

	IDENTIFICATION OF	THE SUBSTANCE/MIXTURE AND OF THE C	OMPANY/UNDERTAKIN	G		
1	Product Identifiers					
	Product Name:	Mouse/Rat/Canine/Porcine TGF-beta 2 Qu	antikine ELISA Kit			
	Catalog Number: Components:	MB200 Microplate Standard (contains ProClin 300) Conjugate (contains ProClin 150) Assay Diluent (contains ProClin 300) Calibrator Diluent (contains ProClin 300) Color Reagent A Color Reagent A Color Reagent B (contains Tetramethylbenz Wash Buffer Concentrate (contains ProClin Stop Solution (contains Sulfuric acid)		r containing N,N-Dimethylformamide (DMF)		
2	Relevant identified us	es of the substance or mixture and uses advise	ed against			
	Identified Uses:	For Research Use Only				
3	Details of the supplier of the safety data sheet					
	Company:	R&D Systems, Inc. a Bio-Techne Brand	Telephone:	1-800-343-7475		
		614 McKinley Place NE	Fax:	1-612-656-4400		
		Minneapolis, MN 55413, USA	Internet:	www.rndsystems.com		
			Email address:	info@bio-techne.com		
	Canada:	461 North Service Rd West	Telephone:	1-855-668-8722		
		Unit B37	Fax:	902-827-6402		
		Oakville, ON L6M 2V5	Email address:	Canada.inquiries@bio-techne.com		
	United Kingdom:	19 Barton Lane	Telephone:	44 (0)1235 529449		
	Ū.	Abingdon Science Park	Fax:	44 (0)1235 533420		
		Abingdon, OX14 3NB	Email address:	info.emea@bio-techne.com		
4	Emergency Telephone	Number				
	Emergency Tel:	US: 612-379-2956 or 800-343-7475 / Euro	44/0)4005 500440			

# 2. HAZARDS IDENTIFICATION

See additional safety data sheets.

# RD SYSTEMS a biotechne brand

.1	Product Identifiers						
	Product Name:	Standard (contains Proclin 300 Mixture =	.005%)				
.2	Relevant identified us	es of the substance or mixture and uses advi	sed against				
	Identified Uses:	For Research Use Only					
1.3	Details of the supplier	of the safety data sheet					
	Company:	R&D Systems, Inc. a Bio-Techne Brand	Telephone:	1-800-343-7475			
		614 McKinley Place NE	Fax:	1-612-656-4400			
		Minneapolis, MN 55413, USA	Internet:	www.rndsystems.com			
			Email address:	info@bio-techne.com			
	Canada:	461 North Service Rd West	Telephone:	1-855-668-8722			
	oundui	Unit B37	Fax:	902-827-6402			
		Oakville, ON L6M 2V5	Email address:	Canada.inquiries@bio-techne.com			
	United Kingdom:	19 Barton Lane	Telephone:	44 (0)1235 529449			
	ented hingdom	Abingdon Science Park	Fax:	44 (0)1235 533420			
		Abingdon, OX14 3NB	Email address:	info.emea@bio-techne.com			
1.4	Emergency Telephone	Number					
		cy, spill, leak, fire, exposure, or accident call CH					
	Within USA and Canac	da: 1-800-424-9300. Outside USA and Canada:	+1 703-527-3887 (collect o	calls accepted).			
2.	HAZARDS IDENTIFIC						
2.1	Classification of the substance or mixture						
	Classification according	ng to Regulation (EC) No 1272/2008 [GHS/CLP	] or 29 CFR 1910.1200 [OS	HA]			
	Classification accordin Sensibilisation, peau -		] or 29 CFR 1910.1200 [OS	HA]			
2.2			] or 29 CFR 1910.1200 [OS	HA]			
2.2	Sensibilisation, peau - Label Elements		] or 29 CFR 1910.1200 [OS	HA]			
2.2	Sensibilisation, peau - Label Elements	Catégorie 1	] or 29 CFR 1910.1200 [OS	HA]			
2.2	Sensibilisation, peau - Label Elements Labeling according to	Catégorie 1	] or 29 CFR 1910.1200 [OS	iHA]			
2.2	Sensibilisation, peau - Label Elements Labeling according to Pictogram(s):	Catégorie 1 Regulation (EC) No 1272/2008 [GHS/CLP]	] or 29 CFR 1910.1200 [OS	HA]			
2.2	Sensibilisation, peau - Label Elements Labeling according to Pictogram(s): Signal Word:	Catégorie 1 Regulation (EC) No 1272/2008 [GHS/CLP]		ΉΑ]			
2.2	Sensibilisation, peau - Label Elements Labeling according to Pictogram(s): Signal Word: Hazard Statement(s): H317	Catégorie 1 Regulation (EC) No 1272/2008 [GHS/CLP] Avertissement Peut provoquer une allergie cutan		ΉΑ]			
2.2	Sensibilisation, peau - Label Elements Labeling according to Pictogram(s): Signal Word: Hazard Statement(s): H317 Precautionary Statement	Catégorie 1 Regulation (EC) No 1272/2008 [GHS/CLP] Avertissement Peut provoquer une allergie cutan ent(s):	ée.	-			
2.2	Sensibilisation, peau - Label Elements Labeling according to Pictogram(s): Signal Word: Hazard Statement(s): H317	Catégorie 1  Regulation (EC) No 1272/2008 [GHS/CLP]  Avertissement  Peut provoquer une allergie cutan ent(s):  Éviter de respirer les poussières / Les vêtements de travail contamin	ée. fumées / gaz / brouillards. íés ne devraient pas sorti o	/ vapeurs / aérosols. du lieu de travail.			
2.2	Sensibilisation, peau - Label Elements Labeling according to Pictogram(s): Signal Word: Hazard Statement(s): H317 Precautionary Statemen P261 P272 P280	Catégorie 1  Regulation (EC) No 1272/2008 [GHS/CLP]  Avertissement  Peut provoquer une allergie cutan ent(s):  Éviter de respirer les poussières / Les vêtements de travail contamin Porter des gants de protection/des	ée. fumées / gaz / brouillards ; és ne devraient pas sortir s vêtements de protection/υ	/ vapeurs / aérosols. du lieu de travail. un équipement de protection des yeux/du vi	sage.		
2.2	Sensibilisation, peau - Label Elements Labeling according to Pictogram(s): Signal Word: Hazard Statement(s): H317 Precautionary Statement P261 P272 P280 P302+352	Catégorie 1  Regulation (EC) No 1272/2008 [GHS/CLP]  Avertissement  Peut provoquer une allergie cutan ent(s):  Éviter de respirer les poussières / Les vêtements de travail contamin Porter des gants de protection/des EN CAS DE CONTACT AVEC LA F	ée. fumées / gaz / brouillards . iés ne devraient pas sortir d s vêtements de protection/u PEAU: laver abondamment .	/ vapeurs / aérosols. du lieu de travail. ın équipement de protection des yeux/du vi à l'eau et au savon.	sage.		
2.2	Sensibilisation, peau - Label Elements Labeling according to Pictogram(s): Signal Word: Hazard Statement(s): H317 Precautionary Statemen P261 P272 P280	Catégorie 1  Regulation (EC) No 1272/2008 [GHS/CLP]  Avertissement  Peut provoquer une allergie cutan ent(s):  Éviter de respirer les poussières / Les vêtements de travail contamin Porter des gants de protection/des	ée. fumées / gaz / brouillards. és ne devraient pas sortir rú s vêtements de protection/u PEAU: laver abondamment tanée: Demander un avis i	/ vapeurs / aérosols. du lieu de travail. un équipement de protection des yeux/du vi à l'eau et au savon. médical/Consulter un médecin.	sage.		
2.2	Sensibilisation, peau - Label Elements Labeling according to Pictogram(s): Signal Word: Hazard Statement(s): H317 Precautionary Statement P261 P272 P280 P302+352 P303+313	Catégorie 1  Regulation (EC) No 1272/2008 [GHS/CLP]  Avertissement  Peut provoquer une allergie cutan ent(s):  Éviter de respirer les poussières / Les vêtements de travail contamin Porter des gants de protection/des EN CAS DE CONTACT AVEC LA f En cas d'irritation ou d'éruption cu Enlever les vêtements contaminés	ée. fumées / gaz / brouillards. és ne devraient pas sortir rú s vêtements de protection/u PEAU: laver abondamment tanée: Demander un avis i	/ vapeurs / aérosols. du lieu de travail. un équipement de protection des yeux/du vi à l'eau et au savon. médical/Consulter un médecin.	sage.		
2.3	Sensibilisation, peau - Label Elements Labeling according to Pictogram(s): Signal Word: Hazard Statement(s): H317 Precautionary Statement P261 P272 P280 P302+352 P333+313 P362+P364 Other Hazards - None	Catégorie 1  Regulation (EC) No 1272/2008 [GHS/CLP]  Avertissement  Peut provoquer une allergie cutan ent(s):  Éviter de respirer les poussières / Les vêtements de travail contamin Porter des gants de protection/des EN CAS DE CONTACT AVEC LA f En cas d'irritation ou d'éruption cu Enlever les vêtements contaminés	ée. fumées / gaz / brouillards. és ne devraient pas sortir rú s vêtements de protection/u PEAU: laver abondamment tanée: Demander un avis i	/ vapeurs / aérosols. du lieu de travail. un équipement de protection des yeux/du vi à l'eau et au savon. médical/Consulter un médecin.	sage.		
2.3	Sensibilisation, peau - Label Elements Labeling according to Pictogram(s): Signal Word: Hazard Statement(s): H317 Precautionary Statement P261 P272 P280 P302+352 P333+313 P362+P364 Other Hazards - None	Catégorie 1         Regulation (EC) No 1272/2008 [GHS/CLP]         Image: Colspan="2">Image: Colspan="2" Teles Teles Colspan="2" Teles Teles Colspan="2" Teles	ée. fumées / gaz / brouillards. és ne devraient pas sortir rú s vêtements de protection/u PEAU: laver abondamment tanée: Demander un avis i	/ vapeurs / aérosols. du lieu de travail. un équipement de protection des yeux/du vi à l'eau et au savon. médical/Consulter un médecin.	sage.		
2.3	Sensibilisation, peau - Label Elements Labeling according to Pictogram(s): Signal Word: Hazard Statement(s): H317 Precautionary Statement P261 P272 P280 P302+352 P333+313 P362+P364 Other Hazards - None COMPOSITION/INFC	Catégorie 1         Regulation (EC) No 1272/2008 [GHS/CLP]         Image: Colspan="2">Image: Colspan="2" Teles Teles Colspan="2" Teles Teles Colspan="2" Teles	ée. fumées / gaz / brouillards. és ne devraient pas sortir rú s vêtements de protection/u PEAU: laver abondamment tanée: Demander un avis i	/ vapeurs / aérosols. du lieu de travail. un équipement de protection des yeux/du vi à l'eau et au savon. médical/Consulter un médecin.	sage.		
2.3 3.	Sensibilisation, peau - Label Elements Labeling according to Pictogram(s): Signal Word: Hazard Statement(s): H317 Precautionary Statemer P261 P272 P280 P302+352 P333+313 P362+P364 Other Hazards - None COMPOSITION/INFC	Catégorie 1         Regulation (EC) No 1272/2008 [GHS/CLP]         Image: Colspan="2">Image: Colspan="2" Teles Teles Colspan="2" Teles Teles Teles Colspan="2" Teles	ée. fumées / gaz / brouillards. és ne devraient pas sortir rú s vêtements de protection/u PEAU: laver abondamment tanée: Demander un avis i	/ vapeurs / aérosols. du lieu de travail. un équipement de protection des yeux/du vi à l'eau et au savon. médical/Consulter un médecin.	sage.		
2.3	Sensibilisation, peau - Label Elements Labeling according to Pictogram(s): Signal Word: Hazard Statement(s): H317 Precautionary Statement P261 P272 P280 P302+352 P333+313 P362+P364 Other Hazards - None COMPOSITION/INFO Substances Not applicable. Mixtures	Catégorie 1         Regulation (EC) No 1272/2008 [GHS/CLP]         Image: Colspan="2">Image: Colspan="2" Teles Teles Colspan="2" Teles Teles Teles Colspan="2" Teles	ée. fumées / gaz / brouillards. és ne devraient pas sortir rú s vêtements de protection/u PEAU: laver abondamment tanée: Demander un avis i	/ vapeurs / aérosols. du lieu de travail. un équipement de protection des yeux/du vi à l'eau et au savon. médical/Consulter un médecin. tion.	sage.		
	Sensibilisation, peau - Label Elements Labeling according to Pictogram(s): Signal Word: Hazard Statement(s): H317 Precautionary Stateme P261 P272 P280 P302+352 P333+313 P362+P364 Other Hazards - None COMPOSITION/INFC Substances Not applicable. Mixtures Component	Regulation (EC) No 1272/2008 [GHS/CLP]	ée. fumées / gaz / brouillards . iés ne devraient pas sortir ( s vêtements de protection/u PEAU: laver abondamment tanée: Demander un avis i s et les laver avant réutilisa	/ vapeurs / aérosols. du lieu de travail. un équipement de protection des yeux/du vi à l'eau et au savon. médical/Consulter un médecin. tion.			

