Flow Seal Vulcanizing Fluid

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations
Issue date: 6/2/2023 Version: 1.0

SECTION 1: Identification

1.1. Identification

Product form	:	Mixture
Trade name	:	Flow Seal Vulcanizing Fluid
Product code	:	768, 768EL

1.2. Recommended use and restrictions on use

Use of the substance/mixture	:	Tire repair adhesive
Restrictions on use	:	No additional information available

1.3. Supplier

Manufacturer
Tech International
200 East Coshocton Street
Johnstown, OH 43031, USA
1-740-967-9015
www.tech-international.com

1.4. Emergency telephone number

Emergency number	:	CHEMTREC Within USA and Canada: 1-800-424-9300 Outside USA and Canada: +1-703-527-3887 Local: +1 703-741-5970

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS US classification

Flammable liquids Category 2	H225	Highly flammable liquid and vapor
Skin corrosion/irritation Category 2	H315	Causes skin irritation
Specific target organ toxicity – Single exposure, Category 3, Narcosis	H336	May cause drowsiness or dizziness
Hazardous to the aquatic environment – Chronic Hazard Category 2	H411	Toxic to aquatic life with long lasting effects

Full text of H statements : see section 16

2.2. GHS Label elements, including precautionary statements

GHS US labeling

Hazard pictograms (GHS US) :

Signal word (GHS US) : Danger

Hazard statements (GHS US) :
H225 - Highly flammable liquid and vapor
H315 - Causes skin irritation
H336 - May cause drowsiness or dizziness
H411 - Toxic to aquatic life with long lasting effects

Precautionary statements (GHS US) :
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P264 - Wash hands thoroughly after handling.

P271 - Use only outdoors or in a well-ventilated area.
P280 - Wear protective gloves, protective clothing, eye protection, face protection.

2.3. Other hazards which do not result in classification

No additional information available

2.4. Unknown acute toxicity (GHS US)

No additional information available

SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Comments : The exact percentage (concentration) in the composition has been withheld as a trade secret in accordance with paragraph (i) of § 1910.1200

Name	Product identifier	%	GHS US classification
Heptane, branched, cyclic and linear	CAS-No.: 64742-49-0	≥ 80 – < 95	Flam. Liq. 2, H225 Skin Irrit. 2, H315 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 2, H411
1,3-Butadiene, 2-methyl-, homopolymer	CAS-No.: 9003-31-0	≥ 5 – < 10	Not classified
Heptane	CAS-No.: 142-82-5	≥ 0.5 – < 5	Flam. Liq. 2, H225 Asp. Tox. 1, H304 Skin Irrit. 2, H315 STOT SE 3, H336 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
(Dibutylamine)bis(dibutyldithiocarbamato-S,S')zinc	CAS-No.: 35884-05-0	≥ 0.1 – < 5	Aquatic Acute 1, H400 Aquatic Chronic 1, H410

Full text of hazard classes and H-statements : see section 16

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures after inhalation : If inhaled and if breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a poison center or a doctor. Give oxygen or artificial respiration if necessary.

First-aid measures after skin contact : Wash skin thoroughly with mild soap and water. Take off contaminated clothing and wash it before reuse. If skin irritation occurs: Get medical advice/attention.

First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention if pain, blinking or redness persists.

First-aid measures after ingestion : If swallowed, seek medical advice immediately and show this container or label. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person.

4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects after inhalation	:	May cause drowsiness or dizziness. In high concentrations vapors cause anesthetic and narcotic effect.
Symptoms/effects after skin contact	:	Causes skin irritation. Redness. Itching. Swelling.
Symptoms/effects after eye contact	:	Lacrimation. redness, itching, tears. Blurred vision.
Symptoms/effects after ingestion	:	Ingestion may cause nausea, vomiting and diarrhea. Abdominal pain.

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media	:	Dry powder. Carbon dioxide. Water spray. Foam. Use extinguishing agent suitable for surrounding fire.
Unsuitable extinguishing media	:	Do not use a heavy water stream.

