

Revision: 04/21/2016

Printing date: 04/25/2016

## 1 Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifier

**Trade name: UF 606 TuffPatch Kit Part A**

**Application of the substance / the preparation:** Modified Epoxy Resin

### 1.3 Details of the supplier of the Safety Data Sheet

**Manufacturer/Supplier:**

Tuff Industrial Products, Inc.  
2120 Roberts Dr.  
Broadview, IL 60155 USA  
Tel (800)6475-0068

### 1.4 Emergency contact: CHEMTREC® (800)424-9300

## 2 Hazards identification

\*\*\* EMERGENCY OVERVIEW \*\*\*: No Information

### GHS Classification

Acute Tox. 4, Eye Irrit. 2, Skin Irrit. 2, Skin Sens. 1

### 2.2 Label elements

**Labeling according to Regulation (EC) No 1272/2008:**

The product is classified and labeled according to the CLP regulation.



GHS07



GHS08



GHS09

### Signal word:

Danger

### Hazard Statements:

H227 Combustible Liquid.

H304 May be fatal if swallowed and enters airways.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H319 Causes serious eye irritation.

H332 Harmful if inhaled.

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H335 May cause respiratory irritation.

H336 May cause drowsiness or dizziness.

H351 Suspected of causing cancer.

H373 May cause damage to organs through prolonged or repeated exposure.

H411 Toxic to aquatic life with long lasting effects.

### Precautionary Statements:

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.

P264 Wash skin thoroughly after handling.

P271 Use only outdoors or in a well-ventilated area.

P272 Contaminated work clothing should not be allowed out of the workplace.

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

P285 In case of inadequate ventilation wear respiratory protection

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**Response Statements:**

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.  
 P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/ physician if you feel unwell.  
 P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 P308 + P313 IF exposed or concerned: Get medical advice/ attention.  
 P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.  
 P337 + P313 If eye irritation persists: Get medical advice/ attention.  
 P362 Take off contaminated clothing and wash before reuse.  
 P403 + P233 Store in a well-ventilated place. Keep container tightly closed.  
 P405 Store locked up.  
 P501 Dispose of contents/ container to an approved waste disposal plant.

**2.3 Other hazards**

**Human health dangers:**

Persons already sensitised to diisocyanates may develop allergic reactions when using this product. Persons suffering from asthma, eczema or skin problems should avoid contact, including dermal contact, with this product. This product should not be used under conditions of poor ventilation unless a protective mask with an appropriate gas filter is used.

**Hazard description:**

**WHMIS-symbols:** None

**Canadian WHMIS Classification:** None

**NFPA ratings (scale 0 - 4)**



Health = 2  
 Fire = 1  
 Reactivity = 1

**HMIS-ratings (scale 0 - 4)**



Health = 2  
 Fire = 1  
 Reactivity = 1

## 3 Composition/Information on Ingredients

**3.1 Mixtures**

**Description:** Mixture of substances listed below.

**Dangerous components:**








<b>Impurities and stabilising additives:</b>		
CAS: 101-68-8, EINECS: 202-966-0 Index number: 615-005-00-9	Methylene-diphenyl diisocyanate Xn R20, R36/37/38, R42/43 Carc. 2; H351 Accute Tox. 4; H332 Eye Irrit. 2; H319 Skin. Irrit. 2; H315 Resp. Sens. 1; H334 Skin Sens. 1; H317	40 - 60%
CAS: 64742-94-5 EINECS: 265-198-5 Index number: 649-424-00-3	Solvent naphtha (petroleum), heavy arom. Xn R65; N R58 Asp. Tox., H304 Aquatic Chronic 2, H411 STOT RE 3, H336	20 - 30%

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CAS: 91-20-3 EINECS: 91-20-3 Index number: 601-052-00-2	Naphthalene  Xn R22/40  N R50/53;  F R11  Flam Sol. 1; H228  Acute Tox. 4; H302  Carc. 2; H351  Aquatic Chronic 1; H410	3 - 8%
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## 4 First aid measures

### 4.1 Description of first aid measures

**General information:**

Take off contaminated clothing and wash before reuse.

**After inhalation:**

Ensure supply of fresh air.

Remove the victim into fresh air and keep him calm.

Consult a doctor immediately.

**After skin contact:**

In case of contact with skin wash off immediately with soap and water. Consult a doctor if skin irritation persists.

**After eye contact:**

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

If eye irritation persists: Get medical advice/attention.

**After swallowing:**

Consult a doctor immediately. Do not induce vomiting. Rinse out mouth and give plenty of water to drink.

### 4.2 Most important symptoms and effects, both acute and delayed

**Irritant effects**

Allergic reactions      Nausea, vomiting      Redness

Cough                      Headache

Vertigo                     Tiredness

### 4.3 Indications of any immediate medical attention and special treatment

Treat symptomatically.

