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Safety Data Sheet - Version 5.0

Preparation Date 11/21/2013

Latest Revision Date (If Revised)

SDS Expiry Date 11/19/2016

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product Identifier

Chemical Name AHR 11652

Toronto Research Chemicals Inc.

Catalogue # A435000

1.2 Relevant Identified Uses of the Substance or Mixture and Uses Advised Against

Product Uses To be used only for scientific research and development. Not for use in humans or animals.

1.3 Details of the Supplier of the Safety Data Sheet				
Company	Toronto Research Chemicals			
	2 Brisbane Road			
	Toronto, ON M3J 2J8			
	CANADA			
Telephone	+14166659696			
FAX	+14166654439			
Email	orders@trc-canada.com			

1.4 Emergency Telephone Number

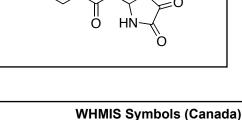
+14166659696 between 0800-1700 (GMT-5)

2. HAZARDS IDENTIFICATION

Emergency#

WHMIS Classification (Canada)

D2B Toxic Material Causing Other Toxic Effects Moderate Skin/Eye/Respiratory Tract Irritant





2.1/2.2 Classification of the Substance or Mixture and Label Elements

GHS Hazards Classification (According to EU Regulation 1272/2008 and US OSHA 1910.1200)

Acute Toxicity, Oral (Category 4)

Skin Irritation (Category 2)

Serious Eye Irritation (Category 2)

Specific Target Organ Toxicity, Single Exposure; Respiratory Tract Irritation (Category 3)

EU Classification (According to EU Regulation 67/548/EEC)

Harmful if swallowed. Irritating to eyes, respiratory system and skin.

EU Risk and Safety Statements (According to EU Regulation 67/548/EEC)

Hazard Statements	Hazard Codes
Harmful	Xn

	. .		
Risk	Codes	and	Phrases

R22 Harmful if swallowed.

R36/37/38 Irritating to eyes, respiratory system and skin.

Safety Precaution Codes and Phrases

- S36/39 Wear suitable protective clothing and eye/face protection.
- S22 Do not breathe dust.
- S24/25 Avoid contact with skin and eyes.
- S45 In case of accident or if you feel unwell, seek medical advice immediately (show label where possible).

GHS Hazards Identification (According to EU Regulation 1272/2008 and US OSHA 1910.1200)

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Signal Word Warning

GHS Hazard Statements



H302	Harmful if swallowed.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.

GHS Precautionary Statements

P280	Wear protective gloves/protective clothing/eye protection/face protection.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P301/P312	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P305/P351/P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

2.3 Unclassified Hazards/Hazards Not Otherwise Classified

No data available

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Molecular Formula: C₁₅H₈BrNO₃

Molecular Weight: 330.13 EC#:

CAS Registry #: 241825-88-7 Synonyms

7-(4-Bromobenzoyl)- 1H-indole-2,3-dione;

3.2 Mixtures

Not a mixture

4. FIRST AID MEASURES

4.1 Description of First Aid Measures

General Advice

If medical attention is required, show this safety data sheet to the doctor.

If Inhaled

If inhaled, move casualty to fresh air. If not breathing, give artificial respiration and consult a physician.

In Case of Skin Contact

Wash affected area with soap and water. Consult a physician if any exposure symptoms are observed.

In Case of Eye Contact

Immediately rinse eyes with plenty of water for at least 15 minutes. Consult a physician.

If Swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Do NOT induce vomiting unless advised to do so by a physician or Poison Control Center. Seek medical attention.

4.2 Most Important Symptoms and Effects, Both Acute and Delayed

No data available

4.3 Indication of any Immediate Medical Attention and Special Treatment Needed

No data available

5. FIREFIGHTING MEASURES

5.1 Extinguishing Media

Suitable Extinguishing Media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special Hazards Arising from the Substance or Mixture

Carbon oxides, Nitrogen oxides, Hydrogen bromide

5.3 Advice for Firefighters

Wear self contained breathing apparatus for fire fighting if necessary.

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6. ACCIDENTAL RELEASE MEASURES

6.1 Personal Precautions, Protective Equipment and Emergency Procedures

Use recommended personal protective equipment (see Section 8). Prevent the formation of dusts and mists. Adequate ventilation must be provided to ensure dusts or mists are not inhaled.

