Safety Data Sheet

According to Canadian Hazardous Products Regulations and WHMIS 2015

Initial preparation date: 11.01.2017

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Flow Seal Vulcanizing Fluid

SECTION 1: Identification

Product identifier

Product name: Flow Seal Vulcanizing Fluid
Product code: 770
Additional information: Rev. 10

Recommended use of the product and restriction on use

Relevant identified uses: Tire & Tube repair
Uses advised against: Not determined or not applicable.
Reasons why uses advised against: Not determined or not applicable.

Manufacturer or supplier details

Manufacturer:	**Supplier:**
North America	**Canada**
Tech International	Tech International
200 E. Coshocton St.	4 Autumn Ridge Drive
Johnstown, Ohio 43031	Brampton, Ontario L6R 0X4
740-967-9015	905-230-7081
www.tech-international.com	akhanna@techtirerepairs.com

Emergency telephone number:

North America
CHEMTREC
Within USA and Canada: 1-800-424-9300
Outside USA and Canada: +1-703-527-3887

SECTION 2: Hazard identification

GHS classification:

Flammable liquids, category 2
Skin irritation, category 2
Skin sensitization, category 1
Specific target organ toxicity - single exposure, category 3, central nervous system

Label elements

Hazard pictograms:

Signal word: Danger

Hazard statements:

H225 Highly flammable liquid and vapor.
H315 Causes skin irritation.

H317 May cause an allergic skin reaction.
H336 May cause drowsiness or dizziness.

Precautionary statements:

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233 Keep container tightly closed.
P240 Ground and bond container and receiving equipment.
P241 Use explosion-proof [electrical/ventilating/lighting] equipment.
P242 Use non-sparking tools.
P243 Take action to prevent static discharges.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P264 Wash skin thoroughly after handling.
P261 Avoid breathing dust/fume/gas/mist/vapors/spray.
P272 Contaminated work clothing should not be allowed out of the workplace.
P271 Use only outdoors or in a well-ventilated area.
P302+P352 IF ON SKIN: Wash with plenty of water/soap.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P370+P378 In case of fire: Use agents recommended in Section 5 to extinguish.
P333+P313 If skin irritation or a rash occurs: Get medical advice/attention
P321 Specific treatment (see supplemental first aid instructions on this label).
P312 Call a POISON CENTER/doctor/physician if you feel unwell.
P362+P364 Take off contaminated clothing and wash it before reuse.
P403+P235 Store in a well ventilated place. Keep cool.
P405 Store locked up.
P403+P233 Store in a well ventilated place. Keep container tightly closed.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazards not otherwise classified: None

SECTION 3: Composition/information on ingredients

Identification	Name	Weight %
CAS number: 9003-31-0	Natural Rubber	3-7
CAS number: 136-23-2	Zinc bis(dibutyldithiocarbamate)	1-5
CAS number: 5459-93-8	N-Ethylcyclohexylamine	0.1-1
CAS number: 142-82-5	Heptane	0.5-5
CAS number: 426260-76-6	Heptane, branched, cyclic and linear	>80

Additional Information:

The specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret in accordance with the Canadian Hazardous Products Regulation and WHMIS 2015.

SECTION 4: First-aid measures

Description of first-aid measures

General notes:
Not determined or not available.

After inhalation:
Loosen clothing as necessary and position individual in a comfortable position
Maintain an unobstructed airway
Get medical advice/attention if you feel unwell

After skin contact:
Rinse affected area with soap and water
If symptoms develop or persist, seek medical attention
Take off all contaminated clothing
Gently blot or brush away excess product
Wash with plenty of lukewarm, gently flowing water
Get medical advice if skin irritation occurs or you feel unwell

After eye contact:
Rinse/flush exposed eye(s) gently using water for 15-20 minutes
If symptoms develop or persist, seek medical attention

After ingestion:
Rinse mouth thoroughly
Seek medical attention if irritation, discomfort, or vomiting persists

Most important symptoms and effects, both acute and delayed

Acute symptoms and effects:
Not determined or not available.

Delayed symptoms and effects:
Not determined or not available.