If swallowed or in the event of vomiting, risk of product entering the lungs.

## 5 Firefighting Measures

### 5.1 Extinguishing media Suitable extinguishing agents:

**Suitable extinguishing agents:**

Carbon Dioxide, Dry Chemical, Foam,

**Extinguishing media that must not be used:**

Full water jet

### 5.2 Unusual fire and explosion hazards: Formation of toxic gases is possible during heating or in case of fire - Carbon monoxide (CO) - Nitrogen oxides (NOx) - Hydrogen cyanide (HCN) - Not combusted hydrocarbons.

### 5.3 Advice for firefighters: Do not inhale explosion and/or combustion gases. Use self-contained breathing apparatus.

Wear full protective suit.

Heat causes increase in pressure and risk of bursting - Keep away from the container. Cool containers at risk with water spray jet.

Fire residues and contaminated firefighting water must be disposed of in accordance within the local regulations.

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**Part A**

## 6 Accidental Release Measures

· **6.1 Personal precautions, protective equipment and emergency procedures**

Keep away from all sources of ignition.  
 Ensure adequate ventilation.  
 Use breathing apparatus if exposed to vapours/aerosol. Use personal protective equipment.  
 High risk of slipping due to leakage/spillage of product. Remove persons to safety.

· **6.2 Environmental precautions:** Prevent spread over a wide area (e.g. by containment or oil barriers). Do not discharge into the drains/surface waters/groundwater. In case the product spills into drains/surface waters/ground water, immediately inform the authorities.

· **6.3 Steps to be taken in case material is release or spilled:**

Take up with absorbent material (e.g. general-purpose binder). Dispose of absorbed material in accordance within the regulations.

· **6.4 Reference to other sections**

See Section 7 for information on safe handling.  
 See Section 8 for information on personal protection equipment.  
 See Section 13 for disposal information.

## 7 Handling and Storage

· **7.1 Precautions for safe handling**

Use only in well-ventilated areas.  
 Avoid spilling or spraying in enclosed areas.  
 Vacuuming in situ required.  
 Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharges.  
 Ground/bond container and receiving equipment. Use explosion-proofed equipment/fittings and non-sparkling tools. Do not eat, drink, smoke or take drugs at work. Take off contaminated clothing and wash before reuse. Contaminated work clothing should not be allowed out of the workplace. Showers and eye wash stations should be provided. Clean skin thoroughly after work, apply skin cream. Use barrier skin cream.

· **7.2 Conditions for safe storage, including any incompatibilities**

**Storage:**  
 Keep only in original container. Prevent penetration into the ground. Keep away from water. Do not store together with oxidizing agents. Do not store together with acids and alkalis. Keep container tightly closed. Keep container in a well-ventilated place. Keep in a cool place. Store in a dry place. Protect from heat/overheating and from sun.

· **7.3 Specific end use(s):** No further relevant information available

## 8 Exposure Controls/Personal Protection

**Additional information about design of technical facilities:**

Use with adequate ventilation to ensure exposure levels are maintained below the limits provided above. Use local exhaust ventilation to control airborne vapor. Ensure eyewash/safety shower stations are available near areas where this product is used.

**8.1 Control parameters**

**Ingredients with limit values that require monitoring at the workplace:**

Methylenediphenyl diisocyanate	Long-term exposure: 0,005 ppm, 0,05 mg/m <sup>3</sup> , NIOSH
Naphthalene	Long-term exposure: 10 ppm, 50 mg/m <sup>3</sup> , OSHA Short-term exposure (15-minute): 15 ppm, 75 mg/m <sup>3</sup> , OSHA
Solvent naphtha (petroleum), heavy arom.	Long-term exposure: 100 ppm, 525 mg/m <sup>3</sup> , OSHA

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**8.2 Exposure controls**

**Personal protective equipment:**

**General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.  
 Immediately remove all soiled and contaminated clothing.  
 Wash hands before breaks and at the end of work.  
 Avoid contact with the eyes and skin.

*The following information on appropriate Personal Protective Equipment is provided to assist employers in complying with OSHA regulations found in 29 CFR Subpart I (beginning at 1910.132) or equivalent standard of Canada, or standards of EU member states (including EN 149 for respiratory PPE, and EN 166 for face/eye protection), and those of Japan.*



**Respiratory Protection:**

Use suitable respiratory protective device in case of insufficient ventilation. Use suitable respiratory protective device when aerosol or mist is formed. Maintain airborne contaminant concentrations below guidelines listed above, if applicable. If necessary, use only respiratory protection authorized in the U.S. Federal OSHA Respiratory Protection Standard (29 CFR 1910.134), equivalent U.S. State standards, Canadian CSA Standard Z94.4-93, the European Standard EN149, or EU member states.



