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MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Product identifier	Royston 120-29 Low VOC Edge Sealer	
Version #	01	
Issue date	05-26-2015	
CAS #	Mixture	
Product use	Not available.	
Manufacturer information	CHASE CORPORATION Blawnox Plant 128 1st Street Blawnox, PA 15238-3223 United States 866-932-0800 800-424-9300 703-527-3887	
	Chemtrec, US	
	Chemtrec, outside of US	
Supplier	Not available.	

2. Hazards Identification

Emergency overview	DANGER Flammable liquid - may release vapors that form flammable mixtures at or above the flash point. Will be easily ignited by heat, spark or flames. Heat may cause the containers to explode. Irritating to eyes and skin. Teratogenic. Can cause adverse reproductive effects - such as birth defects, miscarriages, or infertility. Prolonged exposure may cause chronic effects.
Potential health effects	
Routes of exposure	Inhalation. Ingestion. Skin contact. Eye contact.
Eyes	Contact with eyes may cause irritation. Avoid contact with eyes.
Skin	May cause skin irritation. Avoid contact with the skin.
Inhalation	May cause irritation of respiratory tract. Prolonged inhalation may be harmful. Avoid breathing dust/fume/gas/mist/vapors/spray.
Ingestion	Components of the product may be absorbed into the body by ingestion. Irritating. May cause nausea, stomach pain and vomiting. Do not ingest.
Target organs	Central nervous system. Eyes. Kidneys. Liver. Respiratory system. Skin.
Chronic effects	Sterility. Pregnant women or women of child-bearing age should not be exposed to this product. Can cause adverse reproductive effects - such as birth defects, miscarriages, or infertility. May cause birth defects. Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis.
Signs and symptoms	Birth defects. Sterility. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. Symptoms may include redness, edema, drying, defatting and cracking of the skin.
Potential environmental effects	Components of this product are hazardous to aquatic life. May cause long-term adverse effects in the environment.

3. Composition / Information on Ingredients

Hazardous components	CAS #	Percent
Tert-butyl Acetate	540-88-5	10 - 30

Hazardous components	CAS #	Percent
Toluene	108-88-3	10 - 30
Non-hazardous components	CAS #	Percent
Oil, Mineral	64741-96-4	5 - 10
Other components below reportable levels		40 - 70

4. First Aid Measures

First aid procedures

Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. If a contact lens is present, DO NOT delay irrigation or attempt to remove the lens. Continue rinsing. Get medical attention if irritation develops and persists.
Skin contact	Take off immediately all contaminated clothing. Wash off immediately with soap and plenty of water. Get medical attention if irritation develops and persists.
Inhalation	Move to fresh air. Get medical attention, if needed.
Ingestion	Rinse mouth thoroughly. Never give anything by mouth to a victim who is unconscious or is having convulsions. Do not induce vomiting without advice from poison control center. If ingestion of a large amount does occur, call a poison control center immediately.

Notes to physician

Symptoms may be delayed.

General advice

If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.

5. Fire Fighting Measures

Flammable properties

Flammable by WHMIS criteria. Heat may cause the containers to explode. Vapors may travel considerable distance to a source of ignition and flash back.

Extinguishing media

Suitable extinguishing media Foam. Dry powder. Carbon dioxide (CO₂).

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

Protection of firefighters

Specific hazards arising from the chemical Fire may produce irritating, corrosive and/or toxic gases.

Protective equipment for firefighters Firefighters should wear full protective clothing including self contained breathing apparatus.

Fire fighting equipment/instructions

Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also consider initial evacuation for 800 meters (1/2 mile) in all directions. ALWAYS stay away from tanks engulfed in flame. In the event of fire, cool tanks with water spray. Withdraw immediately in case of rising sound from venting safety device or any discoloration of tanks due to fire. For massive fire in cargo area, use unmanned hose holder or monitor nozzles, if possible. If not, withdraw and let fire burn out. Some of these materials, if spilled, may evaporate leaving a flammable residue.

Explosion data

Sensitivity to static discharge Not available.

Sensitivity to mechanical impact Not available.

Hazardous combustion products

Not available.

6. Accidental Release Measures

Personal precautions

Consider initial downwind evacuation for at least 500 meters (1/3 mile). Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. For personal protection, see section 8 of the MSDS.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not contaminate water.

Methods for containment Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Stop leak if you can do so without risk. Move the cylinder to a safe and open area if the leak is irreparable. Dike the spilled material, where this is possible. Prevent entry into waterways, sewer, basements or confined areas.

Methods for cleaning up Extinguish all flames in the vicinity. Should not be released into the environment.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. Clean up in accordance with all applicable regulations. For waste disposal, see section 13 of the MSDS.

Other information Clean up in accordance with all applicable regulations.

7. Handling and Storage

Handling Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. When using do not smoke. All equipment used when handling the product must be grounded. Avoid breathing mist or vapor. Avoid contact with skin. Avoid contact with eyes. Avoid prolonged exposure. When using do not eat or drink. Do not use in areas without adequate ventilation. Wash thoroughly after handling. Avoid release to the environment.