5.2. Specific hazards arising from the chemical

Fire hazard	:	Highly flammable liquid and vapor. Vapors are heavier than air and may travel considerable distance to an ignition source and flash back to source of vapors. Heating will cause a rise in pressure with a risk of bursting. In case of fire and/or explosion do not breathe fumes.
Hazardous decomposition products in case of fire	:	Toxic fumes may be released. Carbon dioxide. Carbon monoxide.

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions	:	Evacuate the danger area. Fight fire from safe distance and protected location. Move containers from fire area if it can be done without personal risk. Use extinguishing media appropriate for surrounding fire. Use water spray or fog for cooling exposed containers. Prevent fire-fighting water from entering environment. Eliminate all ignition sources if safe to do so.
Protection during firefighting	:	Wear a self contained breathing apparatus. Wear fire/flame resistant/retardant clothing. Do not attempt to take action without suitable protective equipment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures	:	No flames, no sparks. Eliminate all sources of ignition. Use special care to avoid static electric charges. Avoid all contact with skin, eyes, or clothing.

6.1.1. For non-emergency personnel

Protective equipment	:	Wear recommended personal protective equipment.
Emergency procedures	:	Evacuate unnecessary personnel. Ventilate spillage area. Avoid breathing vapors. Avoid contact with skin and eyes. Do not touch or walk on the spilled product. No action shall be taken without appropriate training or involving any personal risk.

6.1.2. For emergency responders

Protective equipment	:	Do not attempt to take action without suitable protective equipment.
Emergency procedures	:	Evacuate unnecessary personnel. Use non-sparking tools. Ventilate area.

6.2. Environmental precautions

Avoid release to the environment. Prevent from entering sewers, basements and workpits, or any place where its accumulation can be dangerous. Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

For containment : Stop leak, if possible without risk. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Remove ignition sources. Caution : this product can cause the floor to be slippery.

Methods for cleaning up : Move containers from spill area. Small quantities of liquid spill: take up in non-combustible absorbent material and shovel into container for disposal. For large spills, confine the spill in a dike and charge it with wet sand or earth for subsequent safe disposal. Clean contaminated surfaces with an excess of water. Prevent entry to sewers and public waters. Use non-sparking tools.

Other information : Dispose of via an authorised person/ licensed waste disposal contractor or by other suitable waste treatment techniques. Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13. For further information refer to section 8: "Exposure controls/personal protection".

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Take all necessary technical measures to avoid or minimize the release of the product on the workplace. Ensure good ventilation of the work station. Provide local exhaust or general room ventilation. Do not breathe vapors. Wear personal protective equipment. Do not get in eyes, on skin, or on clothing. Eliminate all ignition sources if safe to do so. Take precautionary measures against static discharge. Use explosion-proof equipment. Use only non-sparking tools. Empty containers retain product residue and can be hazardous. Do not re-use container for any purpose.

Hygiene measures : Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Do not eat, drink or smoke when using this product. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep only in the original container in a cool, well ventilated place away from : Direct sunlight, Strong oxidizers. Store in a dry place. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep away from food, drink and animal feedingstuffs. Keep container tightly closed. Containers which are opened should be properly resealed and kept upright to prevent leakage. Store in accordance with local, regional, national or international regulation. Do not store in unlabelled containers.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Flow Seal Vulcanizing Fluid

No additional information available

Heptane, branched, cyclic and linear (64742-49-0)

No additional information available

Heptane (142-82-5)

USA - ACGIH - Occupational Exposure Limits

Local name	Heptane, isomers (n-Heptane)

Heptane (142-82-5)	
ACGIH OEL TWA [ppm]	400 ppm
ACGIH OEL STEL [ppm]	500 ppm
Remark (ACGIH)	TLV® Basis: CNS impair; URT irr
Regulatory reference	ACGIH 2023
USA - OSHA - Occupational Exposure Limits	
Local name	Heptane (n-Heptane)
OSHA PEL (TWA) [1]	2000 mg/m³
OSHA PEL (TWA) [2]	500 ppm
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1

(Dibutylamine)bis(dibutyldithiocarbamato-S,S')zinc (35884-05-0)
No additional information available

1,3-Butadiene, 2-methyl-, homopolymer (9003-31-0)
No additional information available

Monitoring methods	
Monitoring methods	Refer to all applicable national, international and local regulations or provisions.

