

**Safety Data Sheet**  
acc. to OSHA HCS

Printing Date 04/23/2020

Revision Number 3

Revision Date 04/23/2020

**1 Identification**

- **Product identifier**
- **Trade name:** FA4844N
- **Article number:** 14158SB
- **Relevant identified uses of the substance or mixture.**  
Adhesive  
Industrial Use Only.
- **Application of the substance / the mixture** Adhesive
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Royal Adhesives And Sealants, LLC  
2001 W. Washington Street  
South Bend IN 46628-2023  
Information Phone Number: 574-246-5000
- **Information department:** Global Regulatory Department.
- **Emergency telephone number:**  
ChemTrec: Day or Night within USA and Canada: 1-800-424-9300.  
Outside USA and Canada: +1 703-527-3887 (collect calls accepted)

**2 Hazard(s) identification**

- **Classification of the substance or mixture**



GHS02 Flame

Flam. Liq. 2 H225 Highly flammable liquid and vapor.



GHS08 Health hazard

Repr. 2 H361 Suspected of damaging fertility or the unborn child.

STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.

Asp. Tox. 1 H304 May be fatal if swallowed and enters airways.



GHS07

Skin Irrit. 2 H315 Causes skin irritation.

STOT SE 3 H336 May cause drowsiness or dizziness.

- **Label elements**

- **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).

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· **Hazard pictograms**



GHS02   GHS07   GHS08

· **Signal word** *Danger*

· **Hazard statements**

*Highly flammable liquid and vapor.*

*Causes skin irritation.*

*Suspected of damaging fertility or the unborn child.*

*May cause drowsiness or dizziness.*

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

*May be fatal if swallowed and enters airways.*

· **Precautionary statements**

*Obtain special instructions before use.*

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

*Keep away from heat/sparks/open flames/hot surfaces. - No smoking.*

*Ground/bond container and receiving equipment.*

*Use explosion-proof electrical/ventilating/lighting/equipment.*

*Use only non-sparking tools.*

*Take precautionary measures against static discharge.*

*Do not breathe dust/fume/gas/mist/vapors/spray.*

*Wash thoroughly after handling.*

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

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

*If swallowed: Immediately call a poison center/doctor.*

*Specific treatment (see on this label).*

*Do NOT induce vomiting.*

*If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.*

*IF INHALED: Remove person to fresh air and keep comfortable for breathing.*

*IF exposed or concerned: Get medical advice/attention.*

*Call a poison center/doctor if you feel unwell.*

*Get medical advice/attention if you feel unwell.*

*Take off contaminated clothing and wash it before reuse.*

*If skin irritation occurs: Get medical advice/attention.*

*In case of fire: Use for extinction: CO<sub>2</sub>, powder or water spray.*

*Store in a well-ventilated place. Keep container tightly closed.*

*Store in a well-ventilated place. Keep cool.*

*Store locked up.*

*Dispose of contents/container in accordance with local/regional/national/international regulations.*

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**

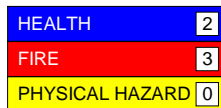


Health = 2

Fire = 3

Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**



HEALTH 2 Health = 2

FIRE 3 Fire = 3

PHYSICAL HAZARD 0 Physical Hazard = 0

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- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

### 3 Composition/information on ingredients

- **Chemical characterization: Mixtures**
- **Description: Mixture**

- **Hazardous components:**

108-88-3	toluene	25-50%
110-54-3	n-hexane	5-20%
68410-97-9	Distillates (petroleum), light distillate hydrotreating process, low-boiling	2.5-10%
110-82-7	cyclohexane	2.5-10%

### 4 First-aid measures

- **Description of first aid measures**
- **After inhalation:**  
Supply fresh air or oxygen; call for doctor.  
In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:**  
Wipe excess from skin.  
Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:**  
Rinse opened eye for 20 minutes under running water. If eye becomes irritated, obtain medical treatment.
- **After swallowing:**  
Rinse mouth with water.  
Do not induce vomiting. Obtain medical advice.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

### 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**  
CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray.  
Use fire fighting measures that suit the environment.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**  
Firefighters use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.
- **Protective equipment:** Protective clothing and respiratory protective device.

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### 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**

Ensure adequate ventilation

Wear protective equipment. Keep unprotected persons away.

- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.

- **Methods and material for containment and cleaning up:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose of contaminated material as waste in accordance with federal state and local regulations.

Ensure adequate ventilation.

- **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

- **Handling:**

- **Precautions for safe handling**

Open and handle receptacle with care.

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of aerosols.

- **Information about protection against explosions and fires:**

Keep container closed when not in use.

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

- **Conditions for safe storage, including any incompatibilities**

- **Storage:**

- **Requirements to be met by storerooms and receptacles:** Store in a cool location away from direct heat.

- **Information about storage in one common storage facility:** Store away from oxidizing agents.

- **Further information about storage conditions:** Keep receptacle tightly sealed.

- **Specific end use(s)** No further relevant information available.

### 8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.

- **Control parameters**

- **Components with limit values that require monitoring at the workplace:**

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit.

At this time, the remaining constituent has no known exposure limits.

