

FLASH 21B

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name	FLASH 21B
Product Family	Iron Solution
Manufacturer	ICL Performance Products Canada Ltd., 3060 Airport Road, Kamloops , British Columbia, V2B 7X2, 250-554-3530
Emergency Contact Information	CANUTEC, 613-996-6666 or *666 on a cellular phone (Canada Only), 24 Hours / Day
Use	Hydrocarbon Gelling Agent

2. HAZARDS IDENTIFICATION

Potential Health Effects

Inhalation	Harmful. Can cause severe irritation of the nose and throat.
Skin Contact	CORROSIVE. Contact can cause pain, redness, burns, and blistering. Permanent scarring can result.
Eye Contact	CORROSIVE. Contact causes severe burns with redness, swelling, pain and blurred vision. Permanent damage including blindness can result.
Ingestion	Harmful. Can irritate the mouth, throat and stomach. Can burn the lips, tongue, throat and stomach.
Carcinogenicity	Not known to cause cancer.
Teratogenicity / Embryotoxicity	Ethylene glycol is considered a developmental hazard based on animal evidence. In rats and mice, embryotoxic (late resorptions), fetotoxic (reduced fetal body weight) and teratogenic (external, soft tissue and skeletal defects) effects were observed at relatively high oral doses that caused no or minimal maternal toxicity. It is unlikely that humans could be exposed to high enough doses to cause developmental effects. No relevant human information was located. Methanol is reported to cause birth defects in rats exposed to 20 000 ppm. In experimental animals, methanol is fetotoxic, teratogenic and has produced significant behavioural abnormalities in offspring at dose levels not producing maternal toxic effects. Behavioural abnormalities were observed in the offspring of rats given drinking water containing 2% methanol. Methanol has produced mutagenic effects (somatic cells) in experimental animals.
Reproductive Toxicity	No information was located.
Mutagenicity	No information was located.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS Registry No.	Concentration %	Other Identifiers
FERRIC SULFATE	10028-22-5	40 - 70	
Ethanol, 2-amino-, sulfate (salt)	56633-27-3	7 - 13	
Ethylene glycol	107-21-1	7 - 13	
Quaternary ammonium compounds, benzyl-C12-C16-alkyldimethyl, chlorides	68424-85-1	5 - 10	
Iron hydroxide sulfate (Fe ₄ (OH) ₂ (SO ₄) ₅)	1310-45-8	5 - 10	
Ethanol	64-17-5	0.5 - 1.5	

4. FIRST AID MEASURES

First Aid Procedures

Inhalation	Move victim to fresh air. Keep at rest in a position comfortable for breathing. If breathing is difficult, trained personnel should administer emergency oxygen. Seek medical attention if respiratory irritation or distress continues.
Skin Contact	Avoid direct contact. Wear chemical protective clothing if necessary. Quickly take off contaminated clothing, shoes and leather goods (e.g. watchbands, belts). Immediately flush with lukewarm, gently flowing water for at least 30 minutes. Seek medical attention if irritation develops or persists.
Eye Contact	Immediately flush the contaminated eye(s) with lukewarm, gently flowing water for at least 30 minutes, while holding the eyelid(s) open. Seek medical attention if irritation develops or persists.
Ingestion	Have victim rinse mouth with water. Drink 2 - 3 glasses of water. NEVER give anything by mouth if victim is rapidly losing consciousness, or is unconscious or convulsing. DO NOT INDUCE VOMITING. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Have victim rinse mouth with water again. Seek medical attention.