**Protective gloves**

**Material of gloves**

Use chemical resistant gloves to prevent skin contact. If necessary, refer to U.S. OSHA 29 CFR 1910.138 or appropriate Standards of Canada

**Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed



**Tightly sealed goggles**

Use tightly sealed goggles to prevent contact with the eyes.



**Body Protection**

Use body protection appropriate to prevent contact (e.g. lab coat, overalls). If necessary, refer to appropriate Standards of Canada, or appropriate Standards of the EU, Australian Standards, or relevant Japanese Standards. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.



**Hygienic Practices**

Do not eat, drink, or smoke in areas where this material is used. Avoid breathing vapors. Remove contaminated clothing and wash before reuse. Wash thoroughly after handling. Wash hands before eating.

**8.3 Thermal hazards:** Not applicable

**Delimitation and monitoring of the environmental exposition:**

Comply with applicable environmental regulations limiting discharge to air, water and soil.

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## 9 Physical and Chemical Properties

### 9.1 Information on basic physical and chemical properties

#### General Information

#### Appearance:

Form: Liquid  
Color: No information available.

Odor: mild aromatic  
Odor threshold: No information available.

pH value: No data available.

#### Change in condition

Melting point/Melting range: Undetermined  
Boiling point/Boiling range: > 148°C / > 300°F

Flash point: > 148°C / > 300°F

Ignition temperature: Not determined.

Decomposition temperature: Not determined.

Self-igniting: Not determined

Danger of explosion: Product does not present an explosive hazard

#### Explosion limits:

Lower: Not determined.  
Upper: Not determined.

Vapor pressure: No information available.

Density at 20°C: 1,00 (20 °C / 68,0 °F)

Relative density: Not determined

Vapour density: Not determined

Evaporation rate: Not determined

Solubility in / Miscibility with water: reacts with water

Specific Gravity 20°C (Water = 1): No data available

#### Viscosity

Dynamic: No data available  
Kinematic: No data available  
Solvent content: No data available  
Organic solvents: No data available  
VOC (EC) No data available

### 9.2 Other information: No further relevant information available

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## 10 Stability and Reactivity

- **10.1 Reactivity:** Upon decomposition in closed containers and tubes risk of bursting due to buildup of overpressure.
- **10.2 Chemical stability:** Stable under normal ambient conditions (ambient temperature).  
**Thermal Decomposition / Conditions to be avoided:**  
 Upon decomposition in closed containers and tubes risk of bursting due to buildup of overpressure.
- **10.3 Possibility of hazardous reactions:**
  - Reactions with acids, alkalies and oxidizing agents.
  - Reactions with water.
  - Reactions with alcohols.
  - Reactions with amines
- **10.4 Conditions to avoid:**
  - Keep away from open flames, hot surfaces and sources of ignition.
  - Contact with moisture.
  - Strong heating.
  - Sunlight
- **10.5 Incompatible materials**
  - See SECTION 10.3.
  - Various metals.
- **10.6 Hazardous decomposition products In the event of fire:**
  - See SECTION 5.

## 11 Toxicological Information

- **11.1 Information on toxicological effects**

### Acute toxicity:

#### LD/LC50 values relevant for classification:

#### 101-68-8 Methylenediphenyl diisocyanate,

Oral LD50 > 5000 mg/kg.(rat)

Dermal LC50 > 9000 mg/kg(rabbit)

#### 64742-94-5 Solvent naphtha (petroleum), heavy aroma

Oral LD50 > 5000 mg/kg (rat)

#### 91-20-3 Naphthalene

Oral LD50 533 mg/kg (OECD 401) (mouse)

Dermal LD50 > 2500 mg/kg (IUCLID) (rat)

Oral LD50 > 2000 mg/kg (IUCLID) (rat)

Inhalative LC50 > 100 ppm(8h) (IUCLID)(rat)

**Serious eye damage/irritation:** Toxicological data of complete product are not available.

**Skin corrosion/irritation:** Toxicological data of complete product are not available.

**Respiratory or skin sensitisation:** Toxicological data of complete product are not available.

**Specific target organ toxicity — single exposure:** May cause respiratory irritation. Vapours may cause drowsiness and dizziness.

**Specific target organ toxicity — repeated exposure:** May cause damage to organs through prolonged or repeated exposure.

**Mutagenicity:** Based on the available information, the classification criteria are not fulfilled.

**Reproduction toxicity:** Based on the available information, the classification criteria are not fulfilled.

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**Carcinogenicity:** Suspected of causing cancer

**Aspiration hazard:** May be fatal if swallowed and enters airways.

**General remarks:**

Symptoms: abdominal pain, nausea, vomiting, diarrhoea.

The toxicity data listed pertaining to the ingredients are intended for those working in the medicinal professions, experts for occupational health and safety and toxicologists. The toxicity data pertaining to the ingredients were supplied by the manufacturers of raw materials

## 12 Ecological Information

· **12.1 Toxicity**

**Aquatic toxicity:**

**Methylenediphenyl diisocyanate:**

EC50, (24h), Daphnia magna: 0,35 mg/L (Lit.).