#### 108-88-3 toluene

PEL	Long-term value: 200 ppm Ceiling limit value: 300; 500* ppm *10-min peak per 8-hr shift
REL	Short-term value: 560 mg/m <sup>3</sup> , 150 ppm Long-term value: 375 mg/m <sup>3</sup> , 100 ppm
TLV	Long-term value: 75 mg/m <sup>3</sup> , 20 ppm BEI

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**110-54-3 n-hexane**PEL Long-term value: 1800 mg/m<sup>3</sup>, 500 ppmREL Long-term value: 180 mg/m<sup>3</sup>, 50 ppmTLV Long-term value: 176 mg/m<sup>3</sup>, 50 ppm  
Skin; BEI**110-82-7 cyclohexane**PEL Long-term value: 1050 mg/m<sup>3</sup>, 300 ppmREL Long-term value: 1050 mg/m<sup>3</sup>, 300 ppmTLV Long-term value: 344 mg/m<sup>3</sup>, 100 ppm**· Ingredients with biological limit values:****108-88-3 toluene**BEI 0.02 mg/L  
Medium: blood  
Time: prior to last shift of workweek  
Parameter: Toluene0.03 mg/L  
Medium: urine  
Time: end of shift  
Parameter: Toluene0.3 mg/g creatinine  
Medium: urine  
Time: end of shift  
Parameter: o-Cresol with hydrolysis (background)**110-54-3 n-hexane**BEI 0.4 mg/L  
Medium: urine  
Time: end of shift at end of workweek  
Parameter: 2,5-Hexanedione without hydrolysis**· Additional information:** The lists that were valid during the creation were used as basis.**· Exposure controls****· Personal protective equipment (see listings below)****· 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.
- Store protective clothing separately.
- Avoid contact with the skin.
- Avoid contact with the eyes and skin.

**· Breathing equipment:**

Use approved respiratory protection equipment when airborne exposure is excessive. Consult the respirator manufacturer to determine the appropriate type of equipment for a given application. Observe respirator use limitations specified by the manufacturer.

**· Protection of hands:**

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

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- **Material of gloves**

Nitrile rubber, NBR

Chloroprene rubber, CR

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

- **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.

- **Eye protection:**

Safety glasses with side shields.



Tightly sealed goggles

- **Body protection:** Protective work clothing

### 9 Physical and chemical properties

- **Information on basic physical and chemical properties**

- **General Information**

- **Appearance:**

<b>Form:</b>	Liquid
<b>Color:</b>	Not determined.
<b>Odor:</b>	Characteristic
<b>Odor threshold:</b>	Not determined.

- **pH-value:** Not determined.

- **Change in condition**

<b>Melting point:</b>	Undetermined.
<b>Boiling point:</b>	69 °C (156.2 °F)

- **Flash point:** -26 °C (-14.8 °F)

- **Flammability (solid, gaseous):** Not applicable.

- **Ignition temperature:** 240 °C (464 °F)

- **Decomposition temperature:** Not determined.

- **Auto igniting:** Product is not selfigniting.

- **Danger of explosion:** Product is not explosive. However, formation of explosive air/vapor mixtures are possible.

- **Flammable limits:**

<b>Lower:</b>	1.2 Vol %
<b>Upper:</b>	7.4 Vol %

- **Vapor pressure at 20 °C (68 °F):** 160 hPa (120 mm Hg)

- **Specific gravity at 20 °C (68 °F):** 0.859 g/cm<sup>3</sup> (7.16836 lbs/gal)

- **Relative density** Not determined.

- **Vapor density** Not determined.

- **Evaporation rate** Not determined.

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- |   |   |
|---|---|
| <b>· Solubility in / Miscibility with Water:</b>  | Not miscible or difficult to mix.   |
| <b>· Partition coefficient (n-octanol/water):</b> | Not determined.   |
| <b>· Viscosity:</b>                               |   |
| <b>Dynamic:</b>                                   | Not determined.   |
| <b>Kinematic:</b>                                 | Not determined.   |
| <b>· Solvent content:</b>                         |   |
| <b>Organic solvents:</b>                          | Not available   |
| <b>· Solids content:</b>                          | Not available.  |
| <b>· Other information</b>                        | Pounds Per Gallon 7.17<br>Lbs VOC/Gallon [less water. less exempts] 5.50<br>Grams VOC/Liter [less water. less exempts] 658.68 |

## 10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** not reactive, as supplied.
- **Conditions to avoid** Heat, flames, sparks.
- **Incompatible materials:**
  - Reacts with oxidizing agents.
  - Reacts with acids.
- **Hazardous decomposition products:**
  - Carbon monoxide and carbon dioxide
  - Hydrogen chloride (HCl)
  - Hydrocarbons

## 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**

### 108-88-3 toluene

Oral	LD50	5,000 mg/kg (rat)
Dermal	LD50	12,124 mg/kg (rabbit)
Inhalative	LC50/4 h	5,320 mg/l (mouse)

### 110-82-7 cyclohexane

Oral	LD50	12,705 mg/kg (rat)
------	------	--------------------

- **Primary irritant effect:**
  - on the skin:** Skin irritant.
  - on the eye:**
    - May irritate the eye.
    - Vapors may be irritating to the eyes.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
  - The product shows the following dangers according to internally approved calculation methods for preparations:

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**Irritant**

The product can cause inheritable damage.

