

SAFETY DATA SHEET

according to ChemO 2015 - SR 813.11



PEFAKIT® TAFI	800186
R3 TAFI Diluent	802211

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

1.1 Product identifier

Trade name	TAFI Diluent Reagent R3 of Pefakit® TAFI
Article number	802211 (Reagent) 800186 (Assay)

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

Application of the substance / the mixture	Reagent of the research assay Pefakit® TAFI. For research use only.
--------------------------------------------	------------------------------------------------------------------------

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier	DSM Nutritional Products Ltd Branch Pentapharm Dornacherstrasse 112 CH-4147 Aesch BL / Switzerland Phone +41 61 706 48 48 Fax +41 61 706 48 00
Further information obtainable from	pentapharm@pentapharm.com

1.4 Emergency telephone number

Tox Info Suisse : +41 44 251 51 51 (24h; 7 days a week)

2 Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008



flame

Flam. Liq. 3 H226 Flammable liquid and vapour.

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



GHS02

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Signal word

Warning

Hazard statements

H226 Flammable liquid and vapour.

Precautionary statements

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

2.3 Other hazards

Results of PBT and vPvB assessment

PBT: According to current knowledge, the product contains no PBT substance.



vPvB: According to current knowledge, the product contains no vPvB substance.

3 Composition/information on ingredients

3.2 Chemical characterization

Description

Mixture of substances listed below with nonhazardous additions.

Dangerous components		
CAS: 64-17-5 EINECS: 200-578-6	Ethanol  Flam. Liq. 2, H225;  Eye Irrit. 2, H319	10 - 25%

SVHC

According to current knowledge no SVHC contained.

Additional information

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

4 First aid measures

4.1 Description of first aid measures

General information

No special measures required.

After inhalation

Move individual to fresh air, seek medical advice in case of complaints.

After skin contact

Wash with plenty of soap and water.

After eye contact

Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing.

If eye irritation persists: Get medical advice/attention.

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After swallowing

If symptoms persist consult doctor.

Remove contact lenses, if present and easy to do. Continue rinsing.

If eye irritation persists: Get medical advice/attention.

After swallowing

Immediately call a POISON CENTRE/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.

5 Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

CO₂, powder or water spray. Fight larger fire with alcohol resistant foam.

For safety reasons unsuitable extinguishing agents

Water with full jet.

5.2 Specific hazards arising from the substance or mixture

In case of fire, the following can be released:

Carbon oxides (CO and CO₂)

Can form explosive gas-air mixtures.

5.3 Advice for firefighters

Protective equipment

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

Additional information

Cool endangered receptacles with water spray

6 Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Not required.

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).

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Ensure adequate ventilation.

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 disposal information.

7 Handling and storage

7.1 Precautions for safe handling

Avoid contact with skin, eyes and clothing.

Information about fire - and explosion protection

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

7.2 Conditions for safe storage, including any incompatibilities

Storage

Requirements to be met by storerooms and receptacles

Store in a cool location.

Information about storage in one common storage facility

Not required.

Further information about storage conditions

Store the product in a dry place protected from light at a temperature between +2 to +8°C.

Store in cool, dry conditions in well sealed receptacles.

Store receptacle in a well ventilated area.

Protect from heat and direct sunlight.

7.3 Specific end use(s)

No further relevant information available.

8 Exposure controls/personal protection

8.1 Control parameters

Ingredients with limit values that require monitoring at the workplace	
64-17-5 ethanol	
MAK (Switzerland)	Short-term value: 1920 mg/m ³ , 1000 ppm Long-term value: 960 mg/m ³ , 500 ppm SSc;
AGW (Germany)	Long-term value: 960 mg/m ³ , 500 ppm 2(II);DFG,

Additional information

The lists valid during the making were used as basis.

PEFAKIT® TAFI**800186****R3 TAFI Diluent****802211****8.2 Exposure controls****Personal protective equipment****General protective and hygienic measures**

Avoid contact with skin, eyes and clothing.

Respiratory protection

Use suitable respiratory protective device in case of insufficient ventilation

Respiratory protection must be compliant with the specifications of Directive 89/686/EEC and be in accordance with the EN standards resulting thereof.

Protection of hands

Protective gloves

Material of gloves

Protective gloves must be compliant with the specifications of EU Directive 89/686/EEC and be in accordance with the standard EN374. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

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 cannot be calculated in advance and has therefore to be checked prior to the application.

Eye protection

Tightly safety glasses

Protective goggles must be compliant with the specifications of Directive 89/686 / EEC and be in accordance with the standard EN166.

Limitation and supervision of exposure into the environment

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

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9 Physical and chemical properties

9.1 Information on basic physical and chemical properties

General Information	
Appearance	
Form	Solution
Colour	Clear
Odour	Not determined.
Odour threshold	Not determined.
pH-value	8.5 - 9.5
Change in condition	
Melting point/Melting range	Not determined.
Boiling point/Boiling range	Not determined.
Flash point	Not applicable.
Flammability (solid, gaseous)	Not determined.
Ignition temperature	Not determined.
Decomposition temperature	Not determined.
Self-igniting	Product is not self-igniting.
Danger of explosion	Product does not present an explosion hazard.
Explosion limits	
Lower	Not determined.
Upper	Not determined.
Oxidising properties	Not determined.
Vapour pressure	Not applicable.
Density	
Relative density	Not determined.
Vapour density	Not determined.
Evaporation rate	Not applicable.
Solubility in / Miscibility with	
Water	Miscible.
Partition coefficient (n-octanol/water)	Not determined.
Viscosity	
Dynamic	Not applicable.
Kinematic	Not applicable.

9.2 Other information

No further relevant information available.

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10 Stability and reactivity

10.1 Reactivity

No further relevant information available.

10.2 Chemical stability

No information available

Thermal decomposition / conditions to be avoided

No decomposition if used according to specifications.

10.3 Possibility of hazardous reactions

Can form explosive gas-air mixtures.

10.4 Conditions to avoid

Heat.

10.5 Incompatible materials

No further relevant information available.

10.6 Hazardous decomposition products

Carbon monoxide and carbon dioxide.

11 Toxicological information

11.1 Information on toxicological effects

Acute toxicity

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

Skin corrosion/irritation

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

Serious eye damage/irritation

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

Respiratory or skin sensitisation

Based on available data, the classification criteria are not met

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

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

STOT-repeated exposure

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

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Aspiration hazard

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

12 Ecological information

12.1 Toxicity

Aquatic toxicity

Based on the ingredients not classified as harmful for the environment.

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.

12.5 Results of PBT and vPvB assessment

PBT

According to current knowledge, the product contains no PBT substance.

vPvB

According to current knowledge, the product contains no vPvB substance.

12.6 Other adverse effects

No further relevant information available.

13 Disposal considerations

13.1 Waste treatment methods

Recommendation: Disposal must be made according to official regulations.

Ordinance of the Federal Department of the Environment, Transport, Energy and Communications (DETEC) on Lists for Waste Traffic (SR 814.610.1).	
18 00 00	WASTES FROM HUMAN OR ANIMAL HEALTH CARE AND/OR RELATED RESEARCH
18 01 00	Wastes from natal care, diagnosis, treatment or prevention of disease in humans
18 01 06	Chemicals consisting of or containing dangerous substances.

Classification: S = hazardous waste

Uncleaned packaging

Recommendation: Disposal must be made according to official regulations.

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14 Transport information

14.1 UN-number

ADR/ADN, IMDG, IATA UN1170

14.2 UN Proper shipping name

ADR/AND 1170 ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)
IMDG ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)
IATA ETHANOL SOLUTION

14.3 Transport hazard class(es)

ADR/ADN, IMDG, IATA



Label

14.4 Packing group

ADR/ADN, IMDG, IATA III

14.5 Environmental hazards

Marine pollutant No

14.6 Special precautions for user

Stowage Category Not applicable.

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

Not applicable.

Transport additional information

ADR/ADN

Limited quantities (LQ) 5L

Expected quantities (EQ) Code: E1

Maximum net quantity per inner packaging: 30ml

Maximum net quantity per outer packaging: 1000ml

Transport category 3

Tunnel restriction code D/E

IMDG

Limited quantities (LQ) 5L

Expected quantities (EQ) Code: E1

Maximum net quantity per inner packaging: 30ml

Maximum net quantity per outer packaging: 1000ml

UN "Model Regulation" Void

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15 Regulatory information

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

Directive 2012/18/EU

Named dangerous substances - ANNEX I None of the ingredients is listed.

Seveso category P5c FLAMMABLE LIQUIDS

Qualifying quantity (tonnes) for the application of lower-tier requirements 5.000 t

Qualifying quantity (tonnes) for the application of upper-tier requirements 50.000 t

National regulations

Ordinance on Protection against Major Accidents (Major Accidents Ordinance, MAO; SR 814.012)
Annex 1: Volume threshold according to MAO in kg: 20'000 kg (Source: FOEN - List 2015 - Volume thresholds in accordance with the Major Accidents Ordinance / Volume Threshold Calculator)

Chemical Risk Reduction Ordinance (ORRChem; SR 814.81):

The product contains no substances subject to authorization according to Annex 1.17 in concentrations $\geq 0.1\%$ w/w or above specific concentration limits (if $< 0.1\%$ w/w).

Chemical Risk Reduction Ordinance (ORRChem; SR 814.81):

The preparation or substances contained therein are not subject to any prohibition or restriction in accordance with Annexes 1 and 2.

Chemicals Ordinance (ChemO; SR 813.11):

The product contains no substances of very high concern according to Annex 3 in concentrations $\geq 0.1\%$ w/w.

Waterhazard class: Water hazard class: class B (self-classification).
OVOC (CH) 10.00 %

15.2 Chemical safety assessment

A Chemical Safety Assessment has not been carried out.

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16 Other information

All information and instructions provided in this Safety Data Sheet are based on the current state of scientific and technical knowledge at the date indicated on this Safety Data Sheet. DSM Nutritional Products Ltd Branch Pentapharm shall not be held responsible for any defect in the product covered by this Safety Data Sheet, should the existence of such a defect not be detectable considering the current state of scientific and technical knowledge.

Relevant phrases

H225 Highly flammable liquid and vapour.

H319 Causes serious eye irritation.

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 Harmonised 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)

PBT: Persistent, Bioaccumulative and Toxic

SVHC: Substances of Very High Concern

vPvB: very Persistent and very Bioaccumulative

Flam. Liq. 2: Flammable liquids - Category 2

Flam. Liq. 3: Flammable liquids - Category 3

Eye Irrit. 2: Serious eye damage/eye irritation - Category 2