#### 4.1 Description of first aid measures

#### General Advice

Consult a doctor and show this safety data sheet.

#### If Inhaled

Remove to fresh air and monitor breathing. If breathing becomes difficult, give oxygen. If breathing stops, give artificial respiration. Consult a doctor.

#### In Case of Skin Contact

Immediately wash skin with copious amounts of soap and water for at least 15 minutes. Remove contaminated clothing and shoes and wash before reuse. Consult a doctor.

#### In Case of Eye Contact

Flush with copious amounts of water for at least 15 minutes. Consult a doctor.

#### If Swallowed

Rinse mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Consult a doctor.

#### 4.2 Most important symptoms and effects, both acute and delayed

To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated.

#### 4.3 Indication of immediate medical attention and special treatment needed

Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.

#### 5. FIRE-FIGHTING MEASURES

#### 5.1 Extinguishing Media

#### Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

#### 5.2 Special hazards arising from the substance or mixture

In combustion, may emit toxic fumes.

#### 5.3 Precautions for fire-fighters

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

# 6. ACCIDENTIAL RELEASE MEASURES

#### 6.1 Personal precautions, protective equipment and emergency procedures

Do not take action without suitable protective clothing - see section 8 of SDS. Evacuate personnel to safe areas. Ensure adequate ventilation. Avoid breathing vapors, mist, dust or gas.

#### 6.2 Environmental precautions

Do not let product enter drains.

#### 6.3 Methods and materials for containment and cleaning up

Cover spillage with suitable absorbent material. Hold all material for appropriate disposal as described under section 13 of SDS.

#### 6.4 Reference to other sections

For required PPE see section 8. For disposal see section 13.

# 7. HANDLING AND STORAGE

#### 7.1 Precautions for safe handling

Avoid inhalation, contact with eyes, skin and clothing. Avoid the formation of dust and aerosols. Use in a well-ventilated area. Keep away from sources of ignition. Avoid prolonged or repeated exposure.

#### 7.2 Conditions for safe storage, including any incompatibilities

Store in cool, well-ventilated area. Keep away from direct sunlight. Keep container tightly sealed until ready for use.

# 7.3 Specific end uses

Not applicable.

#### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### 8.1 Control parameters

# Components with workplace control parameters

Contains no substances with occupational exposure limit values.

#### 8.2 Exposure controls

#### Appropriate Engineering Controls

Use in a fume hood where applicable. Ensure all engineering measures described under section 7 of SDS are in place. Ensure laboratory is equipped with a safety shower and eye wash station.

#### Personal Protective Equipment

Eye / Face Protection

Use appropriate safety glasses.

#### **Skin Protection**

Use appropriate chemical resistant gloves (minimum requirement use standard BS EN 374:2003). Gloves should be inspected before use. Wash and dry hands thoroughly after handling.

#### **Body Protection**

Wear appropriate protective clothing.

#### **Respiratory Protection**

If risk assessment indicates necessary, use a suitable respirator.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

#### 9.1 Information on basic physical and chemical properties

Appearance	Lyophilized white powder or clear liquid	Vapor Pressure	No data available.
Odor	Little to none	Vapor Density	No data available.
Odor Threshold	No data available.	Relative Density	No data available.
pН	No data available.	Solubility(ies)	No data available.
Melting / Freezing Point	No data available.	Partition Coefficient	No data available.
Boiling Point / Range	No data available.	Autoignition Temperature	No data available.
Flash Point	No data available.	Decomposition Temperature	No data available.
Evaporation Rate	No data available.	Viscosity	No data available.
Flammability (Solid, Gas)	No data available.	Explosive Properties	No data available.
Upper / Lower Flammability or Explosive Limits	No data available.	Oxidizing Properties	No data available.

#### 9.2 Other safety information

No data available.

#### 10. STABILITY AND REACTIVITY

#### 10.1 Reactivity

Stable under recommended transport or storage conditions.

# 10.2 Chemical stability

Stable under recommended storage conditions.

#### 10.3 Possibility of hazardous reactions

Hazardous reactions will not occur under normal transport or storage conditions. Decomposition may occur on exposure to conditions or materials listed below.

#### 10.4 Conditions to avoid

Heat, moisture.

#### 10.5 Incompatible materials

Strong acids/alkalis, strong oxidising/reducing agents.

# 10.6 Hazardous decomposition products

Strong acids/alkalis, strong oxidising/reducing agents.

# 11. TOXICOLOGICAL INFORMATION

#### 11.1 Information on toxicological effects

Acute Toxicity

Classified based on available data

#### Skin Corrosion / Irritation

Classified based on available data

Serious Eye Damage / Irritation

#### Classified based on available data

Respiratory or Skin Sensitization

# Classified based on available data

Germ Cell Mutagenicity

Classified based on available data

#### Carcinogenicity

Classified based on available data

# **Reproductive Toxicity**

Classified based on available data

# Specific Target Organ Toxicity - Single Exposure

Classified based on available data

# Specific Target Organ Toxicity - Repeated Exposure

Classified based on available data

# Aspiration Hazard

Classified based on available data

# Symptoms / Routes of Exposure

Inhalation:

There may be irritation of the throat with a feeling of tightness in the chest.

 Ingestion:
 There may be irritation of the throat.

 Skin:
 There may be mild irritation at the site of contact.

 Eyes:
 There may be irritation and redness.

 Delayed / Immediate
 No known symptoms.

Effects:

# Additional Information

Classified based on available data

#### 12. ECOLOGICAL INFORMATION

12.1 Toxicity

12.3

No data available.

# 12.2 Persistence and degradability

No data available.

**Bioaccumulative potential** No data available.

# 12.4 Mobility in soil

No data available.

#### 12.5 Results of PBT and vPvB assessment

No data available

#### 12.6 Other adverse effects

No data available.

#### 13. DISPOSAL CONSIDERATIONS

#### 13.1 Waste treatment methods

#### Product

Transfer to a suitable container and arrange for collection by specialized disposal company in accordance with national, regional, or local legislation.

#### Contaminated Packaging

Dispose of in a regulated landfill site or other method for hazardous or toxic wastes in accordance with national, regional, or local legislation.

TRANSPORT INFORMATION
 Classified according to the criteria of the UN Model Regulations as reflected in the IMDG Code, ADR, RID, DOT and IATA.
 UN-Number

Does not meet the criteria for classification as hazardous for transport.

#### 14.2 UN proper shipping name

Does not meet the criteria for classification as hazardous for transport.

## 14.3 Transport hazard class(es)

Does not meet the criteria for classification as hazardous for transport.

#### 14.4 Packaging group

Does not meet the criteria for classification as hazardous for transport.

#### 14.5 Environmental hazards

Does not meet the criteria for classification as hazardous for transport.

#### 14.6 Special precautions for users

Does not meet the criteria for classification as hazardous for transport.

#### Additional Transport Information

Does not meet the criteria for classification as hazardous for transport.

#### 15. REGULATORY INFORMATION

This safety datasheet complies with the requirements of Regulation (EC) No. 453/2010.

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

TSCA (Toxic Substances Control Act): Not applicable. SARA 313: Not applicable. SARA 311/312: Not applicable. CERCLA Reportable Quantity: Not applicable. California Proposition 65: Proclin 300 Mixture = .005%

#### 15.2 Chemical safety assessment

A Chemical Safety Assessment has not been made for this product.

# 16. OTHER INFORMATION

# Further Information

Copyright © 2018 R&D Systems, Inc. a Bio-Techne Brand

This company shall not be held liable for any damage resulting from handling or from contact with the above product. This material must only be handled by suitably qualified experienced scientists in appropriately equipped and authorized facilities. The above information is believed to be correct but does not purport to be all inclusive and should be used as a guide only for experienced personnel. Always consult your safety advisor and follow appropriate local and national safety legislature. The absence of warning must not, under any circumstance, be taken to mean that no hazard exists.

End of safety data sheet

# RD SYSTEMS a biotechne brand

			Car	ety Data One	GL .		www.iiia	systems.
1.	IDENTIFICATION OF THE S	UBSTANCE/MIXTURE A	ND OF THE CO	MPANY/UNDERTAKI	NG			
1.1	Product Identifiers							
	Product Name: C	Conjugate (contains Proclin	300 Mixture = .00	05%)				
1.2	Relevant identified uses of the	ne substance or mixture a	nd uses advised	lagainst				
	Identified Uses: F	or Research Use Only						
1.3	Details of the supplier of the	safety data sheet						
	Company: R	&D Systems, Inc. a Bio-Tee	chne Brand	Telephone:	1-800-343-7	475		
		14 McKinley Place NE		Fax:	1-612-656-4			
	N	linneapolis, MN 55413, US	A	Internet:	www.rndsys			
				Email address:	info@bio-tec	nne.com		
	Canada: 4	61 North Service Rd West		Telephone:	1-855-668-8	722		
	U	Init B37		Fax:	902-827-640	2		
	C	akville, ON L6M 2V5		Email address:	Canada.inqu	iries@bio-techne.com		
	United Kingdom: 1	9 Barton Lane		Telephone:	44 (0)1235 5	29449		
	A	bingdon Science Park		Fax:	44 (0)1235 5	33420		
	A	bingdon, OX14 3NB		Email address:	info.emea@	pio-techne.com		
1.4	Emergency Telephone Numb	er						
	For chemical emergency, spill Within USA and Canada: 1-80				alls accepted).			
				<b>`</b>	, ,			
2.	HAZARDS IDENTIFICATION	N						
2.1	Classification of the substance or mixture							
	Classification according to R	egulation (EC) No 1272/20	08 [GHS/CLP] or	29 CFR 1910.1200 [OS	HA]			
	Sensitization, skin - Category	1						
2.2	Label Elements							
	Labeling according to Regulation (EC) No 1272/2008 [GHS/CLP]							
	Pictogram(s):	!						
	Signal Word: W	Varning						
	Hazard Statement(s):							
	H317	May cause an allergi	c skin reaction.					
	Precautionary Statement(s):							
	P261	Avoid breathing dust	/fumes/gas/mist/	vanours/sprav				
	P272	•	•	ot be allowed out of the	workplace.			
	P280 P302+352	Wear protective glove IF ON SKIN: Wash w		hing/eye protection/face	protection.			
	P333+313			edical advice/attention.				
	P362+P364	Take off contaminate	d clothing and wa	ash it before reuse.				
2.3	Other Hazards - None							
3.	COMPOSITION/INFORMAT	ION ON INGREDIENTS						
3.1	Substances							
	Not applicable.							
3.2	Mixtures							
	Component	CAS No.	EC No.	Index No.	. cı	assification		Conc.
	Proclin 300 Mixture = .005% (a ingredients)	active 96118-96-6			H:	317		
	Mixture of 5-Chloro-2-Methyl	-4- 55965-84-9		613-167-	00-5			= 0.005 %
	Isothiazolin-3-One (26172-5 and 2-Methyl-4-Isothiazolin- One (2682-20-4)	55-4)		010-107-				0.000 /0

#### 4.1 Description of first aid measures

#### General Advice

Consult a doctor and show this safety data sheet.

#### If Inhaled

Remove to fresh air and monitor breathing. If breathing becomes difficult, give oxygen. If breathing stops, give artificial respiration. Consult a doctor.

#### In Case of Skin Contact

Immediately wash skin with copious amounts of soap and water for at least 15 minutes. Remove contaminated clothing and shoes and wash before reuse. Consult a doctor.

#### In Case of Eye Contact

Flush with copious amounts of water for at least 15 minutes. Consult a doctor.

#### If Swallowed

Rinse mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Consult a doctor.

#### 4.2 Most important symptoms and effects, both acute and delayed

To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated.

#### 4.3 Indication of immediate medical attention and special treatment needed

Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.

#### 5. FIRE-FIGHTING MEASURES

#### 5.1 Extinguishing Media

#### Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

#### 5.2 Special hazards arising from the substance or mixture

In combustion, may emit toxic fumes.

#### 5.3 Precautions for fire-fighters

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

## 6. ACCIDENTIAL RELEASE MEASURES

#### 6.1 Personal precautions, protective equipment and emergency procedures

Do not take action without suitable protective clothing - see section 8 of SDS. Evacuate personnel to safe areas. Ensure adequate ventilation. Avoid breathing vapors, mist, dust or gas.

