U.S. Department
of Transportation

**Pipeline and Hazardous
Materials Safety
Administration**

1200 New Jersey Avenue SE
Washington, DC 20590

SEP 12 2011

Mr. Zac Childers
Dangerous Goods Classification Specialist
Customer Channels Group
Thermo Fisher Scientific
300 Industry Drive
Pittsburgh, PA 15275

Reference No. 11-0133

Dear Mr. Childers:

This responds to your June 1, 2011 letter and subsequent email correspondence with a member of my staff requesting clarification of the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180). Specifically, you ask whether Gieson's solution, consisting of 1.23% picric acid (trinitrophenol), less than 1% acid fuchsine, less than 0.1% diazolidinyl urea and approximately 98% water, is regulated under the HMR.

Under § 173.22, it is the shipper's responsibility to classify a hazardous material. This Office does not normally perform this function. However, as the proper shipping name "Trinitrophenol, wetted" applies to trinitrophenol mixed with not less than 30 percent water by mass and no other materials, we agree with your conclusion that Gieson's solution should not be described as such.

Our research has provided conflicting information regarding the corrosivity of Gieson's solution. For example, some data indicates that a 1.23% concentration of picric acid is sufficiently diluted so that the solution is not regulated as a Division 4.1 material. Further, we do not have the capability to determine the corrosivity of an unlisted material, such as a mixture, without the results of tests conducted on the material as specified in §§ 173.136 and 173.137. If you are not able to perform corrosivity testing on your material, we recommend that you contact a laboratory capable of performing such testing. The American Society for Testing and Materials (ASTM) maintains a website that offers a directory of laboratories that can satisfy this requirement. The ASTM website can be found at: www.astm.org.

I trust this satisfies your inquiry. Please contact us if we can be of further assistance.

Sincerely,

Ben Supko
Chief, Standards Development Branch
Standards and Rulemaking Division

Winter
§ 172.101
Shipping Name / Classification
11-0133

ThermoFisher
SCIENTIFIC

June 1, 2011

Dr. Charles Ke
US Department of Transportation

Re: Van Geison/Gieson's solution Classification

Dear Dr. Ke:

The purpose of this letter is to request clarification on the classification of Van Geison/Gieson's solution under the Hazardous Materials Regulations. Van Geison/Gieson's solution is a product used in the medical industry, primarily as a histology tissue stain. The maximum percentages of the primary ingredients are: picric acid (trinitrophenol) at 1.23%, acid fuchsine (CAS: 3244-88-0) at < 1 %, diazolidinyl urea (CAS: 78491-02-8) at < 0.1%, and water as the balance at approximately 98%.

We believe that Van Geison/Gieson's solution should not be classified as trinitrophenol, wetted with not less than 30% water, 4.1, UN1344, I. We feel that the addition of acid fuchsine and diazolidinyl urea to the mixture do not contribute to the activity of the trinitrophenol, and that the final product should not be classified as explosive or reactive.

However, we do feel that this material should be classified under the HMR. Due to the percentages of acid fuchsine and picric acid, along with a strongly acidic pH value of < 2, we propose the classification for transportation as:

Corrosive Liquid, Acidic, Organic, N.O.S. (Acid fuchsine, Picric acid), 8, UN3265, III

Do you agree with our assessment and classification?

Thank you in advance for your time and consideration in this matter.

Kind regards,

Zac Childers
Dangerous Goods Classification Specialist
Customer Channels Group
Thermo Fisher Scientific
300 Industry Drive
Pittsburgh, PA 15275
Tel: (724) 517-1616
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zachary.childers@thermofisher.com

Thermo SCIENTIFIC

Material Safety Data Sheet

Creation Date 09-Mar-2009 **Revision Date** 09-Mar-2009 **Revision Number** 1

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name **Chromaview Van Geison**

Cat No. **88011**

Synonyms No information available.

Recommended Use Laboratory chemicals

Company
Richard Allan Scientific
A Subsidiary of Thermo Fisher Scientific
4481 Campus Drive
Kalamazoo, MI 49008
Tel: (800) 522-7270

Emergency Telephone Number
Chemtrec US: (800) 424-9300
Chemtrec EU: (202) 483-7616

2. HAZARDS IDENTIFICATION

DANGER!

Emergency Overview
Causes burns by all exposure routes.

Appearance Amber **Physical State** Liquid **odor** odorless

Target Organs Skin, Respiratory system, Eyes, Gastrointestinal tract (GI)

Potential Health Effects

Acute Effects
Principle Routes of Exposure

Eyes	Causes burns.
Skin	Causes burns. May be harmful in contact with skin.
Inhalation	Causes burns. May be harmful if inhaled.
Ingestion	Causes burns. May be harmful if swallowed.

Chronic Effects Mutatagenic effects have occured in microorganisms..

