



MATERIAL SAFETY DATA SHEET

PRODUCT NUMBER: 11 10 29

SECTION 1 PRODUCT IDENTIFICATION AND MANUFACTURE

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PRODUCT: VARI-SET 10/20 LIQUID

SECTION 2 SUBSTANCE HAZARD IDENTIFICATION

- **2.2 Chemical characterization: Mixtures**
- **Description:** Liquid based on methacryl acid ester, containing an activator.

· Dangerous components:		
	Tetrahydrofurfuryl-2-methacrylat T R60; Xi R36/37/38 Repr. 1B, H360Df	50-75%
CAS: 27813-02-1 EINECS: 248-666-3	methacrylic acid, monoester with propane-1,2-diol Xi R36/38 Skin Irrit. 2, H315; Eye Irrit. 2, H319	25-50%
CAS: 99-97-8 EINECS: 202-805-4	N,N-dimethyl-p-toluidine T R23/24/25 R33-52/53 ----- Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331; STOT RE 2, H373; Aquatic Chronic 3, H412	< 2.5%

- **Additional information** For the wording of the listed risk phrases refer to section 16.

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

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



GHS08 health hazard

Repr. 1B H360Df May damage the unborn child. Suspected of damaging fertility.



GHS07

Skin Irrit. 2 H315 Causes skin irritation.
Eye Irrit. 2 H319 Causes serious eye irritation.
Skin Sens. 1 H317 May cause an allergic skin reaction.



Classification according to Directive 67/548/EEC or Directive 1999/45/EC



T; Toxic

R60: May impair fertility.



Xi; Irritant

R36/37/38: Irritating to eyes, respiratory system and skin.



Xi; Sensitising

R43: May cause sensitisation by skin contact.

· **Information concerning particular hazards for human and environment:**

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

· **Classification system:**

The classification is according to the latest editions of the EU-lists, and extended by company and literature data

· **3.2 Label elements**

· **Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the CLP regulation.

· **Hazard pictograms** GHS07, GHS08

· **Signal word** Danger

· **Hazard-determining components of labelling:**

Tetrahydrofurfuryl-2-methacrylat

2-hydroxyethyl methacrylate

· **Hazard statements**

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H317 May cause an allergic skin reaction.

H360Df May damage the unborn child. Suspected of damaging fertility.

· **Precautionary statements**

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

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.

P321 Specific treatment (see on this label).

P405 Store locked up.

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

· **2.3 Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.



SECTION 4 FIRST AID MEASURES

· 4.1 Description of first aid measures

· After inhalation

Take affected persons into fresh air and keep quiet.

Supply fresh air and to be sure call for a doctor.

In case of unconsciousness place patient stably in side position for transportation.

· After skin contact

If skin irritation continues, consult a doctor.

Immediately wash with water and soap and rinse thoroughly.

· After eye contact

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

· **After swallowing** If symptoms persist consult doctor.

· **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

No further relevant information available.

SECTION 5 FIRE FIGHTING MEASURES

· 5.1 Extinguishing media

· Suitable extinguishing agents

Fire-extinguishing powder

Carbon dioxide

Foam

Water haze

· **5.2 Special hazards arising from the substance or mixture** No further relevant information available.

· 5.3 Advice for firefighters

· **Protective equipment:** Wear self-contained respiratory protective device.

· Additional information

Cool endangered receptacles with water spray.

Collect contaminated fire fighting water separately. It must not enter the sewage system.

Dispose of fire debris and contaminated fire fighting water in accordance with official regulation.

SECTION 6 ACCIDENTAL RELEASE MEASURES

· 6.1 Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation

Wear protective clothing.

· **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.

· 6.3 Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

· 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 disposal information.



SECTION 7

HANDLING AND STORAGE

· 7.1 Precautions for safe handling

- Keep receptacles tightly sealed.
- Keep away from heat and direct sunlight.
- Ensure good ventilation/exhaustion at the workplace.
- Open and handle receptacle with care.
- Prevent formation of aerosols.

· Information about fire - and explosion protection:

- Fumes can combine with air to form an explosive mixture.
- Keep respiratory protective device available.

· 7.2 Conditions for safe storage, including any incompatibilities

· Storage

· Requirements to be met by storerooms and receptacles:

Storage between 10 °C and 25 °C.

Only fill the container up to 90 %.

· **Information about storage in one common storage facility:** Store away from foodstuffs.

· **Further information about storage conditions:** Keep receptacle tightly sealed.

· **Storage class** Not determined

· **7.3 Specific end use(s)** No further relevant information available.

SECTION 8

EXPOSURE CONTROL/PERSONAL PROTECTION

· **Additional information about design of technical facilities:** No further data; see item 7.

· 8.1 Control parameters

· **Ingredients with limit values that require monitoring at the workplace:**

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

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

· 8.2 Exposure controls

· **Personal protective equipment**

· **General protective and hygienic measures**

Pregnant women should strictly avoid inhalation or skin contact.

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Store protective clothing separately.

Avoid contact with the eyes and skin.

· **Respiratory protection:**

Not necessary if room is well-ventilated.

Use suitable respiratory protective device when high concentrations are present.

Filter AX.

· **Protection of hands:** Solvent resistant gloves

· **Material of gloves** Butyl rubber, BR

· **Penetration time of glove material**

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 goggles.

· **Body protection:**

Protective work clothing.

