MicroChemicals

Safety Data Sheet

according to Regulation (EC) No 1907/2006

TI- Prime

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

1.1. Product identifier

TI- Prime

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

Use of the substance/mixture

elctronic industry
Intermediate (precursor)

1.3. Details of the supplier of the safety data sheet

Company name:	MicroChemicals GmbH	
Street:	Nicolaus-Otto-Str. 39	
Place:	D-89079 Ulm	
Telephone:	+49 (0) 731 977343 0	Telefax: +49 (0) 731 977343 29
e-mail:	info@microchemicals.com	
Contact person:	Dr. Christian Koch	
e-mail:	msds@microchemicals.com	
Internet:	www.microchemicals.com	

1.4. Emergency telephone number:

+49 (0) 731 977343 0

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No. 1272/2008

Hazard categories:
Flammable liquid: Flam. Liq. 3
Acute toxicity: Acute Tox. 4
Hazard Statements:
Flammable liquid and vapour.
Harmful if inhaled.

2.2. Label elements

Regulation (EC) No. 1272/2008

Signal word: Warning

Pictograms:

Hazard statements

H226	Flammable liquid and vapour.
H332	Harmful if inhaled.

Precautionary statements

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.
P312	Call a POISON CENTER/doctor if you feel unwell.
P370+P378	In case of fire: Use Dry extinguishing powder to extinguish.
P403+P235	Store in a well-ventilated place. Keep cool.
P501	Dispose of contents/container to disposal in accordance with government regulations.

Special labelling of certain mixtures

Restricted to professional users.

2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification according to Regulation (EC) No. 1272/2008 [CLP]			
108-65-6	2-methoxy-1-methylethyl acetate			95 - <= 100 %
	203-603-9	607-195-00-7	01-2119475791-29	
	Flam. Liq. 3; H226			
70657-70-4	2-methoxypropyl acetate			< 0,3 %
	274-724-2	607-251-00-0		
	Flam. Liq. 3, Repr. 1B, STOT SE 3; H226 H360D *** H335			

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, saturated clothing immediately. In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible). Self-protection of the first aider

After inhalation

Provide fresh air. Remove casualty to fresh air and keep warm and at rest. In case of irregular breathing or respiratory arrest provide artificial respiration. Call a physician immediately.

After contact with skin

After contact with skin, wash immediately with polyethylene glycol, followed by plenty of water. Take off immediately all contaminated clothing and wash it before reuse.

After contact with eyes

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist.

After ingestion

Do NOT induce vomiting. Call a physician immediately. Let water be drunken in little sips (dilution effect).

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

No information available.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Carbon dioxide (CO2), alcohol resistant foam, Extinguishing powder.

5.2. Special hazards arising from the substance or mixture

Flammable. Vapours can form explosive mixtures with air. Carbon monoxide Carbon dioxide Nitrogen oxides

(NOx). Sulfur oxides.

5.3. Advice for firefighters

Wear a self-contained breathing apparatus and chemical protective clothing. Full protection suit. Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

Additional information

Use water spray jet to protect personnel and to cool endangered containers. Suppress gases/vapours/mists with water spray jet. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Remove all sources of ignition. Provide adequate ventilation. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes. Use personal protection equipment.

6.2. Environmental precautions

Do not allow uncontrolled discharge of product into the environment. Danger of explosion

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil. Collect in closed and suitable containers for disposal. Prevent spread over a wide area (e.g. by containment or oil barriers).

6.3. Methods and material for containment and cleaning up

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal. Clean contaminated articles and floor according to the environmental legislation. Never return spills in original containers for re-use. Clean contaminated articles and floor according to the environmental legislation.

6.4. Reference to other sections

Safe handling: see section 7
Personal protection equipment: see section 8
Disposal: see section 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

If handled uncovered, arrangements with local exhaust ventilation have to be used. Provide adequate ventilation as well as local exhaustion at critical locations. Do not breathe gas/fumes/vapour/spray.

Advice on protection against fire and explosion

Keep away from sources of ignition - No smoking. Take precautionary measures against static discharges. Vapours can form explosive mixtures with air.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep container tightly closed. Provide adequate ventilation as well as local exhaustion at critical locations. Keep in a cool, well-ventilated place. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Protect against: Light

Advice on storage compatibility

Do not store together with: Oxidising agent. Pyrophoric or self-heating substances. Food and feedingstuffs.