Immediate medical attention and special treatment

Specific treatment:
Not determined or not available.

Notes for the doctor:
Not determined or not available.

SECTION 5: Fire-fighting measures

Extinguishing media

Suitable extinguishing media:
Use Water (fog only), dry chemical, chemical foam, carbon dioxide, or alcohol-resistant foam

Unsuitable extinguishing media:
Not determined or not applicable.

Specific hazards during fire-fighting:

Thermal decomposition can lead to release of irritating gases and vapors
Vapors can flow to distant ignition sources and flashback
Liquid is volatile and may generate an explosive atmosphere
May form corrosive mixtures with water

Special protective equipment for firefighters:

Use typical firefighting equipment, self-contained breathing apparatus, special tightly sealed suit

Special precautions:

Shut off sources of ignition
Carbon monoxide and carbon dioxide may form upon combustion
Heating causes a rise in pressure, risk of bursting and combustion

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures:

Ensure adequate ventilation
Ensure air handling systems are operational
Wear protective eye wear, gloves and clothing
Beware of vapors accumulating to form explosive concentrations
Vapors can accumulate in low areas

Environmental precautions:

Should not be released into the environment
Prevent from reaching drains, sewer or waterway

Methods and material for containment and cleaning up:

Wear protective eye wear, gloves and clothing
Use spark-proof tools and explosion-proof equipment
Absorb with non-combustible liquid-binding material (sand, diatomaceous earth (clay), acid binders, universal binders)
Dispose of contents / container in accordance with local regulations

Reference to other sections:

Not determined or not applicable.

SECTION 7: Handling and storage

Precautions for safe handling:

Use only with adequate ventilation.
Avoid breathing mist or vapor.
Do not eat, drink, smoke or use personal products when handling chemical substances.
Take precautionary measures against electrostatic discharges.
Use only non-sparking tools.

Conditions for safe storage, including any incompatibilities:

Keep container tightly sealed.
Protect from freezing and physical damage.
Store in a cool, well-ventilated area.
Store away from all ignition sources (open flames, hot surfaces, direct sunlight, spark sources).

SECTION 8: Exposure controls/personal protection

Only those substances with limit values have been included below.

Occupational Exposure limit values:

Country (Legal Basis)	Substance	Identifier	Permissible concentration
Canada	Heptane	142-82-5	Alberta OELs - 8-Hour TWA Exposure Limit: 400 ppm (1640 mg/m³)

Country (Legal Basis)	Substance	Identifier	Permissible concentration
	Heptane	142-82-5	Alberta OELs - 15-minute STEL: 500 ppm (2050 mg/m³)
	Heptane	142-82-5	British Columbia OELs - 8-Hour TWA Exposure Value: 400 ppm
	Heptane	142-82-5	British Columbia OELs - 15-minute STEL Value: 500 ppm
	Heptane	142-82-5	Manitoba OELs - 8-Hour Exposure Limit (TLV-TWA): 400 ppm
	Heptane	142-82-5	Manitoba OELs - 15-minute STEL Limit: 500 ppm
	Heptane	142-82-5	Ontario OELs - 8-Hour TWA Exposure Value (TWA): 400 ppm
	Heptane	142-82-5	Ontario OELs - 15-minute STEL (STEL): 500 ppm
	Heptane	142-82-5	Quebec OELs - 8-Hour TWA Exposure Value: 400 ppm (1640 mg/m³)
	Heptane	142-82-5	Quebec OELs - 15-minute STEL: 500 ppm (2050 mg/m³)
	Heptane	142-82-5	Saskatchewan OELs - 8 Hour Average Contamination Limit: 400 ppm
	Heptane	142-82-5	Saskatchewan OELs - 15 Minute Average Contamination Limit: 500 ppm

Biological limit values:

No biological exposure limits noted for the ingredient(s).

Information on monitoring procedures:

Monitoring of the concentration of substances in the breathing zone of workers or in the general workplace may be required to confirm compliance with an OEL and adequacy of exposure controls.
Biological monitoring may also be appropriate for some substances.

