

**Levi Strauss & Co (LS&Co) Screened Chemistry Program Assessment for  
Broadase Abra N768**

Broadase Abra N768, supplied by BroadTex Biotech Co Ltd, was assessed under the requirements of the LS&Co Screened Chemistry Program. This program requires the following:

- Full disclosure and assessment of all ingredients intentionally added and all impurities at greater than 0.01% (100 ppm)
- Contains no chemicals listed on California Proposition 65, the Zero Discharge of Hazardous Chemicals (ZDHC) – Manufacturing Restricted Substances list, Greenpeace List of 11 Chemical Classes to be Eliminated and the AFIRM List

All ingredients are assessed against the U.S. EPA Safer Chemical Ingredient List (SCIL) and the GreenScreen® for Safer Chemicals List Translator. Chemicals in List Translator with scores of LT-P1 or LT-Unk require a full GreenScreen® profile. If the product contains a polymer that is not on the SCIL, then this is assessed under the requirements of the U.S. EPA Safer Choice Program, polymer requirements.

Each ingredient in a product is then scored per the LS&Co criteria to determine the overall product score and classifying the product as “Preferred” (score of 35 – 50), “Needs Improvement” (score of 20 – 34) or “Phase Out” (score of 19 – -50).

Broadase Abra N768 received an overall score of 27.03, Needs Improvement.

This report contains the following:

- LS&Co ingredient detail and scoring summary
- Supplier disclosure form
- Broadase Abra N768 MSDS
- Broadase Abra N768 TDS

References:

1. Clean Production Action (CPA) 2016. GreenScreen® for Safer Chemicals, version 1.3. Available at: <https://www.greenscreenchemicals.org/>
2. Pharos, GreenScreen® List Translator. Available at: <https://www.pharosproject.net/>
3. U.S. EPA Safer Choice Program 2017. Safer Chemicals Ingredient List (SCIL). Available at : <https://www.epa.gov/saferchoice/safer-ingredients>
4. U.S. EPA Safer Choice Program, 2015. Safer Choice Program Master Criteria for Safer Ingredients (Version 2.1). Available at: <https://www.epa.gov/saferchoice/standard>



BroadTex Biotech Co Ltd, in Compliance with LS&Co Screened Chemistry Program Requirements					
Prepared by: SciVera LLC, Certified GreenScreen(R) Profiler					
Date: April 6, 2017					
Product Name	Assessment	No. of chemicals	%	Listed on RSLs*	LS&Co Score
<b>Broadase Abra N768</b>					
	EPA Full Green Circle	10	68.83%	Not listed	24.09
	EPA Yellow Triangle	2	30.47%	Not listed	3.05
	Can't be scored - no CAS	1	0.70%	Not listed	(-0.11)

\* RSLs = AFIRM, LS&Co, MSRL - ZDHC, Greenpeace 11, California Proposition 65

**Broadase Abra N768, Screened Chemistry Chemical Hazard Score = 27.03 Yellow - Needs Improvement**

CHEMICAL HAZARD SCORE	LS&CO. RATING	DEFINITION
35 to 50	Green	Preferred Chemical
20 to 34	Yellow	Needs Improvement
19 to -50	Red	Phase Out

**Supplier Submission for Compliance to Levi Strauss & CO Screened Chemistry Program**

Date: April 5, 17

Supplier Name: BroadTex Biotech Co., Ltd

Product Name: Broadase Abra N763  
Broadase Abra N768

**Ingredient Disclosure Confirmation:**

- I confirm that this Bill of Substances (BOS) includes all intentionally added chemicals (no threshold) and all known residuals and impurities present at greater than 100 ppm (0.01%)
- I confirm that this product does not contain formaldehyde (CASRN 50-00-0) at any level

Supplier Contact (name and email):

Signature: Celia Ye

# Broadase Abra N768

## Material Safety Data Sheet

Effective Date: 08 March 2017

Emergency contact: +86 13500009122

### 1. PRODUCT IDENTIFICATION AND COMPANY UNDERTAKING:

Product Name :	<b>Broadase Abra N768</b>
Chemical Name :	Cellulase
Supplier:	BroadTex Biotech Co., Ltd No.33, 1 <sup>st</sup> Street, Kangcheng Shuijun, Qiaonan Avenue, Panyu District, Guangzhou City, Guangdong Province, China Tel: (86) 20-39927279 FAX: (86) 20-39927276

