SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, as amended

TROYSHIELD FF5

Version 1.0 | Revision Date 01.07.2025 | Print Date 29.08.2025

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

1.1 Product identifier

Product name : TROYSHIELD FF5

Unique Formula Identifier (UFI) : WNP0-40D0-F004-DFA7

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

Use of the Substance/Mixture : Machine cleaner for the metal-working industry

1.3 Details of the supplier of the safety data sheet

Company : **TROY CHEMICAL COMPANY BV**
Poortweg 4C
2612PA Delft
The Netherlands
Telephone: + 31 (0) 10 899 0142

E-mail address / Responsible/issuing person : sds-info@arxada.com

1.4 Emergency telephone number

Emergency telephone number : EMEA: +44 20 3885 0382 [CCN864796]
Americas: +1-800-424-9300 [CCN864796]
Americas: +1-703-527-3887 [CCN864796]
APAC: +65 3163 8374 [CCN864796]
New Zealand: +64 0800 425 459 [CCN864796]

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Skin corrosion, Category 1	H314: Causes severe skin burns and eye damage.
Serious eye damage, Category 1	H318: Causes serious eye damage.
Skin sensitisation, Category 1	H317: May cause an allergic skin reaction.
Long-term (chronic) aquatic hazard, Category 2	H411: 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 : H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.

H411 Toxic to aquatic life with long lasting effects.

Precautionary statements :

Prevention:

P273 Avoid release to the environment.
P280 Wear protective gloves/ eye protection/ face protection.

Response:

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER/ doctor.

Hazardous components which must be listed on the label:

2-phenoxyethanol
2-aminoethanol
Poly(oxy-1,2-ethanediyl), α-(carboxymethyl)-ω-(hexyloxy)-
Benzisothiazol- 3(2H)-one

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.

Ecological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Components

Chemical name	CAS-No. EC-No. Index-No. REACH Registration Number	Classification	Concentration (% w/w)
2-phenoxyethanol	122-99-6	Acute Tox. 4; H302 Eye Dam. 1; H318 STOT SE 3; H335 Acute toxicity estimate Acute oral toxicity: 1 394 mg/kg	>= 3 - < 5
2-phenylphenol (ISO)	90-43-7 201-993-5 604-020-00-6	Aquatic Acute 1; H400 Aquatic Chronic 1; H410	>= 1 - < 2,5

	01-2119511183-53	Eye Irrit. 2; H319 Skin Irrit. 2; H315 STOT SE 3; H335	
2-(2-Butoxyethoxy)ethanol.	112-34-5 01-2119475104-44	Eye Irrit. 2; H319	>= 1 - < 3
potassium hydroxide	1310-58-3 01-2119487136-33	Acute Tox. 4; H302 Aquatic Chronic 3; H412 Eye Irrit. 2; H319 Skin Irrit. 2; H315 specific concentration limit Skin Corr. 1A; H314 >= 5 % Skin Corr. 1B; H314 2 - < 5 % Skin Irrit. 2; H315 0,5 - < 2 % Eye Irrit. 2; H319 0,5 - < 2 %	>= 1 - < 2
2-aminoethanol	141-43-5 01-2119486455-28	Acute Tox. 4; H302 Acute Tox. 4; H312 Acute Tox. 4; H332 Aquatic Chronic 3; H412 Eye Dam. 1; H318 Skin Corr. 1B; H314 STOT SE 3; H335 specific concentration limit STOT SE 3; H335 >= 5 % Acute toxicity estimate Acute oral toxicity: 1 089 mg/kg	>= 1 - < 2,5
Poly(oxy-1,2-ethanediyl), α-(carboxymethyl)-ω-(hexyloxy)-	105391-15-9	Eye Dam. 1; H318 Skin Irrit. 2; H315	>= 1 - < 3
Benzisothiazol- 3(2H)-one	2634-33-5 220-120-9 613-088-00-6	Acute Tox. 4; H302 Acute Tox. 2; H330 Skin Irrit. 2; H315 Eye Dam. 1; H318 Skin Sens. 1; H317 Aquatic Acute 1; H400 Aquatic Chronic 1; H410 M-Factor (Acute aquatic toxicity): 1 M-Factor (Chronic aquatic toxicity): 1	>= 0,3 - < 0,5

		specific concentration limit Skin Sens. 1; H317 >= 0,036 % Acute toxicity estimate Acute oral toxicity: 450 mg/kg Acute inhalation toxicity: 0,21 mg/l 0,21 mg/l	

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

If inhaled : Move to fresh air.
If unconscious, place in recovery position and seek medical advice.
Keep respiratory tract clear.
If breathing is irregular or stopped, administer artificial respiration.
Call a physician or poison control centre immediately.