Appropriate engineering controls:

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or handling.
Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor and mists below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above.
Use explosion-proof ventilation equipment.

Personal protection equipment

Eye and face protection:

Safety goggles or glasses, or appropriate eye protection.

Skin and body protection:

Select glove material impermeable and resistant to the substance.
For continuous contact we recommend nitrile gloves with breakthrough time of more than 240 minutes with preference for > 480 minutes where suitable gloves can be identified.
Glove thickness should be typically greater than 0.35 mm depending on the glove make and model.
Always seek advice from glove suppliers.

Respiratory protection:

If engineering controls do not maintain airborne concentrations below recommended exposure limits

(where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.
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.

General hygienic measures:

Avoid contact with skin, eyes and clothing.
Wash hands before breaks and at the end of work.
Wash contaminated clothing before reuse.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Appearance (physical state, color):	Tan viscous liquid
Odor:	Strong solvent
Odor threshold:	Not determined or not available.
pH-value:	Not determined or not available.
Melting/Freezing point:	Not determined or not available.
Boiling point/range:	190°F (88°C)
Flash point:	15 °F (-9 °C)
Evaporation rate:	> 1 (n-BuAC=1)
Flammability (solid, gaseous):	Not determined or not available.
Explosion limit upper:	6.7
Explosion limit lower:	1.2
Vapor pressure:	119 mmHg @ 20°C
Vapor density:	Not determined or not available.
Density:	Not determined or not available.
Relative density:	0.71 g/cm³ (6.21 lbs./gal) @ 20°C
Solubilities:	Soluble in most organic solvents.
Partition coefficient (n-octanol/water):	Not determined or not available.
Auto/Self-ignition temperature:	Not determined or not available.
Decomposition temperature:	Not determined or not available.
Dynamic viscosity:	Not determined or not available.
Kinematic viscosity:	400 mm²/sec @ 40°C
Explosive properties	Not determined or not available.
Oxidizing properties	Not determined or not available.

Other information

VOC	650 g/L

SECTION 10: Stability and reactivity

Reactivity:

Does not react under normal conditions of use and storage.

Chemical stability:

Stable under normal conditions of use and storage.

Possibility of hazardous reactions:
None under normal conditions of use and storage.

Conditions to avoid:
Excess heat, ignition source or flames.

Incompatible materials:
None known.

Hazardous decomposition products:
None known.

SECTION 11: Toxicological information

Acute toxicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data:

Name	Route	Result
N-Ethylcyclohexylamine	oral	LD50: Rat - 590 mg/kg
Heptane	inhalation	LC50 Rat: > 29.29 mg/L (4 hr)
	oral	LD50 Rat: > 5000 mg/kg

Skin corrosion/irritation

Assessment:
Causes skin irritation

Product data:
No data available.

Substance data:

Name	Result
N-Ethylcyclohexylamine	Corrosive to the skin.
Zinc bis(dibutyldithiocarbamate)	Irritating to the skin.
Heptane	Causes skin irritation.
Heptane, branched, cyclic and linear	Causes skin irritation.

Serious eye damage/irritation

Assessment: Based on available data, the classification criteria are not met.

Product data:
No data available.

Substance data:

Name	Result
Zinc bis(dibutyldithiocarbamate)	Irritating effect on the eyes.

Respiratory or skin sensitization

Assessment:
May cause an allergic skin reaction

Product data:
No data available.
Substance data:

Name	Result
Zinc bis(dibutyldithiocarbamate)	Sensitization possible through skin contact.

Carcinogenicity
Assessment: Based on available data, the classification criteria are not met.
Product data: No data available.
Substance data: No data available.
International Agency for Research on Cancer (IARC):

Name	Classification
Natural Rubber	Group 3 - Not classifiable as to its carcinogenicity to humans

National Toxicology Program (NTP): None of the ingredients are listed.

Germ cell mutagenicity
Assessment: Based on available data, the classification criteria are not met.
Product data:
No data available.
Substance data: No data available.

Reproductive toxicity
Assessment: Based on available data, the classification criteria are not met.
Product data:
No data available.
Substance data: No data available.

