Test Type: 39-WEEK

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Abrasive blasting agents (blasting sand)

**CAS Number: BLASTINGSAND** 

F1\_16 Wk. SSAC

**NTP Study Number:** C20213

**Lock Date:** 08/17/2010

**Cage Range:** ALL

**Date Range:** ALL

**Reasons For Removal:** 25017 SSAC

**Removal Date Range:** 07-Aug-2009 - 07-Aug-2009

**Treatment Groups:** Include ALL

**Study Gender:** Male

**TDMSE Version:** 2.6.0.0\_007

**PWG Approval Date:** NONE

Date Report Requested: 03/20/2012 Time Report Requested: 13:27:50 First Dose M/F: 04/20/09 / NA

Lab: BNW

Test Type: 39-WEEK

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/HSD

#### P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Abrasive blasting agents (blasting sand)

CAS Number: BLASTINGSAND

Date Report Requested: 03/20/2012 Time Report Requested: 13:27:50 First Dose M/F: 04/20/09 / NA

Lab: BNW

DAY ON TEST HARLAN SPRAGUE DAWLEY RATS MALE	0 1 1 0									
Control  ANIMAL ID	0 0 0 0 5	0 0 0 1 1	0 0 0 1 5	0 0 0 1 9	0 0 0 3 4	0 0 0 4 3	0 0 0 6 1	0 0 0 6 2	*	· TOTAL
ALIMENTARY SYSTEM										
Intestine Small, Ileum	М	М	М	М	М	М	М	М		0
Intestine Small, Jejunum	М	М	М	М	М	M	М	М		0
CARDIOVASCULAR SYSTEM										
NONE										
ENDOCRINE SYSTEM										
NONE										
GENERAL BODY SYSTEM										
NONE										
GENITAL SYSTEM										
NONE				_	_					
HEMATOPOIETIC SYSTEM										
Lymph Node, Bronchial	+	М	+	+	I	+	М	+	,	5
Lymph Node, Mediastinal								+		8

# INTEGUMENTARY SYSTEM

NONE

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

<sup>\* ..</sup> Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

<sup>+ ..</sup> Tissue examined microscopically

Test Type: 39-WEEK

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/HSD

#### P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Abrasive blasting agents (blasting sand)

CAS Number: BLASTINGSAND

Date Report Requested: 03/20/2012 Time Report Requested: 13:27:50 First Dose M/F: 04/20/09 / NA

Lab: BNW

DAY ON TEST HARLAN SPRAGUE DAWLEY RATS MALE	0 1 1 0	0 1 1 0	0 1 1 0	0 1 1 0	0 1 1 0	0 1 1 0	0 1 1 0	0 1 1 0	
Control  ANIMAL ID	0 0 0 0 5	0 0 0 1 1	0 0 0 1 5	0 0 0 1 9	0 0 0 3 4	0 0 0 4 3	0 0 0 6 1	0 0 0 6 2	* TOTALS

## **MUSCULOSKELETAL SYSTEM**

NONE

# **NERVOUS SYSTEM**

NONE

# **RESPIRATORY SYSTEM**

Larynx	+	+	+	+	+	+	+	+	8	}	
Lung Infiltration Cellular, Histiocyte Inflammation, Chronic Active Metaplasia, Osseous	+	+	1	+	+	+ 1 1	+	1	8		2 1.0 1 1.0 1 1.0
Nose Olfactory Epithelium, Accumulation, Hyaline Droplet	1	+ 1	+ 1	+ 1	+ 1	+ 1	+ 1	+ 1	8		8 1.0
Trachea	+	+	+	+	+	+	+	+	8	}	

### **SPECIAL SENSES SYSTEM**

NONE

# **URINARY SYSTEM**

NONE

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild

4) Marked

<sup>\* ..</sup> Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

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X .. Lesion present

I .. Insufficient tissue

Test Type: 39-WEEK

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/HSD

#### P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Abrasive blasting agents (blasting sand)

CAS Number: BLASTINGSAND

Date Report Requested: 03/20/2012 Time Report Requested: 13:27:50 First Dose M/F: 04/20/09 / NA