6.2 Environmental Precautions

Material should not be allowed to enter the environment. Prevent further spillage or discharge into drains, if safe to do so.

6.3 Methods and Materials for Containment and Cleaning Up

Contain the spill and then collect using non-combustible absorbent material (such as clay, diatomaceous earth, vermiculite or other appropriate material). Place material in a suitable, sealable container and then dispose according to local/national regulations and guidance (see Section 13).

For protective equipment, refer to Section 8. For disposal, see Section 13.

7. HANDLING AND STORAGE

7.1 Precautions for Safe Handling

Avoid contact with skin and eyes. Ventilation and proper handling are to be used to prevent the formation of dusts and mists. Normal measures for preventative fire protection. No smoking, eating or drinking around this material. Wash hands after use.

7.2 Conditions for Safe Storage, Including any Incompatibilities

Ensure container is kept securely closed before and after use. Keep in a well ventilated area and do not store with strong oxidizers or other incompatible materials (see Section 10).

Store at 2-8°C.

7.3 Specific End Uses

For scientific research and development only. Not for use in humans or animals.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control Parameters

Contains no components with established occupational exposure limits.

8.2 Exposure Controls

Appropriate Engineering Controls

A laboratory fumehood or other appropriate form of local exhaust ventilation should be used to avoid exposure.

Personal Protective Equipment

All recommendations below are advisory in nature and a risk assessment should be performed by the employer/end user prior to use of this product. The type of protective equipment must be selected based on the amount and concentration of the dangerous material being used in the workplace.

Eye/Face Protection

Safety glasses or safety goggles. All equipment should have been tested and approved under appropriate standards, such as NIOSH (US), CSA (Canada), or EN 166 (EU).

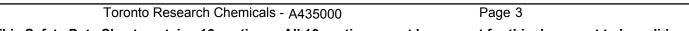
Skin Protection

Gloves should be used when handling this material. Gloves are to be inspected prior to use. Contaminated gloves are to be removed using proper glove removal technique so that the outer surface of the glove does not contact bare skin. Dispose of contaminated gloves after use in compliance with good laboratory practices and local requirements.

Gloves used for incidental exposures (splash protection) should be designated as "low chemical resistant" or "waterproof" by EU standard EN 374. Unrated gloves are not recommended. Suggested gloves: AnsellPro nitrile gloves style 92-500 or 92-600, 5 mil thickness. Penetration time has not been determined.

Gloves used for prolonged direct exposure (immersion) should be designated "chemical resistant" as per EN 734 with the resistance codes corresponding to the anticipated use of the material. Suggested gloves: AnsellPro Viton/Butyl gloves style 38-612, 4/8 mil thickness. Penetration time has not been determined.

These recommendations may not apply if the material is mixed with any other chemical, or dissolved into a solution. A



risk assessment must be performed to ensure the gloves will still offer acceptable protection.

Body Protection

Fire resistant (Nomex) lab coat or coveralls.

Respiratory Protection

Recommended respirators are NIOSH-approved N95 or CEN-approved FFP2 particulate respirators. These are to be only used as a backup to local exhaust ventilation or other engineering controls. If the respirator is the only means of protection, a full-face supplied air respirator must be used.

9. PHYSICAL AND CHEMICAL PROPERTIE	S
9.1 Information on Basic Physical and Chemical Pr	
A) Appearance	B) Odour
Yellow Solid	No data available
C) Odour Threshold	D) pH
No data available	No data available
E) Melting Point/Freezing Point >220°C (dec.)	F) Initial Boiling Point/Boiling Range No data available
G) Flash point	H) Evaporation Rate
No data available	No data available
I) Flammability (Solid/Gas)	J) Upper/Lower Flammability/Explosive Limits
No data available	No data available
K) Vapour Pressure	L) Vapour Density
No data available	No data available
M) Relative Density	N) Solubility
No data available	Chloroform, DMSO
O) Partition Coefficient: n-octanol/water No data available	P) Auto-Ignition Temperature No data available
Q) Decomposition Temperature	R) Viscosity
No data available	No data available
S) Explosive Properties	T) Oxidizing Properties
No data available	No data available
9.2 Other Information	
no data available	
10. STABILITY AND REACTIVITY	
10.1 Reactivity	
No data available	
10.2 Chemical Stability	
Stable at recommended storage conditions.	
10.3 Possibility of Hazardous Reactions	
No data available	
10.4 Conditions to Avoid	
No data available	
10.5 Incompatible Materials	
Strong oxidizing materials.	
10.6 Hazardous Decomposition Products	
No data available	

11. TOXICOLOGICAL INFORMATION

11.1 Information on Toxicological Effects

A) Acute Toxicity

No data available

B) Skin Corrosion/Irritation

Moderate skin irritant.