(Only when handling large quantities)



SECTION 9

PHYSICAL AND CHEMICAL PROPERTIES

· 9.1 Information on basic physical and chemical properties	
· General Information	
· Appearance:	
Form:	Fluid
Colour:	Colourless
Odour:	Ester-like
Odour threshold:	Not determined.
· pH-value:	Not determined
Change in condition	
Melting point/Melting range:	undetermined
Boiling point/Boiling range:	0 °C
· Flash point:	91 °C
· Flammability (solid, gaseous)	Not applicable.
· Ignition temperature:	
· Decomposition temperature:	Not determined.
· Self-igniting:	Product is not selfigniting.
· Danger of explosion:	Product does not present an explosion hazard.
· Explosion limits:	
Lower:	Not determined
Upper:	Not determined
· Vapour pressure at 20 °C:	0.1 hPa
· Density at 20 °C:	1.03448 g/cm ³
· Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with	
Water:	Not miscible or difficult to mix
· Partition coefficient (n-octanol/water):	
Not determined.	
· Viscosity:	
dynamic:	Not determined
kinematic:	Not determined
· Solvent content:	
Organic solvents:	0.0 %
· 9.2 Other information	No further relevant information av

SECTION 10

STABILITY AND REACTIVITY PROPERTIES

- 10.1 Reactivity
- 10.2 Chemical stability
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- 10.3 Possibility of hazardous reactions Exothermic polymerization
- 10.4 Conditions to avoid No further relevant information available.
- 10.5 Incompatible materials:
In presence of radical formers (e. g. peroxides), deoxidizing substances, and/or heavy metal ions, polymerization with heat release is possible.
Oxidation agent.
- 10.6 Hazardous decomposition products: No dangerous decomposition products known



SECTION 11

TOXICOLOGICAL INFORMATION

· 11.1 Information on toxicological effects

· Acute toxicity:

· LD/LC50 values relevant for classification:

Tetrahydrofurylmethacrylat LD-50 oral 4000 mg/kg rat (lit.)

Hydroxypropyl methacrylate LD-50 oral 11200 mg/kg rat (lit.)

· Primary irritant effect:

· **on the skin:** Irritant to skin and mucous membranes.

· on the eye:

THF-2-MA slight irritating Species: rabbit eye

Method OECD 405

HPMA irritating Species: rabbit eye

Method OECD 405

Irritating effect.

· Sensitization:

THF-2-MA not sensitization Species: guinea

Method Polak, Adjuvans

HPMA slight sensitization Species: guinea

Method maximation test

Sensitization possible through skin contact.

· Additional toxicological information:

The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version.

Irritant

· **Repeated dose toxicity** Tetrahydrofurfuryl-2-methacrylate: NOAEL 300 mg/kg

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

SECTION 12

ECOLOGICAL INFORMATION

· 12.1 Toxicity

· **Aquatic toxicity:** No further relevant information available.

· Type of test Effective concentration Method Assessment

Toxicity to fish: LC-50/96h: 34,7 mg/l (lit.)

(THF-2-MA) Species:

Pimephales promelas

(HPMA) LC-50/48h: 493 mg/l (lit.)

Species:

Leuciscus idus

Toxicity to Micro- EC-10/16h: > 1140 mg/l (lit.)

Organism Species:

Pseudomonas putida

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

· **Other information:** THF-2-MA: inherent biological elimination, OEDC 301 F, 28 d 75 %

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

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

· Additional ecological information:

· General notes:

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

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

Danger to drinking water if even small quantities leak into the ground.

· 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 be specially treated adhering to official regulations.

· European waste catalogue	
07 01 04*	other organic solvents, washing liquids and mother liquors

- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

SECTION 14 TRANSPORT INFORMATION

· 14.1 UN-Number	<i>Void</i>
· ADR, ADN, IMDG, IATA	<i>Void</i>
· 14.2 UN proper shipping name	<i>Void</i>
· ADR, ADN, IMDG, IATA	<i>Void</i>
· 14.3 Transport hazard class(es)	<i>Void</i>
· ADR, ADN, IMDG, IATA	<i>Void</i>
· Class	<i>Void</i>
· 14.4 Packing group	<i>Void</i>
· ADR, IMDG, IATA	<i>Void</i>
· 14.5 Environmental hazards:	
· Marine pollutant:	<i>No</i>
· 14.6 Special precautions for user	<i>Not applicable.</i>
· 14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	<i>Not applicable.</i>
· Transport/Additional information:	<i>Not dangerous according to the above specifications.</i>
· UN "Model Regulation":	<i>-</i>

SECTION 15 REGULATORY INFORMATION

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **National regulations**
- **Information about limitation of use:**
Employment restrictions concerning juveniles must be observed.
Employment restrictions concerning pregnant and lactating women must be observed.

- **Technical instructions (air):**

Class	Share in %
I	< 2,5
III	2,5-10

- **Waterhazard class:** Water hazard class 2 (Self-assessment): hazardous for water.
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.



SECTION 16

OTHER INFORMATION

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Relevant phrases**

H301 Toxic if swallowed.

H311 Toxic in contact with skin.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H331 Toxic if inhaled.

H360Df May damage the unborn child. Suspected of damaging fertility.

H373 May cause damage to organs through prolonged or repeated exposure.

H412 Harmful to aquatic life with long lasting effects.

R23/24/25 Toxic by inhalation, in contact with skin and if swallowed.

R33 Danger of cumulative effects.

R36/37/38 Irritating to eyes, respiratory system and skin.

R36/38 Irritating to eyes and skin.

R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R60 May impair fertility.

· **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 Organization

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 (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

Acute Tox. 3: Acute toxicity, Hazard Category 3

Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2

Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2

Skin Sens. 1: Sensitisation - Skin, Hazard Category 1

Repr. 1B: Reproductive toxicity, Hazard Category 1B

STOT RE 2: Specific target organ toxicity - Repeated exposure, Hazard Category 2

Aquatic Chronic 3: Hazardous to the aquatic environment - Chronic Hazard, Category 3

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