SAFETY DATA SHEETS

According to Globally Harmonized System of Classification and Labelling of Chemicals (GHS) - Sixth revised edition

Version: 1.0

Creation Date: Aug 11, 2017

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1.	Identification		
1.1	GHS Product identifier		
	Product name	3-BROMO-4-HYDROXYBENZALDEHYDE	
1.2	Other means of identification		
	Product number Other names	- 2-Bromo-4-formylphenol	
1.3	1.3 Recommended use of the chemical and restrictions on use		
	Identified uses Uses advised against	For industry use only. no data available	
2.	Hazard identification		
2.1	.1 Classification of the substance or mixture		
	Skin irritation, Category 2		
	Eye irritation, Category 2		
	Specific target organ toxicity – single exposure, Category 3		
2.2	GHS label elements, including precautionary statements		
	Pictogram(s)		
	Signal word		

Warning

Hazard statement(s)	H315 Causes skin irritation	
	H319 Causes serious eye irritation	
	H335 May cause respiratory irritation	
Precautionary statement(s)		
Prevention	P264 Wash thoroughly after handling.	
	P280 Wear protective gloves/protective clothing/eye protection/face protection.	
	P261 Avoid breathing dust/fume/gas/mist/vapours/spray.	
	P271 Use only outdoors or in a well-ventilated area.	
Response	P302+P352 IF ON SKIN: Wash with plenty of water/	
	P321 Specific treatment (see on this label).	
	P332+P313 If skin irritation occurs: Get medical advice/attention.	
	P362+P364 Take off contaminated clothing and wash it before reuse.	
	P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.	
	P337+P313 If eye irritation persists: Get medical advice/attention.	
	P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.	
	P312 Call a POISON CENTER/doctor/…if you feel unwell.	
Storage	P403+P233 Store in a well-ventilated place. Keep container tightly closed.	
	P405 Store locked up.	

P501 Dispose of contents/container to ...

2.3 Other hazards which do not result in classification

none

3. Composition/information on ingredients

3.1 Substances

Chemical name	Common names and	CAS	EC	Concentration
Chemical hame	synonyms	number	number	concentration
3-BROMO-4-	3-BROMO-4-	2973-		1000/
HYDROXYBENZALDEHYDE HYDROXYBENZALDEHYDE		78-6	none	100%

4. First-aid measures

4.1 Description of necessary first-aid measures

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms/effects, acute and delayed

no data available

4.3 Indication of immediate medical attention and special treatment

needed, if necessary

no data available

- 5. Fire-fighting measures
- 5.1 Extinguishing media

Suitable extinguishing media

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

5.2 Specific hazards arising from the chemical

no data available

5.3 Special protective actions for fire-fighters

Wear self-contained breathing apparatus for firefighting if necessary.

- 6. Accidental release measures
- 6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust. For personal protection see section 8.

6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

6.3 Methods and materials for containment and cleaning up

Pick up and arrange disposal. Sweep up and shovel. Keep in suitable, closed containers for disposal.

7. Handling and storage

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Avoid exposure - obtain special instructions before use.Provide appropriate exhaust ventilation at places where dust is formed. For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

- 8. Exposure controls/personal protection
- 8.1 Control parameters

Occupational Exposure limit values

no data available

Biological limit values

no data available

8.2 Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

8.3 Individual protection measures, such as personal protective equipment (PPE)

Eye/face protection

Safety glasses with side-shields conforming to EN166. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Wear impervious clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique(without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Respiratory protection

Wear dust mask when handling large quantities.

Thermal hazards

no data available

9. Physical and chemical properties

Physical state	colorless or light yellow crystal
Colour	no data available
Odour	no data available
Melting point/ freezing	455°C(lit.)
point	
Boiling point or initial	275°C(lit.)
boiling point and	
boiling range	
Flammability	no data available
Lower and upper	no data available
explosion limit /	
flammability limit	
Flash point	82°C(lit.)
Auto-ignition	no data available
temperature	
Decomposition	no data available
temperature	
рН	no data available
Kinematic viscosity	no data available
Solubility	no data available
Partition coefficient n-	no data available
octanol/water (log	
value)	
Vapour pressure	0.00718mmHg at 25°C
Density and/or relative	1.737 g/cm3
density	
Relative vapour density	no data available
Particle characteristics	no data available

10. Stability and reactivity

10.1 Reactivity

no data available

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

no data available

10.4 Conditions to avoid

no data available

10.5 Incompatible materials

no data available

10.6 Hazardous decomposition products

no data available

11. Toxicological information

Acute toxicity

- · Oral: no data available
- · Inhalation: no data available
- · Dermal: no data available