### 2. COMPOSITION / INFORMATION ON INGREDIENTS:

CHEMICALS NAME	EINECS NO	IUB NO	CAS NUMBER
Cellulase	232-734-4	3..2.1.4	9012-54-8

### 3. HAZARDOUS IDENTIFICATION:

Symbol:	Xn Harmful
Risk Phrases:	R24: May cause sensitization by inhalation.
Physical/chemical hazards:	The data available do not support any physical or chemical hazard.
Environmental hazards	The data available do not support any environmental hazard.
Human health hazards	Enzyme preparations are dust free preparations. However, inappropriate handling may cause formation of aerosols or dust. Inhalation of enzyme aerosols or dust may induce sensitization and may cause allergic type reactions in sensitized individuals.
Symptoms of (over)exposure :	See Section 4.

#### 4. FIRST AID MEASURES:

Inhalation:	<b>Effects</b> : May cause respiratory allergies. Symptoms may occur after a latency period has elapsed. <b>Symptoms</b> : Shortness of breath, wheezing, and laboured coughing. <b>First Aid</b> : Remove victim from area of exposure. If symptoms of irritation or respiratory allergy occur, consult a doctor.
Skin Contact:	<b>Effects</b> : May be irritating. <b>Symptoms</b> : Redness. <b>First Aid</b> : Remove victim from area of exposure. If symptoms of irritation occur, consult a doctor.
Eyes Contact:	<b>Effects</b> : May be irritating. <b>Symptoms</b> : Redness <b>First Aid</b> : Wash out with plenty of water with the eyelid held wide open for at least 15 minutes. Consult a doctor in event of any complaints.
Ingestion:	<b>Effects</b> : May be irritating. <b>Symptoms</b> : Effects or symptoms are not known. <b>First Aid</b> : Rinse mouth and throat thoroughly with water. Consult a doctor in event of any complaints.

#### 5. FIRE-FIGHTING MEASURES:

Extinguishing measures:	<b>Suitable</b> : Water, foam, halones. <b>Not suitable</b> : None.
Thermal (de)composition products :	---
Protective equipment :	Self-contained breathing apparatus.
Specific hazards:	Inhalation of aerosol may result in sensitization. Avoid any contact with the substance.

#### 6. ACCIDENTAL RELEASE MEASURES:

Personal precautions:	Handle in closed systems and use local exhaust ventilation when there is a potential for aerosol release. Use appropriate personal protection (see Section 8). Avoid any contact with the liquid. Provide for sufficient ventilation.
Environmental precautions :	Do not allow to enter natural waters or soil.
Methods for cleaning up :	Use appropriate personal protection (see Section 8). Avoid any contact with the liquid. Contain spilled liquid. Take up spilled substance by mechanical means or with a vacuum cleaner equipped with a high efficiency filter. After spillage avoid raising aerosols or dust from dried preparation. Avoid splashing and high pressure washing (formation of aerosols). Provide for sufficient ventilation.

**7. HANDLING AND STORAGE:**

<b>Handling:</b>	Use appropriate personal protection (see Section 8). Avoid any contact with the liquid. Avoid the formation of aerosols and dust from dry product. Ventilate areas.
Storage:	Keep in a cool, dry place at 24 - 26°C
Specific uses:	See Section 1: use of the substance/preparation.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION:**

Occupational exposure limits MAC value:	No occupational exposure limits are known.
Other exposure limits:	None.
Occupational Exposure Controls:	Use closed systems and processes for handling enzymes. Supplement with local exhaust ventilation.
Respiratory protection:	Wear suitable respiratory protection in case of aerosol formation. P3 filters are recommended.
Hand protection:	Practical experience has shown that gloves of nitrile rubber, butyl rubber, latex, and polyvinyl chloride (PVC) offer sufficient protection.
Breakthrough time:	Replace damaged gloves.
Eye protection:	Safety glasses, goggles, or face shield.
Skin protection:	Protective clothing
Environmental exposure controls:	Avoid dispersion to the environment.