C) Serious Eye Damage/Irritation

Moderate eye irritant.

D) Respiratory or Skin Sensitization

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Inhalation May be harmful if inhaled. Causes respiratory tract irritation. Indestion Harmful if swallowed. Skin May be harmful if absorbed through skin. Causes serious skin irriation. Eyes Causes eye irritation. L) Signs and Symptoms of Exposure No data available To the best of our knowledge, the chemical, physical, and toxicological properties of this material have not been thoroughly investigated. M) Additional Information RTECS: Not listed **12. ECOLOGICAL INFORMATION** 12.1 Toxicity No data available 12.2 Persistance and Degradability No data available **12.3 Bioaccumulative Potential** No data available 12.4 Mobility in Soil No data available 12.5 Results of PBT and vPvB Assessment No data available **12.6 Other Adverse Effects** No data available **13. DISPOSAL CONSIDERATIONS 13.1 Waste Treatment Methods** A) Product Product may be burned in an incinerator equipped with afterburner and scrubber. Excess and expired materials are to be offered to a licensed hazardous material disposal company. Ensure that all Federal and Local regulations regarding the disposal and destruction of this material are followed. B) Contaminated Packaging Dispose of as above. C) Other Considerations Product is not to be disposed of in sanitary sewers, storm sewers, or landfills. **14. TRANSPORT INFORMATION** 14.1 UN Number DOT (US): N/A IATA: N/A IMDG: N/A ADR/RID: N/A 14.2 UN Proper Shipping Name DOT (US)/IATA: Toronto Research Chemicals - A435000 Page 5 This Safety Data Sheet contains 16 sections. All 16 sections must be present for this document to be valid.

No data available

No data available <u>F) Carcinogenicity</u> No data available

No data available

No data available <u>J) Aspiration Hazard</u> No data available

E) Germ Cell Mutagenicity

G) Reproductive Toxicity/Teratogenicity

Moderate respiratory tract irritation.

H) Single Target Organ Toxicity - Single Exposure

I) Single Target Organ Toxicity - Repeated Exposure

K) Potential Health Effects and Routes of Exposure

Not dangerous goods IMDG/ARD/RID:				
Not dangerous goods	(aa)			
14.3 Transport Hazard Class DOT (US): N/A	IATA: N/A	IMDG: N/A	ADR/RID: N/A	
14.4 Packing Group				
DOT (US): N/A	IATA: N/A	IMDG: N/A	ADR/RID: N/A	
14.5 Environmental Hazards	5	-		
DOT (US): None	- IATA: None	IMDG: None	ADR/RID: None	
14.6 Special Precautions for User				
None				
15. REGULATORY INFORMATION				
This safety data sheet compl EC No. 1907/2006 (Europea 15.1 Safety, Health and Env	n Union).		A 1910.1200 (US), and EU Regulation	

A) Canada

DSL/NDSL Status: This product is not listed on the Canadian DSL/NDSL.

B) United States

TSCA Status: This product is not listed on the US EPA TSCA.

C) European Union

ECHA Status: This product is not registered with the EU ECHA.

15.2 Chemical Safety Assessment

No data available

16. OTHER INFORMATION

16.1 Revision History

Original Publication Date: 11/21/2013

16.2 List of Abbreviations

LD50 Median lethal dose of a substance required to kill 50% of a test population.

- LC50 Medial lethal concentration of a substance required to kill 50% of a test population.
- LDLo Lowest known lethal dose

TDLo Lowest known toxic dose

- IARC International Agency for Research on Cancer
- NTP National Toxicology Program
- RTECS Registry of Toxic Effects of Chemical Substances

16.3 Further Information

Copyright 2013. Toronto Research Chemicals Inc. Copies may be made for internal use only. The above information is believed to be correct to the best of our knowledge, but is to be only used as a guide. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. Please take all due care when handling this product.