#### 6.2 Environmental precautions

Do not let product enter drains.

#### 6.3 Methods and materials for containment and cleaning up

Cover spillage with suitable absorbent material. Hold all material for appropriate disposal as described under section 13 of SDS.

#### 6.4 Reference to other sections

For required PPE see section 8. For disposal see section 13.

# 7. HANDLING AND STORAGE

#### 7.1 Precautions for safe handling

Avoid inhalation, contact with eyes, skin and clothing. Avoid the formation of dust and aerosols. Use in a well-ventilated area. Keep away from sources of ignition. Avoid prolonged or repeated exposure.

#### 7.2 Conditions for safe storage, including any incompatibilities

Store in cool, well-ventilated area. Keep away from direct sunlight. Keep container tightly sealed until ready for use.

# 7.3 Specific end uses

Not applicable.

#### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### 8.1 Control parameters

# Components with workplace control parameters

Contains no substances with occupational exposure limit values.

#### 8.2 Exposure controls

#### Appropriate Engineering Controls

Use in a fume hood where applicable. Ensure all engineering measures described under section 7 of SDS are in place. Ensure laboratory is equipped with a safety shower and eye wash station.

#### Personal Protective Equipment

Eye / Face Protection

Use appropriate safety glasses.

#### **Skin Protection**

Use appropriate chemical resistant gloves (minimum requirement use standard BS EN 374:2003). Gloves should be inspected before use. Wash and dry hands thoroughly after handling.

#### **Body Protection**

Wear appropriate protective clothing.

#### **Respiratory Protection**

If risk assessment indicates necessary, use a suitable respirator.

#### 9. PHYSICAL AND CHEMICAL PROPERTIES

#### 9.1 Information on basic physical and chemical properties

Appearance	Lyophilized white powder or clear liquid	Vapor Pressure	No data available.
Odor	Little to none	Vapor Density	No data available.
Odor Threshold	No data available.	Relative Density	No data available.
рН	No data available.	Solubility(ies)	No data available.
Melting / Freezing Point	No data available.	Partition Coefficient	No data available.
Boiling Point / Range	No data available.	Autoignition Temperature	No data available.
Flash Point	No data available.	Decomposition Temperature	No data available.
Evaporation Rate	No data available.	Viscosity	No data available.
Flammability (Solid, Gas)	No data available.	Explosive Properties	No data available.
Upper / Lower Flammability or Explosive Limits	No data available.	Oxidizing Properties	No data available.

#### 9.2 Other safety information

No data available.

#### 10. STABILITY AND REACTIVITY

#### 10.1 Reactivity

Stable under recommended transport or storage conditions.

# 10.2 Chemical stability

Stable under recommended storage conditions.

#### 10.3 Possibility of hazardous reactions

Hazardous reactions will not occur under normal transport or storage conditions. Decomposition may occur on exposure to conditions or materials listed below.

#### 10.4 Conditions to avoid

Heat, moisture.

#### 10.5 Incompatible materials

Strong acids/alkalis, strong oxidising/reducing agents.

# 10.6 Hazardous decomposition products

Strong acids/alkalis, strong oxidising/reducing agents.

# 11. TOXICOLOGICAL INFORMATION

# 11.1 Information on toxicological effects

Acute Toxicity

# Classified based on available data

Skin Corrosion / Irritation

Classified based on available data

Serious Eye Damage / Irritation

Classified based on available data

# Respiratory or Skin Sensitization

Classified based on available data

#### Germ Cell Mutagenicity

Classified based on available data

#### Carcinogenicity

Classified based on available data

# **Reproductive Toxicity**

Classified based on available data

# Specific Target Organ Toxicity - Single Exposure

Classified based on available data

# Specific Target Organ Toxicity - Repeated Exposure

Classified based on available data

# Aspiration Hazard

Classified based on available data

# Symptoms / Routes of Exposure

Inhalation:

There may be irritation of the throat with a feeling of tightness in the chest.

 Ingestion:
 There may be irritation of the throat.

 Skin:
 There may be mild irritation at the site of contact.

 Eyes:
 There may be irritation and redness.

 Delayed / Immediate
 No known symptoms.

Effects:

# Additional Information

Classified based on available data

#### 12. ECOLOGICAL INFORMATION

12.1 Toxicity

12.3

No data available.

# 12.2 Persistence and degradability

No data available.

**Bioaccumulative potential** No data available.

# 12.4 Mobility in soil

No data available.

#### 12.5 Results of PBT and vPvB assessment

No data available

#### 12.6 Other adverse effects

No data available.

#### 13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

#### Product

Transfer to a suitable container and arrange for collection by specialized disposal company in accordance with national, regional, or local legislation.

#### Contaminated Packaging

Dispose of in a regulated landfill site or other method for hazardous or toxic wastes in accordance with national, regional, or local legislation.

TRANSPORT INFORMATION
 Classified according to the criteria of the UN Model Regulations as reflected in the IMDG Code, ADR, RID, DOT and IATA.
 UN-Number

14.1 UN-Number

Does not meet the criteria for classification as hazardous for transport.

#### 14.2 UN proper shipping name

Does not meet the criteria for classification as hazardous for transport.

# 14.3 Transport hazard class(es)

Does not meet the criteria for classification as hazardous for transport.

#### 14.4 Packaging group

Does not meet the criteria for classification as hazardous for transport.

#### 14.5 Environmental hazards

Does not meet the criteria for classification as hazardous for transport.

#### 14.6 Special precautions for users

Does not meet the criteria for classification as hazardous for transport.

#### Additional Transport Information

Does not meet the criteria for classification as hazardous for transport.

#### 15. REGULATORY INFORMATION

This safety datasheet complies with the requirements of Regulation (EC) No. 453/2010.

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

TSCA (Toxic Substances Control Act): Not applicable. SARA 313: Not applicable. SARA 311/312: Not applicable. CERCLA Reportable Quantity: Not applicable. California Proposition 65: Proclin 300 Mixture = .005%

#### 15.2 Chemical safety assessment

A Chemical Safety Assessment has not been made for this product.

# 16. OTHER INFORMATION

# Further Information

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This company shall not be held liable for any damage resulting from handling or from contact with the above product. This material must only be handled by suitably qualified experienced scientists in appropriately equipped and authorized facilities. The above information is believed to be correct but does not purport to be all inclusive and should be used as a guide only for experienced personnel. Always consult your safety advisor and follow appropriate local and national safety legislature. The absence of warning must not, under any circumstance, be taken to mean that no hazard exists.

End of safety data sheet

# RD SYSTEMS a biotechne brand

1.	IDENTIFICATION OF THE SUB	STANCE/MIXTURE AND	OF THE COMPANY	/UNDERTAKING				
1.1	Product Identifiers							
	Product Name: Assa	y Diluent (contains Proclin	300 Mixture = .005%)					
1.2	Relevant identified uses of the s	ubstance or mixture and	uses advised against					
	Identified Uses: For F	Research Use Only						
1.3	Details of the supplier of the safe	ety data sheet						
		Systems, Inc. a Bio-Techn		none:	1-800-343-7475			
		McKinley Place NE	Fax:	- <b>t</b> .	1-612-656-4400			
	Minn	eapolis, MN 55413, USA	Interne Email	address:	www.rndsystems.com info@bio-techne.com			
	Canada: 461 M	North Service Rd West	Teleph	none:	1-855-668-8722			
	Unit		Fax:		902-827-6402			
	Oakv	ille, ON L6M 2V5	Email	address:	Canada.inquiries@bio-techne.com			
	United Kingdom: 19 Ba	arton Lane	Teleph	ione:	44 (0)1235 529449			
	Abing	gdon Science Park	Fax:		44 (0)1235 533420			
	Abing	gdon, OX14 3NB	Email	address:	info.emea@bio-techne.com			
1.4	Emergency Telephone Number							
	For chemical emergency, spill, lea Within USA and Canada: 1-800-4				accepted).			
2.	HAZARDS IDENTIFICATION							
2.1	Classification of the substance	or mixture						
	Classification of the substance of mixture Classification according to Regulation (EC) No 1272/2008 [GHS/CLP] or 29 CFR 1910.1200 [OSHA]							
	Sensitization, skin - Category 1							
2.2	Label Elements							
	Labeling according to Regulation (EC) No 1272/2008 [GHS/CLP]							
	Pictogram(s):							
	Signal Word: Warr	ning						
	Hazard Statement(s):							
	H317	May cause an allergic sl	kin reaction.					
	Precautionary Statement(s):							
	P261							
	P272	Contaminated work cloth	hing should not be allo	owed out of the work				
	P280 Wear protective gloves/protective clothing/eye protection/face protection. P302+352 IF ON SKIN: Wash with plenty of soap and water.							
	P333+313	If skin irritation or rash o	ccurs: Get medical ad	vice/attention.				
2.3	P362+P364 Other Hazards - None	Take off contaminated c	lothing and wash it be	fore reuse.				
3.	COMPOSITION/INFORMATION	N ON INGREDIENTS						
3.1	Substances							
	Not applicable.							
3.2	Mixtures					-		
	Component	CAS No.	EC No.	Index No.	Classification	Conc.		
	Proclin 300 Mixture = .005% (activ ingredients)	/e 96118-96-6			H317			
	Mixture of 5-Chloro-2-Methyl-4- Isothiazolin-3-One (26172-55-4 and 2-Methyl-4-Isothiazolin-3- One (2682-20-4)	55965-84-9 )		613-167-00-5		= 0.005 %		

#### 4.1 Description of first aid measures

#### General Advice

Consult a doctor and show this safety data sheet.

#### If Inhaled

Remove to fresh air and monitor breathing. If breathing becomes difficult, give oxygen. If breathing stops, give artificial respiration. Consult a doctor.

#### In Case of Skin Contact

Immediately wash skin with copious amounts of soap and water for at least 15 minutes. Remove contaminated clothing and shoes and wash before reuse. Consult a doctor.

#### In Case of Eye Contact

Flush with copious amounts of water for at least 15 minutes. Consult a doctor.

#### If Swallowed

Rinse mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Consult a doctor.

#### 4.2 Most important symptoms and effects, both acute and delayed

To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated.

#### 4.3 Indication of immediate medical attention and special treatment needed

Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.

#### 5. FIRE-FIGHTING MEASURES

#### 5.1 Extinguishing Media

#### Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

#### 5.2 Special hazards arising from the substance or mixture

In combustion, may emit toxic fumes.

#### 5.3 Precautions for fire-fighters

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

#### 6. ACCIDENTIAL RELEASE MEASURES

#### 6.1 Personal precautions, protective equipment and emergency procedures

Do not take action without suitable protective clothing - see section 8 of SDS. Evacuate personnel to safe areas. Ensure adequate ventilation. Avoid breathing vapors, mist, dust or gas.

#### 6.2 Environmental precautions

Do not let product enter drains.

#### 6.3 Methods and materials for containment and cleaning up

Cover spillage with suitable absorbent material. Hold all material for appropriate disposal as described under section 13 of SDS.

#### 6.4 Reference to other sections

For required PPE see section 8. For disposal see section 13.

# 7. HANDLING AND STORAGE

#### 7.1 Precautions for safe handling

Avoid inhalation, contact with eyes, skin and clothing. Avoid the formation of dust and aerosols. Use in a well-ventilated area. Keep away from sources of ignition. Avoid prolonged or repeated exposure.

#### 7.2 Conditions for safe storage, including any incompatibilities

Store in cool, well-ventilated area. Keep away from direct sunlight. Keep container tightly sealed until ready for use.

# 7.3 Specific end uses

Not applicable.

#### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### 8.1 Control parameters

# Components with workplace control parameters

Contains no substances with occupational exposure limit values.

#### 8.2 Exposure controls

#### Appropriate Engineering Controls

Use in a fume hood where applicable. Ensure all engineering measures described under section 7 of SDS are in place. Ensure laboratory is equipped with a safety shower and eye wash station.

#### Personal Protective Equipment

Eye / Face Protection

Use appropriate safety glasses.

#### **Skin Protection**

Use appropriate chemical resistant gloves (minimum requirement use standard BS EN 374:2003). Gloves should be inspected before use. Wash and dry hands thoroughly after handling.

#### **Body Protection**

Wear appropriate protective clothing.

