Material Safety Data Sheet

May be used to comply with

OSHA's Hazard Communication Standard

29 CFR 1910.1200. Standard must be

consulted for specific requirements.

U.S. Department of Labor

Occupational Safety and Health Administration (Non-Mandatory Form)

Form Approved

OMB No. 1218-0072



Manufacturer's Name	IDENTITY				_	Note: Blank spaces are not permitted. If any item is not applicable, or no				
Manufacturer's Name	Nicotine Solutio	n 0.1%				information is available, the space must be marked to indicate that.				
Ward's Natural Science ### Address (Number, Street, City, State, and ZIP Code) ### Address (Number, Street, City, State, and ZIP Code) ### Address (Number for Information ### Telephone Number for Information ### Date Prepared ### A/8/96 ### P.O. Box 92912 ### Bignature of Preparer ### A/8/96 ###	Section I									
Address (Number, Street, City, State, and ZIP Code) 5100 W. Henrietta Rd. 716-359-2502 Date Prepared 4/8/96 Signature of Preparer (Kenneth G. Bainis) Rochester, NY 14692-9012 Section II - Hazardous Ingredients/Identity Information Hazardous Components (Specific Chemical Identity, Common Name(s)) N/A N/A N/A N/A N/A 0.1 Warning May be harmful if injested or absorbed through skin Section III - Physical/Chemical Characteristics Boiling Point Specific Gravity (H2O = 1) Approx. 1.0 Approx. 1.0 Vapor Pressure (mm Hg) Melting Point Approx. 0°C Vapor Density (AIR = 1) O.7 (water) Evaporation rate (Butyl Acetate) <1 Evaporation rate (Butyl Acetate) <1 Solubility in Water Complete Appearance and Odor Clear, colorless liquid with no odor. Section IV - Fire and Explosion Hazard Data Flash Point (Method Used) Flammable Limits in air LEL UEL N/A Stability Procedures Water a NIOSH-approved self-contained breathing apparatus and full protective equipment for large spills. Unusual Fire and Explosion Hazards Stability Unstable Conditions to Avoid Excessive temperatures or heat. Stabile Telephone Number for Information Telephone Prepared 4/8/96 Signature of Preparer (Kenneth G. Bainis) General Arthour General	Manufacturer's Nar	me				Emergency Telephone Number				
Date Prepared Af896 Signature of Preparer Kenneth G. Baints Section II - Hazardous Ingredients/Identity Information Annual Section II - Hazardous Components (Specific Chemical Identity; Common Name(s)) OSHA PEL ACGIH TLV Recommended Accident Caster	Ward's Natural	Science								
P.O. Box 92912 Signature of Preparer Kepneth G, Baints	Address (Number,	Street, City, St	ate, a	nd ZIP Code)	3,3	Telephone Number	for Information			
Rochester, NY 14692-9012 Section II - Hazardous Ingredients/Identity Information Hazardous Components (Specific Chemical Identity; Common Name(s)) Nicotine CAS# 54-11-5 N/A N/A N/A N/A N/A N/A N/A N/	5100 W. Henrie	tta Rd.				k '				
Section II - Hazardous Ingredients/Identity Information Micotine CAS# 54-11-5 N/A N/A N/A N/A N/A 0.1 Warning May be harmful if injested or absorbed through skin Section III - Physical/Chemical Characteristics Boiling Point Approx. 1.0 Vapor Pressure (mm Hg) 14mm (water) Approx. 100°C Vapor Density (AIR = 1) 0.7 (water) Solubility in Water Complete Appearance and Odor Clear, colorless liquid with no odor. Section IV - Fire and Explosion Hazard Data Flammable Limits in air Water spray; carbon dioxide(CO2); dry chemical(ABC); foatm. Special Firefighting Procedures N/A Wear a NIOSH-approved self-contained breathing apparatus and full protective equipment for large spills. Unusual Fire and Explosion Hazards May produce carbon dioxide, carbon monoxide and oxides of nitrogen Section V - Reactivity Data Stable Signature of Preparer (Kenneth G, Baints) ACH Hazardous ACH H TLV ACH L TLV ACH H TLV AC	•					Date Prepared				
Rochester, NY 14692-9012 Section II - Hazardous Ingredients/Identity Information Section II - Hazardous Components (Specific Chemical Identity; Common Name(s)) OSHA PEL ACGIH TLV Recommended %	P.O. Box 92912	,				1				
Rochester, NY 14692-9012 Section II - Hazardous Ingredients/Identity Information Section II - Hazardous Components (Specific Chemical Identity; Common Name(s)) OSHA PEL ACGIH TLV Recommended %						Signature of Prepar	rer (Kenneth G	. Bainis)		
