



**Historic Plaster Conservation Services**  
Applied Science

### TRI Funori

Fixative, cleaning agent and light adhesive for paint and paper conservation; non-toxic, filtered and unbleached.



#### Section 1: Product and Company Identification

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**Product Name:** TRI Funori

**Product Description:** Fixative, Adhesive and Cleaning Agent

**Generic Name:** Aqueous polysaccharide solution

**Date of Revision:** 18 April 2013

#### Section 2: Hazard Identification

**Emergency Overview:** Colorless to white liquid. May be irritating to eyes and skin. Use with adequate ventilation.

<b>HMIS HEALTH</b>	<b>0</b>
<b>HMIS FLAMMABILITY</b>	<b>0</b>
<b>HMIS REACTIVITY</b>	<b>0</b>
<b>PERSONAL PROTECTION</b>	<b>C</b>

**OSHA Regulatory Status:** This material is **not** considered hazardous under the OSHA standard.

**WHMIS Classification:** Not Controlled

**Potential Health Effects:**

**Inhalation:** Not a likely exposure route.

**Ingestion:** May cause digestive system upsets.

**Skin Contact:** May cause irritation.

**Eye Contact:** Liquid may cause irritation and redness.

**Chronic Exposure:** No information found.

**Aggravation of Pre-existing Conditions:** No information found.

**Target Organs:** Eyes, skin

#### Section 3: Composition / Information On Ingredients

Component	Common Names, Synonyms	CAS #	Weight %
Funori extract	Funoran, funori polysaccharide	9083-24-3	1 – 5

Non-hazardous components may or may not be listed. Carcinogens are listed when present at 0.1% or more; components which are otherwise hazardous according to OSHA are listed when present at 1.0% or more. This is not

**intended to be complete compositional disclosure. See Section 15 for applicable states right to know and other regulatory information.**

#### Section 4: First Aid Measures

**Inhalation:** Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Seek medical attention.

**Ingestion:** Dilute material by giving several glasses of water or milk. Never give anything by mouth to an unconscious person. Get medical attention if irritation develops..

**Skin:** Immediately flush skin with plenty of water for at least 15 minutes. Get medical attention if irritation develops.

**Eyes:** Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

**Note to Physicians:** N/A

#### Section 5: Fire Fighting Measures

**Fire:** Flash point: Not flammable. Once water has evaporated, product can provide fuel for a fire.

**Explosion:** Not considered an explosion hazard.

**Extinguishing Media:** Water spray, dry chemical, alcohol foam or carbon dioxide. Water spray may be used to keep fire exposed containers cool.

**Special Precautions:** In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

**NFPA Rating:** Health -0      Flammability - 0      Reactivity - 0      Other – NA

#### Section 6: Accidental Release Measures

Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8. Scrape or push material onto cardboard surface of sufficient size to hold spill. Recovered material can often be disposed of in a sanitary landfill or with ordinary household trash. Make sure that disposal is performed in compliance with federal and local laws.

#### Section 7: Handling and Storage

Keep refrigerated. Mix before using. Keep in a tightly closed container. Keep from freezing. Protect against physical damage. Isolate from any source of heat or ignition. Separate from incompatibles, combustibles, organic or other readily oxidizable materials. Empty containers of this material may possess the same hazards as full containers since they retain product residues (liquid, vapors); observe all warnings and precautions listed for the product.

#### Section 8: Exposure Control / Personal Protection

##### Exposure Guidelines:

Component	CAS #	OSHA PEL	ACGIH TLV	NIOSH TLV
Funori extract	9083-24-3	None established	None established	None established

##### Personal Protective Equipment:

**Skin Contact:** While no specific hazards exist, prudent work practices avoid unnecessary contact with skin. To this end, wear protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact. Nitrile and NBR gloves are recommended.

**Eye Contact:** Use chemical safety goggles and/or full face shield where misting or splashing of solutions is possible.

**Inhalation:** General ventilation should be sufficient to avoid accumulation of fumes.

**Engineering Controls:** A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, *Industrial Ventilation, A Manual of Recommended Practices*, most recent edition, for details.

Section 9: Physical and Chemical Properties			
Appearance	Colorless to white liquid	Specific Gravity (g/mL)	1.00 – 1.05
Odor	Mild, seaweed	pH	Not determined
Odor Threshold	Not determined	Solubility in water	Complete
Freezing Point	About 0°C (32°F)	% Volatiles	<1%
Boiling Point	Not determined	Evaporation Rate	Not determined
Flash Point	Not flammable	Vapor Pressure	Not determined
VOC as component	0 g/L	VOC as applied	0 g/L

#### Section 10: Stability and Reactivity

**Chemical Stability:** This product is stable in closed containers at room temperature.

**Hazardous Decomposition Products:** Carbon oxides (CO, CO<sub>2</sub>), organic acids and aldehydes.

**Hazardous Polymerization:** Will not occur.

**Incompatibilities:** Strong acids, oxidizers, heat

**Conditions to Avoid:** Incompatible materials, combustible materials.

#### Section 11: Toxicological Information

**Acute Dose Effects: Eyes:** No information found.

**Skin:** No information found

**Oral:** No information found.

**Inhalation:** No information found.

#### Section 12: Ecological Information

**Environmental Fate:** This product is not expected to bioaccumulate. This product is not readily biodegradable.

**Ecotoxicity:** This material is expected to have a low environmental toxicity.

#### Section 13: Disposal Considerations

**As a waste, this material IS NOT considered a HAZARDOUS WASTE.**

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

#### Section 14: Transport Information

**Canadian TDG**

**Proper Shipping Name:** Not regulated for transport

**DOT Hazard Class:** N/A

**UN Number:** N/A

**Packing Group:** N/A

**International Air**      **Proper Shipping Name:** Not regulated for transport  
**DOT Hazard Class:** N/A  
**UN Number:** N/A  
**Packing Group:** N/A