#### **Respiratory Protection**

If risk assessment indicates necessary, use a suitable respirator.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

#### 9.1 Information on basic physical and chemical properties

Appearance	Lyophilized white powder or clear liquid	Vapor Pressure	No data available.
Odor	Little to none	Vapor Density	No data available.
Odor Threshold	No data available.	Relative Density	No data available.
pН	No data available.	Solubility(ies)	No data available.
Melting / Freezing Point	No data available.	Partition Coefficient	No data available.
Boiling Point / Range	No data available.	Autoignition Temperature	No data available.
Flash Point	No data available.	Decomposition Temperature	No data available.
Evaporation Rate	No data available.	Viscosity	No data available.
Flammability (Solid, Gas)	No data available.	Explosive Properties	No data available.
Upper / Lower Flammability or Explosive Limits	No data available.	Oxidizing Properties	No data available.

#### 9.2 Other safety information

No data available.

#### 10. STABILITY AND REACTIVITY

#### 10.1 Reactivity

Stable under recommended transport or storage conditions.

# 10.2 Chemical stability

Stable under recommended storage conditions.

#### 10.3 Possibility of hazardous reactions

Hazardous reactions will not occur under normal transport or storage conditions. Decomposition may occur on exposure to conditions or materials listed below.

#### 10.4 Conditions to avoid

Heat, moisture.

#### 10.5 Incompatible materials

Strong acids/alkalis, strong oxidising/reducing agents.

# 10.6 Hazardous decomposition products

Strong acids/alkalis, strong oxidising/reducing agents.

# 11. TOXICOLOGICAL INFORMATION

# 11.1 Information on toxicological effects

Acute Toxicity

# Classified based on available data

Skin Corrosion / Irritation

Classified based on available data

Serious Eye Damage / Irritation

Classified based on available data

**Respiratory or Skin Sensitization** 

#### Classified based on available data

Germ Cell Mutagenicity

Classified based on available data

#### Carcinogenicity

Classified based on available data

# **Reproductive Toxicity**

Classified based on available data

#### Specific Target Organ Toxicity - Single Exposure

Classified based on available data

#### Specific Target Organ Toxicity - Repeated Exposure

Classified based on available data

#### Aspiration Hazard

Classified based on available data

# Symptoms / Routes of Exposure

There may be irritation of the throat with a feeling of tightness in the chest.

 Ingestion:
 There may be irritation of the throat.

 Skin:
 There may be mild irritation at the site of contact.

 Eyes:
 There may be irritation and redness.

 Delayed / Immediate
 No known symptoms.

Effects:

# Additional Information

Classified based on available data

#### 12. ECOLOGICAL INFORMATION

12.1 Toxicity

12.3

No data available.

# 12.2 Persistence and degradability

No data available.

**Bioaccumulative potential** No data available.

# 12.4 Mobility in soil

No data available.

#### 12.5 Results of PBT and vPvB assessment

No data available

#### 12.6 Other adverse effects

No data available.

#### 13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

#### Product

Transfer to a suitable container and arrange for collection by specialized disposal company in accordance with national, regional, or local legislation.

#### Contaminated Packaging

Dispose of in a regulated landfill site or other method for hazardous or toxic wastes in accordance with national, regional, or local legislation.

TRANSPORT INFORMATION
 Classified according to the criteria of the UN Model Regulations as reflected in the IMDG Code, ADR, RID, DOT and IATA.
 UN-Number

Does not meet the criteria for classification as hazardous for transport.

#### 14.2 UN proper shipping name

Does not meet the criteria for classification as hazardous for transport.

# 14.3 Transport hazard class(es)

Does not meet the criteria for classification as hazardous for transport.

#### 14.4 Packaging group

Does not meet the criteria for classification as hazardous for transport.

#### 14.5 Environmental hazards

Does not meet the criteria for classification as hazardous for transport.

#### 14.6 Special precautions for users

Does not meet the criteria for classification as hazardous for transport.

#### Additional Transport Information

Does not meet the criteria for classification as hazardous for transport.

#### 15. REGULATORY INFORMATION

This safety datasheet complies with the requirements of Regulation (EC) No. 453/2010.

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

TSCA (Toxic Substances Control Act): Not applicable. SARA 313: Not applicable. SARA 311/312: Not applicable. CERCLA Reportable Quantity: Not applicable. California Proposition 65: Proclin 300 Mixture = .005%

#### 15.2 Chemical safety assessment

A Chemical Safety Assessment has not been made for this product.

# 16. OTHER INFORMATION

# Further Information

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This company shall not be held liable for any damage resulting from handling or from contact with the above product. This material must only be handled by suitably qualified experienced scientists in appropriately equipped and authorized facilities. The above information is believed to be correct but does not purport to be all inclusive and should be used as a guide only for experienced personnel. Always consult your safety advisor and follow appropriate local and national safety legislature. The absence of warning must not, under any circumstance, be taken to mean that no hazard exists.

End of safety data sheet

# RD SYSTEMS a biotechne brand

1.	IDENTIFICATION OF THE	SUBSTANCE/MIXTURE AND OF	THE COMPANY/UNDERTA	KING			
1.1	Product Identifiers						
	Product Name:	Calibrator Diluent (contains Proclin 3	00 Mixture = .005%)				
1.2	Relevant identified uses of	the substance or mixture and uses	advised against				
	Identified Uses:	For Research Use Only					
1.3	Details of the supplier of the	ne safety data sheet					
	Company:	R&D Systems, Inc. a Bio-Techne Bra	nd Telephone:	1-800-34	43-7475		
		614 McKinley Place NE	Fax:	1-612-6	56-4400		
		Minneapolis, MN 55413, USA	Internet:		dsystems.com		
			Email address:	info@bio	p-techne.com		
	Canada:	461 North Service Rd West	Telephone:	1-855-6	68-8722		
		Unit B37	Fax:	902-827			
		Oakville, ON L6M 2V5	Email address:	Canada	inquiries@bio-techne.com		
	United Kingdom:	19 Barton Lane	Telephone:	44 (0)12	35 529449		
		Abingdon Science Park	Fax:		35 533420		
		Abingdon, OX14 3NB	Email address:	info.eme	ea@bio-techne.com		
1.4	Emergency Telephone Nun	nber					
_		bill, leak, fire, exposure, or accident ca 800-424-9300. Outside USA and Can		ct calls accepted).			
2.	HAZARDS IDENTIFICATIO	ON					
2.1	Classification of the substa	ance or mixture					
	Classification according to Regulation (EC) No 1272/2008 [GHS/CLP] or 29 CFR 1910.1200 [OSHA]						
	Sensitization, skin - Category 1						
2.2	Label Elements						
	Labeling according to Regulation (EC) No 1272/2008 [GHS/CLP]						
	Pictogram(s):						
	Signal Word:	Warning					
	Hazard Statement(s):						
	H317	May cause an allergic skin rea	action.				
	Precautionary Statement(s):						
	P261 Avoid breathing dust/fumes/gas/mist/vapours/spray.						
	P272 Contaminated work clothing should not be allowed out of the workplace.						
	P280 Wear protective gloves/protective clothing/eye protection/face protection. P302+352 IF ON SKIN: Wash with plenty of soap and water.						
	P333+313 If skin irritation or rash occurs: Get medical advice/attention.						
2.3	P362+P364 <b>Other Hazards -</b> None	Take off contaminated clothin	g and wash it before reuse.				
3.	COMPOSITION/INFORMA						
3. 3.1	Substances						
J. I	Not applicable.						
3.2	Mixtures						
3.2		646 No. 56 N	la Indau	Na	Classification	Cana	
	Component Proclin 300 Mixture = .005%	CAS No. EC N	lo. Index	NU.	Classification	Conc.	
	ingredients)				H317		
	Mixture of 5-Chloro-2-Meth Isothiazolin-3-One (26172 and 2-Methyl-4-Isothiazoli	2-55-4)	613-1	67-00-5		= 0.005 %	
	One (2682-20-4)						

#### 4.1 Description of first aid measures

#### General Advice

Consult a doctor and show this safety data sheet.

#### If Inhaled

Remove to fresh air and monitor breathing. If breathing becomes difficult, give oxygen. If breathing stops, give artificial respiration. Consult a doctor.

#### In Case of Skin Contact

Immediately wash skin with copious amounts of soap and water for at least 15 minutes. Remove contaminated clothing and shoes and wash before reuse. Consult a doctor.

#### In Case of Eye Contact

Flush with copious amounts of water for at least 15 minutes. Consult a doctor.

#### If Swallowed

Rinse mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Consult a doctor.

#### 4.2 Most important symptoms and effects, both acute and delayed

To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated.

#### 4.3 Indication of immediate medical attention and special treatment needed

Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.

#### 5. FIRE-FIGHTING MEASURES

#### 5.1 Extinguishing Media

#### Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

#### 5.2 Special hazards arising from the substance or mixture

In combustion, may emit toxic fumes.

#### 5.3 Precautions for fire-fighters

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

#### 6. ACCIDENTIAL RELEASE MEASURES

#### 6.1 Personal precautions, protective equipment and emergency procedures

Do not take action without suitable protective clothing - see section 8 of SDS. Evacuate personnel to safe areas. Ensure adequate ventilation. Avoid breathing vapors, mist, dust or gas.

#### 6.2 Environmental precautions

Do not let product enter drains.

#### 6.3 Methods and materials for containment and cleaning up

Cover spillage with suitable absorbent material. Hold all material for appropriate disposal as described under section 13 of SDS.

#### 6.4 Reference to other sections

For required PPE see section 8. For disposal see section 13.

# 7. HANDLING AND STORAGE

#### 7.1 Precautions for safe handling

Avoid inhalation, contact with eyes, skin and clothing. Avoid the formation of dust and aerosols. Use in a well-ventilated area. Keep away from sources of ignition. Avoid prolonged or repeated exposure.

#### 7.2 Conditions for safe storage, including any incompatibilities

Store in cool, well-ventilated area. Keep away from direct sunlight. Keep container tightly sealed until ready for use.

# 7.3 Specific end uses

Not applicable.

#### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### 8.1 Control parameters

# Components with workplace control parameters

Contains no substances with occupational exposure limit values.

#### 8.2 Exposure controls

#### Appropriate Engineering Controls

Use in a fume hood where applicable. Ensure all engineering measures described under section 7 of SDS are in place. Ensure laboratory is equipped with a safety shower and eye wash station.

#### Personal Protective Equipment

Eye / Face Protection

Use appropriate safety glasses.

#### **Skin Protection**

Use appropriate chemical resistant gloves (minimum requirement use standard BS EN 374:2003). Gloves should be inspected before use. Wash and dry hands thoroughly after handling.

#### **Body Protection**

Wear appropriate protective clothing.

#### **Respiratory Protection**

If risk assessment indicates necessary, use a suitable respirator.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

#### 9.1 Information on basic physical and chemical properties

	• •		
Appearance	Lyophilized white powder or clear liquid	Vapor Pressure	No data available.
Odor	Little to none	Vapor Density	No data available.
Odor Threshold	No data available.	Relative Density	No data available.
pH	No data available.	Solubility(ies)	No data available.
Melting / Freezing Point	No data available.	Partition Coefficient	No data available.
Boiling Point / Range	No data available.	Autoignition Temperature	No data available.
Flash Point	No data available.	Decomposition Temperature	No data available.
Evaporation Rate	No data available.	Viscosity	No data available.
Flammability (Solid, Gas)	No data available.	Explosive Properties	No data available.
Upper / Lower Flammability or Explosiv Limits	No data available.	Oxidizing Properties	No data available.

#### 9.2 Other safety information

No data available.

#### 10. STABILITY AND REACTIVITY

#### 10.1 Reactivity

Stable under recommended transport or storage conditions.

# 10.2 Chemical stability

Stable under recommended storage conditions.

#### 10.3 Possibility of hazardous reactions

Hazardous reactions will not occur under normal transport or storage conditions. Decomposition may occur on exposure to conditions or materials listed below.

#### 10.4 Conditions to avoid

Heat, moisture.

#### 10.5 Incompatible materials

Strong acids/alkalis, strong oxidising/reducing agents.

# 10.6 Hazardous decomposition products

Strong acids/alkalis, strong oxidising/reducing agents.

# 11. TOXICOLOGICAL INFORMATION

#### 11.1 Information on toxicological effects

Acute Toxicity

Classified based on available data

#### Skin Corrosion / Irritation

Classified based on available data

Serious Eye Damage / Irritation

#### Classified based on available data

Respiratory or Skin Sensitization

# Classified based on available data

Germ Cell Mutagenicity

Classified based on available data

#### Carcinogenicity

Classified based on available data

# **Reproductive Toxicity**

Classified based on available data

# Specific Target Organ Toxicity - Single Exposure

Classified based on available data

# Specific Target Organ Toxicity - Repeated Exposure

Classified based on available data

# Aspiration Hazard

Classified based on available data

# Symptoms / Routes of Exposure

Inhalation:

There may be irritation of the throat with a feeling of tightness in the chest.

