Safety Data Sheet

according to Regulation (EC) No 1907/2006

MENNO Florades

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

1.1. Product identifier

MENNO Florades - MAPP 19998

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

Use of the substance/mixture

Horticultural plant protection disinfectant for surfaces and equipment

1.3. Details of the supplier of the safety data sheet

Manufacturer:
MENNO CHEMIE-VERTRIEB GMBH
Langer Kamp 104, D-22850 Norderstedt, Germany
Telephone: +49(0)40 5290667-0, e-mail: info@menno.de, home: www.menno.de
Contact person: Jan Nevermann

UK Distributor:
Fargro Ltd.
Vinery Fields, Arundel Road, Poling, Arundel, West Sussex, BN18
Telephone: +44(0)1903 721591
e-mail: info@fargro.co.uk
www.fargro.co.uk

1.4. Emergency telephone number:

UK National Poisons Information Service (Healthcare professionals only)
0344 892 0111

Further Information

The statements made in relation to the physical-chemical properties are not suited for the formulation of specifications.

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No. 1272/2008

Hazard categories:
Flammable liquid: Flam. Liq. 2
Skin corrosion/irritation: Skin Irrit. 2
Serious eye damage/eye irritation: Eye Dam. 1
Specific target organ toxicity - single exposure: STOT SE 3
Specific target organ toxicity - repeated exposure: STOT RE 2
Hazard Statements:
Highly Flammable liquid and vapour.
Causes serious eye damage.
May cause drowsiness or dizziness.
May cause damage to organs through prolonged or repeated exposure.

2.2. Label elements

Regulation (EC) No. 1272/2008

Hazard components for labelling

propan-1-ol; n-propanol
propan-2-ol; isopropyl alcohol; isopropanol
benzoic acid

Signal word: Danger

Pictograms:



Hazard statements

H225	Highly Flammable liquid and vapour.
H318	Causes serious eye damage.
H336	May cause drowsiness or dizziness.
H373	May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

P210	Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
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 or doctor/physician.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.

Special labelling of certain mixtures

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

2.3. Other hazards

None known.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Chemical characterization

Plant protection active substance concentrate. Contains organic solvents.

Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification according to Regulation (EC) No. 1272/2008 [CLP]			
71-23-8	propan-1-ol; n-propanol			20 - < 25 %
	200-746-9	603-003-00-0		
	Flam. Liq. 2, Eye Dam. 1, STOT SE 3; H225 H318 H336			
67-63-0	propan-2-ol; isopropyl alcohol; isopropanol			10 - < 15 %
	200-661-7	603-117-00-0		
	Flam. Liq. 2, Eye Irrit. 2, STOT SE 3; H225 H319 H336			
65-85-0	benzoic acid			5 - < 10 %
	200-618-2	607-705-00-8		
	STOT RE 1, Skin Irrit. 2, Eye Dam. 1; H372 H315 H318			

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

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

Take off all contaminated clothing immediately.

After inhalation

Move to fresh air. May cause respiratory tract irritation. (Obtain medical attention.)

After contact with skin

Wash off with soap and water.

After contact with eyes

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Call a physician if irritation develops or persists.

After ingestion

If conscious, drink plenty of water. In case of ingestion, the stomach should be emptied by gastric lavage under qualified medical supervision. If a person vomits when lying on his back, place him in the recovery position.

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

This information is not available.

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

Treat symptomatically. Aspiration may cause pulmonary oedema and pneumonitis.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Dry chemical, Carbon dioxide (CO2), Water spray, Alcohol-resistant foam

Unsuitable extinguishing media

High volume water jet

5.2. Special hazards arising from the substance or mixture

Flammable. Vapours may form explosive mixtures with air. Burning produces irritant fumes.

5.3. Advice for firefighters

In the event of fire, wear self-contained breathing apparatus.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Remove all sources of ignition. Avoid breathing vapours, mist or gas. Avoid contact with skin, eyes and clothing. Use personal protective equipment.

6.2. Environmental precautions

Explosive properties. Do not flush into surface water or sanitary sewer system.

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, sawdust).

6.4. Reference to other sections

see chapter 7. Handling and storage
For personal protection see section 8.
see chapter 13. Disposal considerations

Remove all sources of ignition.
Treat recovered material as described in the section "Disposal considerations".

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Keep container tightly closed. Handle and open container with care.
Do not spray on a naked flame or any incandescent material. When using do not eat or drink.

Advice on protection against fire and explosion

Vapours are heavier than air and may spread along floors. Keep product and empty container away from heat and sources of ignition. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapours).

Further information on handling

Do not re-enter treated areas/crops until the spray coating has dried off.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Provide adequate ventilation. Keep in a cool, well-ventilated place. Keep away from heat and sources of ignition.
Jointless smooth floor

Advice on storage compatibility

Do not store together with oxidizing and self-igniting products. Keep away from food, drink and animal feedingstuffs.