IC50, (72h), Desmodemus subspicatus: 1,5 mg/L (Lit.).

**Naphthalene:**

LC50, (72h), Pimephales promelas: 6,08 mg/l (IUCLID).

LC50, (24h), Pimephales promelas: 7,76 mg/l (IUCLID).

EC50, (48h), Daphnia magna: 2,16 mg/l (IUCLID).

· **12.2 Persistence and degradability**

ThSB: 2.990 mg/g (Lit.)(CAS 91-20-3)

BOD/ThBOD: 0% (Lit.)(CAS 91-20-3)

COD/ThBOD: 22% (Lit.)(CAS 91-20-3)

**Behaviour in environment :compartments:** No information available.

**Behaviour in sewage plant:** No information available.

**Biological degradability:** CAS 101-68-8: The product is not readily biodegradable.

· **12.3 Bioaccumulative potential**

log Pow: 3,3 (20°C / 68°F)(OECD 107)(CAS 91-20-3)

BCF: 36,5 - 168 (OECD 305)(CAS 91-20-3)

· **12.4 Mobility in soil:** No information available.

· **12.5 Results of PBT and vPvB assessment:** No information available.

· **12.6 Other:** Ecological data of complete product are not available. The product was classified on the basis of the calculation procedure of the preparation directive. The toxicity data pertaining to the ingredients were supplied by the manufacturers of raw materials. Do not discharge product unmonitored into the environment or into the drainage.

## 13 Disposal Considerations

**13.1 Waste treatment methods**

· **Recommendation**

Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Consult your local or regional authorities

**Product:** Dispose of as hazardous waste. For recycling, consult manufacturer

**Uncleaned packaging:**

**Contaminated packaging:** Uncontaminated packaging may be taken for recycling. Packaging that cannot be cleaned should be disposed of as for product

**RCRA Waste Code:** None listed.

**EU Waste Code:** None listed

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## 14 Transport Information

<b>14.1 UN-Number</b>	
DOT	UN 3082
ADR, IMDG, IATA	
<b>14.2 UN-proper shipping name</b>	
DOT	Environmentally hazardous substance, liquid, n.o.s. (Naphthalene)
ADR, IMDG, IATA	
<b>14.3 Transportation hazard class(es)</b>	
DOT - Class : Label	9  
ADR, IMDG, IATA - Class : Label	
<b>14.4 Packing group</b>	
DOT, ADR, IMDG, IATA	III
<b>14.5 Environmental hazards:</b>	
<b>Marine pollutant:</b>	This product is does contain ingredients that are classified by the DOT as a Marine Pollutant (as defined by 49 CFR 172.101, Appendix B)
<b>14.6 Special precautions for user</b>	
<b>Danger code (Kemler):</b>	No data available
<b>EMS Number:</b>	No data available
<b>Transport/Additional Information:</b>	
<b>ADR</b>	
<b>Tunnel restriction code</b>	No data available
<b>UN "Model Regulations"</b>	No data available

## 15 Regulatory Information

### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

<b>TRANSPORT-REGULATIONS</b>	DOT-Classification, ADR (2015); IMDG-Code (2015, 37. Amdt.); IATA-DGR (2015).
<b>NATIONAL REGULATIONS (GHS):</b>	GHS Rev.5 (2013)
<b>- Observe employment restrictions for people</b>	Observe employment restrictions for young people. Observe employment restrictions for mothers-to-be and nursing mothers.
<b>- VOC (1999/13/CE)</b>	No information available.

**15.2 Chemical safety assessment**      Chemical safety assessments for substances in this mixture were not carried out.

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## 16 Other Information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

### Relevant phrases

H411 Toxic to aquatic life with long lasting effects.

H336 May cause drowsiness or dizziness.

H304 May be fatal if swallowed and enters airways.

H410 Very toxic to aquatic life with long lasting effects.

H400 Very toxic to aquatic life.

H302 Harmful if swallowed.

H317 May cause an allergic skin reaction.

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled. H315 Causes skin irritation.

H335 May cause respiratory irritation.

H319 Causes serious eye irritation.

H373 May cause damage to organs through prolonged or repeated exposure. H332 Harmful if inhaled.

H351 Suspected of causing cancer.

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood. P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.

P264 Wash skin thoroughly after handling.

P271 Use only outdoors or in a well-ventilated area.

P272 Contaminated work clothing should not be allowed out of the workplace. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. P285 In case of inadequate ventilation wear respiratory protection

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.

P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/ physician if you feel unwell.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P308 + P313 IF exposed or concerned: Get medical advice/ attention.

P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.

P337 + P313 If eye irritation persists: Get medical advice/ attention.

P362 Take off contaminated clothing and wash before reuse.