 Ingestion:
 There may be irritation of the throat.

 Skin:
 There may be mild irritation at the site of contact.

 Eyes:
 There may be irritation and redness.

 Delayed / Immediate
 No known symptoms.

Effects:

# Additional Information

Classified based on available data

#### 12. ECOLOGICAL INFORMATION

12.1 Toxicity

12.3

No data available.

# 12.2 Persistence and degradability

No data available.

**Bioaccumulative potential** No data available.

# 12.4 Mobility in soil

No data available.

#### 12.5 Results of PBT and vPvB assessment

No data available

#### 12.6 Other adverse effects

No data available.

#### 13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

#### Product

Transfer to a suitable container and arrange for collection by specialized disposal company in accordance with national, regional, or local legislation.

#### Contaminated Packaging

Dispose of in a regulated landfill site or other method for hazardous or toxic wastes in accordance with national, regional, or local legislation.

TRANSPORT INFORMATION
 Classified according to the criteria of the UN Model Regulations as reflected in the IMDG Code, ADR, RID, DOT and IATA.
 UN-Number

Does not meet the criteria for classification as hazardous for transport.

#### 14.2 UN proper shipping name

Does not meet the criteria for classification as hazardous for transport.

# 14.3 Transport hazard class(es)

Does not meet the criteria for classification as hazardous for transport.

#### 14.4 Packaging group

Does not meet the criteria for classification as hazardous for transport.

#### 14.5 Environmental hazards

Does not meet the criteria for classification as hazardous for transport.

#### 14.6 Special precautions for users

Does not meet the criteria for classification as hazardous for transport.

#### Additional Transport Information

Does not meet the criteria for classification as hazardous for transport.

#### 15. REGULATORY INFORMATION

This safety datasheet complies with the requirements of Regulation (EC) No. 453/2010.

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

TSCA (Toxic Substances Control Act): Not applicable. SARA 313: Not applicable. SARA 311/312: Not applicable. CERCLA Reportable Quantity: Not applicable. California Proposition 65: Proclin 300 Mixture = .005%

#### 15.2 Chemical safety assessment

A Chemical Safety Assessment has not been made for this product.

# 16. OTHER INFORMATION

# Further Information

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This company shall not be held liable for any damage resulting from handling or from contact with the above product. This material must only be handled by suitably qualified experienced scientists in appropriately equipped and authorized facilities. The above information is believed to be correct but does not purport to be all inclusive and should be used as a guide only for experienced personnel. Always consult your safety advisor and follow appropriate local and national safety legislature. The absence of warning must not, under any circumstance, be taken to mean that no hazard exists.

End of safety data sheet



#### 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product Identifiers Product Name: Color Reagent A 1.2 Relevant identified uses of the substance or mixture and uses advised against Identified Uses: For research use only. Details of the supplier of the safety data sheet 1.3 1-800-343-7475 Company: R&D Systems, Inc. a Bio-Techne Brand Telephone: 614 McKinley Place NE 1-612-656-4400 Fax: Minneapolis, MN 55413, USA Internet: www.rndsvstems.com Email address: info@bio-techne.com Canada: 21 Canmotor Avenue Telephone: 1-855-668-8722 Toronto, Ontario M8Z4E6 Fax: 902-827-6402 Canada Email address: Canada.inquiries@bio-techne.com 19 Barton Lane 44 (0)1235 529449 United Kingdom: Telephone: Abingdon Science Park 44 (0)1235 533420 Fax: Abingdon, OX14 3NB Email address: info.emea@bio-techne.com China: 1193 Changning Road Telephone: 86-400-821-3475 Unit 1901, Raffles City Changning Office Fax: 76 (021) 52371001 Shanghai Email address techsupport.cn@bio-techne.com 1.4 **Emergency Telephone Number** Emergency Tel: For chemical emergency, spill, leak, fire, exposure, or accident call Bio-Techne day or night: Bio-Techne Tel: US:612-379-2956 or 800-343-7475 / Europe: +44(0)1235-529449 / China 86-400-821-3475 HAZARDS IDENTIFICATION 2. 2.1 Classification of the substance or mixture This substance does not meet the classification criteria of the EC Directives 67/548/EEC, 1999/45/EC, 1272/2008 [CLP], GHS or 29 CFR 1910.1200 [OSHA]. 2.2 Label Elements The product does not need to be labelled in accordance with EC directives or respective national laws. 2.3 Other Hazards - None 3. COMPOSITION/INFORMATION ON INGREDIENTS 3.1 Substances Not applicable. 3.2 Mixtures This product does not contain hazardous chemicals at concentrations of 1% or greater. This product is not known to contain carcinogens at concentrations of 0.1% or greater. 4. FIRST AID MEASURES Description of first aid measures 4.1 **General Advice** Consult a doctor and show this safety data sheet. If Inhaled Remove to fresh air and monitor breathing. If breathing becomes difficult, give oxygen. If breathing stops, give artificial respiration. Consult a doctor. In Case of Skin Contact Immediately wash skin with copious amounts of soap and water for at least 15 minutes. Remove contaminated clothing and shoes and wash before reuse. Consult a doctor. In Case of Eve Contact Flush with copious amounts of water for at least 15 minutes. Consult a doctor. If Swallowed Rinse mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Consult a doctor. Most important symptoms and effects, both acute and delayed 4.2 To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated. Indication of immediate medical attention and special treatment needed 4.3 Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.

#### 5.1 Extinguishing Media

#### Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

# 5.2 Special hazards arising from the substance or mixture

In combustion, may emit toxic fumes.

#### 5.3 Precautions for fire-fighters

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

#### 6. ACCIDENTIAL RELEASE MEASURES

#### 6.1 Personal precautions, protective equipment and emergency procedures

Do not take action without suitable protective clothing - see section 8 of SDS. Evacuate personnel to safe areas. Ensure adequate ventilation. Avoid breathing vapors, mist, dust or gas.

#### 6.2 Environmental precautions

Do not let product enter drains.

#### 6.3 Methods and materials for containment and cleaning up

Cover spillage with suitable absorbent material. Hold all material for appropriate disposal as described under section 13 of SDS.

#### 6.4 Reference to other sections

For required PPE see section 8. For disposal see section 13.

#### 7. HANDLING AND STORAGE

#### 7.1 Precautions for safe handling

Avoid inhalation, contact with eyes, skin and clothing. Avoid the formation of dust and aerosols. Use in a well-ventilated area. Keep away from sources of ignition. Avoid prolonged or repeated exposure.

#### 7.2 Conditions for safe storage, including any incompatibilities

Store in cool, well-ventilated area. Keep away from direct sunlight. Keep container tightly sealed until ready for use.

7.3 Specific end uses

## Not applicable.

#### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### 8.1 Control parameters

#### Components with workplace control parameters

Contains no substances with occupational exposure limit values.

#### 8.2 Exposure controls

#### Appropriate Engineering Controls

Use in a fume hood where applicable. Ensure all engineering measures described under section 7 of SDS are in place. Ensure laboratory is equipped with a safety shower and eye wash station.

# Personal Protective Equipment

Eye / Face Protection

Use appropriate safety glasses.

#### **Skin Protection**

Use appropriate chemical resistant gloves (minimum requirement use standard BS EN 374:2003). Gloves should be inspected before use. Wash and dry hands thoroughly after handling.

#### **Body Protection**

Wear appropriate protective clothing.

# **Respiratory Protection**

If risk assessment indicates necessary, use a suitable respirator.

# 9. PHYSICAL AND CHEMICAL PROPERTIES

#### 9.1 Information on basic physical and chemical properties

Appearance	Lyophilized white powder or clear liquid.	Vapor Pressure	No data available.
Odor	Little to none.	Vapor Density	No data available.
Odor Threshold	No data available.	Relative Density	No data available.
рН	No data available.	Solubility	No data available.
Melting / Freezing Point	No data available.	Partition Coefficient	No data available.
Boiling Point / Range	No data available.	Autoignition Temperature	No data available.
Flash Point	No data available.	Decomposition Temperature	No data available.
Evaporation Rate	No data available.	Viscosity	No data available.
Flammability (Solid, Gas)	No data available.	Explosive Properties	No data available.

	Upper / Lower Flammability or Explosive Limits	No data available.	Oxidizing Properties	No data available.		
.2	Other safety information					
	No data available.					
0.	STABILITY AND REACTIVITY	Y				
0.1	Reactivity					
	Stable under recommended tran	sport or storage conditions.				
0.2	Chemical stability					
	Stable under recommended stor	age conditions.				
0.3	Possibility of hazardous reacti	ions				
	Hazardous reactions will not occ	ur under normal transport or storage condition	ons. Decomposition may occur on exposure to cond	ditions or materials listed below.		
).4	Conditions to avoid					
	Heat, moisture.					
0.5	Incompatible materials					
	Strong acids/alkalis, strong oxidizing/reducing agents.					
0.6	Hazardous decomposition pro					
	Strong acids/alkalis, strong oxidi	izing/reducing agents.				
1.	TOXICOLOGICAL INFORMA					
1.1	Information on toxicological ef	ifects				
	Acute Toxicity					
	Classified based on available da	ita.				
	Skin Corrosion / Irritation					
	Classified based on available da	ıta.				
	Serious Eye Damage / Irritation	n				
	Classified based on available da	ıta.				
	Respiratory or Skin Sensitizati	ion				
	Classified based on available da	ita.				
	Germ Cell Mutagenicity					
	Classified based on available da	ita.				
	Carcinogenicity					
	Classified based on available da	ita.				
	Reproductive Toxicity					
	Classified based on available da	ıta.				
	Specific Target Organ Toxicity	/ - Single Exposure				
	Classified based on available da	ıta.				
	Specific Target Organ Toxicity	/ - Repeated Exposure				
	Classified based on available da	ıta.				
	Aspiration Hazard					
	Classified based on available da	ıta.				
	Symptoms / Routes of Exposu	ıre				
	Inhalation: The	re may be irritation of the throat with a feeling	g of tightness in the chest.			
	Ingestion: The	ere may be irritation of the throat.				
	Skin: The	ere may be mild irritation at the site of contact	t.			
	Eyes: The	ere may be irritation and redness.				
	Delayed/Immediate Effects: No	known symptoms.				
	Additional Information					
	Additional Information					

No data available.

# 12.2 Persistence and degradability

# No data available.

12.3 Bio accumulative potential

No data available.

#### 12.4 Mobility in soil

No data available.

#### 12.5 Results of PBT and vPvB assessment

No data available.

# 12.6 Other adverse effects

No data available.

# 13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

# Product

Transfer to a suitable container and arrange for collection by specialized disposal company in accordance with national, regional, or local legislation.

## Contaminated Packaging

Dispose of in a regulated landfill site or other method for hazardous or toxic wastes in accordance with national, regional, or local legislation.

# 14. TRANSPORT INFORMATION

Classified according to the criteria of the UN Model Regulations as reflected in the IMDG Code, ADR, RID, DOT and IATA.

# 14.1 UN-Number

Does not meet the criteria for classification as hazardous for transport.

#### 14.2 UN proper shipping name

Does not meet the criteria for classification as hazardous for transport.

#### 14.3 Transport hazard class(es)

Does not meet the criteria for classification as hazardous for transport.

# 14.4 Packaging group

Does not meet the criteria for classification as hazardous for transport.

#### 14.5 Environmental hazards

Does not meet the criteria for classification as hazardous for transport.

#### 14.6 Special precautions for users

Does not meet the criteria for classification as hazardous for transport.

#### Additional Transport Information

Does not meet the criteria for classification as hazardous for transport.

#### 15. REGULATORY INFORMATION

This safety datasheet complies with the requirements of Regulation (EC) No. 453/2010.

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

TSCA (Toxic Substances Control Act): Not applicable. SARA 313: Not applicable.

SARA 311/312: Not applicable.

CERCLA Reportable Quantity: Not applicable.

California Proposition 65: Not applicable.

#### 15.2 Chemical safety assessment

A Chemical Safety Assessment has not been made for this product.

#### 16. OTHER INFORMATION

Further Information

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This company shall not be held liable for any damage resulting from handling or from contact with the above product. This material must only be handled by suitably qualified experienced scientists in appropriately equipped and authorized facilities. The above information is believed to be correct but does not purport to be all inclusive and should be used as a guide only for experienced personnel. Always consult your safety advisor and follow appropriate local and national safety legislature. The absence of warning must not, under any circumstance, be taken to mean that no hazard exists.

