

SAFETY DATA SHEET

According to OSHA Hazard Communication Standard 29 CFR 1910.1200 (GHS)
According to Canada WHMIS 2015

Product name	F-3100	
Product id	9535	
Revision date	19/03/2017	Revision: 8
Supersedes	03/08/2015	

1. Identification of the substance & the company

Product identifier	F-3100
Chemical name	Brominated epoxy polymer end-capped with tribromophenol
Molecular weight	15000
Type of product and use	A polymeric flame retardant additive.
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-group.com
Emergency Telephone	Chemtrec: (800) 424-9300 Medical: PROSAR 1-888-875-1685 (24HRS)

2. Hazards identification

GHS classification	Product is not subject to classification according to GHS. No label elements required.
---------------------------	--

3. Composition / information on ingredients

Components	CAS No.	Weight %
Brominated epoxy resin end-capped with tribromophenol	158725-44-1	100

This product can also be described as:
CAS No.534584-61-7 / CAS No. 135229-48-0

SAFETY DATA SHEET

According to OSHA Hazard Communication Standard 29 CFR 1910.1200 (GHS)
According to Canada WHMIS 2015

Product name	F-3100	
Product id	9535	
Revision date	19/03/2017	Revision: 8
Supersedes	03/08/2015	

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.
Inhalation	In case of 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

None known

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

5. Fire - fighting measures

Suitable extinguishing media	Material is not combustible. Use extinguishing media appropriate to surrounding fire conditions.
Unusual fire and explosion hazards	When heated to decomposition, may release poisonous and corrosive fumes of CO, CO ₂ and HBr.
Fire fighting procedure	Cool containers with water spray. In closed stores, provide fire-fighters with self-contained breathing apparatus in positive pressure mode.

SAFETY DATA SHEET

According to OSHA Hazard Communication Standard 29 CFR 1910.1200 (GHS)
According to Canada WHMIS 2015

Product name	F-3100	
Product id	9535	
Revision date	19/03/2017	Revision: 8
Supersedes	03/08/2015	

6. Accidental release measures

Personal precautions	Wear appropriate safety clothing and eye/face protection (see Section 8).
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	Prevent entry into sewers and watercourses

7. Handling and storage

Handling	Keep containers tightly closed. Avoid bodily contact.
Storage	Keep in a well-ventilated place

8. Exposure controls / personal protection

Exposure Limits :

Components	ACGIH-TLV Data	Korea OEL	OSHA (PEL) Data
Brominated epoxy resin end-capped with tribromophenol 158725-44-1	Not determined	Not determined	Not determined

Ventilation requirements	Ventilation must be sufficient to maintain TLV-TWA below 3 mg/m ³ , respirable particles, and 10 mg/m ³ , inhalable particles (ACGIH recommendation for Particles (Insoluble or poorly soluble) Not Otherwise Specified (PNOS)).
--------------------------	--

Personal protective equipment:

- Respiratory protection	Particle filter with low efficiency for solid particles (e.g. EN 143 or 149, Type P1 or FFP1)
- Hand protection	Rubber 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. Safety shower and eye bath should be provided. Wash hands thoroughly after handling and before eating or smoking.
------------------	--

9. Physical and chemical properties

Appearance	White to off-white powder
Odor	None.
pH	Not applicable
Softening point/range	180-220°C

SAFETY DATA SHEET

According to OSHA Hazard Communication Standard 29 CFR 1910.1200 (GHS)
According to Canada WHMIS 2015

Product name	F-3100	
Product id	9535	
Revision date	19/03/2017	Revision: 8
Supersedes	03/08/2015	
Flash point	None	
Flammable/Explosion limits	Not flammable/Not explosive	
Vapor pressure	Not applicable under standard conditions	
Solubility:		
- Solubility in water	Insoluble	
- Solubility in other solvents	Soluble in chlorobenzene, chloroform, dioxane, acetone, anisole	
Auto-ignition temperature	Not applicable	
Decomposition temperature	340°C	
Specific gravity	1.9	
Oxidising properties	The structure indicates non oxidizing properties	

10. Stability and reactivity

Reactivity	No reactive hazards known/expected.
Stability	Stable under normal conditions
Possibility of hazardous reactions	Not expected to occur
Conditions to avoid	Heating above decomposition temperature.
Materials to avoid	None known.
Hazardous decomposition products	Hydrogen bromide, carbon dioxide and carbon monoxide.