· **Carcinogenic categories**· **IARC (International Agency for Research on Cancer)**

108-88-3 toluene

3

· **NTP (National Toxicology Program)**

None of the ingredients is listed.

· **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

\* **12 Ecological information**· **Toxicity**· **Aquatic toxicity:** No further relevant information available.· **Persistence and degradability** No further relevant information available.· **Behavior in environmental systems:**· **Bioaccumulative potential** No further relevant information available.· **Mobility in soil** No further relevant information available.· **Ecotoxicological effects:**· **Remark:** Toxic for fish· **Additional ecological information:**· **General notes:** At present there are no ecotoxicological assessments.· **Results of PBT and vPvB assessment**· **PBT:** Not applicable.· **vPvB:** Not applicable.· **Other adverse effects** No further relevant information available.\* **13 Disposal considerations**· **Waste treatment methods**· **Recommendation:** Comply with current regulations.· **Uncleaned packagings:**· **Recommendation:** Comply with current regulations.\* **14 Transport information**· **UN-Number**· **DOT, IMDG, IATA**

UN1133

· **UN proper shipping name**· **DOT**

Adhesives

· **IMDG, IATA**

ADHESIVES

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· **Transport hazard class(es)**· **DOT**

· **Class** 3 Flammable liquids  
 · **Label** 3

· **IMDG, IATA**

· **Class** 3 Flammable liquids  
 · **Label** 3

· **Packing group**  
 · **DOT, IMDG, IATA** II

· **Environmental hazards:** Product contains environmentally hazardous substances:  
 cyclohexane  
 · **Marine pollutant:** Yes  
 · **Special marking (ADR):** Symbol (fish and tree)

· **Special precautions for user** Warning: Flammable liquids  
 · **Danger code (Kemler):** 33  
 · **EMS Number:** F-E,S-D  
 · **Stowage Category** B

· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.

· **Transport/Additional information:**

· **DOT** This product is not regulated as a marine pollutant when transported on inland waterways in sizes of  $\leq 5$  L or  $\leq 5$  kg or by road, rail, or inland air in nonbulk sizes, provided the packaging meets the general requirements 173.24 and 173.24a.

· **IMDG** The marine pollutant mark is not required when transported in sizes of  $\leq 5$  L or  $\leq 5$  kg.

· **IATA** The environmentally hazardous substance mark may appear if required by other transport regulations.

· **UN "Model Regulation":** UN 1133 ADHESIVES, 3, II, ENVIRONMENTALLY HAZARDOUS

## 15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**  
 · **Sara**

· **Section 355 (extremely hazardous substances):**

None of the ingredients is listed.

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· **Section 313 (Specific toxic chemical listings):**

108-88-3 toluene

110-54-3 n-hexane

110-82-7 cyclohexane

· **TSCA (Toxic Substances Control Act):**

All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements.

· **Hazardous Air Pollutants**

108-88-3 toluene

110-54-3 n-hexane

· **Proposition 65**

Please contact H.B. Fuller for more information regarding Proposition 65 on this product:  
reg.request@hbfuller.com .

· **(DSL) Canada Domestic Substance List**

All components of this product are on the DSL(Canada Domestic Substance list) or are exempt from DSL requirements.

· **Carcinogenicity categories**

· **EPA (Environmental Protection Agency)**

108-88-3 toluene

II

110-54-3 n-hexane

II

110-82-7 cyclohexane

I

· **TLV (Threshold Limit Value established by ACGIH)**

108-88-3 toluene

A4

TSRN1397250002-5273P

A4

· **MAK (German Maximum Workplace Concentration)**

None of the ingredients is listed.

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

· **National regulations:**

· **Information about limitation of use:**

Workers are not allowed to be exposed to the hazardous carcinogenic materials contained in this preparation.  
Exceptions can be made by the authorities in certain cases.

· **Water hazard class:** Water hazard class 3 (Self-assessment): extremely hazardous for water.

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

### 16 Other information

Although the information and recommendations set forth in this SDS are presented in good faith and are believed to be correct as of the date of this SDS, Royal Adhesives & Sealants makes no representations as to the completeness or accuracy thereof. Information is supplied on the condition that the persons receiving and using it will make their own determination as to the suitability for their purpose prior to use. In no event will Royal Adhesives & Sealants or any affiliate thereof be responsible for damages of any nature whatsoever resulting from the use or reliance on the information set forth in the SDS.

· **Department issuing SDS:**

Global Regulatory Department.  
reg.request@hbfuller.com

· **Creation Date:** 04/23/2020

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· **Date of preparation / last revision** 04/23/2020 / 2

· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (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

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

BEI: Biological Exposure Limit

Flam. Liq. 2: Flammable liquids – Category 2

Skin Irrit. 2: Skin corrosion/irritation – Category 2

Repr. 2: Reproductive toxicity – Category 2

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2

Asp. Tox. 1: Aspiration hazard – Category 1

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