Lab: BNW

DAY ON TEST HARLAN SPRAGUE DAWLEY RATS MALE	0 1 1 0									
15 mg/m3 ANIMAL ID	0 0 2 0 5	0 0 2 1 1	0 0 2 1 5	0 0 2 1 9	0 0 2 3 4	0 0 2 4 3	0 0 2 6 1	0 0 2 6 2	* TOT/	ALS
ALIMENTARY SYSTEM										
Intestine Small, Ileum	М	М	М	М	М	М	М	М	0	
Intestine Small, Jejunum	М	М	М	М	M	М	М	М	0	
Liver Necrosis	+ 4								1	1 4.0
CARDIOVASCULAR SYSTEM										
NONE										
ENDOCRINE SYSTEM										
Adrenal Cortex							+		1	
Adrenal Medulla							+		1	
GENERAL BODY SYSTEM										
NONE						-	-			
GENITAL SYSTEM										
NONE				-	_	-	-	,		
HEMATOPOIETIC SYSTEM										
Lymph Node, Bronchial Foreign Body	+ X	+ X	М			+ X	+ X		7	7

<sup>+ ..</sup> Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

<sup>1-4 ..</sup> Lesion qualified as:

<sup>1)</sup> Minimal 3) Moderate

<sup>2)</sup> Mild 4) Marked

Test Type: 39-WEEK

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/HSD

#### P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Abrasive blasting agents (blasting sand)

CAS Number: BLASTINGSAND

Date Report Requested: 03/20/2012 Time Report Requested: 13:27:50 First Dose M/F: 04/20/09 / NA

Lab: BNW

DAY ON TEST HARLAN SPRAGUE DAWLEY RATS MALE	0 1 1 0								
15 mg/m3  ANIMAL ID	0 0 2 0 5	0 0 2 1 1	0 0 2 1 5	0 0 2 1 9	0 0 2 3 4	0 0 2 4 3	0 0 2 6 1	0 0 2 6 2	* TOTALS
Infiltration Cellular, Histiocyte Pigmentation	1	1		1	1	1	1	1 2	7 1.0 1 2.0
Lymph Node, Mediastinal Foreign Body Infiltration Cellular, Histiocyte Pigmentation	+ X 2	+ X 2	+ X 2	+ X 3	I	+ X 2	+	M	6 5 5 2.2 1 2.0

# **INTEGUMENTARY SYSTEM**

NONE

### **MUSCULOSKELETAL SYSTEM**

NONE

### **NERVOUS SYSTEM**

NONE

# **RESPIRATORY SYSTEM**

Larynx	+ + + + + + +	8
Lung	+ + + + + + +	8
Lung Foreign Body	$X \ X \ X \ X \ X \ X \ X \ X$	8
Infiltration Cellular, Histiocyte	2 1 1 1 1 2 2	8 1.4
Inflammation, Chronic Active	1 1 1	3 1.0
Nose	+ + + + + + +	8

<sup>\* ..</sup> Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

<sup>+ ..</sup> Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

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<sup>1-4 ..</sup> Lesion qualified as:

<sup>1)</sup> Minimal 3) Moderate

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Test Type: 39-WEEK

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/HSD

#### P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Abrasive blasting agents (blasting sand)

CAS Number: BLASTINGSAND

Date Report Requested: 03/20/2012 Time Report Requested: 13:27:50 First Dose M/F: 04/20/09 / NA

Lab: BNW

DAY ON TEST HARLAN SPRAGUE DAWLEY RATS MALE	0 1 1 0								
15 mg/m3  ANIMAL ID	0 0 2 0 5	0 0 2 1 1	0 0 2 1 5	0 0 2 1 9	0 0 2 3 4	0 0 2 4 3	0 0 2 6 1	0 0 2 6 2	* TOTALS
Olfactory Epithelium, Accumulation, Hyaline Droplet	2	2	2	1	1	2	2	1	8 1.6
Respiratory Epithelium, Accumulation, Hyaline Droplet	1	1	1	1	1	1	1	1	8 1.0
Trachea	+	+	+	+	+	+	+	+	8

# **SPECIAL SENSES SYSTEM**

NONE

# **URINARY SYSTEM**

NONE

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

<sup>\* ..</sup> Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

<sup>+ ..</sup> Tissue examined microscopically

X .. Lesion present

Test Type: 39-WEEK

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/HSD

### P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Abrasive blasting agents (blasting sand)

CAS Number: BLASTINGSAND

Date Report Requested: 03/20/2012 Time Report Requested: 13:27:50 First Dose M/F: 04/20/09 / NA