11. Toxicological information

Note:	<i>The toxicological data presented below are the results of studies conducted on a lower molecular weight oligomer.</i>
Acute toxicity:	
- Rat oral LD50	>2000 mg/kg
- Rabbit dermal LD50	>2000 mg/kg
- Dermal irritation (rabbit)	Not irritant
- Eye irritation (rabbit)	Not irritant
Dermal sensitization	Not a sensitizer
Chronic toxicity	No information available
Mutagenicity	Not mutagenic by the Ames Test. The product did not demonstrate mutagenic or genotoxic effects in various tests using mammalian cells.
Carcinogenicity	Not classified by IARC Not included in NTP 14th Report on Carcinogens
Reproductive toxicity	No information available.

SAFETY DATA SHEET

According to OSHA Hazard Communication Standard 29 CFR 1910.1200 (GHS)
According to Canada WHMIS 2015

Product name	F-3100	
Product id	9535	
Revision date	19/03/2017	Revision: 8
Supersedes	03/08/2015	

Specific Target Organ Toxicity (STOT) - Single exposure No effects on specific target organs have been identified

Specific Target Organ Toxicity (STOT) - Repeat exposure No effects on specific target organs have been identified.
NOAEL 1000 mg/kg bw/day (28 days, rat, oral)

12. Ecological information

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

Aquatic toxicity : Not toxic, even when applied amount of 2 orders of magnitude higher than solubility value.

Biodegradation Not biodegradable

Bioaccumulative potential The estimated BCF value suggests that bioconcentration in aquatic organisms is not expected to be an important fate process.

Mobility in soil The adsorption/desorption of the substance has been demonstrated to be high (log Koc >5)

Note: Does not meet the criteria for PBT or vPvB assessment

13. Disposal considerations

Waste disposal Observe all federal, state and local environmental regulations when disposing of this material

Disposal of Packaging Dispose of in a safe manner in accordance with local/national regulations.

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 Not listed

Canada Listed in DSL

SAFETY DATA SHEET

According to OSHA Hazard Communication Standard 29 CFR 1910.1200 (GHS)
According to Canada WHMIS 2015

Product name	F-3100	
Product id	9535	
Revision date	19/03/2017	Revision: 8
Supersedes	03/08/2015	

EU	Monomers are pre-registered under REACH
Japanese METI	7-2266
Australia	Listed in AICS
New Zealand Inventory	Listed in NZIoC (CAS 135229-48-0)
- China inventory	Listed in IECSC
Korea	Listed in the Korea Existing Chemicals Inventory (KECI) number 97-3-607
Taiwan	Listed (TCSI)
Philippines	Listed in PICCS

16. Other information

This data sheet contains changes from the previous version in section(s)
1, 3, 8, 9, 11, 12, 15

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.

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.

SAFETY DATA SHEET

According to OSHA Hazard Communication Standard 29 CFR 1910.1200 (GHS)
According to Canada WHMIS 2015

Product name	F-3100	
Product id	9535	
Revision date	19/03/2017	Revision: 8
Supersedes	03/08/2015	

Although the information and recommendations set forth herein (hereinafter "information") are presented in good faith and believed to be correct as of the date hereof, ICL-IP America Inc. makes no representations as to the completeness or accuracy thereof. Information is supplied upon the condition that the persons receiving same will make their own determination as to its safety and suitability for their purposes prior to use. In no event will ICL-IP America Inc. be responsible for damages of any nature whatsoever resulting from the use of or reliance upon information. NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESSED OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OF ANY OTHER NATURE, ARE MADE HEREUNDER WITH RESPECT TO INFORMATION OR THE PRODUCT TO WHICH THE INFORMATION REFERS.

Prepared by HERA Division
telephone: +/972-8-6297835
telefax: +/972-8-6297832
www.icl-ip.com
e-mail:msdsinfo@icl-group.com

End of safety data sheet