In case of skin contact : After contact with skin, wash immediately with plenty of soap and water.
Take off contaminated clothing and shoes immediately.
Immediate medical treatment is necessary as untreated wounds from corrosion of the skin heal slowly and with difficulty.
Take victim immediately to hospital.

In case of eye contact : Rinse immediately with plenty of lukewarm water, also under the eyelids, for at least 15 minutes.
Call a physician immediately.
Remove contact lenses.
Keep eye wide open while rinsing.
Protect unharmed eye.
Continue rinsing eyes during transport to hospital.
Small amounts splashed into eyes can cause irreversible tissue damage and blindness.

If swallowed : Clean mouth with water and drink afterwards plenty of water.
Do NOT induce vomiting.
Never give anything by mouth to an unconscious person.
Take victim immediately to hospital.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms : No information available.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : Treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media	:	Water spray Alcohol-resistant foam Dry chemical
Unsuitable extinguishing media	:	High volume water jet

5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting	:	Heating or fire can release toxic gas. Do not allow run-off from fire fighting to enter drains or water courses.
Hazardous combustion products	:	No hazardous combustion products are known

5.3 Advice for firefighters

Special protective equipment for firefighters	:	In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment.
Further information	:	Use water spray to cool unopened containers. Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions	:	Use personal protective equipment. Use respirator when performing operations involving potential exposure to vapour of the product.

6.2 Environmental precautions

Environmental precautions	:	Prevent product from entering drains. Prevent further leakage or spillage if safe to do so.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up	:	Neutralise with acid. 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).

6.4 Reference to other sections

For personal protection see section 8.

For disposal considerations see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling	:	Avoid formation of aerosol.

Avoid exposure - obtain special instructions before use.
Do not breathe vapours/dust.
Avoid contact with skin and eyes.
Smoking, eating and drinking should be prohibited in the application area.
For personal protection see section 8.
Provide sufficient air exchange and/or exhaust in work rooms.
To avoid spills during handling keep bottle on a metal tray.
Dispose of rinse water in accordance with local and national regulations.

Advice on protection against fire and explosion : Normal measures for preventive fire protection.

Hygiene measures : Wash hands before breaks and at the end of workday. Avoid contact with skin, eyes and clothing. When using do not eat or drink. When using do not smoke.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Keep container tightly closed. Keep in a well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Electrical installations / working materials must comply with the technological safety standards. To maintain product quality, do not store in heat or direct sunlight. To prevent leaks or spillages from spreading, provide a suitable liquid retention system.

Advice on common storage : Do not store near acids.

Further information on storage stability : No decomposition if stored and applied as directed.

7.3 Specific end use(s)

Specific use(s) : No information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
2-(2-Butoxyethoxy) ethanol.	112-34-5	TWA	10 ppm 67,5 mg/m3	2006/15/EC
		STEL	15 ppm 101,2 mg/m3	2006/15/EC
		(Inhalable fraction and vapor)	10 ppm	ACGIH
2-aminoethanol	141-43-5	TWA	1 ppm 2,5 mg/m3	2006/15/EC
		STEL	3 ppm 7,6 mg/m3	2006/15/EC
			3 ppm	ACGIH
			6 ppm	ACGIH

8.2 Exposure controls

Personal protective equipment

Eye protection	:	Safety glasses with side-shields conforming to EN166 Wear face-shield and protective suit for abnormal processing problems.
Hand protection		
Material	:	Nitrile rubber
Remarks	:	Take note of the information given by the producer concerning permeability and break through times, and of special workplace conditions (mechanical strain, duration of contact). Wear protective gloves. Break through time : > 480 min 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 according to the amount and concentration of the dangerous substance at the work place. Rubber or plastic apron Rubber or plastic boots
Respiratory protection	:	In the case of vapour formation use a respirator with an approved filter. Respirator with ABEK filter. Respirator with a vapour filter (EN 141)

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	:	liquid
Colour	:	colourless, purple
Odour	:	characteristic
Melting point/freezing point	:	No data available
Boiling point/boiling range	:	No data available
Flammability (solid, gas)	:	No data available
Flammability (liquids)	:	No data available
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Flash point	:	No data available
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
pH	:	13
Viscosity		
Viscosity, kinematic	:	No data available
Solubility(ies)		
Water solubility	:	Easily soluble - cold water

		Easily soluble - hot water
Partition coefficient: n-octanol/water	:	No data available
Vapour pressure	:	No data available
Relative density	:	1,035
Density	:	No data available
Relative vapour density	:	No data available
Particle characteristics	:	No data available

9.2 Other information

No data available

SECTION 10: Stability and reactivity

10.1 Reactivity

No decomposition if stored and applied as directed.

