



MATERIAL SAFETY DATA SHEET

Chemical Product and Company Identification

LABEL IDENTIFIER: Bitrex Qualitative Fit Test Apparatus

PRODUCT IDENTIFIER: P/N 697444, Bitrex Qualitative Fit Test Apparatus
P/N 697445, Solution, Sensitivity, for Bitrex Qualitative Fit Testing
P/N 697446, Solution, Fit Test, for Bitrex Qualitative Fit Testing

COMPANY IDENTIFICATION: MINE SAFETY APPLIANCES COMPANY
P.O. Box 439
Pittsburgh, PA 15230
CUSTOMER SERVICE: 1-800-MSA-2222 (8:30 a.m. – 5:00 p.m., USA local time)
EMERGENCY: 1-800-255-3924 (CHEM-TEL, INC.)

Vendor Information

Two (2) Material Safety Data Sheets for Bitrex Qualitative Fit Test Apparatus as furnished by Allegro Industries are attached. (Bitrex Sensitivity Solution, P/N 2041-11K, Bitrex Test Solution #2, P/N 2041-12K) - (2 Pages)

Allegro Industries. MSDS REVISION DATE: P/N 2041-11K 05/04/2007
MSDS REVISION DATE: P/N 2041-12K 05/04/2007

Other Information

WARNING: This is a hazardous chemical product. By following the directions and warnings provided with this product, the hazards associated with the use of this product can be greatly reduced but never entirely eliminated. Mine Safety Appliances Company makes no warranties, expressed or implied, with respect to this product and EXPRESSLY DISCLAIMS THE WARRANTY OF MERCHANTABILITY AND ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE. Users assume all risks in handling, using or storing this product.

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1. IDENTIFICATION AND GENERAL INFORMATION			
P/N#:	2041-11K		NFPA Code
Nomenclature:	Birtex Fit Sensitivity Solution # 1		H 1
Company Name:	Allegra Industries		F 1
Address:	7221 Orangewood Avenue Garden Grove, CA 92841 714-899-9855 Chemtrac: 800-424-9300		R 1 O None
2. COMPOSITION			
Chemical Name:	Ammonium Benzoate		
Chemical Family:	Carboxylic Acids		
Synonyms:	Benzenemethanumium, Bittering Agent		
Molecular Weight:	446.57		
Molecular Formula:	C ₂₈ H ₃₄ N ₂ O ₃		
Ingredient:	Benzoate	Sodium Chloride	Water
CAS Number:	3734-33-6	7647-14-5	N/A
Percent:	0.01350%	4.99932%	94.98718%
3. HAZARDS IDENTIFICATION			
Physical Dangers:	Stable		
Chemical Dangers:	Stable. Materials/conditions to avoid: None known		
Routes of Exposure:	Ingestion, inhalation, absorption		
Target Organs:	No significant target effect reported.		
Health Hazards:			
Inhalation:	No adverse health effects are expected. Avoid prolonged breathing of mist		
Skin Contact:	No need for first aid is anticipated		
Eye Contact:	No need for first aid is anticipated		
Ingestion:	Profuse bad taste. Taste Antidote: Chocolate (Do not ingest)		
Chronic Exposure:	No information available.		
Acute Exposure:	Unknown		
Aggravation of Pre-Ex.Cond:	None known. Denatonium Benzoate is a very bitter chemical used in many consumer products as an aversive agent against child ingestion		
4. FIRST AID MEASURES			
Inhalation:	N/A. No adverse health effects are expected		
Skin Contact:	The affected area should be washed with soap and water.		
Eye Contact:	Flush immediately with cold water.		
Ingestion:	Administer water or milk to dilute.		
5. FIRE FIGHTING MEASURES			
Fire Hazards:	No fire hazard		
Fire Extinguisher:	N/A		
Explosion:	May liberate CO NOx.		
Flash Point:	N/A		
Volatile (% by volume):	N/A		
Exp. Limits (Vol % in air):	N/A		
Auto Ignition Temperature:	N/A		
6. ACCIDENTAL RELEASE MEASURES			
Procedure for spill/leak:	Absorb spills with vermiculite or other suitable absorbent material and remove to an approved disposal container.		
Waste Disposal:	Keep out of water supplies and sewers. Dispose of in accordance with current laws and regulations.		
7. HANDLING AND STORAGE			
Storage:	Store in tight containers in a cool dry place away from light and heat. (Room Temperature)		
Self Life:	2 Years		
PPE:	N/A		
Notes:	None		