Storage Do not handle or store near an open flame, heat or other sources of ignition. Keep at temperature not exceeding 49 °C. This material can accumulate static charge which may cause spark and become an ignition source. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Store in a closed container away from incompatible materials. Store in a well-ventilated place. Refrigeration recommended. Keep in an area equipped with sprinklers. Use care in handling/storage. Store away from incompatible materials (see Section 10 of the MSDS).

8. Exposure Controls / Personal Protection

Occupational exposure limits

US. ACGIH Threshold Limit Values

Components	Type	Value
Tert-butyl Acetate (CAS 540-88-5)	TWA	200 ppm
Toluene (CAS 108-88-3)	TWA	20 ppm

Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)

Components	Type	Value	Form
Oil, Mineral (CAS 64741-96-4)	STEL	10 mg/m3	Mist.
	TWA	5 mg/m3	Mist.
Tert-butyl Acetate (CAS 540-88-5)	TWA	950 mg/m3	
		200 ppm	
Toluene (CAS 108-88-3)	TWA	188 mg/m3	
		50 ppm	

Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)

Components	Type	Value
Tert-butyl Acetate (CAS 540-88-5)	TWA	200 ppm
Toluene (CAS 108-88-3)	TWA	20 ppm

Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act)

Components	Type	Value
Tert-butyl Acetate (CAS 540-88-5)	TWA	200 ppm
Toluene (CAS 108-88-3)	TWA	20 ppm

Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents)

Components	Type	Value	Form
Oil, Mineral (CAS 64741-96-4)	STEL	10 mg/m3	Mist.
	TWA	5 mg/m3	Mist.
Tert-butyl Acetate (CAS 540-88-5)	TWA	200 ppm	
Toluene (CAS 108-88-3)	TWA	20 ppm	

Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment)

Components	Type	Value	Form
Oil, Mineral (CAS 64741-96-4)	STEL	10 mg/m3	Mist.
	TWA	5 mg/m3	Mist.
Tert-butyl Acetate (CAS 540-88-5)	TWA	950 mg/m3	
Toluene (CAS 108-88-3)	TWA	200 ppm	
		188 mg/m3	
		50 ppm	

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	Form
Oil, Mineral (CAS 64741-96-4)	PEL	5 mg/m3	Mist.
		2000 mg/m3	
Tert-butyl Acetate (CAS 540-88-5)	PEL	500 ppm	
		950 mg/m3	
		200 ppm	

US. OSHA Table Z-2 (29 CFR 1910.1000)

Components	Type	Value
Toluene (CAS 108-88-3)	Ceiling	300 ppm
	TWA	200 ppm

Biological limit values**ACGIH Biological Exposure Indices**

Components	Value	Determinant	Specimen	Sampling Time
Toluene (CAS 108-88-3)	0.3 mg/g	o-Cresol, with hydrolysis	Creatinine in urine	*
	0.03 mg/l	Toluene	Urine	*
	0.02 mg/l	Toluene	Blood	*

* - For sampling details, please see the source document.

Exposure guidelines**Canada - Alberta OELs: Skin designation**

Toluene (CAS 108-88-3) Can be absorbed through the skin.

Canada - Quebec OELs: Skin designation

Toluene (CAS 108-88-3) Can be absorbed through the skin.

Canada - Saskatchewan OELs: Skin designation

Toluene (CAS 108-88-3) Can be absorbed through the skin.

Engineering controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Ensure adequate ventilation, especially in confined areas.

Personal protective equipment**Eye/face protection**

Wear safety glasses with side shields (or goggles).

Skin protection

Wear appropriate chemical resistant clothing.

Respiratory protection

Use a positive-pressure air-supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air-purifying respirators may not provide adequate protection.

Hand protection

Wear protective gloves.

9. Physical & Chemical Properties**Appearance**

Physical state	Liquid.
Form	Liquid.
Color	Black
Odor	Hydrocarbon-like.
Odor threshold	Not available.
pH	Not available.
Vapor pressure	48.12 hPa estimated
Vapor density	Not available.
Boiling point	208.04 °F (97.8 °C) estimated
Melting point/Freezing point	-138.82 °F (-94.9 °C) estimated
Solubility (water)	Not available.
Specific gravity	0.9 estimated
Relative density	Not available.
Flash point	40.0 °F (4.4 °C) estimated
Flammability limits in air, upper, % by volume	Not available.
Flammability limits in air, lower, % by volume	1.3 % estimated
Auto-ignition temperature	500 °F (260 °C) estimated
VOC	< 185 g/l (excludes Tert-butyl acetate)
Evaporation rate	Not available.
Percent volatile	25 - 35 %
Partition coefficient (n-octanol/water)	Not available.
Other data	
Density	7.50 lb/gal estimated

10. Chemical Stability & Reactivity Information

Chemical stability	Risk of explosion.
Conditions to avoid	Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents. Nitrates.
Hazardous decomposition products	Not available.
Possibility of hazardous reactions	Hazardous polymerization does not occur.

