

**Safety Data Sheet****Dr. Schumacher**

according to Regulation (EC) No 1907/2006

thermoShield C

Revision date: 13.09.2018

Product code: 00320-0227-GHS

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

thermoShield C

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

Neutralising agent for machine processing of instruments

1.3. Details of the supplier of the safety data sheet

Company name:	Dr. Schumacher GmbH	
Street:	Am Roggenfeld 3	
Place:	34323 Malsfeld / DEUTSCHLAND	
Telephone:	+49 (0) 5664/9496-0	Telefax: +49 (0) 5664/8444
e-mail:	post@schumacher-online.com	
Internet:	www.schumacher-online.com	
Responsible Department:	Responsible for the safety data sheet: sds@gbk-ingelheim.de	

1.4. Emergency telephone number: INTERNATIONAL: +49 - (0) 6132 - 84463, GBK GmbH (24h - 7d/w - 365d/a)
In England and Wales: NHS 111 In Scotland: NHS 24 - dial 111

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture****Regulation (EC) No. 1272/2008**

Hazard categories:

Substance or mixture corrosive to metals: Met. Corr. 1

Skin corrosion/irritation: Skin Corr. 1A

Serious eye damage/eye irritation: Eye Dam. 1

Hazard Statements:

May be corrosive to metals.

Causes severe skin burns and eye damage.

2.2. Label elements**Regulation (EC) No. 1272/2008****Hazard components for labelling**

Citric acid

formic acid

Signal word:

Danger

Pictograms:**Hazard statements**

H290

May be corrosive to metals.

H314

Causes severe skin burns and eye damage.

Precautionary statements

P280

Wear protective gloves/protective clothing/eye protection/face protection.

P301+P330+P331

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P303+P361+P353

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.

P304+P340

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P305+P351+P338

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if



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- P310 present and easy to do. Continue rinsing.
P390 Immediately call a POISON CENTER/doctor.
P406 Absorb spillage to prevent material damage.
Store in a corrosion-resistant container with a resistant inner liner.

Additional advice on labelling

Classification and labelling according to Regulation (EC) No 1272/2008 Annex I paragraph 3.2.3.3.4.2 (pH value).

2.3. Other hazards

According to Regulation (EC) No 1907/2006 (REACH) none of the substances, contained in this product are a PBT / vPvB substance.

SECTION 3: Composition/information on ingredients**3.2. Mixtures****Chemical characterization**

Aqueous solution

Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification according to Regulation (EC) No. 1272/2008 [CLP]			
77-92-9	Citric acid			< 45 %
	201-069-1		01-2119457026-42	
	Eye Irrit. 2; H319			
64-18-6	formic acid			< 1 %
	200-579-1	607-001-00-0	01-2119491174-37	
	Flam. Liq. 3, Met. Corr. 1, Skin Corr. 1A; H226 H290 H314			

Full text of H and EUH statements: see section 16.

SECTION 4: First aid measures**4.1. Description of first aid measures****General information**

Remove contaminated soaked clothing immediately.
If you feel unwell, seek medical advice.

After inhalation

Move to fresh air in case of accidental inhalation of vapours or decomposition products.
In the event of symptoms refer for medical treatment.

After contact with skin

In case of contact with skin wash off with water.
Consult a doctor if skin irritation persists.

After contact with eyes

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
Seek medical treatment by eye specialist.

After ingestion

Do not induce vomiting.
Rinse out mouth and give plenty of water to drink.
Never give anything by mouth to an unconscious person.
Summon a doctor immediately.
Induce vomiting only upon the advice of a physician.





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

Causes severe skin burns and eye damage.
Ingestion causes burns of the upper digestive and respiratory tracts.

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

Treat symptoms.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Product does not burn, fire-extinguishing activities according to surrounding.
Foam, carbon dioxide (CO₂), dry chemical, water-spray.

Unsuitable extinguishing media

Full water jet.

5.2. Special hazards arising from the substance or mixture

Fire may produce:
carbon monoxide and carbon dioxide

5.3. Advice for firefighters

Use breathing apparatus with independent air supply.
Protective suit.

Additional information

Cool containers at risk with water spray jet.
Fire residues and contaminated firefighting water must be disposed of in accordance with the local regulations.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Use personal protective clothing.
Do not breathe vapours.
Avoid contact with skin, eyes and clothing.
Ensure adequate ventilation.

6.2. Environmental precautions

Do not discharge into the drains/surface waters/ground water.

6.3. Methods and material for containment and cleaning up

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder).
Shovel into suitable container for disposal.
Do not use metal containers.

6.4. Reference to other sections

Observe protective instructions (see Sections 7 and 8).
Information for disposal see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Keep container tightly closed.
Do not breathe vapours.
Avoid contact with skin, eyes and clothing.

