness or dizziness.
H400	: Very toxic to aquatic life.
H411	: Toxic to aquatic life with long lasting effects.
H412	: Harmful to aquatic life with long lasting effects.

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



DEFY

Version	Revision Date:	SDS Number:	This version replaces all previous versions.
3.0	16.01.2019	S00040338009	

Full text of other abbreviations

Acute Tox.	: Acute toxicity
Aquatic Acute	: Short-term (acute) aquatic hazard
Aquatic Chronic	: Long-term (chronic) aquatic hazard
Asp. Tox.	: Aspiration hazard
Eye Dam.	: Serious eye damage
Eye Irrit.	: Eye irritation
Flam. Liq.	: Flammable liquids
Skin Irrit.	: Skin irritation
Skin Sens.	: Skin sensitisation
STOT SE	: Specific target organ toxicity - single exposure
2017/164/EU	: Commission Directive (EU) 2017/164 establishing a fourth list of indicative occupational exposure limit values pursuant to Council Directive 98/24/EC, and amending Commission Directives 91/322/EEC, 2000/39/EC and 2009/161/EU
2017/164/EU / TWA	: Limit Value - eight hours

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Further information

Classification of the mixture:

Classification procedure:

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



DEFY

Version	Revision Date:	SDS Number:	This version replaces all previous versions.
3.0	16.01.2019	S00040338009	

Skin Irrit. 2	H315	On basis of test data.
Eye Irrit. 2	H319	Based on product data or assessment
Skin Sens. 1	H317	Based on product data or assessment
Asp. Tox. 1	H304	Calculation method
Aquatic Acute 1	H400	Based on product data or assessment
Aquatic Chronic 1	H410	Based on product data or assessment

Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

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.

GB / EN