11. Toxicological Information**Toxicological data**

Product	Species	Test Results
Royston 120-29 Low VOC Edge Sealer (CAS Mixture)		
Acute		
<i>Dermal</i>		
LD50	Rabbit	71317.6484 mg/kg estimated 82.9412 ml/kg estimated
<i>Inhalation</i>		
LC50	Mouse	31294.1172 ppm, 8 Hours estimated 2352.9412 ppm, 24 Hours estimated
	Rat	71764.7031 ppm, 2 Hours estimated

Product	Species	Test Results
		47058.8242 ppm, 4 Hours estimated
<i>Oral</i> LD50	Rat	15.2941 g/kg estimated
<i>Other</i> LD50	Mouse	347.0588 mg/kg estimated
	Rat	7835.2939 mg/kg estimated

Components	Species	Test Results
Toluene (CAS 108-88-3)		
Acute		
<i>Dermal</i>		
LD50	Rabbit	12124 mg/kg 14.1 ml/kg
<i>Inhalation</i>		
LC50	Mouse	5320 ppm, 8 Hours 400 ppm, 24 Hours
	Rat	26700 ppm, 1 Hours 12200 ppm, 2 Hours 8000 ppm, 4 Hours
<i>Oral</i>		
LD50	Rat	2.6 g/kg
<i>Other</i>		
LD50	Mouse	59 mg/kg
	Rat	1332 mg/kg

Acute effects

Sensitization Not available.

Chronic effects Prolonged inhalation may be harmful. Not expected to be hazardous by WHMIS criteria.

Carcinogenicity

ACGIH Carcinogens

Toluene (CAS 108-88-3) A4 Not classifiable as a human carcinogen.

IARC Monographs. Overall Evaluation of Carcinogenicity

Toluene (CAS 108-88-3) 3 Not classifiable as to carcinogenicity to humans.

Skin corrosion/irritation Not available.

Serious eye damage/irritation Not available.

Mutagenicity Not available.

Reproductive effects Hazardous by WHMIS criteria. Can cause adverse reproductive effects - such as birth defects, miscarriages, or infertility.

Teratogenicity Hazardous by WHMIS criteria. Avoid exposure to women during early pregnancy.

Synergistic materials Not available.

Further information Reproductive toxicity. Symptoms may be delayed.

12. Ecological Information

Ecotoxicological data

Product	Species	Test Results
Royston 120-29 Low VOC Edge Sealer (CAS Mixture)		
Aquatic		
Crustacea	EC50 Daphnia	60.1324 mg/l, 48 hours estimated
Fish	LC50 Fish	428.8575 mg/l, 96 hours estimated

Components	Species	Test Results
Tert-butyl Acetate (CAS 540-88-5)		
Aquatic		
Fish	LC50	Fathead minnow (Pimephales promelas) 296 - 362 mg/l, 96 hours
Toluene (CAS 108-88-3)		
Aquatic		
Crustacea	EC50	Water flea (Daphnia magna) 5.46 - 9.83 mg/l, 48 hours
Fish	LC50	Coho salmon, silver salmon (Oncorhynchus kisutch) 8.11 mg/l, 96 hours
Ecotoxicity	Components of this product are hazardous to aquatic life.	
Environmental effects	Harmful to aquatic organisms. An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.	
Aquatic toxicity	Not available.	
Persistence and degradability	Not available.	
Partition coefficient		
Tert-butyl Acetate		1.76
Toluene		2.73

13. Disposal Considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Dispose in accordance with all applicable regulations.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport Information

TDG

UN number	UN1133
UN proper shipping name	ADHESIVES containing flammable liquid
Transport hazard class(es)	
Class	3
Subsidiary risk	-
Packing group	II
Environmental hazards	Not available.
Special precautions for user	Read safety instructions, MSDS and emergency procedures before handling.

IATA

UN number	UN1133
UN proper shipping name	Adhesives containing flammable liquid
Transport hazard class(es)	
Class	3
Subsidiary risk	-
Packing group	II
Environmental hazards	No.
ERG Code	3L
Special precautions for user	Read safety instructions, MSDS and emergency procedures before handling.
Other information	
Passenger and cargo aircraft	Allowed.
Cargo aircraft only	Allowed.

IMDG

UN number	UN1133
UN proper shipping name	ADHESIVES containing flammable liquid

Transport hazard class(es)

Class 3
Subsidiary risk -
Packing group II

Environmental hazards

Marine pollutant No.
EmS F-E, S-D

Special precautions for user Read safety instructions, MSDS and emergency procedures before handling.

IATA; IMDG; TDG

**15. Regulatory Information****Canadian regulations**

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

WHMIS status

Controlled

WHMIS classification

B2 - Flammable Liquids
 D2A - Other Toxic Effects-VERY TOXIC
 D2B - Other Toxic Effects-TOXIC

WHMIS labeling**International Inventories**

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other Information**HMIS® ratings**

Health: 2*
 Flammability: 3
 Physical hazard: 0

NFPA ratings

Health: 2
Flammability: 3
Instability: 0

Disclaimer

The information offered in this data sheet is designed only as guidance for the safe use, storage and handling of the product. This information is correct to the best of our knowledge and belief at the date of publication, however, no guarantee is made to its accuracy. This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any other process. This material is intended for industrial use only. No warranty, expressed or implied is made.

Prepared by

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