SAFETY DATA SHEET

Safety data sheet according to (EC) No. 1907/2006.

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

Product identifier:

Aminopeptidase Reagent

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

In vitro laboratory use.

Details of the supplier of the safety data sheet:

ROSCO DIAGNOSTICA A/S
Taastrupgaardsvej 30 Phone: +45 - 43 99 33 77
DK-2630 Taastrup Fax.: +45 - 43 52 73 74
Responsible person for the safety data sheet (e-mail): info@rosco.dk

Emergency telephone:

+45 - 43 99 33 77 (within office hours)

2. Hazards identification

Classification of the substance or mixture:

Highly flammable reagent.

EC (67/548 or 1999/45): F;R11

CLP (1272/2008): Flam. Liq. 2;H225

Label elements:

EC:

Contains: Ethanol

Highly flammable

R 11: Highly flammable.

S 7: Keep container tightly closed.

S 16: Keep away from sources of ignition - No smoking.

Other hazards:

None known.

PBT/vPvB: The ingredients are not considered PBT/vPvB according to criteria in Annex XIII.

3. Composition/information on ingredients

Substances: -

Mixtures:

% w/w	Name	CAS-no.	EC-no.	Index-no.	REACH reg.no.	Classification
0.015	4-dimethylamino-cinnamaldehyde	6203-18-5	228-267-0	-	-	EC: Xi;R36/37/38 CLP: Eye Irrit. 2;H319 Skin Irrit. 2;H315 STOT SE 3;H335
2,5	Acetic acid	64-19-7	200-580-7	607-002-00-6	-	EC: R10 C;R35 CLP: Flam. Liq. 3;H226 Skin Corr. 1A;H314
0,5	Sodium lauryl sulphate	151-21-3	205-788-1	-	-	EC: Xi;R38-41 CLP: Skin Irrit. 2;H315 Eye Dam. 1;H318
60	Ethanol	64-17-5	200-578-6	603-002-00-5	-	EC: F;R11 CLP: Flam. Liq. 2;H225

Wording of R-phrases and hazard statements - see section 16.

4. First-aid measures

Description of first aid measures:

Inhalation: Move the affected person to fresh air. Keep at rest. If symptoms persists: Seek medical advice.

Skin contact: Remove contaminated clothing. Wash skin with water and mild soap. If irritation persists: Seek medical advice.

Eye contact: Flush with water or physiological salt water for at least 15 minutes, holding eye lids open, remember to remove contact lenses, if any. If irritation persists: Seek medical advice.

Ingestion: Rinse mouth and drink plenty of water. In case of discomfort: Seek medical advice.

Burns: Flush with water until pain ceases.

Most important symptoms and effects, both acute and delayed:

Irritation of lungs, skin, eyes and mucous membranes.

Prolonged inhalation of vapours may result in inflammation of the nose and gastrointestinal tract, corrosion of the teeth and damage on liver, kidneys, blood or central nervous system.

Indication of any immediate medical attention and special treatment needed:

Show this Safety Data Sheet to a physician or emergency ward.

5. Fire-fighting measures

Extinguishing media:

Carbon dioxide, dry chemical, sand, foam or water fog. Do not use water jet.

Special hazards arising from the substance or mixture:

Do not breathe smoke fumes. In case of fire, the product may form hazardous decomposition products such as oxides of carbon.

Advice for fire-fighters:

When entering burning area: Wear self contained breathing apparatus.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures:

Use personal protective equipment - see section 8. Ventilate area of leak or spill. Remove sources of ignition.

Environmental precautions:

Do not empty into drains - see section 12. Inform appropriate authorities in accordance with local regulations.

Methods and material for containment and cleaning up:

Take up with wet paper, absorbent material (e.g. general-purpose binder) and place in marked container for disposal. Clean with water. Further handling of spillage - see section 13.

Reference to other sections:

See above.

7. Handling and storage

Precautions for safe handling:

Avoid breathing vapours. Provide sufficient ventilation. Avoid contact with skin, eyes and clothing. Change contaminated clothes. Wash hands and contaminated areas with water and mild soap after use. There shall be access to water and eye wash fountain.

Conditions for safe storage, including any incompatibilities:

Store in a well-closed original container and in a flammable liquid storage area. Dry, cool (2-8°C) and separated from oxidizing agents. Keep out of the reach of children.

Specific end use(s):

See section 1.

8. Exposure controls/Personal protection

Control parameters:		**8-hour TWA**	**15-min STEL**
Occupational exposure limits (EH40/2007):	Ethanol	1000 ppm = 1920 mg/m^3	-
DNEL/PNEC:	No CSR.		

Exposure controls:

Appropriate engineering controls: Provide efficient ventilation e.g. by working in a fume cupboard.

Personal protective equipment:

Respiratory protection: Normally not necessary if working in fume cupboard. In case of working in not adequate ventilated areas, use an approved mask with a gas filter: A. The filter has a limited lifetime and must be changed. Read the instruction.

Skin protection: Wear protective gloves of e.g. butyl rubber or nitrile rubber. Breakthrough time: 3 hours.

Eye protection: Wear tight fitting safety goggles when risk of eye contact.

Environmental exposure controls: None particular.

9. Physical and chemical properties

Information on basic physical and chemical properties:

Appearance:	Clear, yellow liquid
Odour:	Alcohol
Odour threshold:	No available data
pH:	No available data
Melting point/freezing point (^{o}C):	No available data
Initial boiling point and boiling range (^{o}C):	No available data
Decomposition temperature (^{o}C):	No available data
Flash point (^{o}C):	9
Evaporation rate (water = 1):	No available data
Flammability (solid, gas):	Not relevant
Upper/lower flammability or explosive limits (vol-%):	No available data
Vapour pressure (mmHg, 20^{o}C):	No available data
Vapour density (Water = 1):	No available data
Relative density (Water = 1):	< 1
Solubility (water):	Miscible with water.
Partition coefficient: n-octanol/water:	No available data
Auto-ignition temperature (^{o}C):	No available data
Viscosity:	Not relevant
Explosive properties:	Not relevant
Oxidising properties:	Not relevant

Other information:

None relevant.

10. Stability and reactivity

Reactivity:

No available information.

Chemical stability:

Stable under the recommended storage conditions (see section 7).

Possibility of hazardous reactions:

Vapours can be ignited by a spark, a hot surface or a glow. Vapours are heavier than air.

Conditions to avoid:

Formation of sparks and glows. Excessive heating and sources of ignition.

Incompatible materials:

May react strongly with oxidizing agents and acids and alkalines.

Hazardous decomposition products:

When heated to high temperatures (decomposition) it emits toxic fumes such as oxides of carbon.

11. Toxicological information

Information on toxicological effects:

Hazard class	Data	Test	Reference
Acute toxicity:			
Inhalation	LC_{50} (rat) = 11,4 mg/l/4H (Acetic acid)	No info	IUCLID
	LC_{50} (rat) = 125 mg/l/4H (Ethanol)	No info	IUCLID
Dermal	LD_{50} (rabbit) = 1060 mg/kg (Acetic acid)	No info	IUCLID
	LD_{Lo} (rabbit) = 20000 mg/kg (Ethanol)	No info	IUCLID
Oral	LD_{50} (rat) = 3310 mg/kg (Acetic acid)	No info	IUCLID
	LD_{50} (rat) = 1780 mg/kg (Ethanol)	No info	IUCLID
Corrosion/irritation:	Strong irritation to corrosion, rabbit (Acetic acid)	No info	IUCLID
	No skin irritation, rabbit (Ethanol)	OECD 404	IUCLID
	None to moderate eye irritation, rabbit (Ethanol)	OECD 405	IUCLID
Sensitization:	No available data (Acetic acid)	-	-
	No skin sensitization, guinea pig (Ethanol)	GPMT m.fl.	IUCLID
CMR:	TD_{Lo} (rat, oral) = 5760 mg/kg/32W intermittent: ”Equivocal tumorigenic agent”	No info	RTECS
	Genotoxic at in vivo test, inhalation	Drosophila SLRL	IUCLID
	TD_{Lo} (nursing female rat, oral) = 700 mg/kg 18d after birth: “Effects on newborn” (Acetic acid)	No info	RTECS
	No applicable/available data on carcinogenicity		
	No applicable/available data on reproductive toxicity		
	Data for mutagenicitet er ikke entydige (Ethanol)	Diverse	IUCLID

11. Toxicological information (continued)

Information on likely routes of exposure: Lungs, skin and gastrointestinal tract.
Symptoms:

Inhalation:	Vapours may cause irritation to the airways. May induce discomfort, nausea, dizziness, headache, narcosis and unconsciousness.
Skin:	May cause irritation with redness. Degreases skin.
Eyes:	May cause irritation with redness, pain and blurred vision.
Ingestion:	May irritate the mucous membranes. May cause symptoms mentioned for “Inhalation”.
Chronic effects:	Prolonged or frequent exposure to vapours of volatile organic compounds may result in damage on liver, kidneys, blood or central nervous system.

12. Ecological information

Toxicity:

Aquatic	**Data** (Acetic acid)	**Test (Media)**	**Reference**
Fish	LC_{50} (Lepomis macrochirus, 96h) = 75 mg/l (Acetic acid)	Statisk (FW)	IUCLID
	LC_{50} (Pimephales promelas, 96h) = 15300 mg/l (Ethanol)	No info (FW)	IUCLID
Crustacean	LC_{50} (Daphnia magna, 48h) = 65 mg/l (Acetic acid)	No info (FW)	EPA Ecotox
	EC_{50} (Daphnia magna, 48h) = 9268 - 14221 mg/l (Ethanol)	No info (FW)	IUCLID
Algae	No applicable/available data (Acetic acid & Ethanol)	-	-

Persistence and degradability:
Acetic acid: BOD_5 = 66-76 % of ThOD - thus readily biodegradable.
Ethanol is readily biodegradable.
Bioaccumulative potential:
Acetic acid: Log K_{ow} = -0.17 – No significant bioaccumulation is expected.
Ethanol: Log K_{ow} < 1 – No significant bioaccumulation is expected.
Mobility in soil:
Acetic acid: $K_{oc} \leq 1$ – Very large mobility expected in soil.
Ethanol: $K_{oc} \leq 5$ – Very large mobility expected in soil.
Results of PBT and vPvB assessment:
Ingredients are not considered PBT/vPvB according to criteria in Annex XIII.
Other adverse effects:
None known.

13. Disposal considerations

Waste treatment methods:
Disposal should be according to local, state or national legislation. Dispose of through authority facilities or pass to chemical disposal company.
EWC-Code:
16 05 08
15 02 02 (paper contaminated with product).

14. Transport information

Not dangerous goods (ADR/RID).

UN-no.:	**UN proper shipping name:**	**Transport hazard class(es):**	**Packing group:**
1170	ETHANOL SOLUTION	3	II

Environmental hazards: None.
Special precautions for user: None.
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: Not relevant.

15. Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture:
Must not be used by persons under 18 years of age.
The employer shall assess the working conditions and, if there is any risk to the safety or health and any effects on the pregnancy or breastfeeding of workers, take the necessary measures to adjust the working conditions (Directive 92/85/EEC).
Chemical Safety Assessment:
No CSR.

16. Other information

CLP label elements (1272/2008):
Content: Ethanol

Danger

H225: Highly flammable liquid and vapour.
P210: Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P233: Keep container tightly closed.
P403+P235: Store in a well-ventilated place. Keep cool.

R-phrases and hazard statements mentioned in section 2 and 3:
R 10: Flammable.
R 11: Highly flammable.
R 35: Causes severe burns.
R 36/37/38: Irritating to eyes, respiratory system and skin.
R 41: Risk of serious damage to eyes.

Abbreviations:
CMR = Carcinogenicitet, mutagenicitet og reproduktionstoksicitet
CSR = Chemical Safety Report
EC_{50} = Effect Concentration 50 %
DNEL = Derived No-Effect Level
FW = Fresh Water
LC_{50} = Lethal Concentration 50 %
LD_{50} = Lethal Dosis 50 %
PBT = Persistent, Bioaccumulative, Toxic
PNEC = Predicted No-Effect Concentration
TD_{Lo} = Toxic Dose Low
vPvB = very Persistent, very Bioaccumulative

Training advice:
No special training is required. However, the user should be well instructed in the execution of the task, be familiar with this Safety Data Sheet and have normal training in the use of personal protective equipment.

Changes since the previous edition:
1-16.

Prepared by: ALTox a/s – Tonsbakken 16-18 – DK-2740 Skovlunde - Phone +45 - 38 34 77 98 - Fax: +45 - 38 34 77 99 / PW - Quality control: PH