Skin corrosion/irritation

no data available

Serious eye damage/irritation

no data available

Respiratory or skin sensitization

no data available

Germ cell mutagenicity

no data available

Carcinogenicity

no data available

Reproductive toxicity

no data available

STOT-single exposure

no data available

STOT-repeated exposure

no data available

Aspiration hazard

no data available

12. Ecological information

12.1 Toxicity

- · Toxicity to fish: no data available
- · Toxicity to daphnia and other aquatic invertebrates: no data available
- · Toxicity to algae: no data available
- · Toxicity to microorganisms: no data available

12.2 Persistence and degradability

no data available

12.3 Bioaccumulative potential

no data available

12.4 Mobility in soil

no data available

12.5 Other adverse effects

no data available

13. Disposal considerations

13.1 Disposal methods

Product

The material can be disposed of by removal to a licensed chemical destruction plant or by controlled incineration with flue gas scrubbing. Do not contaminate

water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewer systems.

Contaminated packaging

Containers can be triply rinsed (or equivalent) and offered for recycling or reconditioning. Alternatively, the packaging can be punctured to make it unusable for other purposes and then be disposed of in a sanitary landfill. Controlled incineration with flue gas scrubbing is possible for combustible packaging materials.

14.	Transport information			
14.1	UN Number			
	ADR/RID: UN2811	IMDG: UN2811	IATA: UN2811	
14.2	UN Proper Shipping Name			
	ADR/RID: TOXIC SOLID, ORGANIC, N.O.S. IMDG: TOXIC SOLID, ORGANIC, N.O.S. IATA: TOXIC SOLID, ORGANIC, N.O.S.			
14.3 Transport hazard class(es)				
	ADR/RID: 6.1	IMDG: 6.1	IATA: 6.1	
14.4	Packing group, if applicab	le		
	ADR/RID: III	IMDG: III	ΙΑΤΑ: ΙΙΙ	
14.5	Environmental hazards			
	ADR/RID: no	IMDG: no	IATA: no	
14.6	Special precautions for user			
	no data available			
14.7	Transport in bulk according to Annex II of MARPOL 73/78 and the IBC			
	Code			
	no data available			
15.	Regulatory information			

15.1 Safety, health and environmental regulations specific for the

product in question

Chemical name	Common names and synonyms	CAS number	EC number	
3-BROMO-4-	3-BROMO-4-	2973-78-	nono	
HYDROXYBENZALDEHYDE	HYDROXYBENZALDEHYDE	6	none	
European Inventory of Existi (EINECS)	Not Listed.			
EC Inventory	Not Listed.			
United States Toxic Substan	Not Listed.			
China Catalog of Hazardous	Not Listed.			
New Zealand Inventory of Ch	Not Listed.			
Philippines Inventory of Che (PICCS)	Not Listed.			
Vietnam National Chemical I	Not Listed.			
Chinese Chemical Inventory of Existing Chemical Substances (China IECSC)			Not Listed.	

16. Other information

Information on revision

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Abbreviations and acronyms

- · CAS: Chemical Abstracts Service
- ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
- RID: Regulation concerning the International Carriage of Dangerous Goods by Rail
- · IMDG: International Maritime Dangerous Goods
- · IATA: International Air Transportation Association
- TWA: Time Weighted Average
- STEL: Short term exposure limit
- · LC50: Lethal Concentration 50%
- · LD50: Lethal Dose 50%
- EC50: Effective Concentration 50%

References

- IPCS The International Chemical Safety Cards (ICSC), website: http://www.ilo.org/dyn/icsc/showcard.home
- HSDB Hazardous Substances Data Bank, website: https://toxnet.nlm.nih.gov/newtoxnet/hsdb.htm
- IARC International Agency for Research on Cancer, website: http://www.iarc.fr/
- eChemPortal The Global Portal to Information on Chemical Substances by OECD, website:
- http://www.echemportal.org/echemportal/index?pageID=0&request_locale=en
- CAMEO Chemicals, website: http://cameochemicals.noaa.gov/search/simple
- ChemIDplus, website: http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp
- ERG Emergency Response Guidebook by U.S. Department of Transportation, website: http://www.phmsa.dot.gov/hazmat/library/erg
- Germany GESTIS-database on hazard substance, website: http://www.dguv.de/ifa/gestis/gestis-stoffdatenbank/index-2.jsp
- · ECHA European Chemicals Agency, website: https://echa.europa.eu/

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