See Section 11 for additional Toxicological information.

Aggravated Medical Conditions No information available.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Haz/Non-haz

Component	CAS-No	Weight %

Water	7732-18-5	> 98
Diazolidinyl urea	78491-02-8	< 0.1
Picric acid	88-89-1	1.23
Acid fuchsine	3244-88-0	< 1.0

4. FIRST AID MEASURES

Eye Contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required.

Skin Contact Wash off immediately with plenty of water for at least 15 minutes. Immediate medical attention is required.

Inhalation Move to fresh air. If breathing is difficult, give oxygen. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with a respiratory medical device. Immediate medical attention is required.

Ingestion Do not induce vomiting. Call a physician or Poison Control Center immediately.

Notes to Physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Flash Point No information available.
Method No information available.

Autoignition Temperature No information available.
Explosion Limits
Upper No data available
Lower No data available

Suitable Extinguishing Media Substance is nonflammable; use agent most appropriate to extinguish surrounding fire..

Unsuitable Extinguishing Media No information available.

Hazardous Combustion Products No information available.

Sensitivity to mechanical impact No information available.
Sensitivity to static discharge No information available.

Specific Hazards Arising from the Chemical
Corrosive Material. Causes burns by all exposure routes.

Protective Equipment and Precautions for Firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

NFPA **Health** 3 **Flammability** 0 **Instability** 0 **Physical hazards** N/A

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions Use personal protective equipment. Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Evacuate personnel to safe areas. Do not get in eyes, on skin, or on clothing.

Environmental Precautions Should not be released into the environment.

Methods for Containment and Clean Up Soak up with inert absorbent material. Keep in suitable and closed containers for disposal.

7. HANDLING AND STORAGE

Handling Use only under a chemical fume hood. Wear personal protective equipment. Do not get in eyes, on skin, or on clothing. Do not breathe vapors or spray mist. Do not ingest.

Storage Keep containers tightly closed in a dry, cool and well-ventilated place. Corrosives area.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Measures Use only under a chemical fume hood. Ensure that eyewash stations and safety showers are close to the workstation location.

Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH IDLH
Picric acid	TWA: 0.1 mg/m^3	(Vacated) TWA: 0.1 mg/m^3 Skin TWA: 0.1 mg/m^3	IDLH: 75 mg/m^3 TWA: 0.1 mg/m^3 STEL: 0.3 mg/m^3

Component	Quebec	Mexico OEL (TWA)	Ontario TWAEV
Picric acid	TWA: 0.1 mg/m^3	TWA: 0.1 mg/m^3 STEL: 0.3 mg/m^3	TWA: 0.1 mg/m^3 STEL: 0.3 mg/m^3 Skin

NIOSH IDLH: *Immediately Dangerous to Life or Health*

Personal Protective Equipment

Eye/face Protection Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin and body protection Wear appropriate protective gloves and clothing to prevent skin exposure.

Respiratory Protection Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid
Appearance	Amber
odor	odorless
Odor Threshold	No information available.
pH	< 2
Vapor Pressure	No information available.
Vapor Density	No information available.
Viscosity	No information available.
Boiling Point/Range	No information available.
Melting Point/Range	No information available.
Decomposition temperature	No information available.
Flash Point	No information available.
Evaporation Rate	No information available.

9. PHYSICAL AND CHEMICAL PROPERTIES

Specific Gravity	1.00 - 1.08
Solubility	No information available.
log Pow	No data available

10. STABILITY AND REACTIVITY

Stability	Stable under normal conditions.
Conditions to Avoid	Incompatible products. Excess heat.
Incompatible Materials	Strong oxidizing agents
Hazardous Decomposition Products	Carbon monoxide (CO), Carbon dioxide (CO_2)
Hazardous Polymerization	Hazardous polymerization does not occur.
Hazardous Reactions .	None under normal processing..

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Product Information No acute toxicity information is available for this product

Component Information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Diazolidinyl urea	2600 mg/kg (Rat)	2 g/kg (Rabbit)	Not listed
Picric acid	200 mg/kg (Rat)	Not listed	Not listed

Irritation Causes burns by all exposure routes

Toxicologically Synergistic Products No information available.

Chronic Toxicity

Carcinogenicity There are no known carcinogenic chemicals in this product

Sensitization No information available.

Mutagenic Effects No information available.

Reproductive Effects No information available.

Developmental Effects No information available.

Teratogenicity No information available.

Other Adverse Effects The toxicological properties have not been fully investigated.. See actual entry in RTECS for complete information.