Further information on storage conditions

Keep at temperatures between 0 and 30 °C. Keep containers tightly closed in a cool, well-ventilated place.

7.3. Specific end use(s)

Disinfectant for surfaces and instruments (Watersoluble)

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limits (EH40)

CAS No	Substance	ppm	mg/m³	fibres/ml	Category	Origin
71-23-8	Propan-1-ol	200	500		TWA (8 h)	WEL
		250	625		STEL (15 min)	WEL
67-63-0	Propan-2-ol	400	999		TWA (8 h)	WEL
		500	1250		STEL (15 min)	WEL

8.2. Exposure controls





Appropriate engineering controls

Use only in area provided with appropriate exhaust ventilation. Avoid breathing vapours, mist or gas.

Protective and hygiene measures

Take off contaminated clothing and shoes immediately. Preventive skin protection. Wash hands and face before breaks and immediately after handling the product. When using do not eat or drink. Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and immediately after handling the product. Avoid contact with the skin and the eyes.

Eye/face protection

Tightly fitting safety goggles.

Hand protection

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it. Wear universal safety gloves (pesticide-resistant) when handling the undiluted product.

Skin protection

Long sleeved clothing.
Wear a protective suit against crop protection agents and sturdy footwear (e.g. rubber boots) when handling the undiluted agent.

Respiratory protection

No personal respiratory protective equipment normally required.In case of mist, spray or aerosol exposure wear suitable personal respiratory protection and protective suit. In case of insufficient ventilation wear suitable respiratory equipment.

Environmental exposure controls

There are no special recommendations.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	liquid
Colour:	colourless, light yellow
Odour:	alcohol-like

		Test method
pH-Value (at 20 °C):	1% : approx. 2,8	CIPAC MT75

Changes in the physical state

Melting point:	not determined	
Initial boiling point and boiling range:	92 °C	EG A.2
Flash point:	19,2 °C	EG A.9/DIN 51755

Flammability

Solid:	not applicable
Gas:	not applicable
Lower explosion limits:	3 vol. %
Upper explosion limits:	15 vol. %
Ignition temperature:	> 435 °C EG.A15

Auto-ignition temperature

Solid:	not applicable
Gas:	not applicable
Decomposition temperature:	not determined

Oxidizing properties

The product has been shown not to be oxidising in a test following Directive 67/548/EEC (Method A17, oxidising properties).

Vapour pressure: (at 20 °C)	21 hPa
Density (at 20 °C):	1 g/cm³
Water solubility:	completely miscible

Solubility in other solvents

not determined

Partition coefficient:	not determined
Vapour density:	not determined
Evaporation rate:	not determined

9.2. Other information

Solid content:	not determined

SECTION 10: Stability and reactivity

10.1. Reactivity

Flammable, Risk of ignition.

10.2. Chemical stability

The product is chemically stable.

10.3. Possibility of hazardous reactions

No dangerous reaction known under conditions of normal use.

10.4. Conditions to avoid

Keep away from heat and flame. Explosive properties. Direct sources of heat. Strong sunlight for prolonged periods. Stable under normal conditions.

10.5. Incompatible materials

Incompatible with strong bases and oxidizing agents.

10.6. Hazardous decomposition products

No decomposition if stored and applied as directed.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity

LD50/oral/rat = > 2000mg/kg (EG B.1/OECD Test Guideline 401)
LD50/dermal/rat = > 2000 mg/kg (EG B.3/OECD Test Guideline 402)

CAS No	Chemical name				
	Exposure routes	Method	Dose	Species	Source
71-23-8	propan-1-ol; n-propanol				
	oral	LD50	8000 mg/kg	rat	OECD 401
	dermal	LD50	4032 mg/kg	rabbit	OECD 402
	inhalative (4 h) vapour	LC50	>33,8 mg/l	rat	OECD 403
67-63-0	propan-2-ol; isopropyl alcohol; isopropanol				
	oral	LD50	>2000 mg/kg	rat	
	dermal	LD50	>2000 mg/kg	rabbit	
	inhalative vapour	LC50	>20 mg/l	rat	
64-18-6	formic acid				
	oral	LD50	730 mg/kg	rat	OECD 401
	inhalative (4 h) vapour	LC50	7,85 mg/l	rat	BASF
	inhalative aerosol	ATE	0,5 mg/l		

Irritation and corrosivity

Acute dermal irritation/corrosion: No skin irritation (EG B.4/OECD 404)
Acute eye irritation/corrosion: irritating (EG B.5/OECD 405)

Sensitising effects

Sensitisation : Did not cause sensitisation on laboratory animals. (EG B.6/OECD 406, Magnusson-Kligman)

Severe effects after repeated or prolonged exposure

No persistent or cumulative effects were observed.

