MATERIAL SAFETY DATA SHEET

Product Name: F-2300H
Product id: 9107H
Revision date: 27/05/2002
Revision: 3

1. Identification of the substance & the company

Chemical name: Tetrabromobisphenol A - Tetrabromobisphenol A diglycidyl ether
Synonym(s): F-2300H, Brominated epoxy Polymer
Chemical formula: \((\text{C}_{21}\text{H}_{20}\text{Br}_4\text{O}_4 \cdot \text{C}_{15}\text{H}_{12}\text{Br}_4\text{O}_2) \times\)
Chemical family: Brominated epoxy resin
Molecular weight: 18000-25000
Type of product and use: A polymeric flame retardant additive for thermoplastic resin systems.

Company: Bromine Compounds Ltd.
P.O.B 180, Beer Sheva 84101, Israel
Tel +972-8-6297830

Supplier: Ameribrom, INC. 2115 Linwood Avenue, Fort Lee, New Jersey 07024-5004 USA  Tel: 201 242 6560

Emergency Telephone: Chemtrec (800)424-9300

2. Composition / information on ingredients

<table>
<thead>
<tr>
<th>Components</th>
<th>Weight %</th>
<th>ACGIH-TLV Data</th>
<th>OSHA (PEL) Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tetrabromobisphenol A - Tetrabromobisphenol A diglycidyl ether 68928-70-1</td>
<td>Not Applicable</td>
<td>Not determined</td>
<td>Not determined</td>
</tr>
</tbody>
</table>

3. Hazards identification

Emergency overview

Light straw granules
No adverse health effects in human are known
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 re-use. Get medical attention immediately.

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 and give water to drink. Get medical attention immediately.

**NOTE:** Never give an unconscious person anything to drink.

Notes to the physician
Material with low toxicity.
No specific antidote. Treat symptomatically and supportively.

5. Fire - fighting measures

Flash point
>250°C (ASTM D93 PMOC)

Flammable/Explosion limits
Not flammable

Auto-ignition temperature
Not self-ignitable

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

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

Unusual fire and explosion hazards
Will decompose from ca. 344°C releasing poisonous and corrosive fumes of hydrogen bromide.

6. Accidental release measures

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

Methods for cleaning up
Sweep up, place in a bag and hold for waste disposal or possible re-use.
Ventilate area and wash spill site after material pickup is complete.
7. Handling and storage

Handling
Keep containers tightly closed.
Avoid bodily contact.

Storage
Store in a dry, cool, well-ventilated area.

8. Exposure controls / personal protection

Ventilation requirements
Ventilation must be sufficient to maintain TLV-TWA below 10 mg/m³ (ACGIH recommendation for Particulates (Insoluble) Not Otherwise Specified (PNOS)).

Personal protective equipment:
- Respiratory protection
  Dust respirator
- Hand protection
  Protective gloves
- Eye protection
  Chemical safety goggles
- Skin and body protection
  Body covering clothes and boots

Hygiene measures
Safety shower and eye bath should be provided. Do not eat, drink or smoke until after-work showering and changing clothes.

9. Physical and chemical properties

Appearance
Light straw granules

Melting point/range
130-150°C

Boiling point/range
Not applicable (decomposes)

Vapour pressure
Not applicable under standard conditions

Vapor density
Not applicable under standard conditions

Solubility:
- Solubility in water
  Insoluble
- Solubility in other solvents
  Soluble in polar solvents such as dioxane and DMF

Specific gravity
1.8

Decomposition temperature
344°C

10. Stability and reactivity

Stability
Stable under normal conditions.

Materials to avoid
None known

Conditions to avoid
Heating above 344°C

Hazardous decomposition products
HBr

Hazardous polymerization
Will not occur by itself, but masses of more than 0.5kg (1lb) of product plus an aliphatic amine will cause irreversible polymerization with moderate heat build-up.
11. Toxicological information

Note: The toxicological data presented below are the results of studies conducted on a lower molecular weight oligomer.

Acute toxicity:
- Rat oral LD50 > 2,000 mg/kg
- Eye irritation (rabbit) Not irritant
- Dermal irritation (rabbit) Not irritant
- Dermal sensitization --(guinea pig) Not a sensitizer

Chronic toxicity Not available

Mutagenicity Not mutagenic by the Ames Test

Carcinogenicity Not known to be a carcinogen.
Not classified by IARC.
Not included in NTP 9th Report on Carcinogens.

12. Ecological information

Information on ecological effects No information available

13. Disposal considerations

Waste disposal Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state and local environmental regulations when disposing of this material.

14. Transportation information

DOT Not regulated

IMO Not regulated
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ICAO/IATA: Not regulated

15. Regulatory information

USA: Reported in the EPA TSCA Inventory

Canada: Listed in DSL

EEC: This product is a polymer. The monomers are reported in EINECS (Nos. 2213460 & 2012369)

Japan: Listed in MITI (ENCS No.7-1267)

Australia: Listed in AICS

China inventory: Listed

South Korea: Listed in ECL (KE-23977)

Philippines: Listed in PICCS

16. Other information

This data sheet contains changes from the previous version in section(s)
1, 5, 8, 9, 10, 15

The HSE Policy of Dead Sea Bromine Group
Dead Sea Bromine Group (DSBG) is the world's largest producer of elemental bromine and a recognized leader in the development and supply of bromine compounds.
DSBG is committed to responsibly manage its products at all stages of their life cycle in order to protect human health and the environment.
This responsibility applies throughout development, manufacture, transportation, use, recycle and disposal of DSBG products.

WITHIN THIS FRAMEWORK DSBG IS COMMITTED TO:
* Comply with national and international regulatory requirements
* Conform to the ISO 14001 and OHSAS 18001 requirements for environmental and occupational health & safety management systems and periodically evaluate performance as part of the company's existing quality audits system
* Design products and processes which prevent risk to health and the environment at production sites and along the supply chain
* Improve efficiency in use of energy & natural resources, promote recycling and waste management through safe & environmentally sound end of life programs
* Work for continual improvement in HSE performance
* Regularly assess and responsibly manage health, safety and environmental risks associated with products and processes
* Educate and train all managers and employees to improve their HSE performance
* Distribute updated information concerning its policy and products to its workers, customers and other interested parties through Material Safety Data Sheet (MSDS), workers' safety sheets and through the DSBG Internet Site
* Develop business relationships with responsible suppliers, transporters and distributors and provide them with HSE support, information and training
* Support Product Stewardship programs in cooperation with customers, distributors and transporters
* Allocate the necessary resources for implementation of this policy

DSBG Disclaimer
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End of safety data sheet