**U.S. Domestic Ground**      **Proper Shipping Name:** Not regulated for transport  
**DOT Hazard Class:** N/A  
**UN Number:** N/A  
**Packing Group:** N/A

**U.S. Domestic Air**      **Proper Shipping Name:** Not regulated for transport  
**DOT Hazard Class:** N/A  
**UN Number:** N/A  
**Packing Group:** N/A

This data provided for information only. The description shown may not apply to all shipping situations. Consult TDG, 49 CFR, or appropriate regulations to properly classify your shipment for transportation.

#### Section 15: Regulatory Information

**TSCA Chemical Inventory:** All of the chemicals in this product are listed on the TSCA Inventory.  
**TSCA Sec 4 Chemical Test Rule:** None of the chemicals in this product are under a Chemical Test Rule.  
**TSCA Sec 8(d):** None of the chemicals in this product are on the Health and Safety Reporting List.  
**TSCA Sec 12(b) Notices of Export:** None of the chemicals in this product are on this list.  
**TSCA Significant New Use Rule (SNUR):** None of the chemicals in this product are on this list.  
**SARA Sec 302 (EHS) TPQ:** None of the chemicals in this product have a TPQ.  
**SARA Sec 302 (EHS) RQ:** None of the chemicals in this product have a RQ.  
**SARA Sec 311/312:** Acute – NO; Chronic – NO; Fire – NO; Release of Pressure – NO; Reactivity – NO  
**SARA 313 List:** None of the chemicals in this product are on this list.  
**CERCLA Hazardous Substances and corresponding RQs:** Not applicable.  
**RCRA:** None of the chemicals in this product are on this list.  
**Clean Air Act: Hazardous Air Pollutants?** NO **Class 1 Ozone Depletors?** NO **Class 2 Ozone Depletors?** NO  
**Clean Water Act: Hazardous Substance?** NO **Priority Pollutant?** NO **Toxic Pollutant?** NO  
**Chemical Weapons Convention:** None of the chemicals in this product are on this list.  
**Drug Enforcement Agency (DEA) CDTA:** None of the chemicals in this product are on this list.  
**OSHA:** None of the chemicals in this product are considered Highly Hazardous by OSHA.  
**State Right-to-Know Lists:** None of the components in this product are found on the state Right-to-Know lists of California, Florida, Massachusetts, Minnesota, New Jersey and Pennsylvania.  
**California Proposition 65:** None of the chemicals in this product are on this list.  
**Canadian:** This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by the Controlled Products Regulations. The components in this product are listed, or exempt from listing, on the Canadian Domestic Substances List.  
**WHMIS Classification:** Not controlled.  
**Canada Ingredient Disclosure List:** None of the components is listed on the Ingredient Disclosure List.

#### Section 16: Other Information

**Abbreviations and acronyms used:**

ACGIH    American Conference of Governmental Industrial Hygienists  
ANSI    American National Standards Institute

ND    not determined  
NFPA    National Fire Prevention Association

atm	atmosphere (pressure unit)	NTP	National Toxicology Program
BOD	biological oxygen demand	OC	open cup
CAS	Chemical Abstracts Service	OSHA	Occupational Safety and Health Administration
CC	closed cup	Part	partition
CDTA	Chemical Drug and Trafficking Act	PEL	permissible exposure limits
COC	Cleveland Open Cup	ppb	parts per billion
COD	chemical oxygen demand	PPE	personal protective equipment
CFR	Code of Federal Regulations	ppm	parts per million
CPR	cardio-pulmonary resuscitation	psi	pounds per square inch
DEA	Drug Enforcement Agency	RCRA	Resource Conservation and Recovery Act
DOT	Department of Transportation	RQ	Reportable quantity
EINECS	European Inventory of Existing Commercial Chemical Substances	RTK	Right to Know
FDA	Food and Drug Administration	SARA	Superfund Amendments and Reauthorization Act
IARC	International Agency for Research on Cancer	STEL	short-term exposure limit
IDLH	immediate danger to life and health	TCC	Tagliabue Closed Cup
kg	kilogram	TDG	Transportation of Dangerous Goods
L	liter	TPQ	threshold planning quantity
LC50	median lethal concentration	TQ	threshold quantity
LD50	median lethal dose	TSCA	Toxic Substances Control Act
LEL	lower explosive limit	TWA	time-weighted average
mg	milligram	UEL	upper explosive limit
mL	milliliter	WHMIS	Workplace Hazardous Information System
NIOSH	National Institute for Occupational Safety and Health		

This document was prepared in accordance with WHMIS, 29 CFR 1910.1200 and ANSI Z400.1-2004.

Prepared by Douglas R. Chrisope on 18 April 2013.

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