End of safety data sheet

# RD SYSTEMS a biotechne brand

Version 2.0 SDS Revision Date 10/25/2023 www.rndsystems.com

1.	IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING					
1.1	Product Identifiers					
	Product Name:	Color Reagent B (contains N,N-Dimethylfor	mamide and Tetramethylbe	nzidine)		
1.2	Relevant identified u	Relevant identified uses of the substance or mixture and uses advised against				
	Identified Uses:					
1.3	Details of the supplier of the safety data sheet					
	Company:	R&D Systems, Inc. a Bio-Techne Brand 614 McKinley Place NE Minneapolis, MN 55413, USA	Telephone: Fax: Internet: www.rndsyst	1-800-343-7475 1-612-656-4400 rems.com		
			Email address:	info@bio-techne.com		
	Canada:	461 North Service Rd West	Telephone:	1-855-668-8722		

	Onit B37 Oakville, ON L6M 2V5	Fax: Email address:	902-827-6402 Canada.inquiries@bio-techne.com
United Kingdom:	19 Barton Lane	Telephone:	44 (0)1235 529449
	Abingdon Science Park	Fax:	44 (0)1235 533420
	Abingdon, OX14 3NB	Email address:	info.emea@bio-techne.com
Emerando - Televilion	a Numula an		

# 1.4 Emergency Telephone Number

For chemical emergency, spill, leak, fire, exposure, or accident call CHEMTREC day or night: Within USA and Canada: 1-800-424-9300. Outside USA and Canada: +1 703-527-3887 (collect calls accepted).

#### 2. HAZARDS IDENTIFICATION

## 2.1 Classification of the substance or mixture

# Classification according to Regulation (EC) No 1272/2008 [GHS/CLP] or 29 CFR 1910.1200 [OSHA]

Acute Toxicity, dermal - Category 4 Skin Corrosion/Irritation - Category 2 Serious eye damage/eye irritation - Category 2A Acute Toxicity, inhalation - Category 4 Reproductive Toxicity - Category 1B

# 2.2 Label Elements

H360

#### Labeling according to Regulation (EC) No 1272/2008 [GHS/CLP]

Danger

Pictogram(s):



Signal Word:
Hazard Statement(s):
H312 H315
H319
L1000

Harmful in contact with skin.
Causes skin irritation.
Causes serious eye irritation.
Harmful if inhaled.
May damage fertility or the unborn child

Precautionary Statement(s):

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P261	Avoid breathing dust/fumes/gas/mist/vapours/spray.
P264	Wash hands thoroughly after handling.
P271	Use only in well-ventilated areas.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P302+352	IF ON SKIN: Wash with plenty of soap and water.
P304+340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+351+338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+313	IF exposed or concerned: Get medical advice/ attention.
P312	Call poison center/doctor if you feel unwell.
P321	Specific treatment (see Section 4).
P332+313	If skin irritation occurs: Get medical advice/attention.
P337+313	If eye irritation persists: Get medical advice/attention.
P362+364	Take off contaminated clothing and wash it before reuse.

#### 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### 3.1 Substances

Not applicable.

# 3.2 Mixtures

Component	CAS No.	EC No.	Index No.	Classification	Conc.
N,N-Dimethylformamide	68-12-2	200-679-5		H312 , H315 , H319 , H332 , H360	< 25 %
Tetramethylbenzidine	54827-17-7	259-364-6	616-001-00-x	Not hazardous at this concentration.	< 0.05 %

#### 4. FIRST AID MEASURES

#### 4.1 Description of first aid measures

#### **General Advice**

Consult a doctor and show this safety data sheet.

#### If Inhaled

Remove to fresh air and monitor breathing. If breathing becomes difficult, give oxygen. If breathing stops, give artificial respiration. Consult a doctor.

#### In Case of Skin Contact

Immediately wash skin with copious amounts of soap and water for at least 15 minutes. Remove contaminated clothing and shoes and wash before reuse. Consult a doctor.

#### In Case of Eye Contact

Flush with copious amounts of water for at least 15 minutes. Consult a doctor.

#### If Swallowed

Rinse mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Consult a doctor.

#### 4.2 Most important symptoms and effects, both acute and delayed

To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated.

#### 4.3 Indication of immediate medical attention and special treatment needed

Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.

#### 5. FIRE-FIGHTING MEASURES

#### 5.1 Extinguishing Media

5.2

#### Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special hazards arising from the substance or mixture

# In combustion, may emit toxic fumes.

# 5.3 Precautions for fire-fighters

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

#### 6. ACCIDENTIAL RELEASE MEASURES

#### 6.1 Personal precautions, protective equipment and emergency procedures

Do not take action without suitable protective clothing - see section 8 of SDS. Evacuate personnel to safe areas. Ensure adequate ventilation. Avoid breathing vapors, mist, dust or gas.

#### 6.2 Environmental precautions

Do not let product enter drains.

#### 6.3 Methods and materials for containment and cleaning up

Cover spillage with suitable absorbent material. Hold all material for appropriate disposal as described under section 13 of SDS.

#### 6.4 Reference to other sections

For required PPE see section 8. For disposal see section 13.

#### 7. HANDLING AND STORAGE

# 7.1 Precautions for safe handling

Avoid inhalation, contact with eyes, skin and clothing. Avoid the formation of dust and aerosols. Use in a well-ventilated area. Keep away from sources of ignition. Avoid prolonged or repeated exposure.

# 7.2 Conditions for safe storage, including any incompatibilities

N,N-Dimethylformamide - Store in cool, well-ventilated area. Keep away from direct sunlight. Keep container tightly sealed until ready for use. Store locked up. Tetramethylbenzidine - Store in cool, well-ventilated area. Keep away from direct sunlight. Keep container tightly sealed until ready for use.

# 7.3 Specific end uses

# 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### 8.1 Control parameters

#### Components with workplace control parameters

#### Occupational exposure limit values (Workplace Exposure Limits

List source(s): EU - Commission Directive (EU) 2019/1831 of 24 October 2019 establishing a fifth list of indicative occupational exposure limit values pursuant to Council Directive 98/24/EC and amending Commission Directive 2000/39/EC UK - EH40/2005 Work Exposure Limits, Third edition. Published 2018. IRE - 2018 Code of Practice for the Chemical Agents Regulations, Schedule 1. Published by the Health and Safety Authority

Component	CAS No.	Agency	OELs	STEL
N, N – Dimethylformamide	68-12-2	OSHA (USA)	10 ppm 30 mg/m3	20 ppm 61 mg/m3
		European Union (IOELV)	5 ppm 15 mg/m3	10 ppm 30 mg/m3
		United Kingdom (UK)	5 ppm 15 mg/m3	10 ppm 30 mg/m3
		Ireland	5 ppm 15 mg/m3	10 ppm 30 mg/m3

#### Human Health Values

Component	Endpoint	Threshold Level	Protection goal / route of exposure	Use in	Exposure time
N, N – Dimethylformamide CAS No. 68-12-2	DNEL	6 mg/m3	Human, inhalation	Worker (industry)	Chronic – system effects
		1,1 mg/kg bw/day	Human, dermal	Worker (industry)	Chronic – systemic effects

#### Environmental Values

Component	Endpoint	Threshold Level	Organism	Environmental compartment	Exposure time
N, N – Dimethylformamide CAS No. 68-12-2	PNEC	44 mg/l	Aquatic organisms	Sewage treatment plant (STP)	Short-term (single instance)
		111 mg/kg	Aquatic organisms	Freshwater sediment	Short-term (single instance)
		11,1 mg/kg	Aquatic organisms	Marine sediment	Short-term (single instance)

#### Tetramethylbenzidine

8.2

9.

54827-17-7

Contains no substances with occupational exposure limit values.

# Exposure controls

# Appropriate Engineering Controls

Use in a fume hood where applicable. Ensure all engineering measures described under section 7 of SDS are in place. Ensure the facility is equipped with a safety shower and eye wash stations near point of use.

#### Personal Protective Equipment

#### Eye / Face Protection

Use safety goggles with side protection and face shield

#### **Skin Protection**

Use appropriate chemical resistant gloves (minimum requirement use standard BS EN 374:2003). Gloves should be inspected before use. Wash and dry hands thoroughly after handling.

# **Body Protection**

Wear appropriate protective clothing.

#### **Respiratory Protection**

Use appropriate respiratory protection if adequate exhaust ventilation is absent.

#### Environmental exposure controls

Prevent product from entering the drains. Dispose in accordance with federal, state and/or local regulations.

# PHYSICAL AND CHEMICAL PROPERTIES

#### 9.1 Information on basic physical and chemical properties

Appearance	Liquid	Vapor Pressure	No data available.
Odor	No data available.	Vapor Density	No data available.
Odor Threshold	No data available.	Relative Density	No data available.
рН	No data available.	Solubility(ies)	No data available.
Melting / Freezing Point	No data available.	Partition Coefficient	No data available.
Boiling Point / Range	No data available.	Autoignition Temperature	No data available.

Upper / Lower Flammability or Explosive No data available.

# 9.2 Other safety information

Limits

No data available.

#### 10. STABILITY AND REACTIVITY

#### 10.1 Reactivity

Stable under recommended transport or storage conditions.

#### 10.2 Chemical stability

Stable under recommended storage conditions.

#### 10.3 Possibility of hazardous reactions

Hazardous reactions will not occur under normal transport or storage conditions. Decomposition may occur on exposure to conditions or materials listed below.

#### 10.4 Conditions to avoid

N,N-Dimethylformamide - Heat, moisture. Tetramethylbenzidine - Heat, flames, sparks.

#### 10.5 Incompatible materials

N,N-Dimethylformamide - Strong acids/alkalis, strong oxidizing/reducing agents. Tetramethylbenzidine - Strong oxidizing agents.

#### 10.6 Hazardous decomposition products

Strong acids/alkalis, strong oxidizing/reducing agents.

#### 11. TOXICOLOGICAL INFORMATION

#### 11.1 Information on toxicological effects

#### Acute Toxicity

N,N-Dimethylformamide - LD50 - Oral, Rat - 2,800 mg/kg Tetramethylbenzidine - No data available.

#### Skin Corrosion / Irritation

N,N-Dimethylformamide - Classified based on available data Tetramethylbenzidine - No data available.

#### Serious Eye Damage / Irritation

N,N-Dimethylformamide - Classified based on available data Tetramethylbenzidine - No data available.

# **Respiratory or Skin Sensitization**

N,N-Dimethylformamide - Classified based on available data Tetramethylbenzidine - No data available.

#### Germ Cell Mutagenicity

N,N-Dimethylformamide - Genotoxicity in vitro – mouse – lymphocyte, Mutation in mammalian somatic cells. Tetramethylbenzidine - Classified based on available data

#### Carcinogenicity

N,N-Dimethylformamide - Classified based on available data Tetramethylbenzidine - Not classified to its carcinogenicity based on its IARC, ACGIH, NTP or EPA classification at levels less than 0.1%.

#### **Reproductive Toxicity**

N,N-Dimethylformamide - May cause congenital malformation in the fetus. Presumed human reproductive toxicant. Tetramethylbenzidine - Classified based on available data

#### Specific Target Organ Toxicity - Single Exposure

Classified based on available data

#### Specific Target Organ Toxicity - Repeated Exposure

N,N-Dimethylformamide - Classified based on available data Tetramethylbenzidine - No data available.

#### **Aspiration Hazard**

N,N-Dimethylformamide - Classified based on available data Tetramethylbenzidine - No data available.

# Symptoms / Routes of Exposure

Inhalation:	N,N-Dimethylformamide - Toxic if inhaled. May cause respiratory tract irritation. Tetramethylbenzidine - There may be irritation of the throat with a feeling of tightness in the chest.
Ingestion:	N,N-Dimethylformamide - May be harmful if swallowed. Tetramethylbenzidine - There may be irritation of the throat.
Skin:	N,N-Dimethylformamide - May be harmful if absorbed through the skin. May cause skin irritation. Tetramethylbenzidine - There may be mild irritation at the site of contact.

Decomposition Temperature Viscosity Explosive Properties

**Oxidizing Properties** 

No data available.

No data available.

No data available.

Eyes: N,N-Dimethylformamide - Causes serious eye irritation. Tetramethylbenzidine - There may be irritation and redness.

 Delayed / Immediate
 N,N-Dimethylformamide - No known symptoms.

 Effects:
 Tetramethylbenzidine - No data available.

# Additional Information

N,N-Dimethylformamide - Classified based on available data Tetramethylbenzidine - No data available.