Lab: BNW

DAY ON TEST HARLAN SPRAGUE DAWLEY RATS	0 1 1 1 0	0 1 1 0								
MALE 30 mg/m3 ANIMAL ID	0 0 4 0 5	0 0 4 1 1	0 0 4 1 5	0 0 4 1 9	0 0 4 3 4	0 0 4 4 3	0 0 4 6 1	0 0 4 6 2	*1	OTALS
ALIMENTARY SYSTEM	'	•	•	•	•	•				
Intestine Small, Ileum	М	М	М	М	М	М	М	М	0	
Intestine Small, Jejunum	М	М	М	М	М	М	М	М	0	
CARDIOVASCULAR SYSTEM										
NONE										
ENDOCRINE SYSTEM										
NONE										
GENERAL BODY SYSTEM					-	-				
NONE										
GENITAL SYSTEM			•							
NONE										
HEMATOPOIETIC SYSTEM										
Lymph Node, Bronchial	+	+	+	+	+	+	+	+	8	-
Foreign Body Infiltration Cellular, Histiocyte	X 2	X 1	X 1	X 1	X 2	X 2	X 1	X 2		8 8 1.
Lymph Node, Mediastinal		+	+	+	+	+	+	+	8	
Foreign Body	X	Х	X	X	т	т	X	т	0	5
Infiltration Cellular, Histiocyte	3	3	2	1			3			5 2.

<sup>\* ..</sup> Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) I

4) Marked

<sup>+ ..</sup> Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

Test Type: 39-WEEK

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/HSD

#### P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Abrasive blasting agents (blasting sand)

CAS Number: BLASTINGSAND

Date Report Requested: 03/20/2012 Time Report Requested: 13:27:50 First Dose M/F: 04/20/09 / NA

Lab: BNW

DAY ON TEST HARLAN SPRAGUE DAWLEY RATS MALE	0 1 1 0									
30 mg/m3  ANIMAL ID	0 0 4 0 5	0 0 4 1 1	0 0 4 1 5	0 0 4 1 9	0 0 4 3 4	0 0 4 4 3	0 0 4 6 1	0 0 4 6 2	* TO1	ALS
Pigmentation			2							1 2.0

### **INTEGUMENTARY SYSTEM**

NONE

### **MUSCULOSKELETAL SYSTEM**

NONE

# **NERVOUS SYSTEM**

NONE

### RESPIRATORY SYSTEM

LOI INATON I OTOTEM										
Larynx	+	+	+	+	+	+	+	+	8	
Lung	+	+	+	+	+	+	+	+	8	
Foreign Body	Χ	Χ	Χ	Χ	Χ	Χ	Χ	X		8
Infiltration Cellular, Histiocyte	2	2	2	2	2	2	2	2		8 2.0
Inflammation, Chronic Active	1					1		1		3 1.0
Nose	+	+	+	+	+	+	+	+	8	
Olfactory Epithelium, Accumulation, Hyaline Droplet	1	1	1	2	1	1	2	2		8 1.4
Respiratory Epithelium, Accumulation, Hyaline Droplet	1	1	1	1	2	1	1	2		8 1.3
Trachea	+	+	+	+	+	+	+	+	8	

<sup>\* ..</sup> Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

<sup>+ ..</sup> Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

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<sup>1-4 ..</sup> Lesion qualified as:

<sup>1)</sup> Minimal 3) Moderate

<sup>2)</sup> Mild 4)

Test Type: 39-WEEK

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/HSD

#### P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Abrasive blasting agents (blasting sand)

CAS Number: BLASTINGSAND

Date Report Requested: 03/20/2012 Time Report Requested: 13:27:50 First Dose M/F: 04/20/09 / NA

Lab: BNW

DAY ON TEST HARLAN SPRAGUE DAWLEY RATS MALE	0 1 1 0	0 1 1 0	0 1 1 0	0 1 1 0	0 1 1 0	0 1 1 0	0 1 1 0	0 1 1 0	
30 mg/m3  ANIMAL ID	0 0 4 0 5	0 0 4 1	0 0 4 1 5	0 0 4 1 9	0 0 4 3 4	0 0 4 4 3	0 0 4 6 1	0 0 4 6 2	* TOTALS

# **SPECIAL SENSES SYSTEM**

NONE

# **URINARY SYSTEM**

NONE

<sup>\* ..</sup> Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

<sup>+ ..</sup> Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

Test Type: 39-WEEK

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/HSD

### P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Abrasive blasting agents (blasting sand)

CAS Number: BLASTINGSAND

Date Report Requested: 03/20/2012 Time Report Requested: 13:27:50 First Dose M/F: 04/20/09 / NA