Hazardous Ingredients/Identity Information	Rochester, NY 1	14692-9012					Thurst	17 Men		
Hazardous Components (Specific Chemical Identity; Common Name(s)) Nicotine CAS# 54-11-5 N/A N/A N/A N/A N/A N/A N/A N/			arec	lients/Identi	ty Information	٦ .				
Nicotine CAS# 54-11-5 N/A Warning May be harmful if injested or absorbed through skin Section III - Physical/Chemical Characteristics Boiling Point Approx. 100°C Approx. 1.0 Vapor Pressure (mm Hg) Approx. 0°C Vapor Density (AIR = 1) O.7 (water) Vapor Density (AIR = 1) Complete Appearance and Odor Clear, colorless liquid with no odor. Section IV - Fire and Explosion Hazard Data Flammable Limits in air NA by volume EtOH			×				4000117111		^′	
Warning May be harmful if injested or absorbed through skin Section III - Physical/Chemical Characteristics Boiling Point Approx. 100°C Approx. 100°C Vapor Pressure (mm Hg) 14mm (water) Vapor Density (AIR = 1) 0.7 (water) Solubility in Water Complete Appearance and Odor Clear, colorless liquid with no odor. Section IV - Fire and Explosion Hazard Data Flammable Limits in air Extinguishing Media Water spray; carbon dioxide(CO2); dry chemical(ABC); foam. Special Firefighting Procedures N/A Wear a NIOSH-approved self-contained breathing apparatus and full protective equipment for large spills. Unusual Fire and Explosion Hazards May produce carbon dioxide, carbon monoxide and oxides of nitrogen Section V - Reactivity Data Stable Conditions to Avoid Excessive temperatures or heat.			Cher	mical identity; C	ommon Name(s))					
Section III - Physical/Chemical Characteristics Bolling Point							N/A	N/A	0.1	
Bolling Point Approx. 100°C Approx. 1.0 Vapor Pressure (mm Hg) Approx. 0°C Vapor Density (AIR = 1) O.7 (water) Solubility in Water Complete Appearance and Odor Clear, colorless liquid with no odor. Section IV - Fire and Explosion Hazard Data Flash Point (Method Used) N/A Water spray; carbon dioxide(CO2); dry chemical(ABC); foam. Special Firefighting Procedures N/A Wear a NIOSH-approved self-contained breathing apparatus and full protective equipment for large spills. Unusual Fire and Explosion Hazards May produce carbon dioxide, carbon monoxide and oxides of nitrogen Section V - Reactivity Data Conditions to Avoid Excessive temperatures or heat. Stable Special Gravity (H2O = 1) Approx. 1.0 Melting Point Approx. 1.0 Melting Point Approx. 0°C Evaporation rate (Butyl Acetate) <1 Evaporation rate (Butyl Acetate) <						kin ·				
Approx. 100°C Vapor Pressure (mm Hg) 14mm (water) Vapor Density (AIR = 1) O.7 (water) Solubility in Water Complete Appearance and Odor Clear, colorless liquid with no odor. Section IV - Fire and Explosion Hazard Data Flammable Limits in air N/A Water spray; carbon dioxide(CO2); dry chemical(ABC); foam. Special Firefighting Procedures N/A Wear a NIOSH-approved self-contained breathing apparatus and full protective equipment for large spills. Unusual Fire and Explosion Hazards May produce carbon dioxide, carbon monoxide and oxides of nitrogen Section V - Reactivity Data Stable Melting Point Approx. 1.0 Melting Point Approx. 0°C Evaporation rate (Butyl Acetate) < 1 Evaporation rate (Butyl Aceta	Section III - Ph	iysical/Chem	nical	Characterist	ics					
Vapor Pressure (mm Hg) 14mm (water) Approx. 0°C Vapor Density (AIR = 1) 0.7 (water) Solubility in Water Complete Appearance and Odor Clear, colorless liquid with no odor. Section IV - Fire and Explosion Hazard Data Flash Point (Method Used) N/A Flammable Limits in air LEL UEL N/A Sy volume EtOH - - Extinguishing Media Water spray; carbon dioxide(CO2); dry chemical(ABC); foam. Special Firefighting Procedures N/A Wear a NIOSH-approved self-contained breathing apparatus and full protective equipment for large spills. Unusual Fire and Explosion Hazards May produce carbon dioxide, carbon monoxide and oxides of nitrogen Section V - Reactivity Data Stability Unstable Conditions to Avoid Excessive temperatures or heat. Stable	Boiling Point			·		Specific Gravity (H2O = 1)				
Approx. 0°C	Approx. 100°C					Approx. 1.0				