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

Hazardous reactions	:	Stable under recommended storage conditions.

10.4 Conditions to avoid

Conditions to avoid	:	Heat

10.5 Incompatible materials

Materials to avoid	:	Oxidizing agents Strong acids and strong bases

10.6 Hazardous decomposition products

No decomposition if used as directed.

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity

Acute oral toxicity	:	Acute toxicity estimate: > 2 000 mg/kg Method: Calculation method
Acute inhalation toxicity	:	Acute toxicity estimate: > 5 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: Calculation method
Acute dermal toxicity	:	Acute toxicity estimate: > 2 000 mg/kg Method: Calculation method

Skin corrosion/irritation

Remarks: No data available

Serious eye damage/eye irritation

Remarks: No data available

Respiratory or skin sensitisation

Remarks: No data available

Germ cell mutagenicity

Genotoxicity in vitro : Remarks: No data available

Carcinogenicity

Remarks: No data available

Reproductive toxicity

Effects on fertility : Remarks: No data available

STOT - single exposure

Remarks: No data available

STOT - repeated exposure

Remarks: No data available

Aspiration toxicity

No aspiration toxicity classification

11.2 Information on other hazards

Endocrine disrupting properties

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Further information

Remarks: Ingestion may cause nausea, vomiting, sore throat, stomach-ache and eventually lead to a perforation of the intestine.

SECTION 12: Ecological information

12.1 Toxicity

Toxicity to fish : Remarks: No data available

12.2 Persistence and degradability

Biodegradability : Remarks: No data available

12.3 Bioaccumulative potential

Bioaccumulation : Remarks: No data available

12.4 Mobility in soil

Distribution among environmental compartments	:	Remarks: No data available

12.5 Results of PBT and vPvB assessment

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.

12.6 Endocrine disrupting properties

Endocrine disrupting potential	:	The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7 Other adverse effects

Additional ecological information	:	An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Toxic to aquatic life with long lasting effects.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product	:	Dispose of contents/container in accordance with local regulation. Contact waste disposal services. Do not dispose of waste into sewer. The product should not be allowed to enter drains, water courses or the soil.
Contaminated packaging	:	Dispose of as unused product. Do not re-use empty containers.

SECTION 14: Transport information

IATA

14.1	**UN number**	:	3266
14.2	**Proper shipping name**	:	CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (potassium hydroxide, 2-phenylphenol (ISO))
14.3	**Transport hazard class(es)**	:	8
14.4	**Packing group**	:	II
	Labels	:	8
14.5	**Environmental hazards**	:	no

IMDG

14.1	**UN number**	:	3266
14.2	**Proper shipping name**	:	CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (potassium hydroxide, 2-phenylphenol (ISO))
14.3	**Transport hazard class(es)**	:	8
14.4	**Packing group**	:	II
	Labels	:	8
	EmS Number 1	:	F-A
	EmS Number 2	:	S-B
14.5	**Environmental hazards**	:	Marine pollutant: no

ADR

14.1	**UN number**	:	3266
14.2	**Proper shipping name**	:	CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (potassium hydroxide, 2-phenylphenol (ISO))
14.3	**Transport hazard class(es)**	:	8
14.4	**Packing group**	:	II
	Classification Code	:	C5
	Hazard Identification Number	:	80
	Labels	:	8
14.5	**Environmental hazards**	:	no

RID

14.1	**UN number**	:	3266
14.2	**Proper shipping name**	:	CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (potassium hydroxide, 2-phenylphenol (ISO))
14.3	**Transport hazard class(es)**	:	8
14.4	**Packing group**	:	II
	Classification Code	:	C5
	Hazard Identification Number	:	80
	Labels	:	8
14.5	**Environmental hazards**	:	no

DOT

14.1	**UN number**	:	3266
14.2	**Proper shipping name**	:	CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (potassium hydroxide, 2-phenylphenol (ISO))
14.3	**Transport hazard class(es)**	:	8
14.4	**Packing group**	:	II
	Labels	:	8
	Emergency Response Guidebook Number	:	154
14.5	**Environmental hazards**	:	no

TDG

14.1	**UN number**	:	3266
14.2	**Proper shipping name**	:	CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (potassium hydroxide, 2-phenylphenol (ISO))
14.3	**Transport hazard class(es)**	:	8
14.4	**Packing group**	:	II
	Labels	:	8
14.5	**Environmental hazards**	:	no

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 Maritime transport in bulk according to IMO instruments

Not applicable for product as supplied.