Carcinogenic/mutagenic/toxic effects for reproduction

Benzoesäure is not given in any official list as a carcinogen or mutagen.

Additional information on tests

The product is classified as dangerous in accordance with Regulation (EC) No. 1272/2008. Handle in accordance with good industrial hygiene and safety practice. Other dangerous properties can not be excluded.

SECTION 12: Ecological information

12.1. Toxicity

Acute Fish toxicity (LC50/96h/Brachydanio rerio): >100mg/L (OECD 203 / EG C.1)
Toxicity to daphnia EC50/48h/daphnia = 255mg/L (OECD 202 (2004) / EG C.2)
Algal inhibition test 72h ErC50 + EbC50 (Scenedesmus subspicatus): > 1000 mg/L (OECD 201 (2006) / EG C.3)

12.2. Persistence and degradability

See chapter 12.5

12.3. Bioaccumulative potential

Does not bioaccumulate.

12.4. Mobility in soil

Not Rated

12.5. Results of PBT and vPvB assessment

This mixture contains no substance considered to be very persistent nor very bioaccumulating (vPvB). This mixture contains no substance considered to be persistent, bioaccumulating nor toxic (PBT).

12.6. Other adverse effects

None known.

Further information

Ecological injuries are not known or expected under normal use. Product does not contain any organic halogens.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Advice on disposal

Dispose of as hazardous waste in compliance with local and national regulations.

Waste disposal number of waste from residues/unused products

020108 WASTES FROM AGRICULTURE, HORTICULTURE, AQUACULTURE, FORESTRY, HUNTING AND FISHING, FOOD PREPARATION AND PROCESSING; wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing; agrochemical waste containing hazardous substances
Classified as hazardous waste.

Waste disposal number of used product

020108 WASTES FROM AGRICULTURE, HORTICULTURE, AQUACULTURE, FORESTRY, HUNTING AND FISHING, FOOD PREPARATION AND PROCESSING; wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing; agrochemical waste containing hazardous substances
Classified as 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

Clean container with water. Where possible recycling is preferred to disposal or incineration. Rinse empty containers with water and use the rinse-water to prepare the working solution. Materials can be delivered to a plastics recycling facilities after cleaning.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number:	UN 1987
14.2. UN proper shipping name:	1987 - Alcohols, n.o.s., (n-Propanol + Isopropanol , Solution)
14.3. Transport hazard class(es):	3
14.4. Packing group:	I I I
Hazard label:	3



Classification code:	F1
Special Provisions:	274, 601
Limited quantity:	5 L
Transport category:	3
Hazard No:	30
Tunnel restriction code:	(D/E)

Marine transport (IMDG)

14.1. UN number:	UN 1987
14.2. UN proper shipping name:	1987 - Alcohols, n.o.s. , (n-Propanol + Isopropanol , Solution)

14.3. Transport hazard class(es): 3

14.4. Packing group: III

Hazard label: 3



Marine pollutant: no
Special Provisions: 223, 274
Limited quantity: 5 L
EmS: F-E, S-D

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: no

14.6. Special precautions for user

Warning: Combustible Liquid.

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

not applicable

SECTION 15: Regulatory information

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

EU regulatory information

2004/42/EC (VOC): 67,16 % (671,6 g/l)

Additional information

850/2004/EC, 79/117/EEC , 689/2008/EC
The guideline for the requirements for personal protective equipment in plant protection "Personal protective equipment when handling plant protection products" of the Federal Office of Consumer Protection and Food Safety must be observed.
Do not re-enter treated areas/crops until the spray coating has dried.
Wear a protective suit against crop protection agents and sturdy footwear (e.g. rubber boots) when handling the undiluted agent.

National regulatory information

Employment restrictions: Observe restrictions to employment for juvenils according to the 'juvenile work protection guideline' (94/33/EC).
Water contaminating class (D): 1 - slightly water contaminating

Additional information

Use plant protection products safely. Always read the label and product information before use.
To avoid risks to man and the environment, comply with the instructions for use.
Wear gas-proof safety goggles when handling the undiluted product.
Wear universal safety gloves (pesticide-resistant) when handling the undiluted product.

15.2. Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

Abbreviations and acronyms

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 Harmonized System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service
LC50: Lethal concentration, 50%
LD50: Lethal dose, 50%

Relevant H and EUH statements (number and full text)

H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H336	May cause drowsiness or dizziness.
H372	Causes damage to organs through prolonged or repeated exposure.
H373	May cause damage to organs through prolonged or repeated exposure.
EUH401	To avoid risks to human health and the environment, comply with the instructions for use.

Further Information

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.

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