**9. PHYSICALLY AND CHEMICAL PROPERTIES:**

Appearance:	Powder form
Color:	Light Yellowish
Odour:	Slight fermentation odour
Solubility in water:	Soluble

**10. STABILITY AND REACTIVITY:**

General:	Stable under storage conditions
Condition to avoid:	None
Material to avoid:	None
Hazardous decomposition products:	None

**11. TOXICOLOGICAL INFORMATION:**

Irritation :	Eyes : May be irritating. Skin : May be irritating. Respiratory system : May be irritating.
Acute toxicity:	Oral : LD50 rat: >5000 mg/kg. Dermal : Information not available. Inhalation : Information not available.
Chronic toxicity :	Oral : Information not available. Dermal : Information not available. Inhalation : Information not available.
Other Information :	Inhalation: Repeated Inhalation of enzyme aerosol, resulting from improper handling, may induce sensitization and may cause allergic type reactions in sensitized individuals. Skin: Prolonged or repeated skin contact may be irritating. Oral: Not toxic.
Carcinogenicity:	Information not available.
Mutagenicity:	Not mutagenic.
Reproduction toxicity :	Information not available.

**12. ECOLOGICAL INFORMATION:**

Ecotoxicity:	The preparation is believed not to be dangerous to the environment with respect to mobility, persistence and degradability, bio-accumulative potential, aquatic toxicity and other data relating to ecotoxicity.
Persistence- degradability:	The substance is readily biodegradable.
Bioaccumulative potential:	Bioaccumulative in aquatic organisms is not expected.
Other adverse effects	Not applicable.

**13. DISPOSAL CONSIDERATIONS:**

Methods of disposal:	No special dispose methods required, expect to be in accordance with current authority regulations.
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**14. TRASPORTATION INFORMATION:**

Special precautions:	None known
Proper shipping name:	Not a dangerous goods according to transport regulations.
National transport regulations:	No additional national transport regulations are known to the supplier

**15. REGULATORY INFORMATION:**

**Labelling according to Directive 67/548/EC and 1999/45/EC.**

**Contains :** Cellulase (enzyme) .

This product is labelled by the supplier in accordance to the EC regulations.

This product is hazardous within the meaning of directive 88/379/ECC.

**HARMFUL**

**Symbol :** Xn

**Risk phrases :** R42 : May cause sensitization by inhalation.

**Safety phrases :** S22 : Do not breathe dust.

S23 : Do not breathe spray.

S24 : Avoid contact with skin.

**16. OTHER INFORMATION:**

The above information is based on data available to us and considered to be accurate. However, NO WARRANTY is expressed or implied regarding the accuracy of this information, the results to be obtained from the use thereof, or the hazards connected with the use of the material. As the information contained herein may be applied under conditions beyond our control and with which we are unfamiliar, we do not assume any responsibility for the results of its use. This information is furnished upon the condition that the persons receiving it shall make their own determination of the effects, properties and protections which pertain to their particular conditions.



# Broadase

## Abra N768

### Introduction

**Broadase Abra N768** is formulated with new generation neutral cellulases, complex buffer chemicals and superior anti-stain agents. Capable to show good & fast graining even without present of stones. Superb wide operating temperature and pHs range.

### Typical Characteristics

- Appearance: Light yellowish powder form.

### Features and Benefits.

Outstanding abrasion performance, where it capable to show fast abrasion with good grain and low stain.

Wide operating temperature range, 35 – 60 degree C.

Premium Wash looks;

- High graining & high contrast.
- Grey Cast.
- Low stain.

For a good balance of good abrasion, high graining, high contrast and low stain, operating at 40 – 45 degree C is recommended.

### Applications

#### Dosage

Denim Garments (Belly washers/Front loaders) : 0.5 % to 2.5 % owg

#### Temperature

Operation range : 35 °C – 60 °C

Optimal range : 45 °C – 55 °C

#### pH

Operation range : 5.5 – 9.0

Optimal range : 6.0 – 8.0

## Storage

To ensure extend shelf life, store **Broadase Abra N768** at 25°C or below in a sealed container. Exposure of this product to elevated temperatures for prolonged periods of time may result in loss of activity.

## Safety Enzyme Handling

Inhalation of enzymes mists should be avoided. In case of contact with skin or eyes, promptly rinse with water for at least 15 minutes.

## Contact:

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