

Material Safety Data Sheet

Section 1

Product Identification & Use

Material Name	ALUMINUM ALLOYS (Series 1,2,3,5,6,7 thousand)	Supplier	Samuel, Son & Co. LTD.
Synonyms	Includes all sheet products, plate, strip, bar, slab, ingot, and tubular products	Address	2360 Dixie Road Mississauga, Ontario L4Y 1Z7
WHMIS Class	D2A, D2B	Phone	(905) 279-5460
Material Use	Manufacture of Articles	Toll Free	1-800-26SAMUEL
		Fax	(905) 279-9658

Section 2

Hazardous Ingredients (OF=oxide fumes/DF=dust and fume/TD=Ti dioxide)

ELEMENT	C.A.S.#	% weight	OSHA PEL (mg/m)	TLV (mg/m3)
Aluminum	7429-90-5	90-99.7	N/A	10.0 OF/5.0 DF
Chromium	7440-47-3	<0.01-0.4	1.0 chrome metal	0.2 fume, 0.1 dust
Metal Copper	7440-50-8	<0.05-6.0	0.1 fume 1.0 dust	0.2 fume 1.0 dust
Iron	1309-37-1	<0.35-1.0	10 OF	5 OF
Magnesium	1309-48A	<0.03A.9	15 OF	10 OF
Manganese	7439-96-5	<0.02-1.5	5c dust 5c fume	5c dust 1 fume
Silicon	7440-21-3	<0.25-0.2	N/A	10 total dust
Titanium	7440-32-6	<0.02-0.2	15 TD	10 TD
Zinc	1314-13-2	,0.05-6.1	15 OF	10 dust 5 fume
Bismuth	7440-69-9	<0.40-0.7	N/A	N/A
Boron	7440A2-8	.06 max	15 oxide fume	10 oxide fume
Lead	7439-92-1	<0.40-0.7	0.05 DF	0.15 DF
Vanadium	7440-62-2	0.05 max	0.05c dust, 0.1c fume	0.05 dust & 0.05 fume

Note:

Aluminum alloys will be comprised of various combinations of the elements shown above. In addition, other alloying elements may be present in minute quantities. No permissible exposure limits (PEL) or threshold limit values (TLV) exist for aluminum alloys. Values shown are applicable to component elements.

Section 3

Physical Data

Physical state: Solid Odour: N/a Evaporation Rate: N/a Boiling point: N/a Vapour pressure: N/a
Vapour density: N/a Freezing point: N/a Coefficient wtr/oil distribution: N/a Ph: N/a
Odour threshold: N/a Boiling point: N/a Appearance: slvr gry Specific Gravity:H20=1(approx. 2.5-2.9)

Section 4

Fire & Explosion Data

Means of extinction: Dry Powder or Sand *NOTE: do not use water or Halogen on molten Aluminum Flash

Section 5

Reactivity Data

Not applicable Chemical Stability: yes Incompatibility to other substances: yes
Reactivity & under what condition: Sodium Hydroxide & Halogen ACIDS in contact with Aluminum may generate explosive Hydrogen Mixtures. Hazardous Decomposition Products: extreme heat may produce toxic or irritating airborne particulate, including Alloy Oxide

Section 6

Toxicological Properties of Material

Route of entry: Prolonged skin contact with coated products may cause skin irritation in sensitive individuals
Inhalation of alloy particulate or elemental oxide fumes generated during welding, burning, grinding or machining may pose acute or chronic effects.

Acute exposure: Inhalation of overexposure may cause metal fume fever characterised by fever and chills (flu like symptoms) appears to 6 hours after exposure with no know long term effects.

Chronic exposure: Chronic inhalation of alloy fume may cause a benign pneumonconiosis (siderosis)

with few or no symptoms. Chronic inhalation of fumes may affect the digestive system, nervous system, respiratory system, muscles and joints.

Sensitisation to product: **Unknown** Synergistic materials: **Unknown** Reproductive effects: **No known effect**

Teratogenicity: **No known effect** Mutagenicity: **No known effect**

Carcinogenicity of material: IARC lists Hexavalent Chromium compounds under its group 1 category.

Confirmed Human Carcinogen

Note: welding fume may also contain
contaminants from fluxes or welding consumables.

Section 7 **Preventive Measures**

Personal Protective Equipment: Dependent upon process being performed on material.

Each operation must be addressed for suitable equipment and or engineering controls.

Gloves: Leather faced/ cut protection Eyes: Safety glasses or face shield as appropriate

Footwear: Safety shoes/ boots where required Other: Barrier cream may be used when handling

Respiratory: Approved respiratory protection where applicable.

Engineering Controls (eg. Ventilation, enclosures): General or local exhaust ventilation during welding.

Leak and spill procedures: N/a

Water disposal: N/a

Storage Requirements: Keep stored material dry to prevent corrosion.