12.	ECOLOGICAL INFORMATION
12.1	Toxicity
	No data available.
12.2	Persistence and degradability
	No data available.
12.3	Bioaccumulative potential
	No data available.
12.4	Mobility in soil
	No data available.
12.5	Results of PBT and vPvB assessment
	No data available.
12.6	Other adverse effects
	No data available.
13.	DISPOSAL CONSIDERATIONS
13.1	Waste treatment methods
	Product
	Dispose of contents/container in accordance with local/regional/national/international regulations.
	Contaminated Packaging
	Dispose of contents/container in accordance with local/regional/national/international regulations.
14.	TRANSPORT INFORMATION
	Classified according to the criteria of the UN Model Regulations as reflected in the IMDG Code, ADR, RID, DOT and IATA.
14.1	UN-Number
	Does not meet the criteria for classification as hazardous for transport.
14.2	UN proper shipping name
	Does not meet the criteria for classification as hazardous for transport.
14.3	Transport hazard class(es)
	Does not meet the criteria for classification as hazardous for transport.
14.4	Packaging group
	Does not meet the criteria for classification as hazardous for transport.
14.5	Environmental hazards
	Does not meet the criteria for classification as hazardous for transport.
14.6	Special precautions for users
	Does not meet the criteria for classification as hazardous for transport.
	Additional Transport Information

#### 15. REGULATORY INFORMATION

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006. COMMISSION REGULATION (EU) 2020/878 amending Annex II to Regulation (EC) No 1907/2006

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

TSCA (Toxic Substances Control Act): N,N-Dimethylformamide – Is Listed.

Tetramethylbenzidine - Is Listed.

SARA 313 : Not applicable.

SARA 311/312 : Not applicable.

CERCLA Reportable Quantity : Not applicable.

California Proposition 65 :

N,N-Dimethylformamide

WARNING: This product can expose you to chemicals including N,N-Dimethylformamide, which is known to the State of California to cause cancer. For more information, go to www.P65Warnings.ca.gov.

#### National Inventories

#### **Country Specific Chemical Inventory Status**

	Australia (AIIC)	China (IECSC)	EU (ESCI)	EU REACH	Japan (CSCL-ENCS)	Korea (KECI)	New Zealand (NXIoC)	Philippines (PICCS)
N,N-Dimethylformamide	х	Х	Х	X	x	х	Х	х

Legend: AllC Australian Inventory of Industrial Chemicals; CICR Chemical Inventory and Control Regulation; CSCL-ENCS List of Existing and New Chemical Substances (CSCL-ENCS) DSL Domestic Substances List (DSL); ECSI EC Substance Inventory (EINECS, ELINCS, NLP); IECSC Inventory of Existing Chemical Substances Produced or Imported in China; KECI Korea Existing Chemicals Inventory; NZIoC New Zealand Inventory of Chemicals: PICCS Philippine Inventory of Chemicals and Chemical Substances (PICCS); REACH Reg. REACH registered substances; TCSI Taiwan Chemical Substance Inventory; TSCA Toxic Substance Control Act

#### Authorization / Restriction according to EU REACH

Component	REACH (1907/2006) - Annex XIV - Substances Subject to Authorization		REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC)
N,N-Dimethylformamide		Use is restricted under specified conditions. See link for additional details. EU REACH Restriction - N,N- Dimethylformamide	SVHC Candidate list - (Toxic to Reproduction, Article 57c)

#### National Regulations

Component	Germany – Water Classification (VwVwS)	Germany – TA – Luft Class
N,N-Dimethylformamide	WGK 2	-

#### 15.2 Chemical safety assessment

An occupational exposure assessment for inhalation and dermal exposure was conducted, based on site specific conditions, and the results were found to be below the occupational exposure limits and derived no-effect limits (DNELs) for this product. Operational conditional and risk management measures described in this safety data sheet are determined adequate. Customers may conduct their own assessments to evaluate exposure within their operations and take appropriate risk management.

## 16. OTHER INFORMATION

#### **Further Information**

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This company shall not be held liable for any damage resulting from handling or from contact with the above product. This material must only be handled by suitably qualified experienced scientists in appropriately equipped and authorized facilities. The above information is believed to be correct but does not purport to be all inclusive and should be used as a guide only for experienced personnel. Always consult your safety advisor and follow appropriate local and national safety legislature. The absence of warning must not, under any circumstance, be taken to mean that no hazard exists.

End of safety data sheet

# RD SYSTEMS a biotechne brand

G		o brand	Safety Dat	a Sheet		www.rndsystems.co	
	IDENTIFICATION OF	THE SUBSTANCE/MIXTURE AND	OF THE COMPANY/UN	DERTAKING	j		
.1	Product Identifiers						
	Product Name:	Wash Buffer Concentrate (conta	ains Proclin 300 Mixture = .	.025%)			
2	Relevant identified use	es of the substance or mixture and					
	Identified Uses:	For Research Use Only	-				
3	Details of the supplier	of the safety data sheet					
	Company:	R&D Systems, Inc. a Bio-Techn	e Brand Telephone:	:	1-800-343-7475		
		614 McKinley Place NE	Fax:		1-612-656-4400		
		Minneapolis, MN 55413, USA	Internet:		www.rndsystems.com		
			Email addı	ress:	info@bio-techne.com		
	Canada:	461 North Service Rd West	Telephone:	:	1-855-668-8722		
		Unit B37	Fax:		902-827-6402		
		Oakville, ON L6M 2V5	Email addı	ress:	Canada.inquiries@bio-techne.com		
	United Kingdom:	19 Barton Lane	Telephone:		44 (0)1235 529449		
	onned Ringdom.	Abingdon Science Park	Fax:		44 (0)1235 533420		
		Abingdon, OX14 3NB	Email addı	ress:	info.emea@bio-techne.com		
4	Emergency Telephone	Number					
	Emergency Tel:	US: 612-379-2956 or 800-343-	7475 / Europe: +44(0)1235	5-529449			
	HAZARDS IDENTIFIC	ATION					
.1	Classification of the s	ubstance or mixture					
	This substance does no	ot meet the classification criteria of th	e EC Directives 67/548/EE	EC, 1999/45/E0	C, 1272/2008 [CLP], GHS or 29 CFR 1910	.1200 [OSHA].	
2	Label Elements						
	The product does not n	need to be labelled in accordance wit	h EC directives or respecti	ve national lav	NS.		
3	Other Hazards - None						
.1	COMPOSITION/INFO Substances Not applicable.	RMATION ON INGREDIENTS					
.2	Mixtures						
.2		CAS No.	EC No.	Index No.	Classification	Conc.	
	Component			index no.	Classification	Conc.	
	ingredients)	025% (active 96118-96-6		040 407 00	-	0.005.0/	
	Mixture of 5-Chloro-2- Isothiazolin-3-One (2 and 2-Methyl-4-Isothi One (2682-20-4)	6172-55-4)		613-167-00-	5	= 0.025 %	
	FIRST AID MEASURE	ES					
1	Description of first aid	l measures					
	General Advice						
	Consult a doctor and show this safety data sheet.						
	If Inhaled						
	Remove to fresh air and monitor breathing. If breathing becomes difficult, give oxygen. If breathing stops, give artificial respiration. Consult a doctor.						
	In Case of Skin Contact Immediately wash skin with copious amounts of soap and water for at least 15 minutes. Remove contaminated clothing and shoes and wash before reuse. Consult a doctor.						
	In Case of Eye Contact	t ounts of water for at least 15 minutes	s. Consult a doctor.				
	If Swallowed			orconnol Nov	or give anything by mouth to an unconsoic	us person. Consult a dester	
2		oms and effects, both acute and de		CISOTITEI. INEVI	er give anything by mouth to an unconscio		
-		vledge, the chemical, physical and to:	-	not been thore	oughly investigated.		
3		te medical attention and special tre					
						Page 32 of 40	
						1 490 02 01 40	

#### 5. FIRE-FIGHTING MEASURES

#### 5.1 Extinguishing Media

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

#### 5.2 Special hazards arising from the substance or mixture

In combustion, may emit toxic fumes.

# 5.3 Precautions for fire-fighters

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

#### 6. ACCIDENTIAL RELEASE MEASURES

#### 6.1 Personal precautions, protective equipment and emergency procedures

Do not take action without suitable protective clothing - see section 8 of SDS. Evacuate personnel to safe areas. Ensure adequate ventilation. Avoid breathing vapors, mist, dust or gas.

#### 6.2 Environmental precautions

Do not let product enter drains.

#### 6.3 Methods and materials for containment and cleaning up

Cover spillage with suitable absorbent material. Hold all material for appropriate disposal as described under section 13 of SDS.

# 6.4 Reference to other sections

For required PPE see section 8. For disposal see section 13.

#### 7. HANDLING AND STORAGE

#### 7.1 Precautions for safe handling

Avoid inhalation, contact with eyes, skin and clothing. Avoid the formation of dust and aerosols. Use in a well-ventilated area. Keep away from sources of ignition. Avoid prolonged or repeated exposure.

#### 7.2 Conditions for safe storage, including any incompatibilities

Store in cool, well-ventilated area. Keep away from direct sunlight. Keep container tightly sealed until ready for use.

#### 7.3 Specific end uses

Not applicable.

#### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### 8.1 Control parameters

#### Components with workplace control parameters

Contains no substances with occupational exposure limit values.

#### 8.2 Exposure controls

# Appropriate Engineering Controls

Use in a fume hood where applicable. Ensure all engineering measures described under section 7 of SDS are in place. Ensure laboratory is equipped with a safety shower and eye wash station.

#### **Personal Protective Equipment**

#### Eye / Face Protection

Use appropriate safety glasses.

#### **Skin Protection**

Use appropriate chemical resistant gloves (minimum requirement use standard BS EN 374:2003). Gloves should be inspected before use. Wash and dry hands thoroughly after handling.

#### **Body Protection**

Wear appropriate protective clothing.

#### **Respiratory Protection**

If risk assessment indicates necessary, use a suitable respirator.

#### 9. PHYSICAL AND CHEMICAL PROPERTIES

#### 9.1 Information on basic physical and chemical properties

Appearance	Lyophilized white powder or clear liquid	Vapor Pressure	No data available.	
Odor	Little to none	Vapor Density	No data available.	
Odor Threshold	No data available.	Relative Density	No data available.	
рН	No data available.	Solubility(ies)	No data available.	
Melting / Freezing Point	No data available.	Partition Coefficient	No data available.	
Boiling Point / Range	No data available.	Autoignition Temperature	No data available.	
Flash Point	No data available.	Decomposition Temperature	No data available.	
Evaporation Rate	No data available.	Viscosity	No data available.	

	Flammability (Solid, Gas)	No data available.	Explosive Properties	No data available.				
	Upper / Lower Flammability or Ex Limits	No data available.	Oxidizing Properties	No data available.				
.2	Other safety information							
	No data available.							
0.	STABILITY AND REACTIVITY							
0.1	Reactivity							
0.1	Stable under recommended trans	nort or storage conditions						
0.2	Chemical stability	port of storage conditions.						
0.2	Stable under recommended stora	as conditions						
0.3	Possibility of hazardous reaction	-						
0.0	-		ditions. Decomposition may occur on exposure	to conditions or materials listed below				
0.4	Conditions to avoid	and hornal tanoport of storage con						
	Heat, moisture.							
0.5	Incompatible materials							
0.0	Strong acids/alkalis, strong oxidis	ing/reducing agents						
0.6	Hazardous decomposition produ							
	Strong acids/alkalis, strong oxidis							
1.								
1.1	Information on toxicological effe	cts						
	Acute Toxicity							
	Classified based on available data	a						
	Skin Corrosion / Irritation							
	Classified based on available data							
	Serious Eye Damage / Irritation							
	Classified based on available data							
	Respiratory or Skin Sensitization							
	Classified based on available data	а						
	Germ Cell Mutagenicity							
	Classified based on available data							
	Carcinogenicity							
	Classified based on available data							
	Reproductive Toxicity							
		Classified based on available data						
	Specific Target Organ Toxicity - Single Exposure							
	Classified based on available data							
	Specific Target Organ Toxicity - Repeated Exposure							
	Classified based on available data							
	•	Aspiration Hazard						
	Classified based on available data							
	Symptoms / Routes of Exposure							
		may be irritation of the throat with a feeli	ng of ugniness in the chest.					
		Ingestion: There may be irritation of the throat.						
		may be mild irritation at the site of conta	ω.					
	,	may be irritation and redness.						
	Delayed / Immediate No kno Effects:	own symptoms.						
	Additional Information							
	Classified based on available data							

# 12.1 Toxicity

# No data available.

# 12.2 Persistence and degradability

No data available.

#### 12.3 **Bioaccumulative potential**

No data available.

12.4 Mobility in soil

No data available

Results of PBT and vPvB assessment 12.5

# No data available. 12.6

Other adverse effects

No data available

#### 13. DISPOSAL CONSIDERATIONS

#### 13.1 Waste treatment methods

#### Product

Transfer to a suitable container and arrange for collection by specialized disposal company in accordance with national, regional, or local legislation.

