

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 22.12.2015

Version number 2

Revision: 22.12.2015

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

- **Date of compilation:** 17.02.2005
- **1.1 Product identifier**
- **Trade name:** Melpool MF/200
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the preparation:** Chemicals for various applications
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer / Supplier:**
Melspring International B.V. Phone: +31 (0) 26 - 38420 - 00
Arnhemsestraatweg 8 Fax: +31 (0) 26 - 38420 - 11
NL-6881 NG Velp
- **E-mail address of the competent person responsible for the Safety Data Sheet:** sdb@csb-online.de
- **Informing department:** Sales / Technique
- **1.4 Emergency telephone number:** As above or next toxicological information centre.

SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS05 corrosion

Eye Dam. 1 H318 Causes serious eye damage.



GHS09 environment

Aquatic Acute 1 H400 Very toxic to aquatic life.

Aquatic Chronic 1 H410 Very toxic to aquatic life with long lasting effects.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

STOT SE 3 H335 May cause respiratory irritation.

- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the CLP regulation.
- **Hazard pictograms**



GHS05



GHS07



GHS09

- **Signal word** Danger
- **Hazard-determining components of labelling:**
Trichloro-1,3,5-triazinetriene
Aluminium sulphate
- **Hazard statements**
H302 Harmful if swallowed.

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H318 Causes serious eye damage.

H335 May cause respiratory irritation.

H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements

P101 If medical advice is needed, have product container or label at hand.

P102 Keep out of reach of children.

P103 Read label before use.

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P273 Avoid release to the environment.

P301+P330+P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P391 Collect spillage.

P401 Store in accordance with local/regional/national/international regulations.

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Additional information:

EUH031 Contact with acids liberates toxic gas.

Warning! Do not use together with other products. May release dangerous gases (chlorine).

2.3 Other hazards

Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

SECTION 3: Composition/information on ingredients

3.2 Chemical characterisation: Mixtures

Description: Mixture consisting of the following components.

Dangerous components:

CAS: 87-90-1 EINECS: 201-782-8 Index number: 613-031-00-5	Trichloro-1,3,5-triazinetrione ☠ Ox. Sol. 2, H272; ☠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410; ☠ Acute Tox. 4, H302; Eye Irrit. 2, H319; STOT SE 3, H335	50 - 100%
CAS: 10043-01-3 EINECS: 233-135-0	Aluminium sulphate ☠ Eye Dam. 1, H318	2.5-<10%
CAS: 10043-35-3 EINECS: 233-139-2 Index number: 005-007-00-2	Boric acid ☠ Repr. 1B, H360FD	≤2.5%

SVHC

10043-35-3 Boric acid

Additional information: For the wording of the listed hazard phrases refer to section 16.

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SECTION 4: First aid measures

- **4.1 Description of first aid measures**
- **General information:**
Immediately remove any clothing contaminated by the product.
Symptoms of poisoning may occur after several hours. Medical observation for at least 48 hours after the accident is recommended.
- **After inhalation:** Supply fresh air; consult doctor in case of symptoms.
- **After skin contact:**
Instantly wash with water and soap and rinse thoroughly.
Immediate medical treatment necessary. Failure to treat burns can prevent wounds from healing.
- **After eye contact:**
Rinse opened eye for several minutes under running water.
Remove contact lenses, if present and easy to do.
Use eye protection.
Call a doctor immediately.
- **After swallowing:**
Do NOT induce vomiting.
Rinse out mouth and then drink plenty of water.
Call a doctor immediately.
- **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed** symptomatic treatment

SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents** Only use plenty of water.
- **For safety reasons unsuitable extinguishing agents** All but water.
- **5.2 Special hazards arising from the substance or mixture**
Can be released in case of fire:
Nitrogen oxides (NO_x)
Hydrogen chloride (HCl)
Sulphur oxides (SO_x)
Carbon monoxide (CO) and Carbon dioxide (CO₂)
Oxidising by development of oxygen
Under certain fire conditions, traces of other toxic gases cannot be excluded.
- **5.3 Advice for firefighters**
- **Protective equipment:**
Wear self-contained breathing apparatus.
Wear full protective suit.
- **Additional information**
Cool endangered containers with water spray jet.
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Ensure adequate ventilation.
Wear protective clothing.
Keep people at a distance and stay on the windward side.
Remove all ignition sources.
Avoid contact with skin and eyes.
Do not breathe dust.