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8. EXPOSURE CONTROLS

Inhalation:	Respiratory protection is normally not required. No adverse health effects are expected from inhalation exposure.	
Skin:	No adverse health effects are expected.	
Eye:	No adverse health effects are expected.	
Ingestion:	Do not ingest.	
Ventilation:	Ventilation meeting ACGIH standard should be employed.	
Engineering Controls:	N/A	
Work/Hygienic Practices:	Use good personal hygiene practices. Wash after any contact.	
Exposure Limits:	N/A	
Chemical:	Benzoate	Sodium Chloride
TLV (ACGIH TLV):	None Established	None listed
PEL (OSHA PEL):	None Established	None listed
IDLH:	None Established	None listed
Control Parameter:	Wash after any contact. Thoroughly wash any contaminated clothing or shoes before reuse	

9. PHYSICAL AND CHEMICAL PROPERTIES

Color/Appearance/Odor:	Clear odorless liquid, extreme bitter taste.
Boiling Point:	N/A
Melting Point:	163 - 170 °C
Specific Gravity (H ₂ O=1):	N/A
Refractive Index:	N/A
Relative Density:	N/A
Evaporative Rate:	N/A
Water Content:	95%
Vapor Density(Air-1):	N/A
Vapor Pressure:	N/A
Solubility in Water:	1:20

10. STABILITY AND REACTIVITY

Conditions to avoid:	This material presents no significant reactivity hazard. Hazardous polymerization will not occur and it will not react violently with water. Stable at normal temp. and press.
Materials to avoid	Contact with highly reactive chemical oxidants should be avoided.

11. TOXICOLOGICAL INFORMATION

Health effects:	No information available on significant adverse effects.
Oral LD50:	612 mg/kg/ (rat)
Dermal LD50:	N/A
Human Lethal Dose:	N/A
Notes:	Carcinogenicity not listed.

12. ECOLOGICAL INFORMATION

No Information available

13. DISPOSAL CONSIDERATIONS

No Information available.

14. TRANSPORT INFORMATION

Proper shipping name:	Denatonium Benzoate
Transport Emergency Card:	N/A
Packing Group:	N/A
UN Number:	N/A
Reportable Quantity	N/A
Notes:	None

15. REGULATORY INFORMATION

TSCA Registered:	TSCA 12 (b) Export notification - Not Listed. CAS# 7647-145 is listed on the TSCA inventory	RTECS:	N/A
FDA Approved:	N	EC Number (EINECS):	223-095-2
California Proposition 65:	N		
ICSC:	N/A		

16. OTHER INFORMATION

No other information available.

DISCLAIMER: THE INFORMATION FURNISHED HEREIN IS BELIEVED TO BE ACCURATE AND REPRESENTS THE BEST DATA CURRENTLY AVAILABLE TO US. NO WARRANTY, EXPRESSED OR IMPLIED IS MADE AND ALLEGRO INDUSTRIES ASSUMES NO LEGAL RESPONSIBILITY OR LIABILITY RESULTING FROM ITS USE.