Special Shipping Information: N/a

Section 8 **First-Aid Measures**

Skin: Wash affected area with soap and water. Seek medical attention if irritation persists.

Eye: For irritation from any coating material flush eyes with plenty of water.

Seek medical attention if irritation persists.

Inhalation: For overexposure to alloy fumes remove to fresh air.

Seek medical attention for adverse symptoms

Ingestion: N/a

Section 9 **Preparation Date of MSDS**

Prepared by Samuel, Son & Co. Ltd.

Phone Number 1-800-267-2683

Date January 2012

The information contained is based on the data considered accurate, however, no warranty is expressed or implied regarding the accuracy of these data or the results obtained from the use thereof.





MATERIAL SAFETY DATA SHEET

SECTION 1. PRODUCT IDENTIFICATION

MATERIAL NAME: ABS Pipe and Fittings
PRODUCT USE: Plumbing product (drain, waste, vent), Industrial piping

SECTION 2. PREPARATION INFORMATION

MANUFACTURER/SUPPLIER: IPEX Inc.
807 Pharmacy Avenue
Scarborough, Ontario
Canada
M1L 3K2

TELEPHONE NO.: (416) 445-3400
PREPARED BY: Health, Safety and Environment
DATE PREPARED: February 22nd 2012

SECTION 3. HAZARDOUS INGREDIENTS

This product consists primarily of high molecular weight polymers. Substances listed below are reportable hazardous ingredients as defined by the OSHA Hazard Communication Standard. Exposure limits, when available, are also listed. Styrene, if present, is listed below based upon its IARC classification as a possible carcinogen.

Additional compositional data are also provided in Section 11, REGULATORY INFORMATION, subject to supplier notification requirements.

INGREDIENT NAME	CAS NUMBER	OSHA	UNITS	ACGIH	UNITS
Carbon Black	1333-86-4	3.5	mg/m ³ PEL	3.5	mg/m ³ TLV
Styrene	100-42-5	50.0	Ppm PEL	50.0	ppm TLV
		100.0	Ppm STEL	100.0	ppm STEL

SECTION 4. PHYSICAL DATA

PHYSICAL STATE: Solid

ODOUR AND APPEARANCE: Pipe and Fittings with slight odour

BOILING POINT: Not applicable

MELTING POINT: See COMMENT below

VAPOUR PRESSURE (mmHg): Negligible

VAPOUR DENSITY (air=1): Not applicable

SPECIFIC GRAVITY (water=1): > 1

WATER SOLUBILITY: Insoluble

% VOLATILES: Negligible

MSDS: ABS Pipe and Fittings	Revision Level: # 4	Prepared Date: 2012 02 22	Page 1 of 4
Prepared by: Amy Slattery	Checked by: Stan Rodriguez <i>SS</i>	Approved by: <i>SS</i>	



pH: Not applicable

ODOUR THRESHOLD: Not established

EVAPORATION RATE: Negligible

COEFFICIENT WATER/OIL DISTR: Not established

COMMENT: This product does not exhibit a sharp melting point, but softens gradually over a wide temperature range.

SECTION 5. FIRE OR EXPLOSION HAZARD

FIRE FIGHTING: Approved pressure demand breathing apparatus and protective clothing should be used for all fires. Water spray is the preferred extinguishing medium. This product will melt but will not be carried on the surface of water.

EXTINGUISHING MEDIA: Water spray and foam. Water is the best extinguishing medium. Carbon dioxide and dry chemical are not generally recommended because their lack of cooling capacity may permit re-ignition.

HAZARDOUS COMBUSTION PRODUCTS: Hazardous combustion products may include intense heat, dense black smoke, carbon monoxide, hydrogen cyanide, hydrocarbon fragments and carbon dioxide.

FLASH POINT: Not applicable

LOWER FLAMMABLE LIMIT: Not established

UPPER FLAMMABLE LIMIT: Not established

AUTOIGNITION: 508°C (946°F), estimated

CONDITIONS OF FLAMMABILITY: Requires a continuous flame source to ignite.

IMPACT SENSITIVITY: Not sensitive to mechanical impact.

STATIC DISCHARGE: Not sensitive to static discharge.

SECTION 6. REACTIVITY DATA

STABILITY: Stable under recommended conditions of storage and handling.

REACTIVITY: Not reactive under recommended conditions of handling, storage, processing and use.

CONDITIONS TO AVOID: Do not exceed melt temperature recommendations in product literature.

HAZARDOUS DECOMPOSITION: Processing fumes evolved at recommended processing conditions may include trace levels of styrene, acrylonitrile, acrolein, acetaldehyde, acetophenone, ethylbenzene, cumene, 4-vinylcyclohexene and phenols.