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- **6.2 Environmental precautions:** Do not allow product to reach sewage system or water bodies.
- **6.3 Methods and material for containment and cleaning up:**
Ensure adequate ventilation.
Collect mechanically.
Dispose of the material collected according to regulations.
- **6.4 Reference to other sections**
See Section 7 for information on safe handling
See Section 8 for information on personal protection equipment.
See Section 13 for information on disposal.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of dust.
Do not breathe dust.
Avoid mixing with acids/materials containing acids under any circumstances.
- **Information about protection against explosions and fires:**
Substance/product is oxidising when dry.
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
Do not spray on flames or red-hot objects.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage**
- **Requirements to be met by storerooms and containers:**
Observe all local and national regulations for storage of water polluting products.
- **Information about storage in one common storage facility:**
Store away from foodstuffs.
Do not store together with acids.
Store away from flammable substances.
- **Further information about storage conditions:**
Store in cool, dry conditions in well sealed containers.
Protect from heat and direct sunlight.
Caution when reopening containers with broken seal.
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **8.1 Control parameters**

· **Components with critical values that require monitoring at the workplace:**

10043-01-3 Aluminium sulphate

WEL (Great Britain) Long-term value: 2 mg/m³

· **DNELs**

10043-35-3 Boric acid

Oral	DNEL long-term exposure - systemic effects	0.98 mg/kg bw/d (general population)
	DNEL acute / short-term exposure - systemic effect	0.98 mg/kg bw/d (general population)
Dermal	DNEL long-term exposure - systemic effects	196 mg/kg bw/d (general population)
		392 mg/kg bw/d (worker)

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<i>Inhalative</i>	DNEL long-term exposure - systemic effects	4.15 mg/m ³ (general population) 8.3 mg/m ³ (worker)
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 · **PNECs**
10043-35-3 Boric acid

PNEC	2.90 mg/l (aqua (freshwater))
	13.7 mg/l (aqua (intermittent releases))
	2.90 mg/l (aqua (marine water))
	10 mg/l (STP (sewage treatment plant))
PNEC	5.7 mg/kg (soil)

 · **Additional Occupational Exposure Limit Values for possible hazards during processing:**
7782-50-5 Chlorine

WEL (Great Britain)	Short-term value: 1.5 mg/m ³ , 0.5 ppm
IOELV (European Union)	Short-term value: 1.5 mg/m ³ , 0.5 ppm

 · **Additional information:** The lists that were valid during the compilation were used as basis.

 · **8.2 Exposure controls**

 · **Personal protective equipment**

 · **General protective and hygienic measures**

Keep away from foodstuffs, beverages and food.

Instantly remove any contaminated garments.

Wash hands during breaks and at the end of the work.

Use skin protection cream for preventive skin protection.

Do not eat, drink or smoke while working.

 · **Breathing equipment:**

Dust proof mask - particle filter mask

In case of brief exposure or low pollution use breathing filter apparatus. In case of intensive or longer exposure use breathing apparatus that is independent of circulating air.

Use breathing protection in case of dust formation.

 · **Protection of hands:**

Protective gloves

To avoid skin problems reduce the wearing of gloves to the required minimum.

Check the permeability prior to each renewed use of the glove.

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

 · **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

 · **Penetration time of glove material**

Protective gloves should be replaced at first signs of wear.

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

 · **Eye protection:** Tightly sealed safety glasses

 · **Body protection:**

Protective work clothing

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Body protection must be chosen depending on activity and possible exposure.

SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties

· General Information

· Appearance:

· Form:	Tablets
· Colour:	white
· Smell:	chlorine-like
· Odour threshold:	no data available

· pH-value (10 g/l) at 20 °C:	3.05
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· Change in condition

· Melting point/Melting range:	not determined
· Boiling point/Boiling range:	not determined

· Flash point:	not applicable
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· Inflammability (solid, gaseous)	Contact with combustible material may cause fire.
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· Ignition temperature:

· Decomposition temperature:	~225 °C
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· Self-inflammability:	Product is not selfigniting.
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· Danger of explosion:	Product is not explosive.
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· Critical values for explosion:

· Lower:	not applicable
· Upper:	not applicable

· Oxidising properties	oxidising
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· Vapor pressure:	not determined
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· Density:	not determined
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· Bulk density at 20 °C:	950 kg/m ³
· Relative density	not determined
· Vapour density (AIR = 1):	not determined
· Evaporation rate	not determined

· Solubility in / Miscibility with Water at 20 °C:	10 g/l
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· Partition coefficient (n-octanol/water):	not determined
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· Viscosity:

· dynamic:	not applicable
· kinematic:	not applicable

· 9.2 Other information	No further relevant information available.
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SECTION 10: Stability and reactivity

· 10.1 Reactivity	No further relevant information available.
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· 10.2 Chemical stability	
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· Thermal decomposition / conditions to be avoided:	
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No decomposition if used according to specifications.

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Avoid impact, friction, heat, sparks, electrostatic charges.

· **10.3 Possibility of hazardous reactions**

Contact with acids releases toxic gases

Reacts with flammable substances

· **10.4 Conditions to avoid** No further relevant information available.

· **10.5 Incompatible materials:**

Amines

Strong acids

Flammable materials

· **10.6 Hazardous decomposition products:**

Nitrogen oxides (NO_x)

Hydrogen chloride (HCl)

Sulphur oxides (SO_x)

Carbon monoxide (CO) and Carbon dioxide (CO₂)

SECTION 11: Toxicological information

· **11.1 Information on toxicological effects**

· **Acute toxicity**

Harmful if swallowed.

· **LD/LC50 values that are relevant for classification:**

87-90-1 Trichloro-1,3,5-triazinetrione

Oral	LDLo	3570 mg/kg (human)
	LD50	490 mg/kg (rat)
Dermal	LD50	> 2000 mg/kg (rabbit)

10043-01-3 Aluminium sulphate

Oral	LD50	6207 mg/kg (rat)
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10043-35-3 Boric acid

Oral	LD50	3450 mg/kg (mouse)
		2660 mg/kg (rat)
Inhalative	LC50/4 h	2 mg/l (rat)

· **Primary irritant effect:**

· **Skin corrosion/irritation**

Longer lasting and/or repeated skin contact may cause irritation.

Dust particles may mechanically irritate the skin.

· **Serious eye damage/irritation**

Causes serious eye damage.

· **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.

· **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**

· **Germ cell mutagenicity** Based on available data, the classification criteria are not met.

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

· **Reproductive toxicity** Based on available data, the classification criteria are not met.

· **STOT-single exposure**

May cause respiratory irritation.

· **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.

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SECTION 12: Ecological information

· 12.1 Toxicity

· Aquatic toxicity:

87-90-1 Trichloro-1,3,5-triazinetrione

 LC50/96 h 0.30 mg/l (bluegill (*lepomis macrochirus*))

 0.32 mg/l (*salmo gairdneri*)

 LC50/48 h 0.21 mg/l (water flea (*daphnia magna*))

10043-01-3 Aluminium sulphate

 LC50/96 h 37 mg/l (*gambusia affinis*)

 EC50/48 h > 160 mg/l (water flea (*daphnia magna*)) (OECD 202)

 LL50/96h > 1000 mg/l (zebra fish (*danio rerio*)) (OECD 203)

10043-35-3 Boric acid

 LC50 46 mg/l (*carassius auratus*) (7 d)

 150 mg/l (rainbow trout (*oncorhynchus mykiss*)) (24 d)

 LC50/48 h 115 - 153 mg/l (water flea (*daphnia magna*))

 · **12.2 Persistence and degradability** No further relevant information available.

 · **12.3 Bioaccumulative potential** No further relevant information available.

 · **12.4 Mobility in soil** No further relevant information available.

· Ecotoxicological effects:

 · **Remark:** Very toxic for fish and aquatic organisms.

· Additional ecological information:

· General notes:

Do not allow product to reach ground water, water bodies or sewage system.

Very toxic for aquatic organisms

Water hazard class 2 (Self-assessment): hazardous for water

· 12.5 Results of PBT and vPvB assessment

 · **PBT:** Not applicable.

 · **vPvB:** Not applicable.

 · **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

· 13.1 Waste treatment methods

· Recommendation

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

Disposal must be made according to official regulations.

· European waste catalogue:

Waste disposal key numbers from EWC have to be assigned depending on origin and processing.