8.2. Appropriate engineering controls

Appropriate engineering controls : Provide local exhaust or general room ventilation. Ensure exposure is below occupational exposure limits (where available). Handle in accordance with good industrial hygiene and safety procedures. Avoid all unnecessary exposure. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

Environmental exposure controls : Avoid release to the environment. Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil.

8.3. Individual protection measures/Personal protective equipment

Personal protective equipment:

Wear recommended personal protective equipment. Personal protective equipment should be chosen according to the NIOSH standards and in discussion with the supplier of the protective equipment.

Hand protection:
Chemical resistant gloves (according to NIOSH standard). Please follow the instructions related to the permeability and the penetration time provided by the manufacturer

Eye protection:
Chemical goggles or safety glasses

Skin and body protection:
Wear suitable protective clothing. Skin protection appropriate to the conditions of use should be provided

Respiratory protection:
An approved organic vapor respirator/supplied air or self-contained breathing apparatus must be used when vapor concentration exceeds applicable exposure limits. All respirators must conform to specifications for efficiency and performance indicated by OSHA Standard 29 CFR 1910.134 and NIOSH Standards

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Liquid
Appearance	:	Viscous.
Color	:	tan
Odor	:	strong solvent-like
Odor threshold	:	No data available
pH	:	No data available
Melting point	:	No data available
Freezing point	:	No data available
Boiling point	:	88 °C (190 °F)
Flash point	:	-9 °C (15 °F)
Relative evaporation rate (butyl acetate=1)	:	> 1
Flammability (solid, gas)	:	Highly flammable liquid and vapor.
Vapor pressure	:	119 mm Hg @ 20°C
Relative vapor density at 20°C	:	> 1
Relative density	:	No data available
Density	:	0.7 g/cm³ @ 20°C
Solubility	:	Insoluble in water. Soluble in organic solvents.
Partition coefficient n-octanol/water (Log Pow)	:	No data available
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity, kinematic	:	400 mm²/s @ 40°C
Viscosity, dynamic	:	No data available
Explosion limits	:	Lower explosion limit: 1.2 vol % Upper explosion limit: 6.7 vol %
Explosive properties	:	No data available
Oxidizing properties	:	No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Highly flammable liquid and vapor. Can form explosive mixtures with air. Heating may cause a fire or explosion.

10.2. Chemical stability

Stable under normal conditions of use.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use. Hazardous polymerization: Will not occur.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7). Protect from sunlight. Overheating. Extremely high or low temperatures. No flames, no sparks. Eliminate all sources of ignition.

10.5. Incompatible materials

Oxidising agents.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

Heptane, branched, cyclic and linear (64742-49-0)	
LD50 oral rat	> 5000 mg/kg
LD50 dermal rabbit	> 2000 mg/kg
LC50 Inhalation - Rat (Vapours)	> 4.42 mg/l/4h

Heptane (142-82-5)	
LD50 oral rat	> 5000 mg/kg
LD50 oral	5000 mg/kg
LD50 dermal rabbit	> 2000 mg/kg
LD50 dermal	3000 mg/kg
LC50 Inhalation - Rat (Vapours)	> 29.29 mg/l/4h

Skin corrosion/irritation : Causes skin irritation.
Serious eye damage/irritation : Not classified
Respiratory or skin sensitization : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified
Reproductive toxicity : Not classified
STOT-single exposure : May cause drowsiness or dizziness.

Heptane, branched, cyclic and linear (64742-49-0)	
STOT-single exposure	May cause drowsiness or dizziness.

Heptane (142-82-5)	
STOT-single exposure	May cause drowsiness or dizziness.