5. FIRE FIGHTING MEASURES

Flammable Properties	Can ignite if strongly heated.
Suitable Extinguishing Media	Not combustible. Use extinguishing agent suitable for surrounding fire.
Unsuitable Extinguishing Media	None known.
Specific Hazards Arising from the Chemical	During a fire, irritating/toxic gases such as carbon monoxide, carbon dioxide, formaldehyde and other toxic and irritating gases or fumes and acrid smoke may be generated. Closed containers may rupture violently and suddenly release large amounts of product when exposed to fire or excessive heat for a sufficient period of time.
Protective Equipment and Precautions for Firefighters	Fight fire from a safe distance or a protected location. Firefighters may enter the area if positive pressure SCBA and full Bunker Gear is worn.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	Use the Personal Protective Equipment recommended in Section 8 of this MSDS. Handle in accordance with good industrial hygiene and safety practice. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate.
Environmental Precautions	Do not allow into any sewer, on the ground or into any waterway. Do not flush to drain.
Methods for Containment and Clean-up	Contain and soak up spill with absorbent that does not react with spilled product. Place used absorbent into suitable, covered, labelled containers for disposal. After cleaning, flush away traces with water. Collect washing for disposal.

7. HANDLING AND STORAGE

Handling	Only use where there is adequate ventilation. Avoid ALL unprotected contact with this product or with contaminated equipment/surfaces. Wear personal protective equipment to avoid direct contact with this chemical. Prevent uncontrolled release of product. Immediately report leaks, spills or failures of the safety equipment (e.g. ventilation system). Keep containers tightly closed when not in use or empty.
Storage	Store in an area that is: well-ventilated, separate from incompatible materials (see Section 10: Stability and Reactivity). Store in a dry place. Do not store in unlabeled containers. Store out of direct sunlight.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Chemical Name	ACGIH TLV®		OSHA PEL		AIHA WEEL	
	TWA	STEL	TWA	Ceiling	8-hr TWA	TWA
FERRIC SULFATE	1 mg/m ³	Not established	Not established	Not established	Not established	Not established
Ethanol, 2-amino-, sulfate (salt)	Not established	Not established	Not established	Not established	Not established	Not established
Quaternary ammonium compounds, benzyl-C12-C16-alkyldimethyl, chlorides	Not established	Not established	Not established	Not established	Not established	Not established
Ethylene glycol	Not established	100 mg/m ³ A4	Not established	50 ppm	Not established	Not established
Ethanol	Not established	Not established	Not established	Not established	Not established	Not established

Engineering Controls General ventilation is usually adequate. Use local exhaust ventilation, if general ventilation is not adequate to control amount in the air. Provide eyewash and safety shower if contact or splash hazard exists.

Personal Protective Equipment (PPE)

Eye/Face Protection Do not get in eyes. Contact lenses should not be worn when working with this material. Eye contact should be prevented through use of chemical safety glasses with side shields or splash proof goggles.

Skin Protection Prevent all skin contact. Skin contact should be minimized through use of gloves and suitable long sleeved clothing (i.e., shirt and pants, coveralls) Consideration must be given both to durability as well as permeation resistance. Chemically resistant gloves should be used.

Respiratory Protection Wear a NIOSH approved air-purifying respirator with an organic vapour cartridge. When airborne concentrations are excessive.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid
Appearance	Amber liquid.
Odour	Faint
Boiling Point	Not available
Melting Point	Not available
Freezing Point	Not available
Relative Density (water = 1)	1.395
Solubility in Water	Soluble.
pH	1.89
Vapour Pressure	Not available
Vapour Density (air = 1)	Not available
Evaporation Rate	Not available
Flash Point	> 93.3 °C (199.9 °F) (closed cup)
Lower Flammable/Explosive Limit	Not available
Upper Flammable/Explosive Limit	Not available

10. STABILITY AND REACTIVITY

Chemical Stability Normally stable.

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Conditions to Avoid	None known.
Incompatible Materials	Oxidizing agents (e.g. peroxides), reducing agents (e.g. hydroquinone).
Hazardous Decomposition Products	Oxides of Carbon Oxides of Nitrogen Oxides of Sulfur.