Specific target organ toxicity (single exposure)
Assessment:
May cause drowsiness or dizziness
Product data:
No data available.
Substance data:

Name	Result
Zinc bis(dibutyldithiocarbamate)	Component affects the respiratory system.
Heptane, branched, cyclic and linear	May cause drowsiness or dizziness.
Heptane	May cause drowsiness or dizziness.

Specific target organ toxicity (repeated exposure)
Assessment: Based on available data, the classification criteria are not met.
Product data:
No data available.
Substance data: No data available.

Aspiration toxicity
Assessment: Based on available data, the classification criteria are not met.
Product data:

No data available.

Substance data:

Name	Result
Heptane, branched, cyclic and linear	May be fatal if swallowed and enters airways.
Heptane	May be fatal if swallowed and enters airways.

Information on likely routes of exposure:
No data available.

Symptoms related to the physical, chemical and toxicological characteristics:
No data available.

Other information:
No data available.

SECTION 12: Ecological information

Acute (short-term) toxicity

Assessment:
Toxic to aquatic life

Product data: No data available.

Substance data:

Name	Result
Zinc bis(dibutyldithiocarbamate)	EC50 - Daphnia magna - 0.74 mg/L - 48 hr
	NOEC - Daphnia magna - 0.0032 mg/L - 21 d
Heptane	LC50 - Carassius auratus (goldfish) - 4 mg/l - 24.0 h
	EC50 - Daphnia magna - 82.5 mg/L - 96 h

Chronic (long-term) toxicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data: No data available.

Persistence and degradability

Product data: No data available.

Substance data:

Name	Result
Heptane	Readily biodegradable in water.

Bioaccumulative potential

Product data: No data available.

Substance data:

Name	Result
Heptane	Calculated BCF: 552 (Not expected to bioaccumulate).

Mobility in soil

Product data: No data available.

Substance data:

Name	Result
Heptane	Moderately Mobile (log Koc: 2.38)

Other adverse effects: No data available.

SECTION 13: Disposal considerations

Disposal methods:

It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities

SECTION 14: Transport information

Canadian Transportation of Dangerous Goods (TDG)

UN number	UN1133
UN proper shipping name	Adhesives
UN transport hazard class(es)	3 
Packing group	II
Environmental hazards	Marine Pollutant (Heptane, Zinc Bis(dibutyldithiocarbamate))
Special precautions for user	None

International Maritime Dangerous Goods (IMDG)

UN number	UN1133
UN proper shipping name	Adhesives
UN transport hazard class(es)	3 
Packing group	II
Environmental hazards	Marine Pollutant (Heptane, Zinc Bis(dibutyldithiocarbamate))
Special precautions for user	None

International Air Transport Association Dangerous Goods Regulations (IATA-DGR)

UN number	UN1133
UN proper shipping name	Adhesives
UN transport hazard class(es)	3 
Packing group	II
Environmental hazards	Marine Pollutant (Heptane, Zinc Bis(dibutyldithiocarbamate))
Special precautions for user	None

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	
Bulk Name	None
Ship type	None

Flow Seal Vulcanizing Fluid

Pollution category	None

SECTION 15: Regulatory information

Canada regulations

Domestic substances list (DSL):

5459-93-8	N-Ethylcyclohexylamine	Not Listed
136-23-2	Zinc bis(dibutyldithiocarbamate)	Listed
9003-31-0	Natural Rubber	Listed
426260-76-6	Heptane, branched, cyclic and linear	Listed
142-82-5	Heptane	Listed

Non-domestic substances list (NDSL):

5459-93-8	N-Ethylcyclohexylamine	Listed

SECTION 16: Other information

Abbreviations and Acronyms: None

Disclaimer:

This product has been classified in accordance with the Canadian Hazardous Products Regulations and WHMIS 2015. The information provided in this SDS is correct, to the best of our knowledge, based on information available. The information given is designed only as a guidance for safe handling, use, storage, transportation and disposal and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials, unless specified in the text. The responsibility to provide a safe workplace remains with the user.

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End of Safety Data Sheet