Vapor Density (AIR = 1) 0.7 (water) Solubility in Water Complete Appearance and Odor Clear, colorless liquid with no odor. Section IV - Fire and Explosion Hazard Data Flammable Limits in air N/A Flammable Limits in air N/A Subject of the procedures of the procedure	Vapor Pressure (m	nm Hg)				Melting Point				
Solubility in Water Complete Appearance and Odor Clear, colorless liquid with no odor. Section IV - Fire and Explosion Hazard Data Flash Point (Method Used) N/A Betainguishing Media Water spray; carbon dioxide(CO2); dry chemical(ABC); foam. Special Fireflighting Procedures N/A Wear a NIOSH-approved self-contained breathing apparatus and full protective equipment for large spills. Unusual Fire and Explosion Hazards May produce carbon dioxide, carbon monoxide and oxides of nitrogen Section V - Reactivity Data Stability Unstable Conditions to Avoid Excessive temperatures or heat. Stable	14mm (water)					Approx. 0°C				
Solubility in Water Complete Appearance and Odor Clear, colorless liquid with no odor. Section IV - Fire and Explosion Hazard Data Flash Point (Method Used) N/A Flammable Limits in air LEL UEL N/A Extinguishing Media Water spray; carbon dioxide(CO2); dry chemical(ABC); foam. Special Firefighting Procedures N/A Wear a NIOSH-approved self-contained breathing apparatus and full protective equipment for large spills. Unusual Fire and Explosion Hazards May produce carbon dioxide, carbon monoxide and oxides of nitrogen Section V - Reactivity Data Stability Unstable Conditions to Avoid Excessive temperatures or heat. Stable	Vapor Density (Alf	R = 1)				Evaporation rate				
Appearance and Odor Clear, colorless liquid with no odor. Section IV - Fire and Explosion Hazard Data Flash Point (Method Used) N/A Flammable Limits in air LEL UEL N/A Flammable Limits in air LEL VEL N/A Extinguishing Media Water spray; carbon dioxide(CO2); dry chemical(ABC); foam. Special Firefighting Procedures N/A Wear a NIOSH-approved self-contained breathing apparatus and full protective equipment for large spills. Unusual Fire and Explosion Hazards May produce carbon dioxide, carbon monoxide and oxides of nitrogen Section V - Reactivity Data Stability Unstable Conditions to Avoid Excessive temperatures or heat. Stable	0.7 (water)					(Butyl Acetate) <1				
Appearance and Odor Clear, colorless liquid with no odor. Section IV - Fire and Explosion Hazard Data Flash Point (Method Used) N/A Flammable Limits in air N/A Extinguishing Media Water spray; carbon dioxide(CO2); dry chemical(ABC); foam. Special Firefighting Procedures N/A Wear a NIOSH-approved self-contained breathing apparatus and full protective equipment for large spills. Unusual Fire and Explosion Hazards May produce carbon dioxide, carbon monoxide and oxides of nitrogen Section V - Reactivity Data Stability Unstable Conditions to Avoid Excessive temperatures or heat. Stable	Solubility in Water	•					•			
Clear, colorless liquid with no odor. Section IV - Fire and Explosion Hazard Data Flash Point (Method Used) N/A Flammable Limits in air Water Spray; carbon dioxide(CO2); dry chemical(ABC); foam. Special Firefighting Procedures N/A Wear a NIOSH-approved self-contained breathing apparatus and full protective equipment for large spills. Unusual Fire and Explosion Hazards May produce carbon dioxide, carbon monoxide and oxides of nitrogen Section V - Reactivity Data Stability Unstable Conditions to Avoid Excessive temperatures or heat. Stable	Complete									
Flash Point (Method Used) Flammable Limits in air N/A Flammable Limits in air N/A Flammable Limits in air Flammable Limits in air Flammable Limits in air N/A Flammable Limits in air Flammable Limits	Appearance and C	Odor								
Flash Point (Method Used) N/A Flammable Limits in air N/A Extinguishing Media Water spray; carbon dioxide(CO2); dry chemical(ABC); foam. Special Firefighting Procedures N/A Wear a NIOSH-approved self-contained breathing apparatus and full protective equipment for large spills. Unusual Fire and Explosion Hazards May produce carbon dioxide, carbon monoxide and oxides of nitrogen Section V - Reactivity Data Stability Unstable Conditions to Avoid Excessive temperatures or heat.	Clear, colorless	liquid with r	10 od	or.			<u> </u>			
