



SAFETY DATA SHEET

According to OSHA Hazard Communication Standard 29 CFR 1910.1200 (GHS)

Product name	Merquel® 96	
Product id	8650M	
Revision date	24/11/2013	Revision: 3
Supersedes	02/11/2010	

1. Identification of the substance & the company

Trade name	MERQUEL® 96
Chemical family	Inorganic bromide
Type of product and use	Product is used for oxidation of mercury
Supplier	ICL-IP America Inc. 622 Emerson Road - Suite 500 St Louis, Missouri 63141, USA Tel:(314)983-7884 Fax:(314)983-7607 e-mail:msdsinfo@icl-ip.com
Emergency Telephone	Chemtrec (800)424-9300 Medical (800)420-9236

2. Hazards identification

GHS classification	Eye Irrit. 2, H319 Causes serious eye irritation USA: Eye Irrit. 2A, Causes serious eye irritation
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Symbol(s)



Signal Word	WARNING
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Hazard statements	H319 - Causes serious eye irritation
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Precautionary statements	P264 - Wash hands thoroughly after handling P337 + P313 - If eye irritation persists: Get medical advice/attention. P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing P280 - Wear protective gloves/protective clothing/eye protection/face protection
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3. Composition / information on ingredients

Components	CAS No.	Weight %
MERQUEL® 96	Confidential	99.5

4. First-aid measures

Eye contact Holding the eyelids apart, flush eyes promptly with copious flowing water for at least 20 minutes. Get medical attention immediately.

Skin contact Remove contaminated clothing. Wash skin thoroughly with mild soap and plenty of water for at least 15 minutes. Wash clothing before reuse. Get medical attention if irritation occurs and persists.

Inhalation In case of dust inhalation or breathing fumes released from heated material, remove person to fresh air. Keep him quiet and warm. Apply artificial respiration if necessary and get medical attention immediately.

Ingestion If swallowed, wash mouth thoroughly with plenty of water. Get medical attention immediately.

NOTE: Never give an unconscious person anything to drink

Most important symptoms and effects, acute or delayed

- Ocular Irritant

- Dermal Not irritant

- Inhalation May cause irritation to mucous membranes and upper respiratory tract.

- Ingestion Abdominal pain, nausea and vomiting. May cause falling asleep, muscular incoordination and respiratory depression.

Notes to the physician No specific antidote.
Treat symptomatically and supportively.



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5. Fire - fighting measures

Suitable extinguishing media Material is not combustible. Use extinguishing media appropriate to surrounding fire conditions.

Unusual fire and explosion hazards Will decompose from ca. 452°C releasing poisonous and corrosive fumes of HBr and NH₃.

Fire fighting procedure Cool containers with water spray. In closed stores, provide fire-fighters with self-contained breathing apparatus in positive pressure mode.

6. Accidental release measures

Personal precautions Wear respirator, chemical safety goggles, rubber gloves and boots.

Methods for cleaning up Sweep up, place in a bag and hold for waste disposal or possible reuse
Avoid raising dust.
Ventilate area and wash spill site after material pickup is complete.

Environmental precautions Avoid access to streams, lakes or ponds.

7. Handling and storage

Handling Keep containers tightly closed. Avoid bodily contact.

Storage Hygroscopic. Avoid exposure to moisture. Store in a dry, cool, well-ventilated area away from incompatible materials (see "materials to avoid").

8. Exposure controls / personal protection

Exposure Limits :

Components	ACGIH-TLV Data	OSHA (PEL) Data
MERQUEL® 96	Not determined	Not determined

Ventilation requirements Mechanical exhaust required.

Personal protective equipment:
- **Respiratory protection** Dust respirator
In case of significant or accidental dust emissions, dust mask should be worn



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- Hand protection	PVC or neoprene coated latex gloves
- Eye protection	Chemical safety goggles
- Skin and body protection	Body covering clothes and boots.

Hygiene measures Do not eat, smoke or drink where material is handled, processed or stored. Wash hands thoroughly after handling and before eating or smoking. Safety shower and eye bath should be provided.

9. Physical and chemical properties

Appearance	White granular powder or compacted solid, odourless
pH	6.62
Melting point/range	>370°C
Boiling point/range	235°C (in vacuum)
Flash point	None
Evaporation rate (ether=1)	Not applicable under standard conditions
Flammable/Explosion limits	Not flammable/Not explosive
Vapor pressure	1.3x10 ⁻⁴ Pa (25°C)
Vapor density	Not applicable under standard conditions
Solubility:	
- Solubility in water	97 g/100ml at 25°C 145.6 gr/100ml at 100°C
- Solubility in other solvents	Alcohol: 10 g/100ml at 78°C Acetone
Partition coefficient (n-octanol/water)	Not applicable since this material is almost completely soluble in water.
Auto-ignition temperature	Not applicable
Decomposition temperature	> 452°C
Viscosity	Not applicable
Specific gravity	2.455
Explosive properties	Not explosive
Oxidising properties	Not oxidising
Particle size	D10 =<90 µm, D50 =<277 µm, D90 =<508 µm

10. Stability and reactivity

Reactivity	Hygroscopic. Reacts explosively with bromine trifluoride .
Stability	Stable under normal conditions. No oxidizing or reducing potential. The powder product tends to cake under normal storage conditions.
Possibility of hazardous reactions	Decomposes when heated, releasing poisonous and corrosive fumes.
Conditions to avoid	Exposure to moisture. Heating above decomposition temperature.
Materials to avoid	Heavy metal salts, silver and potassium. Strong oxidizers, acids and bases.