Advice on protection against fire and explosion

No special protective measures against fire required.

7.2. Conditions for safe storage, including any incompatibilities





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Requirements for storage rooms and vessels

- Keep containers tightly closed in a dry, well-ventilated place.
- Keep only in original container.
- Do not use metal containers.

Hints on joint storage

- Incompatible with bases.

Further information on storage conditions

- Keep away from food, drink and animal feeding stuffs.

7.3. Specific end use(s)

- Neutralising agent for machine processing of instruments

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limits (EH40)

CAS No	Substance	ppm	mg/m ³	fibres/ml	Category	Origin
64-18-6	Formic acid	5	9.6		TWA (8 h)	WEL

8.2. Exposure controls

Appropriate engineering controls

- Ensure adequate ventilation, especially in confined areas.

Protective and hygiene measures

- Do not inhale vapours.
- Wash hands before breaks and immediately after handling the product.
- When using do not eat, drink or smoke.
- Avoid contact with skin, eyes and clothing.
- Remove and wash contaminated clothes before re-use.

Eye/face protection

- Tightly fitting goggles (EN 166).
- Eye wash bottle with pure water (EN 15154).

Hand protection

- Also suitable are gloves made of:
 - Natural rubber (NR; 0,5 mm): Breakthrough time > 8 h
 - Polychloropren - CR (0,5 mm): Breakthrough time > 8 h
 - Nitrile rubber/nitrile latex - NBR (0,35 mm): Breakthrough time > 8 h
 - Butyl rubber - Butyl (0,5 mm): Breakthrough time > 8 h
 - Fluoro-rubber - FKM (0,4 mm): Breakthrough time > 8 h
 - Polyvinyl chloride - PVC (0,5 mm): Breakthrough time > 8 h
- This recommendation refers exclusively to the chemical compatibility and the lab test conforming to EN 374 carried out under lab conditions.
- Requirements can vary as a function of the use. Therefore it is necessary to adhere additionally to the recommendations given by the manufacturer of protective gloves.

Skin protection

- Long sleeved clothing (DIN EN ISO 6530)

Respiratory protection

- No personal respiratory protective equipment normally required.
- In case of insufficient ventilation wear suitable respiratory equipment (gas filter type E) (EN 14387).





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SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	Liquid
Colour:	Colourless
Odour:	Pungent

pH-Value (at 20 °C): approx. 1

Changes in the physical state

Melting point:	n.d.
Initial boiling point and boiling range:	n.d.
Sublimation point:	n.a.
Softening point:	n.d.
Flash point:	n.a.

Flammability

Solid:	n.a.
Gas:	n.a.

Explosive properties

The product is not explosive.

Lower explosion limits:	n.a.
Upper explosion limits:	n.a.
Ignition temperature:	n.a.

Auto-ignition temperature

Solid:	n.a.
Gas:	n.a.

Decomposition temperature: n.d.

Oxidizing properties

Not oxidising.

Vapour pressure: n.d.

Density (at 20 °C): 1,166 g/cm³

Bulk density: n.a.

Water solubility:
(at 20 °C) Miscible

Solubility in other solvents

n.d.

Partition coefficient: n.d.

Viscosity / dynamic: n.d.

Viscosity / kinematic: n.d.

Flow time: n.d.

Vapour density: n.d.

Evaporation rate: n.d.

Solvent separation test: 0 %

Solvent content: 0 %

Test method





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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 normal conditions.

10.3. Possibility of hazardous reactions

Reactions with alkalis.

Reactions with metals, with evolution of hydrogen.

10.4. Conditions to avoid

To avoid thermal decomposition, do not overheat.

10.5. Incompatible materials

Strong bases.

Metals

10.6. Hazardous decomposition products

carbon monoxide and carbon dioxide

Hydrogen, by reaction with metals.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity

Based on available data, the classification criteria are not met.

No toxicological data available.

Irritation and corrosivity

Causes severe skin burns and eye damage.

Sensitising effects

Based on available data, the classification criteria are not met.

Carcinogenic/mutagenic/toxic effects for reproduction

Based on available data, the classification criteria are not met.

STOT-single exposure

Based on available data, the classification criteria are not met.

STOT-repeated exposure

Based on available data, the classification criteria are not met.

Aspiration hazard

Based on available data, the classification criteria are not met.

Additional information on tests

Classification in compliance with the assessment procedure specified in the Regulation (EC) no 1272/2008.

Practical experience

Other observations

Ingestion causes burns of the upper digestive and respiratory tracts.

SECTION 12: Ecological information

12.1. Toxicity

Ecological data are not available.





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12.2. Persistence and degradability

Biodegradable.

12.3. Bioaccumulative potential

No data available

12.4. Mobility in soil

No data available

12.5. Results of PBT and vPvB assessment

According to Regulation (EC) No 1907/2006 (REACH) none of the substances, contained in this product are a PBT / vPvB substance.