11. TOXICOLOGICAL INFORMATION

LC50/LD50 Values

Chemical Name	LC50	LD50 (oral)	LD50 (dermal)
FERRIC SULFATE	Not available	500 mg/kg (rat)	Not available
Ethanol, 2-amino-, sulfate (salt)	Not available	Not available	Not available
Quaternary ammonium compounds, benzyl-C12-C16-alkyldimethyl, chlorides	Not available	426 mg/kg (rat)	Not available
Ethylene glycol	2725 mg/m3 (rat)	4000 mg/kg (female rat)	9530 mg/kg (rabbit)
Iron hydroxide sulfate (Fe4(OH)2(SO4)5)	Not available	Not available	Not available
Ethanol	> 32380 ppm (rat) (4-hour exposure)	7060 mg/kg (rat)	> 15800 mg/kg (rabbit)

Skin Irritation / Corrosion

No information was located.

Eye Irritation / Corrosion

No information was located.

Effects of Short-Term (Acute) Exposure

Ingestion

Depression of the central nervous system, and effects on the heart and kidneys. In some cases, there may be delayed effects on the nervous system.

Effects of Long-Term (Chronic) Exposure

Kidney stones and long-lasting kidney injury.

Carcinogenicity

Chemical Name	IARC	ACGIH®	NTP	OSHA
FERRIC SULFATE	Not Listed	Not designated	Not Listed	Not Listed
Ethanol, 2-amino-, sulfate (salt)	Not Listed	Not designated	Not Listed	Not Listed
Quaternary ammonium compounds, benzyl-C12-C16-alkyldimethyl, chlorides	Not Listed	Not designated	Not Listed	Not Listed
Ethylene glycol	Not Listed	A4	Not Listed	Not Listed
Iron hydroxide sulfate (Fe4(OH)2(SO4)5)	Not Listed	Not designated	Not Listed	Not Listed
Ethanol	Not Listed	A3	Not Listed	Not Listed

ACGIH®:

A3 – Confirmed animal carcinogen.

A4 – Not classifiable as a human carcinogen.

IARC:

Group 1 – Carcinogenic to humans.

Teratogenicity / Embryotoxicity

Ethylene glycol is considered a developmental hazard based on animal evidence. In rats and mice, embryotoxic (late resorptions), fetotoxic (reduced fetal body weight) and teratogenic (external, soft tissue and skeletal defects) effects were observed at relatively high oral doses that caused no or minimal maternal toxicity. It is unlikely that humans could be exposed to high enough doses to cause developmental effects. No relevant human information was located.

Reproductive Toxicity

No information was located.

12. ECOLOGICAL INFORMATION

General Comments Environmental information was not located.

Ecotoxicity Studies were not located.

Persistence and Degradability No information was located.

Bioaccumulation / Accumulation No information was located.

Mobility Studies are not available.

13. DISPOSAL CONSIDERATIONS

Recycle and reuse product, if possible. Contact local environmental authorities for approved disposal or recycling methods in your jurisdiction.

14. TRANSPORT INFORMATION

Shipping Information

Regulation	UN No.	Shipping Name	Class	Packing Group
Canadian TDG	UN3264	Corrosive Liquid, Acidic, Inorganic, N.O.S. (FERRIC SULFATE)	8	III

Other Transport Information

Special Shipping Information Not applicable

15. REGULATORY INFORMATION

Canada

WHMIS Classification



Class D2A



Class E

D2A - Very Toxic (Teratogenicity/embryotoxicity); E - Corrosive

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by the Controlled Products Regulations.

Domestic Substances List (DSL) / Non-Domestic Substances List (NDSL)

All ingredients are listed on the DSL or are not required to be listed.

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Toxic Substances Control Act (TSCA) Section 8(b)

All ingredients are listed on the TSCA Inventory.

16. OTHER INFORMATION

MSDS Prepared By Product Safety Committee

Phone No. 403-279-8545

Date of Preparation April 23, 2012

Disclaimer To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.