MATERIAL SAFETY DATA SHEET

1. IDENTIFICATION AND GENERAL INFORMATION			
P/N#:	2041-12K		NFPA Code
Nomenclature:	Bitrex Fit Test Solution # 2		H 1
Company Name:	Allegro Industries		F 1
Address:	7221 Orangetown Avenue Garden Grove, CA 92841 714-899-9855 Chemtrac: 800-424-9300		R 1 O None
2. COMPOSITION			
Chemical Name:	Ammonium Benzoate		
Chemical Family:	Carboxylic Acids		
Synonyms:	Benzenemethanamide, Bittering Agent		
Molecular Weight:	446.57		
Molecular Formula:	C ₇ H ₇ N ₂ O ₃		
Ingredient:	Benzoate	Sodium Chloride	Water
CAS Number:	3734-33-6	7647-14-5	N/A
Percent:	0.16850%	4.99160%	94.83990%
3. HAZARDS IDENTIFICATION			
Physical Dangers:	Stable		
Chemical Dangers:	Stable. Materials/conditions to avoid: None known		
Routes of Exposure:	Ingestion, Inhalation, absorption		
Target Organs:	No significant target effect reported.		
Health Hazards:			
Inhalation:	No adverse health effects are expected. Avoid prolonged breathing of mist		
Skin Contact:	No need for first aid anticipated		
Eye Contact:	No need for first aid anticipated		
Ingestion:	Profuse bad taste. Taste Antidote: Chocolate (Do not ingest)		
Chronic Exposure:	No information available.		
Acute Exposure:	Unknown		
Aggravation of Pre-Ex.Cond:	None Known. Denatonium Benzoate is a very bitter chemical used in many consumer products as an aversive agent against child ingestion		
4. FIRST AID MEASURES			
Inhalation:	N/A. No adverse health effects are expected		
Skin Contact:	The affected area should be thoroughly washed with soap and water.		
Eye Contact:	Flush immediately with cold water.		
Ingestion:	Administer water or milk to dilute.		
5. FIRE FIGHTING MEASURES			
Fire Hazards:	No fire hazard		
Fire Extinguisher:	N/A		
Explosion:	May liberate CO NOx.		
Flash Point:	N/A		
Volatile (% by volume):	N/A		
Exp. Limits (Vol % in air):	N/A		
Auto Ignition Temperature:	N/A		
6. ACCIDENTAL RELEASE MEASURES			
Procedure for spill/leak:	Absorb spills with vermiculite or other suitable absorbent material and remove to an approved disposal container.		
Waste Disposal:	Keep out of water supplies and sewers. Dispose of in accordance with current laws and regulations.		
7. HANDLING AND STORAGE			
Storage:	Store in tight containers in a cool dry place away from light and heat. (Room temperature)		
Self Life:	2 Years		
PPE:	N/A		
Notes:	None		

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Ingestion:	Do not ingest.		
Ventilation:	Ventilation meeting ACGIH standard should be employed.		
Engineering Controls:	N/A		
Work/Hygienic Practices:	Use good personal hygiene practices. Wash after any contact.		
Exposure Limits:	N/A		
Chemical:	Benzoate	Sodium Chloride	
TLV (ACGIH TLV)	None Established	None listed	
PEL (OSHA PEL):	None Established	None listed	
IDLH	None Established	None listed	
Control Parameter:	Wash after any contact. Thoroughly wash any contaminated clothing or shoes before reuse.		
9. PHYSICAL AND CHEMICAL PROPERTIES			
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Relative Density:	N/A		
Evaporative Rate:	N/A		
Water Content:	95%		
Vapor Density(Air-1):	N/A		
Vapor Pressure:	N/A		
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Human Lethal Dose:	N/A		
Notes:	Carcinogenicity not listed.		
12. ECOLOGICAL INFORMATION			
No Information available			
13. DISPOSAL CONSIDERATIONS			
No Information available.			
14. TRANSPORT INFORMATION			
Proper shipping name:	Denatonium Benzoate		
Transport Emergency Card:	N/A		
Packing Group:	N/A		
UN Number:	N/A		
Reportable Quantity	N/A		
Notes:	None		
15. REGULATORY INFORMATION			
TSCA Registered:	TSCA 12 (b) Export notification - Not Listed.	RTECS:	N/A
	CAS# 7647-145 is listed on the TSCA inventory	EC Number (EINECS):	223-095-2
FDA Approved	N		
California Proposition 65:	N		
ICSC:	N/A		
16. OTHER INFORMATION			
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