N/A % by volume EtOH - Extinguishing Media Water spray; carbon dioxide(CO2); dry chemical(ABC); foam. Special Firefighting Procedures N/A Wear a NIOSH-approved self-contained breathing apparatus and full protective equipment for large spills. Unusual Fire and Explosion Hazards May produce carbon dioxide, carbon monoxide and oxides of nitrogen Section V - Reactivity Data Stability Unstable Conditions to Avoid Excessive temperatures or heat.	Section IV - F	ire and Ex	olosi	ion Hazard I	Data					
Extinguishing Media Water spray; carbon dioxide(CO2); dry chemical(ABC); foam. Special Firefighting Procedures N/A Wear a NIOSH-approved self-contained breathing apparatus and full protective equipment for large spills. Unusual Fire and Explosion Hazards May produce carbon dioxide, carbon monoxide and oxides of nitrogen Section V - Reactivity Data Stability Unstable Conditions to Avoid Excessive temperatures or heat.	Flash Point (Metho	od Used)				Flammable Limits i	in air	LEL	UEL	
Water spray; carbon dioxide(CO2); dry chemical(ABC); foam. Special Firefighting Procedures N/A Wear a NIOSH-approved self-contained breathing apparatus and full protective equipment for large spills. Unusual Fire and Explosion Hazards May produce carbon dioxide, carbon monoxide and oxides of nitrogen Section V - Reactivity Data Stability Unstable Conditions to Avoid Excessive temperatures or heat. Stable	N/A					% by volume	EtOH	-	-	
Special Firefighting Procedures N/A Wear a NIOSH-approved self-contained breathing apparatus and full protective equipment for large spills. Unusual Fire and Explosion Hazards May produce carbon dioxide, carbon monoxide and oxides of nitrogen Section V - Reactivity Data Stability Unstable Conditions to Avoid Excessive temperatures or heat. Stable	Extinguishing Med	dia								
Wear a NIOSH-approved self-contained breathing apparatus and full protective equipment for large spills. Unusual Fire and Explosion Hazards May produce carbon dioxide, carbon monoxide and oxides of nitrogen Section V - Reactivity Data Stability Unstable Conditions to Avoid Excessive temperatures or heat. Stable	Water spray; ca	rbon dioxide	(CO2	2); dry chemic	cal(ABC); foam.					
Wear a NIOSH-approved self-contained breathing apparatus and full protective equipment for large spills. Unusual Fire and Explosion Hazards May produce carbon dioxide, carbon monoxide and oxides of nitrogen Section V - Reactivity Data Stability Unstable Conditions to Avoid Excessive temperatures or heat. Stable	Special Firefightin	g Procedures								
Unusual Fire and Explosion Hazards May produce carbon dioxide, carbon monoxide and oxides of nitrogen Section V - Reactivity Data Stability Unstable Conditions to Avoid Excessive temperatures or heat. Stable	N/A									
Unusual Fire and Explosion Hazards May produce carbon dioxide, carbon monoxide and oxides of nitrogen Section V - Reactivity Data Stability Unstable Conditions to Avoid Excessive temperatures or heat. Stable	Wear a NIOSH	-approved se	lf-co	ntained breath	ing apparatus ar	nd full protective	equipment for la	arge spills.		
Stability Unstable Conditions to Avoid Excessive temperatures or heat. Stable	Unusual Fire and	Explosion Haz	ards							
Stability Unstable Conditions to Avoid Excessive temperatures or heat. Stable	May produce ca	arbon dioxide	e, car	bon monoxid	e and oxides of r	nitrogen				
Stability Unstable Conditions to Avoid Excessive temperatures or heat.										
Excessive temperatures or heat. Stable				Conditions to Avoid						
Stable				Excessive ter	nperatures or he	at.				
$ \mathbf{x} $	s	Stable			<u> </u>					
			х							
Incompatibility (Materials to Avoid)	Incompatibility (M	laterials to Avoi	<u> </u>	L						
Strong oxidizers materials.			-,							
Hazardous Decomposition or Byproducts			produ	ıcts					· · · · · · · · · · · · · · · · · · ·	
Thermal decomposition or burning may produce carbon dioxide, carbon monoxide and oxides of nitrogen		-	-		ce carbon dioxid	le, carbon monox	ide and oxides o	of nitrogen		