Endocrine Disruptor Information No information available

12. ECOLOGICAL INFORMATION

Ecotoxicity

Do not empty into drains

Persistence and Degradability No information available

Bioaccumulation/ Accumulation No information available

Mobility

Component	log Pow
Water	-1.87
Acid fuchsine	-6.46

13. DISPOSAL CONSIDERATIONS

Waste Disposal Methods Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

14. TRANSPORT INFORMATION

DOT

UN-No	UN3265
Proper Shipping Name	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.
Proper technical name	(Acid fuchsin, Picric acid)
Hazard Class	8
Packing Group	III

TDG

UN-No	UN3265
Proper Shipping Name	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.
Hazard Class	8
Packing Group	III

IATA

UN-No	UN3265
Proper Shipping Name	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.
Hazard Class	8
Packing Group	III

14. TRANSPORT INFORMATION

IMDG/IMO

UN-No	UN3265
Proper Shipping Name	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.
Hazard Class	8
Packing Group	III

15. REGULATORY INFORMATION

International Inventories

Component	TSCA	DSL	NDSL	EINECS	ELINCS	NLP	PICCS	ENCS	AICS	CHINA	KECL
Water	X	X	-	231-791-2	-		X	-	X	X	X
Diazolidinyl urea	X	X	-	278-928-2	-		X	-	X	X	KE-03215 X
Picric acid	X	X	-	201-865-9	-		X	X	X	X	KE-34715 X
Acid fuchsine	X	X	-	221-816-5	-		X	X	X	X	-

Legend:
X - Listed
E - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.
F - Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.
N - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.
P - Indicates a commenced PMN substance
R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.
S - Indicates a substance that is identified in a proposed or final Significant New Use Rule
T - Indicates a substance that is the subject of a Section 4 test rule under TSCA.
XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B).
Y1 - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.
Y2 - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

U.S. Federal Regulations

TSCA 12(b) Not applicable

SARA 313

Component	CAS-No	Weight %	SARA 313 - Threshold Values %
Picric acid	88-89-1	1.23	1.0

SARA 311/312 Hazardous Categorization
Acute Health Hazard Yes

Chronic Health Hazard	No
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

Clean Water Act
Not applicable

Clean Air Act
Not applicable

OSHA
Not applicable

CERCLA
Not Applicable

California Proposition 65
This product does not contain any Proposition 65 chemicals.

State Right-to-Know

Component	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Picric acid	X	X	X	-	X

U.S. Department of Transportation

Reportable Quantity (RQ):	N
DOT Marine Pollutant	N
DOT Severe Marine Pollutant	N

U.S. Department of Homeland Security
This product contains the following DHS chemicals:

Component	DHS Chemical Facility Anti-Terrorism Standard
Picric acid	2000 lb STQ

Other International Regulations

Mexico - Grade No information available

Canada

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

WHMIS Hazard Class
E Corrosive material

16. OTHER INFORMATION

Prepared By	Regulatory Affairs Thermo Fisher Scientific Tel: (412) 490-8929
Creation Date	09-Mar-2009
Print Date	09-Mar-2009
Revision Summary	"****", and red text indicates revision

Disclaimer

The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of MSDS

Winter, Lisa (PHMSA)

From: Childers, Zachary A. [zachary.childers@thermofisher.com]
Sent: Thursday, July 28, 2011 1:05 PM
To: Winter, Lisa (PHMSA)
Subject: RE: Interpretation Request Regarding the Classification of Gieson's solution
Attachments: 88011_MSDS.pdf

Lisa,

Good afternoon. The product is manufactured by one of our sister companies, Thermo Scientific - Anatomical Pathology division (formerly Richard Allan Scientific). Their current MSDS is attached. I spoke with a member of their dangerous goods transport team, who informed me that the pH of this mixture has actually been tested, & that the values fall within the 1.40 – 1.85 range. She further explained that this was their reason for classifying as a class 8, corrosive material.

Members of both companies/divisions are willing to reevaluate the material & consider making it non-regulated for transport. However, the corrosive vs. non-regulated issue becomes a moot point if we are unable to obtain approval to ship the material (a diluted/desensitized explosive).

Please let me know what you decide – thanks again.

Zac

From: lisa.winter@dot.gov [mailto:lisa.winter@dot.gov]
Sent: Thursday, July 28, 2011 7:56 AM
To: Childers, Zachary A.
Subject: RE: Interpretation Request Regarding the Classification of Gieson's solution

Good morning Zac,

You're request was clear. We're just wondering if in fact the material you are shipping is regulated as a hazardous material.

If the manufacturer has an MSDS, that would be helpful.

Thank you,

Lisa

Sincerely,

Lisa (Winter) O'Donnell
Transportation Regulations Specialist
Pipeline and Hazardous Materials Safety Administration
United States Department of Transportation
202.366.6415
http://www.phmsa.dot.gov/hazmat

From: Childers, Zachary A. [mailto:zachary.childers@thermofisher.com]
Sent: Wednesday, July 27, 2011 4:56 PM
To: Winter, Lisa (PHMSA)
Subject: RE: Interpretation Request Regarding the Classification of Gieson's solution