Further information on storage conditions

Recommended storage temperature 5 - 15°C

7.3. Specific end use(s)

elctronic industry
Intermediate (precursor)

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limits (EH40)

CAS No	Substance	ppm	mg/m³	fibres/ml	Category	Origin
108-65-6	1-Methoxypropyl acetate	50	274		TWA (8 h)	WEL
		100	548		STEL (15 min)	WEL

DNEL/DMEL values

CAS No	Substance		
DNEL type	Exposure route	Effect	Value
108-65-6	2-methoxy-1-methylethyl acetate		
Worker DNEL, long-term	inhalation	systemic	33 mg/m³
Worker DNEL, long-term	dermal	systemic	54,8 mg/kg bw/day

PNEC values

CAS No	Substance
Environmental compartment	Value
108-65-6	2-methoxy-1-methylethyl acetate
Freshwater	0,635 mg/l
Marine water	0,635 mg/l
Freshwater sediment	3,29 mg/kg
Marine sediment	0,329 mg/kg
Soil	0,29 mg/kg

Additional advice on limit values

Y: A risk of reproductive effects needs not to be feared if the occupational exposure limit value (AGW) and the biological limit value (BGW) is kept

8.2. Exposure controls

Appropriate engineering controls

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray.

Protective and hygiene measures

Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary . When using do not eat or drink. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin and eyes.

Eye/face protection

Suitable eye protection: Tightly sealed safety glasses.

Hand protection

Breakthrough time (maximum wearing time): >10min
Thickness of the glove material: > 0,4mm
By short-term hand contact: NBR (Nitrile rubber)

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Skin protection

Wear suitable protective clothing.

Respiratory protection

Respiratory protection necessary at: insufficient exhaust, prolonged exposure

Environmental exposure controls

Do not allow to enter into surface water or drains.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	Liquid
Colour:	colourless
Odour:	characteristic (Ether)

		Test method
pH-Value:	not applicable	
Changes in the physical state		
Initial boiling point and boiling range:	145 °C	
Flash point:	45 °C	DIN 51755
Lower explosion limits:	1 vol. %	
Upper explosion limits:	7 vol. %	
Ignition temperature:	315 °C	DIN 51794
Decomposition temperature:	not determined	

Oxidizing properties

Not oxidising.

Vapour pressure: (at 20 °C)	5 hPa
Density (at 20 °C):	0,97 g/cm³
Water solubility: (at 20 °C)	200 g/L

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, Ignition hazard.

10.2. Chemical stability

The product is chemically stable under recommended conditions of storage, use and temperature.

10.3. Possibility of hazardous reactions

No hazardous reaction when handled and stored according to provisions. Incompatible materials: Oxidising substances

10.4. Conditions to avoid

Keep away from sources of heat (e.g. hot surfaces), sparks and open flames. Vapours can form explosive mixtures with air.

10.5. Incompatible materials

Oxidising agent, Strong acid, Base

10.6. Hazardous decomposition products

No known hazardous decomposition products.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Toxicocinetics, metabolism and distribution

The product has not been tested.

Acute toxicity

The product has not been tested.

ATEmix tested

	Dose	Species	Source
LD50, oral	>8500 mg/kg	Rat	
LD50, dermal	>5000 mg/kg	Rabbit	
LC50, inhalative (vapour)	>23 mg/l	Rat	

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
108-65-6	2-methoxy-1-methylethyl acetate				
	oral	LD50 8532 mg/kg	Rat	RTECS	
	dermal	LD50 >5000 mg/kg	Rabbit		
	inhalative (4 h) vapour	LC50 10,8 mg/l	Rat		

Irritation and corrosivity

Skin contact:
Species: Rabbit
Result: Not an irritant.

SECTION 12: Ecological information

12.1. Toxicity

The product is not: Ecotoxic.

Aquatic toxicity:
LC50: 100-180 mg/l
Exposure time: 96h
Species:Oncorhynchus mykiss (Rainbow trout)

CAS No	Chemical name						
	Aquatic toxicity	Dose		[h] | [d]	Species	Source	Method
108-65-6	2-methoxy-1-methylethyl acetate						
	Acute fish toxicity	LC50	100 mg/l	96 h	Oryzias latipes (Ricefish)		
	Acute crustacea toxicity	EC50	373 mg/l	48 h	Daphnia magna		
	Fish toxicity	NOEC mg/l	47,5	14 d		ECHA	
	Algea toxicity	NOEC mg/l	1000	1 d		ECHA	
	Crustacea toxicity	NOEC	100 mg/l	21 d		ECHA	

12.2. Persistence and degradability

The product is: Biodegradable.