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

P405 Store locked up.

P501 Dispose of contents/ container to an approved waste disposal plant.

### Abbreviations and Acronyms

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road IMDG:

International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

ACGIH: American Conference of Governmental Industrial Hygienists

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

WHMIS: Workplace Hazardous Materials Information System (Canada)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

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

Vendor assumes no responsibility for injury to vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Additionally, vendor assumes no responsibility for injury to vendee or third persons proximately caused by abnormal use of the material even if reasonable safety procedures are followed. Furthermore, vendee assumes the risk of his use of the material for either Component A and/or B or the combination of both components

Tuff Industrial Products is a registered Trademark of Tuff Industrial Products, Inc. Complies with Federal Standard No. 29 CFR 1910.1200





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## 1 Identification of the substance/mixture and of the company/undertaking

· **1.1 Product identifier**

**Trade name: UF 606 TuffPatch Kit Part B**

**Application of the substance / the preparation:** Modified Epoxy Curing Agent

· **1.3 Details of the supplier of the Safety Data Sheet**

**Manufacturer/Supplier:**

Tuff Industrial Products, Inc.  
2120 Roberts Dr.  
Broadview, IL 60155 USA  
Tel (800)475-0068

· **1.4 Emergency contact: CHEMTREC® (800)424-9300**

## 2 Hazards identification

\*\*\* EMERGENCY OVERVIEW \*\*\*: No Information

**GHS Classification**

Acute Tox. 4, Eye Irrit. 2, Skin Irrit. 2, Skin Sens. 1

· **2.2 Label elements**

**Labeling according to Regulation (EC) No 1272/2008:**

The product is classified and labeled according to the CLP regulation.



GHS07



GHS08



GHS09

**Signal word:**

Danger

**Hazard Statements:**

- H227 Combustible Liquid.
- H304 May be fatal if swallowed and enters airways.
- H336 May cause drowsiness or dizziness.
- H351 Suspected of causing cancer.
- H411 Toxic to aquatic life with long lasting effects.

**Precautionary Statements:**

- P201 Obtain special instructions before use.
- P202 Do not handle until all safety precautions have been read and understood.
- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
- P261 Avoid breathing vapours / spray.
- P273 Avoid release to the environment.
- P280 Wear protective gloves / protective clothing / eye protection

**Response Statements:**

- P301+P310 IF SWALLOWED: Immediately call a POISON CENTER / doctor.
- P331 Do NOT induce vomiting.
- P308+P313 IF exposed or concerned: Get medical advice / attention.
- P403+P233 Store in a well-ventilated place. Keep container tightly closed.
- P501 Dispose of contents / container to in accordance with local / regional / national / international regulation.

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**Part B**

**2.3 Other hazards**

Further hazards were not determined with the current level of knowledge.

**Hazard description:**

**WHMIS-symbols:** None

**Canadian WHMIS Classification:** None

**NFPA ratings (scale 0 - 4)**



Health = 2  
Fire = 1  
Reactivity = 1

**HMIS-ratings (scale 0 - 4)**

HEALTH	2
FIRE	1
REACTIVITY	1

Health = 2  
Fire = 1  
Reactivity = 1

## 3 Composition/Information on Ingredients

**3.1 Mixtures**

**Description:** Mixture of substances listed below.

**Dangerous components:**

<b>Impurities and stabilising additives:</b>		
CAS: 91-20-3 EINECS: 91-20-3 Index number: 601-052-00-2	Naphthalene Xn R22/40;  N R50/53;  F R11 Flam Sol. 1; H228 Acute Tox. 4; H302 Carc. 2; H351 Aquatic Chronic 1; H410	1 - 5%
CAS: 64742-94-5 EINECS: 265-198-5 Index number: 649-424-00-3	Solvent naphtha (petroleum), heavy arom. Xn R65;  N R58 Asp. Tox., H304 Aquatic Chronic 2, H411 STOT RE 3, H336	40 - 60%

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Printing date: 04/29/2016

Trade name: UF 606 TuffPatch Kit Part B

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## 4 First aid measures

### 4.1 Description of first aid measures

#### General information:

Take off contaminated clothing and wash before reuse.

#### After inhalation:

Ensure supply of fresh air.

Remove the victim into fresh air and keep him calm.

In the event of symptoms seek medical treatment.

#### After skin contact:

In case of contact with skin wash off immediately with soap and water.

Consult a doctor if skin irritation persists.

#### After eye contact:

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

If eye irritation persists: Get medical advice/attention.

#### After swallowing:

Do not induce vomiting.

Rinse out mouth and give plenty of water to drink.

Consult a doctor immediately.

### 4.2 Most important symptoms and effects, both acute and delayed

#### Irritant effects

Nausea, vomiting

Headache

### 4.3 Indications of any immediate medical attention and special treatment

Treat symptomatically.

If swallowed or in the event of vomiting, risk of product entering the lungs.

## 5 Firefighting Measures

### 5.1 Extinguishing media Suitable extinguishing agents:

#### Suitable extinguishing agents:

Dry powder.

Carbon dioxide.

Foam.

#### Extinguishing media that must not be used:

Full water jet

### 5.2 Unusual fire and explosion hazards:

Risk of formation of toxic pyrolysis products.

Carbon monoxide (CO)

Nitrogen oxides (NOx).

Not combusted hydrocarbons

### 5.3 Advice for firefighters:

Do not inhale explosion and/or combustion gases.

Use self-contained breathing apparatus.

Wear full protective suit.

Heat causes increase in pressure and risk of bursting - Keep away from the container.

Cool containers at risk with water spray jet.

Fire residues and contaminated firefighting water must be disposed of in accordance within the local regulations.

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**Part B**

## 6 Accidental Release Measures

· **6.1 Personal precautions, protective equipment and emergency procedures**

Ensure adequate ventilation.  
 Use breathing apparatus if exposed to vapours/aerosol.  
 High risk of slipping due to leakage/spillage of product.  
 Keep away from all sources of ignition.

· **6.2 Environmental precautions:** Prevent spread over a wide area (e.g. by containment or oil barriers). Do not discharge into the drains/surface waters/groundwater. In case the product spills into drains/surface waters/ground water, immediately inform the authorities.

· **6.3 Steps to be taken in case material is release or spilled:**

Take up with absorbent material (e.g. general-purpose binder). Dispose of absorbed material in accordance within the regulations.

· **6.4 Reference to other sections**

See Section 7 for information on safe handling.  
 See Section 8 for information on personal protection equipment.  
 See Section 13 for disposal information.

## 7 Handling and Storage

· **7.1 Precautions for safe handling**

Use only in well-ventilated areas.  
 Avoid spilling or spraying in enclosed areas. Vacuuming in situ required.  
 Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharges.  
 Use explosion-proofed equipment/fittings and non-sparking tools.  
 Do not eat, drink, smoke or take drugs at work.  
 Take off contaminated clothing and wash before reuse. Contaminated work clothing should not be allowed out of the workplace.  
 Showers and eye wash stations should be provided.  
 Clean skin thoroughly after work, apply skin cream. Use barrier skin cream.

· **7.2 Conditions for safe storage, including any incompatibilities**

**Storage:** Keep only in original container. Prevent penetration into the ground. Do not store together with oxidizing agents.  
 Keep container tightly closed. Keep container in a well-ventilated place. Keep in a cool place. Store in a dry place.  
 Protect from heat/overheating and from sun.

· **7.3 Specific end use(s):** No further relevant information available

## 8 Exposure Controls/Personal Protection

**Additional information about design of technical facilities:**

Use with adequate ventilation to ensure exposure levels are maintained below the limits provided above. Use local exhaust ventilation to control airborne vapor. Ensure eyewash/safety shower stations are available near areas where this product is used.

**8.1 Control parameters**

**Ingredients with limit values that require monitoring at the workplace:**

Naphthalene	Long-term exposure: 10 ppm, 50 mg/m <sup>3</sup> , OSHA
	Short-term exposure (15-minute): 15 ppm, 75 mg/m <sup>3</sup> , OSHA
Solvent naphtha (petroleum), heavy arom.	Long-term exposure: 100 ppm, 525 mg/m <sup>3</sup> , OSHA



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**8.2 Exposure controls**

**Personal protective equipment:**

**General protective and hygienic measures:**

- Ensure adequate ventilation on workstation.
- Using suitable discharges or exhaust ventilation.
- Keep away from foodstuffs, beverages and feed.
- Immediately remove all soiled and contaminated clothing.
- Wash hands before breaks and at the end of work.
- Avoid contact with the eyes and skin.

*The following information on appropriate Personal Protective Equipment is provided to assist employers in complying with OSHA regulations found in 29 CFR Subpart I (beginning at 1910.132) or equivalent standard of Canada, or standards of EU member states (including EN 149 for respiratory PPE, and EN 166 for face/eye protection), and those of Japan.*



**Respiratory Protection:**

Use suitable respiratory protective device in case of insufficient ventilation. Use suitable respiratory protective device when aerosol or mist is formed. Maintain airborne contaminant concentrations below guidelines listed above, if applicable. If necessary, use only respiratory protection authorized in the U.S. Federal OSHA Respiratory Protection Standard (29 CFR 1910.134), equivalent U.S. State standards, Canadian CSA Standard Z94.4-93, the European Standard EN149, or EU member states.



**Protective gloves**

**Material of gloves**

Use chemical resistant gloves to prevent skin contact. If necessary, refer to U.S. OSHA 29 CFR 1910.138 or appropriate Standards of Canada

**Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed



**Tightly sealed goggles**

Use ^ c Á |æ • ^ Á ! & @ { } ^ Á [ \* \* | ^ • Á • Á | ] | [ ] | ä ^ Á | Á | ^ ç ^ } ^ ^ ^ Á | } ca & É Á ^ & • • æ ^ É ^ - Á | Á Á É Á Ú P O Á G Á Ó R



**Body Protection**

Use body protection appropriate to prevent contact (e.g. lab coat, overalls). If necessary, refer to appropriate Standards of Canada, or appropriate Standards of the EU, Australian Standards, or relevant Japanese Standards. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.



**Hygienic Practices**

Do not eat, drink, or smoke in areas where this material is used. Avoid breathing vapors. Remove contaminated clothing and wash before reuse. Wash thoroughly after handling. Wash hands before eating.

**8.3 Thermal hazards:** Not applicable

**Delimitation and monitoring of the environmental exposition:**

Comply with applicable environmental regulations limiting discharge to air, water and soil.

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## Part B 9 Physical and Chemical Properties

### 9.1 Information on basic physical and chemical properties

#### General Information

#### Appearance:

Form: Liquid  
Color: No information available.

Odor: mild aromatic  
Odor threshold: No information available.

pH value: No data available.

#### Change in condition

Melting point/Melting range: Undetermined  
Boiling point/Boiling range: > 176°C / > 350°F

Flash point: 62°C / 145°F

Ignition temperature: Not determined.

Decomposition temperature: Not determined.

Self-igniting: Not determined

Danger of explosion: Product does not present an explosive hazard

#### Explosion limits:

Lower: Not determined.  
Upper: Not determined.

Vapor pressure: No information available.

Density at 20°C: 1,00 (20 °C / 68,0 °F)

Relative density: Not determined

Vapour density: Not determined

Evaporation rate: Not determined

Solubility in / Miscibility with water: reacts with water

Specific Gravity 20°C (Water = 1): No data available

#### Viscosity

Dynamic: No data available  
Kinematic: No data available  
Solvent content: No data available  
Organic solvents: No data available  
VOC (EC) No data available

### 9.2 Other information: No further relevant information available

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## Part B

**10 Stability and Reactivity**

- **10.1 Reactivity:** Upon decomposition in closed containers and tubes risk of bursting due to buildup of overpressure.
- **10.2 Chemical stability:** Stable under normal ambient conditions (ambient temperature).  
**Thermal Decomposition / Conditions to be avoided:**  
Upon decomposition in closed containers and tubes risk of bursting due to buildup of overpressure.
- **10.3 Possibility of hazardous reactions:**
  - Reactions with isocyanates.
  - Reactions with strong oxidizing agents.
- **10.4 Conditions to avoid:**
  - Keep away from open flames, hot surfaces and sources of ignition.
  - Strong heating.
  - Sunlight
- **10.5 Incompatible materials**
  - See SECTION 10.3.
  - Various metals.
- **10.6 Hazardous decomposition products In the event of fire:**
  - See SECTION 5.

**11 Toxicological Information**

- **11.1 Information on toxicological effects**

**Acute toxicity:****LD/LC50 values relevant for classification:****64742-94-5 Solvent naphtha (petroleum), heavy aroma**

Oral LD50 &gt; 5000 mg/kg (rat)

**91-20-3 Naphthalene**

Oral LD50 533 mg/kg (OECD 401) (mouse)

Dermal LD50 &gt; 2500 mg/kg (IUCLID) (rat)

Oral LD50 &gt; 2000 mg/kg (IUCLID) (rat)

Inhalative LC50 &gt; 100 ppm(8h) (IUCLID)(rat)

NOAEL, dermal, Rat: 300 mg/kg/90d (OECD 411)(Lit.).

NOAEL, oral, mouse: 133 mg/kg/90d (OECD 408)(Lit.).

LOAEL, inhalativ (vapour ), Rat: 0,011 mg/kg/90d (OECD 413)(Lit.).

**Serious eye damage/irritation:** Toxicological data of complete product are not available.**Skin corrosion/irritation:** Toxicological data of complete product are not available.**Respiratory or skin sensitisation:** Toxicological data of complete product are not available.**Specific target organ toxicity — single exposure:** May cause respiratory irritation. Vapours may cause drowsiness and dizziness. Calculation method**Specific target organ toxicity — repeated exposure:** Toxicological data of complete product are not available.**Carcinogenicity —** Suspected of causing cancer. Calculation method**Aspiration hazard —** May be fatal if swallowed and enters airways.

General remarks:

Symptoms: abdominal pain, nausea, vomiting, diarrhoea.

The toxicity data listed pertaining to the ingredients are intended for those working in the medicinal professions, experts for occupational health and safety and toxicologists. The toxicity data pertaining to the ingredients were supplied by the manufacturers of raw materials

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## 12 Ecological information

### 12.1 Toxicity

#### Naphthalene:

LC50, (72h), Pimephales promelas: 6,08 mg/l (IUCLID).

LC50, (24h), Pimephales promelas: 7,76 mg/l (IUCLID).

EC50, (48h), Daphnia magna: 2,16 mg/l (IUCLID).

### 12.2 Persistence and degradability

ThSB: 2.990 mg/g (Lit.)(CAS 91-20-3)

BOD/ThBOD: 0% (Lit.)(CAS 91-20-3)

COD/ThBOD: 22% (Lit.)(CAS 91-20-3)

#### Behaviour in environment :compartments:

No information available.

#### Behaviour in sewage plant:

No information available.

#### Biological degradability:

No information available

### 12.3 Bioaccumulative potential

log Pow: 3,3 (20°C / 68°F)(OECD 107)(CAS 91-20-3)

BCF: 36,5 - 168 (OECD 305)(CAS 91-20-3)

### 12.4 Mobility in soil: No information available.

### 12.5 Results of PBT and vPvB assessment:

No information available.

### 12.6 Other:

Ecological data of complete product are not available.

The product was classified on the basis of the calculation procedure of the preparation directive. The toxicity data pertaining to the ingredients were supplied by the manufacturers of raw materials. Do not discharge product unmonitored into the environment or into the drainage.

## 13 Disposal Considerations

### 13.1 Waste treatment methods

#### Recommendation

Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Consult your local or regional authorities

#### Product:

Dispose of as hazardous waste. For recycling, consult manufacturer

#### Uncleaned packaging:

#### Contaminated packaging:

Uncontaminated packaging may be taken for recycling. Packaging that cannot be cleaned should be disposed of as for product

**RCRA Waste Code:** None listed.**EU Waste Code:** None listed

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## Part B 14 Transport Information

<b>14.1 UN-Number</b>	
DOT	UN 3082
ADR, IMDG, IATA	
<b>14.2 UN-proper shipping name</b>	
DOT	Environmentally hazardous substance, liquid, n.o.s. (Naphthalene)
ADR, IMDG, IATA	
<b>14.3 Transportation hazard class(es)</b>	
DOT - Class : Label	9  
ADR, IMDG, IATA - Class : Label	
<b>14.4 Packing group</b>	
DOT, ADR, IMDG, IATA	III
<b>14.5 Environmental hazards:</b>	
<b>Marine pollutant:</b>	This product is does contain ingredients that are classified by the DOT as a Marine Pollutant (as defined by 49 CFR 172.101, Appendix B)
<b>14.6 Special precautions for user</b>	
Danger code (Kemler):	No data available
EMS Number:	No data available
<b>Transport/Additional Information:</b>	
ADR	
Tunnel restriction code	No data available
UN "Model Regulations"	No data available

## 15 Regulatory Information

### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

**TRANSPORT-REGULATIONS** DOT-Classification, ADR (2015); IMDG-Code (2015, 37. Amdt.); IATA-DGR (2015).

**NATIONAL REGULATIONS (GHS):** GHS Rev.5 (2013)

- **Observe employment restrictions for people** Observe employment restrictions for young people.  
Observe employment restrictions for mothers-to-be and nursing mothers.
- **VOC (1999/13/CE)** No information available.

**15.2 Chemical safety assessment** Chemical safety assessments for substances in this mixture were not carried out.

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## 16 Other Information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

### Relevant phrases

H227 Combustible Liquid.  
H304 May be fatal if swallowed and enters airways.  
H336 May cause drowsiness or dizziness.  
H351 Suspected of causing cancer.  
H411 Toxic to aquatic life with long lasting effects.  
P201 Obtain special instructions before use.  
P202 Do not handle until all safety precautions have been read and understood.  
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking  
P261 Avoid breathing vapours / spray.  
P273 Avoid release to the environment.  
P280 Wear protective gloves / protective clothing / eye protection  
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER / doctor.  
P331 Do NOT induce vomiting.  
P308+P313 IF exposed or concerned: Get medical advice / attention.  
P403+P233 Store in a well-ventilated place. Keep container tightly closed.  
P501 Dispose of contents / container to in accordance with local / regional / national /international regulation.

### Abbreviations and Acronyms

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road IMDG:  
International Maritime Code for Dangerous Goods  
DOT: US Department of Transportation  
IATA: International Air Transport Association  
GHS: Globally Harmonized System of Classification and Labelling of Chemicals  
ACGIH: American Conference of Governmental Industrial Hygienists  
NFPA: National Fire Protection Association (USA)  
HMIS: Hazardous Materials Identification System (USA)  
WHMIS: Workplace Hazardous Materials Information System (Canada)  
VOC: Volatile Organic Compounds (USA, EU)  
LC50: Lethal concentration, 50 percent  
LD50: Lethal dose, 50 percent

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