#### **Contaminated Packaging**

Dispose of in a regulated landfill site or other method for hazardous or toxic wastes in accordance with national, regional, or local legislation.

#### 14. TRANSPORT INFORMATION

Classified according to the criteria of the UN Model Regulations as reflected in the IMDG Code, ADR, RID, DOT and IATA.

#### 14.1 **UN-Number**

Does not meet the criteria for classification as hazardous for transport.

#### 14.2 UN proper shipping name

Does not meet the criteria for classification as hazardous for transport.

#### 14.3 Transport hazard class(es)

Does not meet the criteria for classification as hazardous for transport.

#### 14.4 Packaging group

Does not meet the criteria for classification as hazardous for transport.

#### 14.5 Environmental hazards

Does not meet the criteria for classification as hazardous for transport.

#### 14.6 Special precautions for users

Does not meet the criteria for classification as hazardous for transport.

#### Additional Transport Information

Does not meet the criteria for classification as hazardous for transport.

#### 15. **REGULATORY INFORMATION**

This safety datasheet complies with the requirements of Regulation (EC) No. 453/2010.

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

TSCA (Toxic Substances Control Act): Not applicable. SARA 313: Not applicable. SARA 311/312: Not applicable. CERCLA Reportable Quantity: Not applicable. California Proposition 65: Proclin 300 Mixture = .025%

#### 15.2 Chemical safety assessment

A Chemical Safety Assessment has not been made for this product.

#### OTHER INFORMATION 16.

#### **Further Information**

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This company shall not be held liable for any damage resulting from handling or from contact with the above product. This material must only be handled by suitably qualified experienced scientists in appropriately equipped and authorized facilities. The above information is believed to be correct but does not purport to be all inclusive and should be used as a guide only for experienced personnel. Always consult your safety advisor and follow appropriate local and national safety legislature. The absence of warning must not, under any circumstance, be taken to mean that no hazard exists.

End of safety data sheet

# RD SYSTEMS a biotechne brand

Version SDS Revision Date 9/29/2018 www.rndsystems.com

1.	IDENTIFICATION OF	THE SUBSTANCE/MIXTURE AND OF THE C	OMPANY/UNDERTAKI	NG		
1.1	Product Identifiers					
	Product Name:	Stop Solution (contains Sulfuric Acid)				
1.2	Relevant identified us	es of the substance or mixture and uses advis	ed against			
	Identified Uses:	For Research Use Only				
1.3	Details of the supplier	r of the safety data sheet				
	Company:	R&D Systems, Inc. a Bio-Techne Brand	Telephone:	1-800-343-7475		
		614 McKinley Place NE	Fax:	1-612-656-4400		
		Minneapolis, MN 55413, USA	Internet:	www.rndsystems.com		
			Email address:	info@bio-techne.com		
	Canada:	461 North Service Rd West	Telephone:	1-855-668-8722		
		Unit B37	Fax:	902-827-6402		
		Oakville, ON L6M 2V5	Email address:	Canada.inquiries@bio-techne.com		
	United Kingdom:	19 Barton Lane	Telephone:	44 (0)1235 529449		
		Abingdon Science Park	Fax:	44 (0)1235 533420		
		Abingdon, OX14 3NB	Email address:	info.emea@bio-techne.com		
1.4	Emergency Telephone Number					
	For chemical emergency, spill, leak, fire, exposure, or accident call CHEMTREC day or night: Within USA and Canada: 1-800-424-9300. Outside USA and Canada: +1 703-527-3887 (collect calls accepted).					
2.	HAZARDS IDENTIFIC	CATION				
2.1	Classification of the substance or mixture					
	Classification according to Regulation (EC) No 1272/2008 [GHS/CLP] or 29 CFR 1910.1200 [OSHA]					
	Skin Corrosion/Irritatio Serious eye damage/e	n - Category 2 ye irritation - Category 2A				
2.2	Label Elements					
	Labeling according to Regulation (EC) No 1272/2008 [GHS/CLP]					
	Pictogram(s):	(!)				
	Signal Word:	Warning				

H315 H319

Causes skin irritation. Causes serious eye irritation.

Precautionary Statement(s):

P264	Wash hands thoroughly after handling.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P302+352	IF ON SKIN: Wash with plenty of soap and water.
P305+351+338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P321	Specific treatment (see Section 4).
P332+313	If skin irritation occurs: Get medical advice/attention.
P337+313	If eye irritation persists: Get medical advice/attention.
P362+364	Take off contaminated clothing and wash it before reuse.

2.3 Other Hazards - None

#### COMPOSITION/INFORMATION ON INGREDIENTS 3.

#### 3.1 Substances

Component	CAS No.	EC No.	Index No.	Classification	Conc.
Sulfuric Acid	7664-93-9	231-639-5	016-020-00-8	H315 , H319	= 9.8 %
Water	7732-18-5	231-791-2			= 90.2 %

	General Advice
	Consult a doctor and show this safety data sheet. If Inhaled
	Move person into fresh air. If not breathing, give artificial respiration. Consult a physician. Show this MSDS.
	In Case of Skin Contact
	Immediately take off contaminated clothing or shoes. Wash with plenty of soap and water. Consult a physician.
	In Case of Eye Contact
	Rinse thoroughly with water for at least 15 minutes and immediately consult a physician.
	If Swallowed Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Immediately consult a physician. Show this MSDS.
4.2	Most important symptoms and effects, both acute and delayed
	See Section 11.
4.3	Indication of immediate medical attention and special treatment needed
	Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.
5.	FIRE-FIGHTING MEASURES
5.1	Extinguishing Media
0.1	Suitable extinguishing media
	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
5.2	Special hazards arising from the substance or mixture
	In case of fire, toxic and corrosive gases may be formed.
5.3	Precautions for fire-fighters
	Self contained breathing apparatus and full protective clothing must be worn in case of fire.
6.	
6.1	Personal precautions, protective equipment and emergency procedures
	Use appropriate personal protective equipment to prevent contamination of skin, eyes and personal clothing. Avoid breathing vapors, mist or gas. Ensure adequate ventilation.
6.2	Environmental precautions
<b>~ ^</b>	Keep away from drains.
6.3	Methods and materials for containment and cleaning up
<b>6</b> 4	Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.
6.4	Reference to other sections For required PPE see section 8. For disposal see section 13.
7.	HANDLING AND STORAGE
7.1	Precautions for safe handling
	Avoid inhalation of vapour or mist. Use normal measures for preventive fire protection.
7.2	Conditions for safe storage, including any incompatibilities
	Store in a cool, dry place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent
7.3	leakage. Specific end uses
7.5	Not applicable.
8.	EXPOSURE CONTROLS/PERSONAL PROTECTION
8.1	Control parameters
	Components with workplace control parameters
	Contains no substances with occupational exposure limit values.
8.2	Exposure controls
	Appropriate Engineering Controls
	Use with adequate ventilation including local extraction. Ensure that eyewash stations and safety showers are close to the workstation location.
	Personal Protective Equipment
	Eye / Face Protection
	Wear approved safety goggles.
	Skin Protection
	Handle with protective gloves, plastic or rubber. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.
	Body Protection

4.1

Description of first aid measures

Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved. Wear suitable protective clothing as protection against splashing or contamination.

#### **Respiratory Protection**

In case of inadequate ventilation, use a suitable respirator. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

## 9. PHYSICAL AND CHEMICAL PROPERTIES

#### 9.1 Information on basic physical and chemical properties

· · · · · · · · · · · · · · · · · · ·			
Appearance	Colorless liquid	Vapor Pressure	No data available.
Odor	Pungent	Vapor Density	No data available.
Odor Threshold	No data available.	Relative Density	No data available.
pН	~1	Solubility(ies)	Soluble
Melting / Freezing Point	No data available.	Partition Coefficient	No data available.
Boiling Point / Range	No data available.	Autoignition Temperature	No data available.
Flash Point	No data available.	Decomposition Temperature	No data available.
Evaporation Rate	No data available.	Viscosity	No data available.
Flammability (Solid, Gas)	No data available.	Explosive Properties	No data available.
Upper / Lower Flammability or Explosiv Limits	e No data available.	Oxidizing Properties	No data available.

#### 9.2 Other safety information

No data available.

#### 10. STABILITY AND REACTIVITY

#### 10.1 Reactivity

Contact with metals produces highly flammable hydrogen gas. Addition of water liberates excessive heat.

#### 10.2 Chemical stability

Stable under recommended storage conditions.

#### 10.3 Possibility of hazardous reactions

Under normal conditions of storage and use, hazardous reactions will not occur.

#### 10.4 Conditions to avoid

Bases, Halides, Metals, Alkalis, Acetonitrile.

# 10.5 Incompatible materials

Most metals, oxidizers, reducers, bases, metal carbonates, cyanides, sulphides, carbides, oxides, metal acetylides, hydrides, halogens, organic or combustible materials, percholorates, acetonitrile, permanganates, alcohols, picrates.

# 10.6 Hazardous decomposition products

Products formed under fire conditions: oxides of sulphur, hydrogen gas.

#### 11. TOXICOLOGICAL INFORMATION

#### 11.1 Information on toxicological effects

# Acute Toxicity

Can cause severe burns upon contact while the vapours or mist are corrosive and can cause severe irritation or damage to the nose, throat and lungs. Ingestion of this product causes pain, nausea and vomiting and may be fatal if large doses are ingested.

#### Skin Corrosion / Irritation

Can cause severe burns.

#### Serious Eye Damage / Irritation

Can cause severe burns.

#### **Respiratory or Skin Sensitization**

Classified based on available data

#### Germ Cell Mutagenicity

Classified based on available data

#### Carcinogenicity

Classified based on available data

#### **Reproductive Toxicity**

Classified based on available data

#### Specific Target Organ Toxicity - Single Exposure

Classified based on available data

#### Specific Target Organ Toxicity - Repeated Exposure

Classified based on available data

#### Aspiration Hazard

Can cause severe burns.

#### Symptoms / Routes of Exposure

Inhalation:	Harmful if inhaled. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.
Ingestion:	Harmful if swallowed. Irritating to mouth, throat and stomach. Causes burns.
Skin:	Causes skin irritation / causes burns.
Eyes:	Causes serious eye irritation / causes burns.
Delayed / Immediate Effects:	Repeated skin contact with this product may lead to dermatitis while repeated inhalation may cause bronchitis, conjunctivitis, respiratory infections, emphysema and digestive disturbances. May cause erosion and discoloration of the teeth.

#### Additional Information

Classified based on available data

#### 12. ECOLOGICAL INFORMATION

#### 12.1 Toxicity

This product may affect the acidity (pH-factor) in water with risk of harmful effects to aquatic organisms.

#### 12.2 Persistence and degradability

No data available.

#### 12.3 Bioaccumulative potential

No data available.

# 12.4 Mobility in soil

No data available.

12.5 Results of PBT and vPvB assessment

No data available.

## 12.6 Other adverse effects

No data available.

# 13. DISPOSAL CONSIDERATIONS

#### 13.1 Waste treatment methods

#### Product

Dispose of waste in accordance to applicable national, regional, or local regulations.

#### Contaminated Packaging

Dispose in the same manner as unused product.

#### 14. TRANSPORT INFORMATION

Classified according to the criteria of the UN Model Regulations as reflected in the IMDG Code, ADR, RID, DOT and IATA.

# 14.1 UN-Number

UN2796

# 14.2 UN proper shipping name

Battery fluid, acid or Sulfuric acid with not more than 51 percent acid

#### 14.3 Transport hazard class(es)

8

Ш

# 14.4 Packaging group

#### 14.5 Environmental hazards

This product is not classified as environmentally hazardous according to the UN Model Regulations, nor a marine pollutant according to the IMDG Code.

#### 14.6 Special precautions for users

No data available.

# Additional Transport Information

No data available.

# 15. REGULATORY INFORMATION

This safety datasheet complies with the requirements of Regulation (EC) No. 453/2010.

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

TSCA (Toxic Substances Control Act): On TSCA Inventory SARA 313: Not applicable. SARA 311/312: Acute health hazard CERCLA Reportable Quantity: 1000 lbs. California Proposition 65: Sulfuric Acid

# 15.2 Chemical safety assessment

A Chemical Safety Assessment has not been made for this product.

# 16. OTHER INFORMATION

#### Further Information

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This company shall not be held liable for any damage resulting from handling or from contact with the above product. This material must only be handled by suitably qualified experienced scientists in appropriately equipped and authorized facilities. The above information is believed to be correct but does not purport to be all inclusive and should be used as a guide only for experienced personnel. Always consult your safety advisor and follow appropriate local and national safety legislature. The absence of warning must not, under any circumstance, be taken to mean that no hazard exists.

End of safety data sheet