STOT-repeated exposure : Not classified
Aspiration hazard : Not classified
Viscosity, kinematic : 400 mm²/s @ 40°C

Heptane, branched, cyclic and linear (64742-49-0)	
Viscosity, kinematic	0.83 mm²/s (15.6 °C)

Symptoms/effects after inhalation : May cause drowsiness or dizziness. In high concentrations vapors cause anesthetic and narcotic effect.
Symptoms/effects after skin contact : Causes skin irritation. Redness. Itching. Swelling.
Symptoms/effects after eye contact : Lacrimation. redness, itching, tears. Blurred vision.
Symptoms/effects after ingestion : Ingestion may cause nausea, vomiting and diarrhea. Abdominal pain.
Other information : No experimental study on the product is available. The information given is based on our knowledge of the components and the classification of the product is determined by calculation.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Do not allow product to spread into the environment. Toxic to aquatic life with long lasting effects.

Heptane, branched, cyclic and linear (64742-49-0)	
EC50 - Crustacea [1]	4.5 mg/l (Daphnia magna)
ErC50 algae	3.1 mg/l (72h, Selenastrum capricornutum)
NOEC chronic crustacea	10 mg/l (10d, Daphnia magna)

Heptane (142-82-5)	
LC50 - Fish [1]	4 mg/l (Carassius auratus)
EC50 - Crustacea [1]	1.15 mg/l

12.2. Persistence and degradability

Flow Seal Vulcanizing Fluid	
Persistence and degradability	Biodegradability in water: no data available.

Heptane, branched, cyclic and linear (64742-49-0)
Not rapidly degradable

Heptane (142-82-5)	
Persistence and degradability	Readily biodegradable.

12.3. Bioaccumulative potential

Flow Seal Vulcanizing Fluid	
Bioaccumulative potential	No data available concerning bioaccumulation.

Heptane (142-82-5)	
Bioconcentration factor (BCF REACH)	552

12.4. Mobility in soil

Flow Seal Vulcanizing Fluid	
Ecology - soil	No additional information available.

Heptane (142-82-5)	
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	2.38

12.5. Other adverse effects

Other adverse effects : No other effects known.

SECTION 13: Disposal considerations

13.1. Disposal methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

Sewage disposal recommendations	:	Do not dispose of waste into sewer.
Product/Packaging disposal recommendations	:	Dispose in a safe manner in accordance with local/national regulations. Do not dispose of the packaging without first carrying out the necessary cleaning. Do not pierce or burn, even after use.
Additional information	:	Flammable vapors may accumulate in the container.
Ecology - waste materials	:	Avoid release to the environment.

SECTION 14: Transport information

In accordance with DOT / TDG / IMDG / IATA

14.1. UN number

DOT NA No	:	UN1133
UN-No. (TDG)	:	UN1133
UN-No. (IMDG)	:	1133
UN-No. (IATA)	:	1133

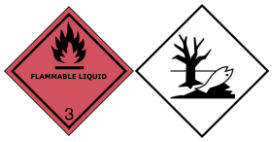
14.2. UN proper shipping name

Proper Shipping Name (DOT)	:	Adhesives
Proper Shipping Name (TDG)	:	ADHESIVES
Proper Shipping Name (IMDG)	:	ADHESIVES
Proper Shipping Name (IATA)	:	Adhesives

14.3. Transport hazard class(es)

DOT

Transport hazard class(es) (DOT)	:	3
Hazard labels (DOT)	:	3



TDG

Transport hazard class(es) (TDG)	:	3
Hazard labels (TDG)	:	3

IMDG

Transport hazard class(es) (IMDG)	:	3
Hazard labels (IMDG)	:	3

IATA

Transport hazard class(es) (IATA) : 3

Hazard labels (IATA) : 3

14.4. Packing group

Packing group (DOT) : II

Packing group (TDG) : II

Packing group (IMDG) : II

Packing group (IATA) : II

14.5. Environmental hazards

Dangerous for the environment : Yes

Marine pollutant : Yes

Other information : No supplementary information available.