Lab: BNW

DAY ON TEST HARLAN SPRAGUE DAWLEY RATS MALE	;	0 1 1 0	0 1 1 0	0 1 1 0	0 1 1 0	0 1 1 0	0 1 1 0	0 1 1 0		
60 mg/m3 ANIMAL ID	0 0 6 0 5	0 0 6 1	0 0 6 1 5	0 0 6 1 9	0 0 6 3 4	0 0 6 4 3	0 0 6 6 1	0 0 6 6 2	**	ΓΟΤ
ALIMENTARY SYSTEM	·									
Intestine Small, Ileum	М	М	М	М	М	М	М	М	0	
Intestine Small, Jejunum	М	М	М	М	М	М	М	M	0	
Liver Hepatodiaphragmatic Nodule			+ X						1	1
CARDIOVASCULAR SYSTEM										
NONE										
ENDOCRINE SYSTEM										
NONE										
GENERAL BODY SYSTEM										
NONE			_							
GENITAL SYSTEM										
Preputial Gland Inflammation, Chronic Active							+ 4		1	1
HEMATOPOIETIC SYSTEM										
Lymph Node, Bronchial Foreign Body	+ X	+ X	+	+ X	+ X	+ X	+ X	+ X	8	7

<sup>\* ..</sup> Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

<sup>+ ..</sup> Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation BLANK .. Not examined microscopically

<sup>1-4 ..</sup> Lesion qualified as:

<sup>1)</sup> Minimal 3) Moderate

<sup>2)</sup> Mild 4) Marked

Test Type: 39-WEEK

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/HSD

#### P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Abrasive blasting agents (blasting sand)

CAS Number: BLASTINGSAND

Date Report Requested: 03/20/2012 Time Report Requested: 13:27:50 First Dose M/F: 04/20/09 / NA

Lab: BNW

DAY ON TEST HARLAN SPRAGUE DAWLEY RATS MALE 60 mg/m3 ANIMAL ID	0 1 1 0	0 1 1 0	0 1 1 0	0 1 1 0	0 1 1 0	0 1 1 0	0 1 1 0	0 1 1 0		
	ANIMAL ID	0 0 6 0 5	0 0 6 1	0 0 6 1 5	0 0 6 1 9	0 0 6 3 4	0 0 6 4 3	0 0 6 6 1	0 0 6 6 2	* TOTALS
Infiltration Cellular, Histiocyte		1	3		1	1	1	1	2	7 1.4
Lymph Node, Mediastinal Foreign Body Infiltration Cellular, Histiocyte		+ X 3	+ X 3	+ X 3	+ X 3	+ X 4	+ X 2	+ X 3	+ X 3	8 8 8 3.0

# **INTEGUMENTARY SYSTEM**

NONE

# **MUSCULOSKELETAL SYSTEM**

NONE

# **NERVOUS SYSTEM**

NONE

RESPIRATORY	SYSTEM
-------------	--------

Larynx	+	+	+	+	+	+	+	+	8	
Lung	+	+	+	+	+	+	+	+	8	
Foreign Body	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ		8
Infiltration Cellular, Histiocyte	2	2	2	2	2	2	2	2		8 2.0
Inflammation, Chronic Active	1	1	1	1	1	1	1	1		8 1.0
Nose	+	+	+	+	+	+	+	+	8	
Olfactory Epithelium, Accumulation, Hyaline Droplet	2	3	2	2	3	3	2	2		8 2.4

<sup>\* ..</sup> Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

<sup>+ ..</sup> Tissue examined microscopically

X .. Lesion present

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<sup>1-4 ..</sup> Lesion qualified as:

<sup>1)</sup> Minimal 3) Moderate

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Test Type: 39-WEEK

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/HSD

#### P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Abrasive blasting agents (blasting sand)

CAS Number: BLASTINGSAND

Date Report Requested: 03/20/2012 Time Report Requested: 13:27:50 First Dose M/F: 04/20/09 / NA

Lab: BNW

DAY ON TEST HARLAN SPRAGUE DAWLEY RATS MALE	0 1 1 0	0 1 1 0	0 1 1 0	0 1 1 0	0 1 1 0	0 1 1 0	0 1 1 0	0 1 1 0	
60 mg/m3  ANIMAL ID	00605	0 0 6 1	0 0 6 1 5	0 0 6 1 9	0 0 6 3 4	0 0 6 4 3	0 0 6 6 1	0 0 6 6 2	* TOTALS
Respiratory Epithelium, Accumulation, Hyaline Droplet		1	1	1	1	1	1	2	7 1.1
Respiratory Epithelium, Metaplasia, Squamous Trachea	+	1 +	+	+	+	+	+	+	1 1.0

# **SPECIAL SENSES SYSTEM**

NONE

# **URINARY SYSTEM**

NONE

\*\*\* END OF REPORT \*\*\*

<sup>\* ..</sup> Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

<sup>+ ..</sup> Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically