

MATERIAL SAFETY DATA SHEET (MSDS)

MSDS: B4615

This MSDS should be attached or kept with the respective product with which it is associated.

MATERIAL SAFETY DATA SHEET - B4615

MSDS

MATERIAL SAFETY DATA SHEET

LAMOTTE
P.O. BOX 329
802 WASHINGTON AVENUE
CHESTERTOWN, MD 21620
USA

TELEPHONE # FOR INFORMATION: 410 778-3100

24 HOUR EMERGENCY NUMBER (CHEM-TEL):
USA, CANADA, PUERTO RICO: 800-255-3924
OUTSIDE NORTH AMERICAN CONTINENT: 813-248-0585 (CALL COLLECT)

1. PRODUCT IDENTIFICATION

PRODUCT CODE: 4458

PRODUCT DESCRIPTION: SULFIDE REAGENT A

MANUFACTURED BY:
LAMOTTE COMPANY
802 WASHINGTON AVENUE
CHESTERTOWN, MD 21620

2. COMPOSITION/INFORMATION ON INGREDIENTS

HAZARD	CAS#	NAME	%	PEL	TLV
YES	7664-93-9	SULFURIC ACID	64	1 MG/CUBIC M	1 MG/CUBIC M
YES	536-47-0	N,N-DIMETHYL-p-PHENYLENEDIAMINE SULFATE	<1	N/E	N/E
NO	7732-18-5	WATER	TO 100%		

3. HAZARDS OVERVIEW

PRIMARY ROUTE OF ENTRY:
SKIN
INGESTION
INHALATION

POISON!

DANGER!

CORROSIVE. LIQUID AND MIST CAUSE SEVERE BURNS TO ALL BODY TISSUE. INHALATION MAY CAUSE COUGHING, CHEST PAINS, DAMAGE TO LUNGS. INGESTION MAY BE FATAL. REACTS WITH WATER, BASES, AND OTHER MATERIALS.

HMS HAZARD:
HEALTH 3
FLAMMABILITY 0
REACTIVITY 3

SCALE:
4 = EXTREME
3 = HIGH
2 = MODERATE
1 = SLIGHT
0 = LEAST

CARCINOGENICITY:
YES: IARC

OTHER HEALTH RELATED COMMENTS: SEE SECTION 11.

4. FIRST AID MEASURES

EYE CONTACT:
IMMEDIATELY FLUSH WITH WATER FOR AT LEAST 15 MINUTES. IMMEDIATELY CALL A DOCTOR.

SKIN CONTACT:
IMMEDIATELY FLUSH WITH WATER FOR AT LEAST 15 MINUTES, WHILE REMOVING AFFECTED CLOTHING. CONSULT PHYSICIAN.

INGESTION:
DO NOT INDUCE VOMITING. RINSE MOUTH, DRINK PLENTY OF WATER. CALL A PHYSICIAN IMMEDIATELY.

INHALATION:
REMOVE TO FRESH AIR. GIVE ARTIFICIAL RESPIRATION IF NOT BREATHING. IF BREATHING IS DIFFICULT, GIVE OXYGEN.

5. FIRE FIGHTING MEASURES

FLASH POINT (METHOD USED): N/A

LEL: N/A
UEL: N/A

EXTINGUISHING MEDIA: DRY CHEMICAL OR CO2, NOT WATER

SPECIAL FIRE FIGHTING PROCEDURES:
FIREFIGHTERS WEAR SELF-CONTAINED BREATHING APPARATUS

UNUSUAL FIRE & EXPLOSION HAZARD:

A VIOLENT EXOTHERMIC REACTION OCCURS WITH WATER. REACTS WITH METALS TO PRODUCE HYDROGEN GAS WHICH CAN FORM AN EXPLOSIVE MIXTURE WITH AIR.

6. ACCIDENTAL RELEASE MEASURES

USE GLOVES & EYE PROTECTION. COVER SPILL WITH SODIUM BICARBONATE OR SODIUM CARBONATE & CALCIUM HYDROXIDE MIXTURE. MIX AND CAREFULLY ADD WATER TO FORM SLURRY, AVOIDING HEAT, SPATTERING AND FUMES. SCOOP UP, FLUSH TO DRAIN WITH EXCESS WATER

7. HANDLING & STORAGE

STORE IN COOL, DRY, STORAGE AREA AWAY FROM SUCH INCOMPATIBLE MATERIALS AS BASES, METALS, ORGANIC MATERIALS, CYANIDES, AND SULFIDES.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

VENTILATION: MECHANICAL

PROTECTION WHEN HANDLING:
EYE PROTECTION
GLOVES
LABCOAT
RESPIRATOR
NON-LATEX GLOVES
FACE SHIELD

WORK/HYGIENIC PRACTICES:
AVOID CONTACT WITH SKIN AND CLOTHING. DON'T BREATHE VAPOR. RESPIRATOR W/ACID GAS & DUST/MIST FILTERS

9. PHYSICAL & CHEMICAL PROPERTIES

APPEARANCE: CLEAR COLORLESS LIQUID

VAPOR DENSITY: 3 (AIR=1)

SOLUBILITY IN WATER: SOLUBLE

VAPOR PRESSURE: <0.3 MMHg @ 20 DEG C

ODOR: NONE

BOILING POINT: CA. 290 DEG C

pH: <1

MELTING POINT: N/A

10. STABILITY & REACTIVITY

STABLE: YES

CONDITIONS TO AVOID: HEAT, LIGHT, MOISTURE

INCOMPATIBILITY (MATERIALS TO AVOID):
WATER, METALS, ORGANIC OR COMBUSTIBLE MATERIALS, AND STRONG BASES.

HAZARDOUS DECOMPOSITION PRODUCTS: SO_x, HYDROGEN GAS

11. TOXICOLOGICAL INFORMATION

ORAL RAT LD50:
2140 MG/KG FOR SULFURIC ACID. H₂SO₄ MISTS INVESTIGATED AS A TUMORIGEN, MUTAGEN, REPRODUCTIVE EFFECTOR. IARC HAS CLASSIFIED "STRONG INORGANIC MISTS CONTAIN. SULFURIC ACID" AS A KNOWN HUMAN CARCINOGEN. THIS APPLIES TO MISTS-NOT LIQUID ACID

TARGET ORGANS:
CORROSIVE TO ALL BODY PARTS
SKIN

PRE-EXISTING CONDITIONS AGGRAVATED BY EXPOSURE: RESPIRATORY AILMENTS.

12. ECOLOGICAL INFORMATION

INFORMATION NOT YET AVAILABLE

13. DISPOSAL CONSIDERATIONS

ADD VERY SLOWLY WITH STIRRING TO A LARGE VOLUME OF SODIUM CARBONATE/CALCIUM HYDROXIDE. POUR NEUTRALIZED SOLUTION DOWN DRAIN WITH EXCESS WATER. DISPOSE ACCORDING TO FEDERAL, STATE AND LOCAL REGULATIONS.

14. TRANSPORTATION INFORMATION

PROPER SHIPPING NAME:

DOT: SULFURIC ACID (>51% ACID)

IATA: SULPHURIC ACID >51% ACID

HAZARD CLASS/DIV:
DOT: 8
IATA: 8

UN: 1830

PACKING GROUP: II

15. REGULATORY INFORMATION

CHEMICAL INVENTORY STATUS:

HAZARD	INGREDIENT	USA TSCA	EUROPE EC	CANADA DSL	AUSTRALIA NDSL	JAPAN
YES	7664-93-9 SULFURIC ACID	YES	YES	YES	NO	YES
YES	536-47-0 N,N-DIMETHYL-p- PHENYLENEDIAMINE SULFATE	YES	YES	YES	NO	YES
NO	7732-18-5 DISTILLED WATER	YES	YES	YES	NO	YES

FEDERAL, STATE, & INTERNATIONAL REGULATIONS:

INGREDIENT	SARA 302 RQ	TPQ	SARA 313 LISTED	313 CHEMICAL CATEGORY	CERCLA	RCRA 261.33	TSCA 8 (D)
7664-93-9 SULFURIC ACID	1000	1000	YES	NO	1000	NO	NO
536-47-0 N,N-DIMETHYL-p- PHENYLENEDIAMINE SULFATE	NO	NO	NO	NO	NO	NO	NO
7732-18-5 DISTILLED WATER	NO	NO	NO	NO	NO	NO	NO

INGREDIENT	SARA 311/312 HAZARD CATEGORIES				REACTIVITY
	ACUTE	CHRONIC	FIRE	PRESSURE	
7664-93-9 SULFURIC ACID	YES	YES	NO	NO	YES
536-47-0 N,N-DIMETHYL-p- PHENYLENEDIAMINE SULFATE	YES	YES	NO	NO	NO
7732-18-5 DISTILLED WATER	NO	NO	NO	NO	NO
PRODUCT 4458 AS A WHOLE	YES	YES	NO	NO	YES

INGREDIENT	AUSTRALIA HAZCHEM CODE	POISON SCHEDULE	THIS MSDS IS WHMIS COMPLIANT
SULFURIC ACID	2P	NONE ALLOCATED	
N,N-DIMETHYL-p- PHENYLENEDIAMINE SULFATE	NONE ALLOCATED	NONE ALLOCATED	
DISTILLED WATER	NONE ALLOCATED	NONE ALLOCATED	
PRODUCT 4458 AS A WHOLE	2P	NONE ALLOCATED	YES

16. OTHER INFORMATION

PREPARED BY: IP, REGULATORY AFFAIRS DEPARTMENT

REVISED: 5/12/2006

MSDS

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P.O. BOX 329
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CHESTERTOWN, MD 21620
USA

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USA, CANADA, PUERTO RICO: 800-255-3924
OUTSIDE NORTH AMERICAN CONTINENT: 813-248-0585 (CALL COLLECT)

1. PRODUCT IDENTIFICATION

PRODUCT CODE: 4459

PRODUCT DESCRIPTION: SULFIDE REAGENT B

MANUFACTURED BY:
LAMOTTE COMPANY
802 WASHINGTON AVENUE
CHESTERTOWN, MD 21620

2. COMPOSITION/INFORMATION ON INGREDIENTS

HAZARD	CAS#	NAME	%	PEL	TLV
YES	10025-77-1	FERRIC CHLORIDE HEXAHYDRATE	25 W/W	1 MG/CUBIC M AS Fe	1 MG/CUBIC M AS Fe
NO	7732-18-5	WATER	TO 100%		

3. HAZARDS OVERVIEW

PRIMARY ROUTE OF ENTRY:

EYE
SKIN
INHALATION

WARNING!

CORROSIVE.

CAN CAUSE SEVERE IRRITATION OR BURNS TO ALL BODY TISSUE. HARMFUL IF SWALLOWED.

HMIS HAZARD:
HEALTH 2
FLAMMABILITY 0
REACTIVITY 1

SCALE:
4 = EXTREME
3 = HIGH
2 = MODERATE
1 = SLIGHT
0 = LEAST

CARCINOGENICITY: NONE

OTHER HEALTH RELATED COMMENTS:

4. FIRST AID MEASURES

EYE CONTACT:
IMMEDIATELY FLUSH WITH WATER FOR AT LEAST 15 MINUTES. GET MEDICAL ATTENTION.

SKIN CONTACT:
IMMEDIATELY FLUSH WITH WATER FOR 15 MINUTES WHILE REMOVING AFFECTED CLOTHING. WASH SKIN WITH SOAP AND WATER. CONSULT PHYSICIAN IF SEVERE IRRITATION.

INGESTION:
RINSE OUT MOUTH. DRINK PLENTY OF WATER. CALL A PHYSICIAN IMMEDIATELY.

INHALATION: REMOVE TO FRESH AIR.

5. FIRE FIGHTING MEASURES

FLASH POINT (METHOD USED): N/A

LEL: N/A
UEL: N/A

EXTINGUISHING MEDIA: NOT A FIRE HAZARD

SPECIAL FIRE FIGHTING PROCEDURES:
WEAR PROTECTIVE EQUIPMENT AND SELF-CONTAINED BREATHING APPARATUS.

UNUSUAL FIRE & EXPLOSION HAZARD: EMITS TOXIC FUMES UNDER FIRE CONDITIONS.

6. ACCIDENTAL RELEASE MEASURES

WEAR GLOVES & EYE PROTECTION. COVER SPILL WITH SODIUM BICARBONATE. CAREFULLY SCOOP UP AND FLUSH DOWN DRAIN WITH EXCESS WATER.

7. HANDLING & STORAGE

STORE IN COOL, DRY, PLACE AWAY FROM INCOMPATIBLE MATERIALS (STRONG ACIDS OR BASES, OXIDIZERS, METALS). KEEP CONTAINER TIGHTLY CLOSED AND OUT OF REACH OF CHILDREN.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

VENTILATION:
NORMAL RESPIRATORY
USE WITH GOOD VENTILATION OR IN FUME HOOD.

PROTECTION WHEN HANDLING:
EYE PROTECTION
GLOVES
LAB COAT

WORK/HYGIENIC PRACTICES:
AVOID CONTACT WITH SKIN AND CLOTHING. WASH WITH SOAP AND WATER AFTER HANDLING.

9. PHYSICAL & CHEMICAL PROPERTIES

APPEARANCE: DARK AMBER LIQUID

VAPOR DENSITY: UNKNOWN

SOLUBILITY IN WATER: SOLUBLE

VAPOR PRESSURE: UNKNOWN

ODOR: NONE

BOILING POINT: D. @ 300 DEG C

pH: <1

MELTING POINT: N/A

10. STABILITY & REACTIVITY

STABLE: YES

CONDITIONS TO AVOID: HEAT

INCOMPATIBILITY (MATERIALS TO AVOID):
ALKALIES, OXIDIZERS, STRONG ACIDS (NITRIC OR SULFURIC), METALS

HAZARDOUS DECOMPOSITION PRODUCTS: HYDROGEN CHLORIDE GAS

11. TOXICOLOGICAL INFORMATION

IPR MOUSE LD50: 260 MG/KG FOR FERRIC CHLORIDE.

TARGET ORGANS:

SKIN
RESPIRATORY SYSTEM
EYES
LIVER
CORROSIVE TO ALL BODY PARTS

12. ECOLOGICAL INFORMATION

INFORMATION NOT YET AVAILABLE

13. DISPOSAL CONSIDERATIONS

NEUTRALIZE WITH SODIUM BICARBONATE OR DILUTE AMMONIA. POUR NEUTRALIZED SOLUTION DOWN DRAIN WITH EXCESS WATER. DISPOSE ACCORDING TO FEDERAL, STATE AND LOCAL REGULATIONS.

14. TRANSPORTATION INFORMATION

PROPER SHIPPING NAME:

DOT: FERRIC CHLORIDE SOLUTION

IATA: FERRIC CHLORIDE SOLUTION

HAZARD CLASS/DIV:

DOT: 8

IATA: 8

UN: 2582

PACKING GROUP: III

15. REGULATORY INFORMATION

CHEMICAL INVENTORY STATUS:

HAZARD	INGREDIENT	USA TSCA	EUROPE EC	CANADA DSL	NDSL	AUSTRALIA	JAPAN
YES	7705-08-0 FERRIC CHLORIDE ANHYDROUS	YES	YES	YES	NO	YES	YES
NO	7732-18-5 DISTILLED WATER	YES	YES	YES	NO	YES	YES

FEDERAL, STATE, & INTERNATIONAL REGULATIONS:

INGREDIENT	SARA 302 RQ	TPQ	SARA 313 LISTED	CHEMICAL CATEGORY	CERCLA	RCRA 261.33	TSCA 8 (D)
7705-08-0 FERRIC CHLORIDE ANHYDROUS	NO	NO	NO	NO	1000	NO	NO
7732-18-5 DISTILLED WATER	NO	NO	NO	NO	NO	NO	NO

INGREDIENT	ACUTE	CHRONIC	SARA 311/312 HAZARD CATEGORIES FIRE	PRESSURE	REACTIVITY
7705-08-0 FERRIC CHLORIDE ANHYDROUS	YES	NO	NO	NO	NO
7732-18-5 DISTILLED WATER	NO	NO	NO	NO	NO
PRODUCT 4459 AS A WHOLE	YES	NO	NO	NO	NO

INGREDIENT	AUSTRALIA HAZCHEM CODE	POISON SCHEDULE	THIS MSDS IS WHMIS COMPLIANT
FERRIC CHLORIDE ANHYDROUS	2R	NONE ALLOCATED	
DISTILLED WATER	NONE ALLOCATED	NONE ALLOCATED	
PRODUCT 4459 AS A WHOLE	2R	NONE ALLOCATED	YES

16. OTHER INFORMATION

PREPARED BY: IP, REGULATORY AFFAIRS DEPARTMENT

REVISED: 3/29/2007

MSDS

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USA

TELEPHONE # FOR INFORMATION: 410 778-3100

24 HOUR EMERGENCY NUMBER (CHEM-TEL):
USA, CANADA, PUERTO RICO: 800-255-3924
OUTSIDE NORTH AMERICAN CONTINENT: 813-248-0585 (CALL COLLECT)

1. PRODUCT IDENTIFICATION

PRODUCT CODE: 4460

PRODUCT DESCRIPTION: SULFIDE REAGENT C

MANUFACTURED BY:
LAMOTTE COMPANY
802 WASHINGTON AVENUE

CHESTERTOWN, MD 21620

2. COMPOSITION/INFORMATION ON INGREDIENTS

HAZARD	CAS#	NAME	%	PEL	TLV
YES	7783-28-0	AMMONIUM PHOSPHATE DIBASIC	40	N/E	N/E
NO	7732-18-5	WATER			TO 100%

3. HAZARDS OVERVIEW

PRIMARY ROUTE OF ENTRY:
SKIN
INGESTION

LARGE DOSES BY MOUTH CAN CAUSE GI IRRITATION. MAY IRRITATE EYES AND SKIN.

HMSI HAZARD:
HEALTH 1
FLAMMABILITY 0
REACTIVITY 0

SCALE:
4 = EXTREME
3 = HIGH
2 = MODERATE
1 = SLIGHT
0 = LEAST

CARCINOGENICITY: NONE

OTHER HEALTH RELATED COMMENTS:

4. FIRST AID MEASURES

EYE CONTACT: FLUSH WITH WATER FOR 15 MINUTES.

SKIN CONTACT: FLUSH WITH WATER. WASH WITH SOAP AND WATER.

INGESTION: DRINK PLENTY OF WATER. CONSULT A PHYSICIAN.

INHALATION: N/A

5. FIRE FIGHTING MEASURES

FLASH POINT (METHOD USED): N/A

LEL: N/A
UEL: N/A

EXTINGUISHING MEDIA: NOT A FIRE HAZARD

SPECIAL FIRE FIGHTING PROCEDURES: N/A

UNUSUAL FIRE & EXPLOSION HAZARD:
MAY RELEASE AMMONIA OR NOX UNDER FIRE CONDITIONS

6. ACCIDENTAL RELEASE MEASURES

MOP UP WITH PAPER TOWELS.