SECTION 15: Regulatory information

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

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

		Quantity 1	Quantity 2
E2	ENVIRONMENTAL HAZARDS	200 t	500 t

Water hazard class (Germany) : WGK 3 highly hazardous to water

Other regulations:

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

No data available

SECTION 16: Other information

Classification of the mixture:		Classification procedure:
Skin Corr. 1	H314	Based on product data or assessment
Eye Dam. 1	H318	Based on product data or assessment
Skin Sens. 1	H317	Calculation method
Aquatic Chronic 2	H411	Calculation method

Full text of H-Statements

H302	:	Harmful if swallowed.
H312	:	Harmful in contact with skin.
H314	:	Causes severe skin burns and eye damage.
H315	:	Causes skin irritation.
H317	:	May cause an allergic skin reaction.
H318	:	Causes serious eye damage.
H319	:	Causes serious eye irritation.
H330	:	Fatal if inhaled.
H332	:	Harmful if inhaled.
H335	:	May cause respiratory irritation.
H400	:	Very toxic to aquatic life.
H410	:	Very toxic to aquatic life with long lasting effects.
H412	:	Harmful to aquatic life with long lasting effects.

Full text of other abbreviations

Acute Tox.	:	Acute toxicity
Aquatic Acute	:	Short-term (acute) aquatic hazard
Aquatic Chronic	:	Long-term (chronic) aquatic hazard
Eye Dam.	:	Serious eye damage
Eye Irrit.	:	Eye irritation
Skin Corr.	:	Skin corrosion
Skin Irrit.	:	Skin irritation
Skin Sens.	:	Skin sensitisation
STOT SE	:	Specific target organ toxicity - single exposure
2006/15/EC	:	Europe. Indicative occupational exposure limit values
ACGIH	:	USA. ACGIH Threshold Limit Values (TLV)
ACGIH / TWA	:	8-hour, time-weighted average
ACGIH / STEL	:	Short-term exposure limit

ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; ATE - Acute Toxicity Estimate; AwSV - Verordnung über Anlagen zum Umgang mit wassergefährdenden Stoffen / Ordinance on facilities for handling substances that are hazardous to water; BPR – Biocidal Product Regulation; bw - Body weight; CAS - Chemical Abstract Service; CLP - Classification Labelling Packaging Regulation, Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DNEL-Derived No Effect Level; DOT - Department of Transportation; EC – European Community; ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; EmS (Emergency Response Procedures for Ships Carrying Dangerous Goods); EN – European Standard; ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; EU OEL - European Occupational Exposure Limit; GHS -Globally Harmonized System of Classification and Labelling of Chemicals; GLP - Good Laboratory Practice; GV – Danish Exposure Limits for Substances and Materials; 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; IMDG - International Maritime Dangerous Goods; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); LOFT - Danish Threshold Limit Value; MAK - German Threshold Limit

Value; MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NIOSH/Guide – National Institute of Safety and Health Guidebook; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NTP - National Toxicology Program; OECD - Organization for Economic Co-operation and Development; PBT - Persistent, Bioaccumulative and Toxic substance; PEL - Permissible Exposure Limit; PNEC - Predicted no Effect Concentration; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; REL - Recommended Exposure Limit; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; STEL - Short-Term Exposure Limit; TDG - Transportation of Dangerous Goods; TGG – Dutch Threshold Limit Value; TGV – Swedish OEL; TLV Threshold Limit Value; TLV-C - Threshold Limit Value Ceiling; TWA -Time Weighted Average; UDS - Unscheduled DNA Synthesis; UN - United Nations; VLE - Valeurs limites d'exposition professionnelle aux agents chimiques en France; VME - Valeur (Limite) Moyenne d'Exposition; VOC - Volatile Organic Compound[s]; WEEL - Workplace Environmental Exposure Level; % w/w Percent weight by weight; %(V) Percent Volume

Further information

Other information	:	This Safety Data Sheet is a generic European Safety Data Sheet and therefore does not contain all specific information for each European country.
Date format	:	dd.mm.yyyy

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.

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