

DS8000 Series Part A Safety Data Sheet

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

This safety data sheet applies to the following products:

- DS8014 Part A
- DS8024 Part A
- DS8069 Part A
- DS8088 Part A

1.2 Relevant identified uses of the substance or mixture and uses advised against

- Epoxy adhesive for joining fiberglass reinforced plastic products.
- This product is intended to be mixed only with its specific catalyst; DS8000 Series Part B

1.3 Details of the supplier of the safety data sheet

- NOV Fiber Glass Systems
17115 San Pedro Avenue, Suite 200
San Antonio, Texas 78232 USA
Tel: 1-210-477-7500
Fax: 1-210-231-5915
E-mail: Mike.Thayer@nov.com

1.4 Emergency telephone number(s)

- 3E Company, 24-Hour Support (Access Code/Contract Number: 333386)
 - USA, Canada 1-888-298-2344
 - Asia, Pacific 1-760-476-3960
 - Europe, Middle East, Africa 1-760-476-3961
 - Americas 1-760-476-3962

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Physical

- Not classified

Health

- Skin irritation, Category 2
- Skin sensitizer, Category 1
- Carcinogen – Category 1B (inhalation; refractories, fibers, aluminosilicate)

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NOV Fiber Glass Systems

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RV2018

Environmental

- Toxic to aquatic life, acute, Category 2
- Toxic to aquatic life with long lasting effects, Category 2

2.2 Label elements

Signal Word(s)

- DANGER

Pictogram(s)



Hazard Statements

- Physical
 - Not classified
- Health
 - H315: Causes skin irritation.
 - H317 May cause an allergic skin reaction.
 - H350: May cause cancer (inhalation; refractories, fibers, aluminosilicate).
- Environmental
 - H401: Toxic to aquatic life.
 - H411: Toxic to aquatic life with long lasting effects.

Precautionary Statements

- Prevention
 - P202: Do not handle until all safety precautions have been read and understood.
 - P233: Keep container tightly closed.
 - P261: Avoid breathing dust/fume/gas/mist/vapor/spray.
 - P264: Wash skin thoroughly after handling.
 - P270: Do not eat, drink or smoke when using this product.
 - P271: Use only outdoors or in well-ventilated area.
 - P272: Contaminated work clothing should not be allowed out of the workplace.
 - P273: Avoid release to the environment.
 - P280: Wear protective gloves/protective clothing/eye protection/face protection.
- Response
 - P302+P352: IF ON SKIN: Wash with plenty of soap and water.
 - P333+P313: If skin irritation or rash occurs: Get medical advice/attention.
 - P301+P310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
 - P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
 - P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.

- P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 - P331: Do NOT induce vomiting.
 - P332+P313: If skin irritation occurs: Get medical advice/attention.
 - P337+P313: If eye irritation persists: Get medical advice/attention.
 - P362+P364: Take off all contaminated clothing and wash it before reuse.
 - P391: Collect spillage.
- Storage
- P403+P233: Store in a well-ventilated place. Keep container tightly closed.
 - P403+P235: Store in a well-ventilated place. Keep cool.
- Disposal
- P501: Dispose of contents/container in accordance with regulatory requirements.

2.3 Other Hazards

- PBT and vPvB assessment
 - None of the ingredients are considered to be either PBT or vPvB.
- Warning: The cured adhesive product may form combustible dust concentrations in air when sanded, grinded, or cut.

SECTION 3: Composition/information on Ingredients

3.1 Substances

- Not applicable

3.2 Mixtures

| Chemical Identity | CAS No. | EC No. | Concentration Range (weight %) |
|--|----------------|----------------|--------------------------------|
| Epoxy phenol novolac resin | 0028064-14-4 | Polymer | 60 – 95 |
| Refractories, fibers, aluminosilicate | 0142844-00-6 | 604-314-4 | < 5 |
| Substances that do not meet the classification and labeling criteria established under the GHS | Not applicable | Not applicable | Balance |

SECTION 4. First-aid measures

4.1 Description of first-aid measures

Inhalation

- Move to fresh air.
- If difficulty in breathing or respiratory irritation; seek immediate medical attention.
- If breathing has stopped; seek immediate medical attention, perform artificial respiration.

Skin contact

- Wash affected area thoroughly with soap and water for at least 20 minutes.
- If irritation develops or persists; seek medical attention.

Eye contact

- Immediately flush with water for at least 20 minutes.
- Remove contact lenses, if present.
- If irritation develops or persists, seek medical attention.

Ingestion

- Do not induce vomiting unless directed to do so by medical personnel.
- Never give anything by mouth to an unconscious person.
- If conscious, rinse out mouth with water.
- If symptoms persist, seek immediate medical attention.

4.2 Most Important symptoms and effects, both acute and delayed

Acute

- Irritation.

Delayed

- Pre-existing skin problems may be aggravated by prolonged or repeated contact.

4.3 Indication of any immediate medical attention and special treatment needed

- Treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media

- Water spray, ABC dry chemical, foam or carbon dioxide.

5.2 Specific hazards arising from the substance or mixture

- Product is not considered a fire hazard, but may burn if ignited.
- Closed containers may rupture when exposed to extreme heat.
- Toxic or irritating substances may be emitted upon burning, combustion or decomposition.