7. HANDLING & STORAGE

STORE IN COOL, DRY, STORAGE AREA AWAY FROM INCOMPATIBLE MATERIALS.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

VENTILATION: NORMAL

PROTECTION WHEN HANDLING:
GLOVES
EYE PROTECTION
LAB COAT

WORK/HYGIENIC PRACTICES: AVOID CONTACT WITH SKIN.

9. PHYSICAL & CHEMICAL PROPERTIES

APPEARANCE: CLEAR COLORLESS LIQUID

VAPOR DENSITY: <1 (AIR=1)

SOLUBILITY IN WATER: SOLUBLE

VAPOR PRESSURE: UNKNOWN

ODOR: NONE

BOILING POINT: UNKNOWN

pH: 8

MELTING POINT: UNKNOWN

10. STABILITY & REACTIVITY

STABLE: YES

CONDITIONS TO AVOID: HEATING TO DECOMPOSITION

INCOMPATIBILITY (MATERIALS TO AVOID): STRONG ALKALI

HAZARDOUS DECOMPOSITION PRODUCTS:
REACTION WITH STRONG BASE CAUSES EMISSION OF AMMONIA.

11. TOXICOLOGICAL INFORMATION

ORAL WOMAN LDLO: 800 MG/KG FOR AMMONIUM PHOSPHATE DIBASIC SOLID

TARGET ORGANS: SKIN

12. ECOLOGICAL INFORMATION

INFORMATION NOT YET AVAILABLE

13. DISPOSAL CONSIDERATIONS

WASH DOWN DRAIN WITH EXCESS WATER. DISPOSE ACCORDING TO FEDERAL, STATE AND LOCAL REGULATIONS.

14. TRANSPORTATION INFORMATION

NOT REGULATED FOR TRANSPORT

15. REGULATORY INFORMATION

CHEMICAL INVENTORY STATUS:

HAZARD	INGREDIENT	USA TSCA	EUROPE EC	CANADA DSL	NDL	AUSTRALIA NDSL	JAPAN
YES	7783-28-0 AMMONIUM PHOSPHATE DIBASIC	YES	YES	YES	NO	YES	YES
NO	7732-18-5 DISTILLED WATER	YES	YES	YES	NO	YES	YES

FEDERAL, STATE, & INTERNATIONAL REGULATIONS:

INGREDIENT	SARA 302 RQ	TPQ	SARA 313 LISTED	CHEMICAL CATEGORY	CERCLA	RCRA 261.33	TSCA 8 (D)
7783-28-0 AMMONIUM PHOSPHATE DIBASIC	NO	NO	NO	NO	NO	NO	NO
7732-18-5 DISTILLED WATER	NO	NO	NO	NO	NO	NO	NO

INGREDIENT	SARA 311/312 HAZARD CATEGORIES				
	ACUTE	CHRONIC	FIRE	PRESSURE	REACTIVITY
7783-28-0 AMMONIUM PHOSPHATE DIBASIC	YES	NO	NO	NO	NO
7732-18-5 DISTILLED WATER	NO	NO	NO	NO	NO
PRODUCT 4460 AS A WHOLE	YES	NO	NO	NO	NO

INGREDIENT	AUSTRALIA HAZCHEM CODE	POISON SCHEDULE	THIS MSDS IS WHMIS COMPLIANT
AMMONIUM PHOSPHATE DIBASIC	NONE ALLOCATED	NONE ALLOCATED	
DISTILLED WATER	NONE ALLOCATED	NONE ALLOCATED	
PRODUCT 4460 AS A WHOLE	NONE ALLOCATED	NONE ALLOCATED	YES

16. OTHER INFORMATION

PREPARED BY: IP, REGULATORY AFFAIRS DEPARTMENT

REVISED: 12/19/2005