

Safety Data Sheet

acc. to OSHA HCS

Printing date 09/15/2016

Reviewed on 09/15/2016

1: Identification

· **1.1 Product identifier**

- Trade name: **TOYOPEARL AF-rprotein A: Group 21-3:**
0022803 TOYOPEARL AF-rProtein A-650F 10ML
0022804 TOYOPEARL AF-rProtein A-650F 25ML
0022805 TOYOPEARL AF-rProtein A-650F 100ML
0022806 TOYOPEARL AF-rProtein A-650F 1L
0022807 TOYOPEARL AF-rProtein A-650F 5L
0022808 TOYOPEARL AF-rProtein A-650F 50L
0023425 TOYOPEARL AF-rProtein A HC-650F 10ML
0023426 TOYOPEARL AF-rProtein A HC-650F 25ML
0023427 TOYOPEARL AF-rProtein A HC-650F 100ML
0023428 TOYOPEARL AF-rProtein A HC-650F 1L
0023429 TOYOPEARL AF-rProtein A HC-650F 5L
0023434 TOYOPEARL AF-rProtein A HC-650F 50L

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

No further relevant information available.

· **Application of the substance / the mixture** Resin

· **1.3 Details of the supplier of the safety data sheet**

· **Manufacturer**

TOSOH CORPORATION
 3-8-2 Shiba, Minato-ku
 Tokyo 105 -8623
 JAPAN

/ Supplier:

TOSOH BIOSCIENCE LLC
 3604 Horizon Dr; Suite 100
 King of Prussia, PA 19406
 USA

Tel. : + 81 3 5427 5181
 Fax : + 81 3 5427 5220

Phone : + 1 614 317 1934 or (800) 366 4875
 Fax : + 1 614 317 1930 or (800) 685 7595

· **Information department:** biosciencequality@tosoh.com

www.tosohbioscience.com

· **1.4 Emergency telephone number:** CHEMTREC 800-424-9300

2: Hazard(s) identification

· **2.1 Classification of the substance or mixture**

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



GHS02 Flame

Flam. Liq. 3 H226 Flammable liquid and vapor.

· **Classification according to 29 CFR 1910**

Flammable.

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

The product has to be labeled due to the calculation procedure of international guidelines.

· **Classification system:**

The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.

· **2.2 Label elements**

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

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

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· **Hazard pictograms**



GHS02

· **Signal word** Danger

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

ethanol

· **Hazard statements**

H226 Flammable liquid and vapor.

· **Precautionary statements**

- P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
- P241 Use explosion-proof electrical/ventilating/lighting/equipment.
- P280 Wear protective gloves / eye protection / face protection.
- P240 Ground/bond container and receiving equipment.
- P233 Keep container tightly closed.
- P242 Use only non-sparking tools.
- P243 Take precautionary measures against static discharge.
- P201 Obtain special instructions before use.
- P202 Do not handle until all safety precautions have been read and understood.
- P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P308+P313 IF exposed or concerned: Get medical advice/attention.
- P370+P378 In case of fire: Use for extinction: CO₂, powder or water spray.
- P405 Store locked up.
- P403+P235 Store in a well-ventilated place. Keep cool.
- P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



Health = 0
Fire = 2
Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**



HEALTH 0 Health = 0
FIRE 2 Fire = 2
REACTIVITY 0 Reactivity = 0

· **2.3 Other hazards**

· **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3: Composition/information on ingredients

· **3.2 Chemical characterization: Mixtures**

· **Description:** Mixture of the substances listed below with nonhazardous additions.

· **Dangerous components:**

CAS: 64-17-5	ethanol	10-<25%
EINECS: 200-578-6		

4: First-aid measures

· **4.1 Description of first aid measures**

- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Generally the product does not irritate the skin.
- **After eye contact:** Rinse opened eye for several minutes under running water.
- **After swallowing:** If symptoms persist consult doctor.

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- **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: Fire-fighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:** CO2, sand, extinguishing powder. Do not use water.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **5.2 Special hazards arising from the substance or mixture** No further relevant information available.
- **5.3 Advice for firefighters**
- **Protective equipment:** No special measures required.

6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **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).
Do not flush with water or aqueous cleansing agents
- **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** No special precautions are necessary if used correctly.
- **Information about protection against explosions and fires:**
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:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Store in a cool place.
Keep receptacle tightly sealed.
- **7.3 Specific end use(s)** No further relevant information available.

8: Exposure controls/personal protection

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

8.1 Control parameters

- **Components with limit values that require monitoring at the workplace:**

64-17-5 ethanol

PEL	Long-term value: 1900 mg/m ³ , 1000 ppm
REL	Long-term value: 1900 mg/m ³ , 1000 ppm
TLV	Short-term value: 1880 mg/m ³ , 1000 ppm

- **Additional information:** The lists that were valid during the creation were used as basis.
- **8.2 Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:** Wash hands before breaks and at the end of work.
- **Breathing equipment:** Not required.

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· **Protection of hands:**

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
 Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
 Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

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

· **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

9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

Form: Suspension

Color: White

· **Odor:** Alcohol-like

· **Odour threshold:** Not determined.

· **pH-value:** Not determined.

· **Change in condition**

Melting point/Melting range: Undetermined.

Boiling point/Boiling range: Undetermined.

· **Flash point:** 39 °C (102 °F)
Not applicable.

· **Flammability (solid, gaseous):** Not applicable.

· **Ignition temperature:** 425 °C (797 °F)

· **Decomposition temperature:** Not determined.

· **Auto igniting:** Product is not selfigniting.

· **Danger of explosion:** Product is not explosive. However, formation of explosive air/vapor mixtures are possible.