Hazardous	May Occur	ļ	Conditions to Avoid			· · ·				
Polymerization	,		N/A							
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Will Not Occur	_								
		х								
Section VI - Health Hazard Data										
Route(s) of Entr	y:		Inhalation?		Skin?		Ingestion?			
			No		Yes		Yes			
Health Hazards (Acute and Chronic)										
TLV Skin: 0.5mg/m3.										
Carcinogenicity	:		NTP?	١	ARC Monographs?		OSHA Regulated?			
No			No]	No		No			
Signs and Symp	otoms of Exposu	ire								
May be harm	ful by ingestic	n or	absorbtion. The toxicologic	ical pr	operties of this che	mical have n	ot been thouroughly			
investigated.										
Medical Conditi	ons									
May be aggra	vated by expo	sure	•				4			
Emergency and	First Aid Proce	dure								
Eyes:	Immediately	flusl	eyes with plenty of water	for at	least 15 minutes, li	ifting upper a	and lower eyelids.			
	Get medical:	atten	tion.							
Skin:	Flush area w	ith r	inning water. Wash contact	t area	with soap and wate	ъг.				
Ingestion:	Do NOT give	e any	thing by meuth to an uncor	nscio	us or very drowsy p	erson. If con	nscious, have victim drink			
	several glass	es of	water, induce vomiting. C	Call ph	ysician or Poison C	Control Cente	er.			
Section VII	- Precaution	ns fo	or Safe Handling and Us	se						
Steps to be Tal	cen in Case Mat	erial i	s Released or Spilled							
Wear PPE: g	oggles, gloves	and	apron. Absorb spill in vern	miculi	te, paper towelling,	or other abs	orbent material.			
Place in suita	ble container	for i	ncineration. Wash spill area	a with	soap and water.					
Waste Disposa	l Method									
Dilute with c	opious amoun	ts of	water and flush to sanitary	, sewe	r. Disposal may be	subject to Fe	ederal, State and Local			
regulations.										
Other Precaution	ons:	Rea	ad label caarefully before use. (Do not	wear contact lenses v	vhen working w	vith chemicals.			
For lab use o	nly. Not for d		·							
For lab use only. Not for drug, food, or cosmetic use. Keep out of reach of children. Keep away from heat, sparks, and flames. Keep container tightly closed when not in use. Remove and wash contaminated										
clothing.										
Section VIII - Control Measures										
Respiratory Protection (Specify Type)										
None needed										
Ventilation	Local Exhaust				Special					
	None needed	i			No					
	Mechanical (G	ener	al)		Other					
	None needed	<u> </u>			No					
Protective Glov										
	/l/nitrile) Glov						·			
Other Protective Clothing or Equipment Charminal active angular lab cost, appear and wash station in along gravimity, within 15 and of work station										
Chemical safety goggles, lab coat, apron, eye wash station in close proximity, within 15 sec. of work station. Work/Hygenic Practices										
- •		, 11	lach hands with sace and	voto- f	ollowing the hand!	ing of this	atarial			
Wear protective equipment. Wash hands with soap and water following the handling of this material. Use under direct supervision of a qualified individual knowledgeable in all aspects of laboratory safety. This product is intended for lab use only. Not for drug, food, or										
cosmetic use.										

THE ABOVE INFORMATION IS BELIEVED TO BE ACCURATE AND REPRESENTS THE BEST INFORMATION CURRENTLY AVAILABLE TO US.

HOWEVER, WE MAKE NO WARRANTY OR MERCHANTABILITY OR ANY OTHER WARRANTY, EXPRESSED OR IMPLIED, WITH RESPECT TO SUCH INFORMATION, AND WE ASSUME NO LIABILITY RESULTING FROM SUCH USE. USERS SHOULD MAKE THEIR OWN INVESTIGATION TO DETERMINE SUITABILITY OF THIS INFORMATION TO THEIR PARTICULAR PURPOSES

necotine #2