14.6. Special precautions for user

DOT

UN-No.(DOT) : UN1133

DOT Special Provisions (49 CFR 172.102) : 149 - When transported as a limited quantity or a consumer commodity, the maximum net capacity specified in 173.150(b)(2) of this subchapter for inner packaging may be increased to 5 L (1.3 gallons).
B52 - Notwithstanding the provisions of 173.24b of this subchapter, non-reclosing pressure relief devices are authorized on DOT 57 portable tanks.
IB2 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized.
T4 - 2.65 178.274(d)(2) Normal..... 178.275(d)(3)
TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling = 97 / 1 + a (tr - tf) Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling.
TP8 - A portable tank having a minimum test pressure of 1.5 bar (150 kPa) may be used when the flash point of the hazardous material transported is greater than 0 C (32 F).

DOT Packaging Exceptions (49 CFR 173.xxx) : 150

DOT Packaging Non Bulk (49 CFR 173.xxx) : 173

DOT Packaging Bulk (49 CFR 173.xxx) : 242

DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 5 L

DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 60 L

DOT Vessel Stowage Location : B - (i) The material may be stowed ‘‘on deck’’ or ‘‘under deck’’ on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length; and (ii) ‘‘On deck only’’ on passenger vessels in which the number of passengers specified in paragraph (k)(2)(i) of this section is exceeded.

TDG

UN-No. (TDG) : UN1133

Explosive Limit and Limited Quantity Index : 5 L

Excepted quantities (TDG)	:	E2
Passenger Carrying Road Vehicle or Passenger Carrying Railway Vehicle Index	:	5 L
Emergency Response Guide (ERG) Number	:	128

IMDG

Limited quantities (IMDG)	:	5 L
Excepted quantities (IMDG)	:	E2
Packing instructions (IMDG)	:	P001
Packing provisions (IMDG)	:	PP1
IBC packing instructions (IMDG)	:	IBC02
Tank instructions (IMDG)	:	T4
Tank special provisions (IMDG)	:	TP1, TP8
EmS-No. (Fire)	:	F-E - FIRE SCHEDULE Echo - NON-WATER-REACTIVE FLAMMABLE LIQUIDS
EmS-No. (Spillage)	:	S-D - SPILLAGE SCHEDULE Delta - FLAMMABLE LIQUIDS
Stowage category (IMDG)	:	B
Properties and observations (IMDG)	:	Adhesives are solutions of gums, resins, etc., usually volatile due to the solvents. Miscibility with water depends upon their composition.

IATA

PCA Excepted quantities (IATA)	:	E2
PCA Limited quantities (IATA)	:	Y341
PCA limited quantity max net quantity (IATA)	:	1L
PCA packing instructions (IATA)	:	353
PCA max net quantity (IATA)	:	5L
CAO packing instructions (IATA)	:	364
CAO max net quantity (IATA)	:	60L
Special provision (IATA)	:	A3
ERG code (IATA)	:	3L

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. US Federal regulations

All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

15.2. International regulations

CANADA

Heptane, branched, cyclic and linear (64742-49-0)

Listed on the Canadian DSL (Domestic Substances List)

Heptane (142-82-5)

Listed on the Canadian DSL (Domestic Substances List)

(Dibutylamine)bis(dibutyldithiocarbamato-S,S')zinc (35884-05-0)

Listed on the Canadian NDSL (Non-Domestic Substances List)

1,3-Butadiene, 2-methyl-, homopolymer (9003-31-0)
Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

No additional information available

National regulations

Heptane, branched, cyclic and linear (64742-49-0)
Listed on INSQ (Mexican National Inventory of Chemical Substances)

Heptane (142-82-5)
Listed on INSQ (Mexican National Inventory of Chemical Substances)

1,3-Butadiene, 2-methyl-, homopolymer (9003-31-0)
Listed on INSQ (Mexican National Inventory of Chemical Substances)

15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

SECTION 16: Other information

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Data sources : Supplier's safety documents.

Training advice : Training staff on good practice.

Full text of H-phrases	
H225	Highly flammable liquid and vapor
H304	May be fatal if swallowed and enters airways
H315	Causes skin irritation
H336	May cause drowsiness or dizziness
H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects
H411	Toxic to aquatic life with long lasting effects

Safety Data Sheet (SDS), USA

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.