· **Explosion limits:**

Lower: 3.5 Vol %

Upper: 15.0 Vol %

· **Vapor pressure at 20 °C (68 °F):** 59 hPa (44 mm Hg)

· **Density:** Not determined.

· **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.

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· Solvent content:	
Organic solvents:	12.8 %
Water:	67.2 %
VOC content:	12.8 %
· Solids content:	
9.2 Other information	No further relevant information available.

10: Stability and reactivity

- **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** No dangerous reactions known.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** No dangerous decomposition products known.

11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
- **Carcinogenic categories**

· IARC (International Agency for Research on Cancer)	
64-17-5	ethanol

1

· NTP (National Toxicology Program)	
None of the ingredients is listed.	

· OSHA-Ca (Occupational Safety & Health Administration)	
None of the ingredients is listed.	

12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **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.
- **Additional ecological information:**
- **General notes:**
Water hazard class 1 (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

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13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation:**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

14: Transport information

- | | |
|--|-----------------|
| <ul style="list-style-type: none"> · 14.1 UN-Number · DOT, ADR, ADN, IMDG, IATA | Void |
| <ul style="list-style-type: none"> · 14.2 UN proper shipping name · DOT, ADR, ADN, IMDG, IATA | Void |
| <ul style="list-style-type: none"> · 14.3 Transport hazard class(es) · DOT, ADR, ADN, IMDG, IATA · Class | Void |
| <ul style="list-style-type: none"> · 14.4 Packing group · DOT, ADR, IMDG, IATA | Void |
| <ul style="list-style-type: none"> · 14.5 Environmental hazards: · Marine pollutant: | No |
| <ul style="list-style-type: none"> · 14.6 Special precautions for user | Not applicable. |
| <ul style="list-style-type: none"> · 14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code | Not applicable. |
| <ul style="list-style-type: none"> · UN "Model Regulation": | - |

15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Sara**
- **Section 355 (extremely hazardous substances):**
None of the ingredients is listed.
- **Section 313 (Specific toxic chemical listings):**
None of the ingredients is listed.
- **TSCA (Toxic Substances Control Act):**
- 64-17-5 ethanol
- 7732-18-5 water, distilled, conductivity or of similar purity
- **Proposition 65**
- **Chemicals known to cause cancer:**
None of the ingredients is listed.
- **Chemicals known to cause reproductive toxicity for females:**
None of the ingredients is listed.
- **Chemicals known to cause reproductive toxicity for males:**
None of the ingredients is listed.
- **Chemicals known to cause developmental toxicity:**
64-17-5 ethanol
- **Carcinogenic categories**
- **EPA (Environmental Protection Agency)**
None of the ingredients is listed.

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<ul style="list-style-type: none"> · TLV (Threshold Limit Value established by ACGIH) 	
64-17-5 ethanol	A3
<ul style="list-style-type: none"> · NIOSH-Ca (National Institute for Occupational Safety and Health) 	
None of the ingredients is listed.	
<ul style="list-style-type: none"> · Labelling according to Regulation (EC) No 1272/2008 	
The product is classified and labeled according to the CLP regulation.	
<ul style="list-style-type: none"> · Hazard pictograms 	
	
GHS02	
<ul style="list-style-type: none"> · Signal word Danger 	
<ul style="list-style-type: none"> · Hazard-determining components of labeling: 	
ethanol	
<ul style="list-style-type: none"> · Hazard statements 	
H226 Flammable liquid and vapor.	
<ul style="list-style-type: none"> · Precautionary statements 	
P210	Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P241	Use explosion-proof electrical/ventilating/lighting/equipment.
P280	Wear protective gloves / eye protection / face protection.
P240	Ground/bond container and receiving equipment.
P233	Keep container tightly closed.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P303+P361+P353	If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P370+P378	In case of fire: Use for extinction: CO2, powder or water spray.
P405	Store locked up.
P403+P235	Store in a well-ventilated place. Keep cool.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.
<ul style="list-style-type: none"> · 15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out. 	

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.

The information contained herein is prepared based on the available information to Tosoh that is believed to be reliable; however the information is provided by Tosoh WITHOUT ANY REPRESENTATION OR WARRANTY, EXPRESSED OR IMPLIED, AS TO ITS COMPLETENESS, COMPREHENSIVENESS AND ACCURACY.

Since the conditions of handling, storage and disposal of this material are beyond our control, it is the responsibility of the user to determine whether the material is fit for a particular purpose and/or suitable for the user's method of use or application, and to determine safe conditions for use of the material, and to assume full responsibility for loss, injury and expense arising out of or in connection with the use of material. NO REPRESENTATION OR WARRANTY, EXPRESS OR IMPLIED, REGARDING THE MATERIAL DESCRIBED HEREIN SHALL BE CREATED BY OR INFERRED FROM ANY STATEMENT OR OMISSION FROM THIS SDS.

Various government agencies and local authorities may have general or specific regulations applicable to the material which may not be covered in this SDS. It is sole responsibility of the user to examine and confirm for its full compliance with any such regulations.

When the revision of this SDS is received, please dispose of the old one.

- **Date of preparation / last revision** 07/15/2015 / -

- **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
- DOT: US Department of Transportation
- IATA: International Air Transport Association
- GHS: Globally Harmonised System of Classification and Labelling of Chemicals
- ACGIH: American Conference of Governmental Industrial Hygienists
- 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)
- NFPA: National Fire Protection Association (USA)

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HMIS: Hazardous Materials Identification System (USA)
VOC: Volatile Organic Compounds (USA, EU)
Flam. Liq. 3: Flammable liquids, Hazard Category 3
Carc. 1A: Carcinogenicity, Hazard Category 1A

USA