12.6. Other adverse effects

Low hazard to waters.

A pH-change becomes possible in water.

Further information

This concentrate is not allowed to be released into the sewerage, surface water or groundwater.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Advice on disposal

Where possible recycling is preferred to disposal.

Can be incinerated, when in compliance with local regulations.

Waste disposal number of waste from residues/unused products

200129 MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS; separately collected fractions (except 15 01); detergents containing hazardous substances; hazardous waste

Waste disposal number of contaminated packaging

150102 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); plastic packaging

Contaminated packaging

Empty containers should be taken for local recycling, recovery or waste disposal.

Contaminated packaging should be emptied as far as possible and after appropriate cleansing may be taken for reuse.

Packaging that cannot be cleaned should be disposed of like the product.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number:

UN 3265

14.2. UN proper shipping name:

CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (formic acid, Citric acid)

14.3. Transport hazard class(es):

8

14.4. Packing group:

III

Hazard label:

8



Classification code:

C3

Limited quantity:

5 L / 30 kg





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Excepted quantity: E1
Transport category: 3
Hazard No: 80
Tunnel restriction code: E

Inland waterways transport (ADN)

14.1. UN number: UN 3265
14.2. UN proper shipping name: CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (formic acid, Citric acid)
14.3. Transport hazard class(es): 8
14.4. Packing group: III
Hazard label: 8



Classification code: C3
Limited quantity: 5 L / 30 kg
Excepted quantity: E1

Marine transport (IMDG)

14.1. UN number: UN 3265
14.2. UN proper shipping name: CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (Formic acid, Citric acid)
14.3. Transport hazard class(es): 8
14.4. Packing group: III
Hazard label: 8



Marine pollutant: No
Limited quantity: 5 L / 30 kg
Excepted quantity: E1
EmS: F-A, S-B

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number: UN 3265
14.2. UN proper shipping name: CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (Formic acid, Citric acid)
14.3. Transport hazard class(es): 8
14.4. Packing group: III
Hazard label: 8



Limited quantity Passenger: 1 L
Passenger LQ: Y841
Excepted quantity: E1
IATA-packing instructions - Passenger: 852
IATA-max. quantity - Passenger: 5 L
IATA-packing instructions - Cargo: 856



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IATA-max. quantity - Cargo:

60 L

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: no

14.6. Special precautions for user

Take the usual precautions when handling with chemicals.

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

The transport takes place only in approved and appropriate packaging.

SECTION 15: Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****EU regulatory information**

2004/42/EC (VOC):

0 %

Information according to 2012/18/EU
(SEVESO III):

Not subject to 2012/18/EU (SEVESO III)

National regulatory information

Employment restrictions:

Observe restrictions to employment for juvenils according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

Water contaminating class (D):

1 - slightly water contaminating

15.2. Chemical safety assessment

For this substance a chemical safety assessment has not been carried out.

SECTION 16: Other information**Changes**

Changes in chapter: 2, 7, 9, 15

Abbreviations and acronyms

ADR = Accord européen relatif au transport international des marchandises Dangereuses par Route

RID = Règlement concernant le transport international ferroviaire de marchandises dangereuses

ADN = Accord européen relatif au transport international des marchandises dangereuses par voie de navigation intérieure

IMDG = International Maritime Code for Dangerous Goods

IATA/ICAO = International Air Transport Association / International Civil Aviation Organization

MARPOL = International Convention for the Prevention of Pollution from Ships

IBC-Code = International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk

GHS = Globally Harmonized System of Classification and Labelling of Chemicals

REACH = Registration, Evaluation, Authorization and Restriction of Chemicals

CAS = Chemical Abstract Service

EN = European norm

ISO = International Organization for Standardization

DIN = Deutsche Industrie Norm

PBT = Persistent Bioaccumulative and Toxic

vPvB = Very Persistent and very Bio-accumulative

LD = Lethal dose

LC = Lethal concentration

EC = Effect concentration

IC = Median immobilisation concentration or median inhibitory concentration

Relevant H and EUH statements (number and full text)

H226

Flammable liquid and vapour.



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H290	May be corrosive to metals.
H314	Causes severe skin burns and eye damage.
H319	Causes serious eye irritation.

Further Information

Data of items 4 to 8, as well as 10 to 12, do partly not refer to the use and the regular employing of the product (in this sense consult information on use and on product), but to liberation of major amounts in case of accidents and irregularities.

The information describes exclusively the safety requirements for the product(s) and is based on the present level of our knowledge.

The delivery specifications are contained in the corresponding product sheet.

This data does not constitute a guarantee for the characteristics of the product(s) as defined by the legal warranty regulations.

(n.a. = not applicable; n.d. = not determined)

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)