CAS No	Chemical name			
	Method	Value	d	Source
	Evaluation			
108-65-6	2-methoxy-1-methylethyl acetate			
		99%	28	
	Readily biodegradable (according to OECD criteria).			

12.3. Bioaccumulative potential

The product has not been tested.
2-Methoxy-1-methylethylacetat: On the basis of existing data about the elimination/degradation and bioaccumulation potential longer term damage to the environment is unlikely.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
108-65-6	2-methoxy-1-methylethyl acetate	1,2

12.4. Mobility in soil

The product has not been tested.
2-Methoxy-1-methylethylacetat: Koc.1,7

12.5. Results of PBT and vPvB assessment

The product has not been tested.
2-Methoxy-1-methylethylacetat: The substance in the mixture does not meet the PBT/vPvB criteria according to REACH, annex XIII.

12.6. Other adverse effects

No information available.

Further information

Avoid release to the environment. Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Advice on disposal

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil. Dispose of waste according to applicable legislation.

Contaminated packaging

This material and its container must be disposed of as hazardous waste. Handle contaminated packages in

the same way as the substance itself.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number:	UN 3272
14.2. UN proper shipping name:	ESTERS, N.O.S. (2-Methoxy-1-methylethylacetat)
14.3. Transport hazard class(es):	3
14.4. Packing group:	III
Hazard label:	3

Classification code:	F1
Special Provisions:	274
Limited quantity:	5 L
Excepted quantity:	E1
Transport category:	3
Hazard No:	30
Tunnel restriction code:	D/E

Inland waterways transport (ADN)

14.1. UN number:	UN 3272
14.2. UN proper shipping name:	ESTERS, N.O.S. (2-Methoxy-1-methylethylacetat)
14.3. Transport hazard class(es):	3
14.4. Packing group:	III
Hazard label:	3

Classification code:	F1
Special Provisions:	274 601
Limited quantity:	5 L
Excepted quantity:	E1

Marine transport (IMDG)

14.1. UN number:	UN 3272
14.2. UN proper shipping name:	ESTERS, N.O.S. (2-Methoxy-1-methylethylacetat)
14.3. Transport hazard class(es):	3
14.4. Packing group:	III
Hazard label:	3

Special Provisions:	223, 274
Limited quantity:	5 L
Excepted quantity:	E1
EmS:	F-E, S-D

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number:	UN 3272

14.2. UN proper shipping name: ESTERS, N.O.S.

14.3. Transport hazard class(es): 3

14.4. Packing group: III

Hazard label: 3

Special Provisions:	A3
Limited quantity Passenger:	10 L
Passenger LQ:	Y344
Excepted quantity:	E1
IATA-packing instructions - Passenger:	355
IATA-max. quantity - Passenger:	60 L
IATA-packing instructions - Cargo:	366
IATA-max. quantity - Cargo:	220 L

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: no

14.6. Special precautions for user

No information available.

14.7. Transport in bulk according to Annex II of Marpol 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

Restrictions on use (REACH, annex XVII):

Entry 3: 2-methoxy-1-methylethyl acetate

Entry 30: 2-methoxypropyl acetate

2010/75/EU (VOC):	95 % (921,5 g/l)
2004/42/EC (VOC):	95,671 % (928,009 g/l)

Additional information

To follow: 850/2004/EC, 79/117/EEC, 689/2008/EC

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):	2 - clearly water contaminating

15.2. Chemical safety assessment

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

SECTION 16: Other information

Changes

This data sheet contains changes from the previous version in section(s): 3,7,15.

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%

Classification for mixtures and used evaluation method according to Regulation (EC) No. 1272/2008 [CLP]

Classification	Classification procedure
Flam. Liq. 3; H226	On basis of test data
Acute Tox. 4; H332	On basis of test data

Relevant H and EUH statements (number and full text)

H226	Flammable liquid and vapour.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H360D	May damage the unborn child.

Further Information

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

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