· Uncleaned packagings:

 · **Recommendation:** Disposal must be made according to official regulations.

SECTION 14: Transport information

· 14.1 UN-Number

 · **ADR, IMDG, IATA**

UN3077

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· **14.2 UN proper shipping name**
· **ADR** UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (TRICHLOROISOCYANURIC ACID)
· **IMDG** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (TRICHLOROISOCYANURIC ACID), MARINE POLLUTANT
· **IATA** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (TRICHLOROISOCYANURIC ACID)

· **14.3 Transport hazard class(es)**
· **ADR**

· **Class** 9 (M7) Miscellaneous dangerous substances and articles.
· **Label** 9

· **IMDG, IATA**

· **Class** 9 Miscellaneous dangerous substances and articles.
· **Label** 9

· **14.4 Packing group**
· **ADR, IMDG, IATA** III

· **14.5 Environmental hazards:**
· **Marine pollutant:** Symbol (fish and tree)
· **Special marking (ADR):** Symbol (fish and tree)
· **Special marking (IATA):** Symbol (fish and tree)

· **14.6 Special precautions for user** Warning: Miscellaneous dangerous substances and articles.
· **Kemler Number:** 90
· **EMS Number:** F-A,S-F

· **14.7 Transport in bulk according to Annex II of Marpol and the IBC Code** Not applicable.

· **Transport/Additional information:** Test for oxidizing solids: negative

· **ADR**
· **Limited quantities (LQ):** 5 kg
· **Transport category:** 3
· **Tunnel restriction code:** E

· **UN "Model Regulation":** UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (TRICHLOROISOCYANURIC ACID), 9, III

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SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Directive 2012/18/EU**
- **Seveso category E1**
- **Qualifying quantity (tonnes) for the application of lower-tier requirements 100 t**
- **Qualifying quantity (tonnes) for the application of upper-tier requirements 200 t**
- **National regulations**
- **Information about limitation of use:**
Employment restrictions concerning pregnant and lactating women must be observed.
Employment restrictions concerning young persons must be observed.
- **Decree to be applied in case of technical fault:**
Quantity limits according to "EC Seveso directive" should be observed.
- **Water hazard class:** Water hazard class 2 (Self-assessment): hazardous for water
- **Other regulations, limitations and prohibitive regulations**
Observe restrictions on the marketing and use according to Annex XVII of Regulation (EC) No 1907/2006.
- **Substances of very high concern (SVHC) according to REACH, Article 57**

10043-35-3	Boric acid
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- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Reasons for changes:** Changes in labelling
- **Relevant phrases**
The(se) H-phrases are those of the ingredient(s) and do(es) not necessarily represent the classification of the product.
 - H272 May intensify fire; oxidiser.
 - H302 Harmful if swallowed.
 - H318 Causes serious eye damage.
 - H319 Causes serious eye irritation.
 - H335 May cause respiratory irritation.
 - H360FD May damage fertility. May damage the unborn child.
 - H400 Very toxic to aquatic life.
 - H410 Very toxic to aquatic life with long lasting effects.
- **Department issuing MSDS:**
C.S.B. GmbH Phone: +49 - 2151 - 652086-0
Düsseldorfer Str. 113 Fax: +49 - 2151 - 652086-9
47809 Krefeld / Germany
- **Abbreviations and acronyms:**
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
ICAO: International Civil Aviation Organisation
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances

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CAS: Chemical Abstracts Service (division of the American Chemical Society)
 DNEL: Derived No-Effect Level (REACH)
 PNEC: Predicted No-Effect Concentration (REACH)
 LC50: Lethal concentration, 50 percent
 LD50: Lethal dose, 50 percent
 PBT: Persistent, Bioaccumulative and Toxic
 SVHC: Substances of Very High Concern
 vPvB: very Persistent and very Bioaccumulative
 Ox. Sol. 2: Oxidising Solids, Hazard Category 2
 Acute Tox. 4: Acute toxicity, Hazard Category 4
 Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1
 Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2
 Repr. 1B: Reproductive toxicity, Hazard Category 1B
 STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3
 Aquatic Acute 1: Hazardous to the aquatic environment - AcuteHazard, Category 1
 Aquatic Chronic 1: Hazardous to the aquatic environment - Chronic Hazard, Category 1

· *** Data compared to the previous version altered.**