MSDS: ABS Pipe and Fittings	Revision Level: # 4	Prepared Date: 2012 02 22	Page 2 of 4
Prepared by: Amy Slattery	Checked by: Stan Rodriguez <i>[Signature]</i>	Approved by: <i>[Signature]</i>	



SECTION 7. TOXICOLOGICAL PROPERTIES

- ORAL ACUTE:** Oral LD₅₀ (Rat) > 5 g/kg, estimated.
- COMPONENTS:** Styrene monomer is listed as a possible carcinogen by IARC. Rats exposed to acrylonitrile by inhalation or ingestion induced brain, zymball gland (no comparable human gland) and stomach tumours.
- EMERGENCY OVERVIEW:** ABS Pipe and Fittings with slight or no odour. Can burn in a fire creating dense toxic smoke. Molten plastic can cause severe thermal burns. Fumes produced if melted or burned may cause eye, skin and respiratory tract irritation. Secondary operations, such as grinding, sanding or sawing, can produce dust which may present an explosion or respiratory hazard.

POTENTIAL HEALTH EFFECTS

- EYE:** Product may cause irritation or injury due to mechanical action.
- SKIN:** ABS Pipe and Fittings not likely to cause skin irritation.
- INGESTION:** Not acutely toxic.

CHRONIC/CARCINOGENICITY

- NTP:** Not tested
- OSHA:** Not regulated
- IARC:** Listed

MEDICAL RESTRICTIONS: There are no known human health effects aggravated by exposure to this product. However, certain sensitive individuals and individuals with respiratory impairments may be affected by exposure to components in the processing fumes.

NOTE: OSHA, IARC and/or NTP have listed carbon black and heavy metals, present in some colorants, as carcinogens. If these colorants are present in this product, they are shown in SECTION 2. These colorants are essentially bound to the plastic matrix and are unlikely to contribute to workplace exposure under recommended processing conditions.

SECTION 8. PREVENTIVE MEASURES

- PERSONAL PROTECTIVE EQUIPMENT TO BE USED:** When cutting, the use of eye protection and a NIOSH-approved respirator for dust is recommended.
- ENGINEERING CONTROLS TO BE USED:** Ventilate adequately when cutting.
- WASTE DISPOSAL:** Handle in accordance with federal, state, provincial and municipal regulations.
- PROCEDURES TO BE FOLLOWED IN CASE OF LEAK OR SPILL:** Pipe fragments and debris should be swept up and removed to a disposal container.
- HANDLING PROCEDURES AND EQUIPMENT:** Avoid creating and breathing ABS dust.
- STORAGE REQUIREMENTS:** None

MSDS: ABS Pipe and Fittings	Revision Level: # 4	Prepared Date: 2012 02 22	Page 3 of 4
Prepared by: Amy Slattery	Checked by: Stan Rodriguez <i>SS</i>	Approved by: <i>SS</i>	



SPECIAL SHIPPING INFORMATION:

Not applicable

SECTION 9. EMERGENCY AND FIRST AID MEASURES

SPECIFIC FIRST AID MEASURES:

No situation is likely to arise from routine handling of ABS Pipe and Fittings.

EYES:

Remove contact lenses at once. Immediately flush eyes with copious quantities of water or normal saline for at least 20-30 minutes. If irritation persists, seek medical attention.

SKIN:

Wash skin thoroughly with soap and water. Seek medical attention if rash or burn occurs.

INGESTION:

Not probable. If a large amount is swallowed, seek medical attention.

INHALATION:

Not likely to be inhaled due to physical form.

SECTION 10. REGULATORY INFORMATION

Listed below are chemical substances subject to supplier notification requirements. The percentages, when present, represent average values.

INGREDIENT NAME	CAS NUMBER	EPCRA 313 %	WHMIS %	NPRI %	CA-65 %	FL RI
4-ethenylcyclohexene	100-40-3				<0.1	
Styrene	100-42-5	0.2				
Acrylonitrile	107-13-1				<0.01	

CA-65: Chemical substances identified under the California Proposition 65 column are known to the State of California to cause cancer and/or reproductive toxicity.

TSCA STATUS: This product complies with the Chemical Substance Inventory requirements of the US EPA Toxic Structures Control Act (TSCA).

WHMIS CLASSIFICATION: Not a controlled product.

SECTION 11. ADDITIONAL GENERAL INFORMATION

Disclaimer:

The information contained in this material safety data sheet is based on information available to IPEX Inc. and is believed to be accurate. Where this information is based on data developed by third parties, IPEX Inc. expressly denies liability. IPEX Inc. makes no warranty, expressed or implied, regarding the accuracy of this information or data or the results obtained from its use. All recommendations are made without guarantee, since the conditions of use of this product are beyond IPEX Inc.'s control. IPEX Inc. assumes no responsibility for any damages resulting from the use of this product described herein.

Please consult IPEX Inc. for further information.

MSDS: ABS Pipe and Fittings	Revision Level: # 4	Prepared Date: 2012 02 22	Page 4 of 4
Prepared by: Amy Slattery	Checked by: Stan Rodriguez <i>SS</i>	Approved by: <i>SS</i>	