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Hazardous decomposition products	NH ₃ , HBr
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11. Toxicological information

Likely Routes of Exposure	Skin Eye contact Ingestion Inhalation
Acute toxicity:	
- Rat oral LD50	2714 mg/kg
- Rat dermal LD50	> 2000 mg/kg
- Eye irritation (rabbit)	Irritant
- Dermal irritation (rabbit)	Not irritant
Dermal sensitization	Not a sensitizer
Sub-chronic toxicity:	In the 13 week toxicity study in rats with administration by the diet with neurotoxicity screening battery the NOEL was 100 mg/kg/day for females. For males, the NOEL (No Observed Effect Level) was very close to 100 mg/kg/day, since only one animal had slight limpness recorded on more than one occasion, and this recording was restricted to the detailed neurotoxicological examination.
Chronic toxicity	Repeated skin contact may cause dermatitis. Repeated oral intake of bromides (>9 mg/kg body weight/day) may affect the central nervous system. Warning symptoms include mental dullness, slurred speech, weakened memory, apathy, anorexia, constipation, drowsiness and loss of sensitivity to touch and pain.
Mutagenicity	Not mutagenic in the mouse lymphoma L5178Y test system. No micronucleus induction was detected in bone marrow erythrocytes of mice Not mutagenic by the Ames Test and by mouse lymphoma assay.
Carcinogenicity	Not classified by IARC Not included in NTP 12th Report on Carcinogens
Reproductive toxicity	The NOEL for foetal toxicity was identified as 50 mg/kg/day and the NOEL for maternal toxicity- 100 mg/kg/day

12. Ecological information

Note: Toxicity data of BROMIDE ION (tested as sodium bromide)

Aquatic toxicity :	Aquatic toxicity :
- LC50, Fish	> 1000 mg/l, 96 Hours (bluegill sunfish) > 1000 mg/l, 96 Hours (rainbow trout)



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- EC50, Daphnia magna > 1000 mg/l, 48 Hours

Avian toxicity:

- Oral LD50 >2000 mg/kg (Mallard Duck)
- Dietary LC50, Mallard duck >5000 mg/kg

Mobility Expected to be mobile in soil

Persistence and degradability NH₄Br is an inorganic salt, which fully dissociates in aquatic environment to bromide and ammonium ions. It also undergoes degradation in soil to bromide ion (no further degradation or biodegradation will occur).

Bioaccumulative potential Bioaccumulation is not likely to occur since this material is highly soluble in water.

Germany, water endangering classes (WGK) 2

13. Disposal considerations

Waste disposal Add into a large vessel containing water and drain into sewer with ample water. Observe all federal, state and local environmental regulations when disposing of this material

14. Transportation information

DOT Not regulated

IMDG Not regulated

ICAO/IATA Not regulated

15. Regulatory information

USA Reported in the EPA TSCA Inventory.

- SARA 313 This product does not contain a chemical listed at or above de minimis concentrations.

- Massachusetts Right-to-Know Hazardous Substances list Listed

- Pennsylvania Right-to-Know Hazardous Substances list Listed



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**- Rhode Island Right-to-Know
Hazardous Substances list**

Listed

Canada

Listed in DSL

EU

Reported in EINECS

EC No.

235-183-8

Japan

ENCS no. 1-106
ISHL no. 1-106

Australia

Listed in AICS

New Zealand Inventory

Listed in NZIoC

China

- China inventory

Listed in IECSC

Mexico

Listed in the National Inventory of Chemical Substances (INSQ).

Korea

Listed in the Korea Existing Chemicals Inventory (KECI), number KE-01639

Philippines

Listed in PICCS

16. Other information

This data sheet contains changes from the previous version in section(s)

1 (REACH), 2 (ROW), 8, 9, 10, 11, 12 (ROW), 15

Note:

All sections reformatted in accordance with OSHA Hazard Communication Standard 29 CFR 1910.1200 (GHS)

Health, Safety & Environment Policy

We will strive to ensure that our operations and products meet the needs of the present global community without compromising the ability of future generations to meet their needs. We accept that the success of our business is dependent on the supply of products and services that will benefit society whilst ensuring human safety and protection of the environment and natural resources. Within the framework of our commitment to the Responsible Care program, we will provide a healthy and safe work environment for employees and will responsibly manage our products at all stages of their life cycle in order to protect human health and the environment whilst maintaining high production standards of operation.



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TO MEET THIS COMMITMENT WE WILL: Comply with or exceed applicable national and international regulatory requirements and other requirements to which we subscribe Communicate openly and actively encourage dialogue with employees, customers and community concerning our products and operations Implement documented management systems consistent with and for promotion of the Responsible Care ethics

Develop and supply products that can be manufactured, transported, used and disposed of safely whilst best meeting the needs of our customers Regularly assess, continually improve and responsibly manage health, safety and environmental risks associated with products and processes throughout their life-cycles Share knowledge and expertise with others and seek to learn from and incorporate improved practices into our own operations

Educate and train employees, contractors and customers to improve their HSE performance Communicate up-to-date information to enable our workers, customers and other interested parties to handle our products in a safe and environmentally responsible manner Endeavor to work with customers, suppliers, distributors and contractors to foster the safe use, transport and disposal of our chemicals Support Product Stewardship programs in cooperation with customers, distributors and transporters

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End of safety data sheet