5.3 Advice for firefighters

- Wear self-contained breathing apparatus and protective clothing, as necessary.
-

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

- Due to the high viscosity of this adhesive product and the relatively small end-use container size, significant spills are unlikely to occur.
- If a spilled in an enclosed area, ventilate and remove all sources of ignition.
- Use only non-sparking tools during cleanup and place discarded material into a suitable container.

6.2 Environmental precautions

- Do not allow spilled materials to enter storm sewers, sanitary sewers, or impact groundwater.
- Do not allow spilled materials to remain on the ground.

6.3 Methods and materials for containment and cleaning up

- Use only non-sparking tools during cleanup and place discarded material into a suitable container for disposal.
- Avoid dispersal of dust in the air (i.e., cleaning dusty surfaces with compressed air) as this can contribute to a combustible dust hazard.

6.4 Reference to other sections

- See also, *SECTION 8: Control parameters* and *SECTION 13: Disposal considerations*.
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SECTION 7: Handling and storage

7.1 Precautions for safe handling

- Avoid contact with skin and eyes and inhalation of vapors.
- Avoid sources of ignition, including smoking while using this product.
- Thoroughly wash exposed skin after working with this product.
- Only use this product in a well-ventilated area.
- Use spark-free tools.
- Empty containers may contain product residue and may be hazardous.
- Minimize generation of dust when sanding, grinding, and cutting the cured product.
- Routine housekeeping should be instituted to ensure that product dusts do not accumulate on surfaces.

7.2 Conditions for safe storage, including any incompatibilities

- Store in cool location away from ignition sources or open flames.
- Avoid prolonged exposure to temperatures in excess of 38°C (100°F).
- Store in original containers or in containers of the same construction material as original containers.

7.3 Specific end use(s)

- No additional data available.
-

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Epoxy phenol novolac resin
CAS No. 0028064-14-4

| Country | Occupational Exposure Limit (OEL) Values | | Legal Basis |
|---|--|---------------------|-------------|
| | Eight Hour TWA | Fifteen Minute STEL | |
| No OELs were found for this ingredient. | | | |

Refractories, fibers, aluminosilicate ^[1]
CAS No. 0142844-00-6

| Country | Occupational Exposure Limit (OEL) Values | | Legal Basis |
|---------------------------|--|------------------------|--|
| | Eight Hour TWA | Fifteen Minute STEL | |
| Australia | 0.5 fiber/mL (respirable) 2 mg/m ³ (inhalable) | None established | Workplace Exposure Standards for Airborne Contaminants |
| Belgium | 0.5 fiber/m ³ | None established | limites d'exposition professionnelle – VLEP/ Grenswaarden voor beroepsmatige blootstelling – GWBB |
| Canada – Alberta | 0.2 fiber/m ³ | None established | Occupational Safety and Health Code |
| Canada – British Columbia | 0.2 fiber/m ³ | None established | Occupational Health and Safety Regulation, Table of Exposure Limits for Chemical and Biological Substances |
| Canada - Ontario | 0.5 fiber/m ³ | None established | Regulation 883, Control of Exposure to Biological or Chemical Agents |
| Canada - Quebec | 1 fiber/m ³ | None established | Regulation respecting occupational safety and health |
| Canada - Saskatchewan | 0.2 fiber/m ³ | None established | The Occupational Safety and Health Regulations |
| Denmark | 1 fiber/m ³ | 2 fiber/m ³ | Grænseværdier for stoffer og materialer |
| France | 0.1 fiber/m ³ | None established | Institut National de Recherche et de Sécurité (INRS) |
| Germany (AGS) | 0.1 fiber/m ³ (respirable) 0.01 fiber/m ³ (inhalable) | None established | Technical Rule for Hazardous Substances (TRGS) No. 900 |
| Hungary | 1 fiber/m ³ | None established | Chemical Safety of Workplaces |
| Ireland | 1 fiber/m ³ | None established | Code of Practice for the Safety, Health and Welfare at Work (Chemical Agents) Regulations |
| South Korea | 0.2 fiber/m ³ | None established | [Need reference] |
| Spain | 0.5 fiber/m ³ | None established | Instituto Nacional de Seguridad e Higiene en el Trabajo (INSHT) |
| Sweden | 0.2 fiber/m ³ | None established | Occupational Exposure Limit Values and Measures Against Air Contaminants (AFS 2005:17) |
| Switzerland | 0.25 fiber/m ³ | None established | Verordnung über die Verhütung von Unfällen und Berufskrankheiten |

| | | | |
|-----------------|---------------------------|------------------|--|
| | | | (VUV)", Art. 50 Abs.3 |
| The Netherlands | 0.54 fiber/m ³ | None established | MAC-Values / Public limit values Dutch OEL Databank |
| USA (ACGIH) | 0.2 fiber/m ³ | None established | None |

^[1] This material is incorporated into the adhesive mixture and exposure via inhalation is not likely to occur unless the cured product is subjected to finishing operations such as sanding, grinding, cutting, etc.

Particulates not otherwise classified/regulated (PNOC / PNOR) (may be generated if cured product is subjected to sanding, grinding, cutting, etc.)

CAS No. – Not applicable

| Country | Occupational Exposure Limit (OEL) Values | | Legal Basis |
|---------------------------|---|---------------------|---|
| | Eight Hour TWA | Fifteen Minute STEL | |
| Austria | 10 mg/m ³ (inhalable) | None established | Workplace Exposure Standards for Airborne Contaminants |
| Belgium | 10 mg/m ³ | None established | limites d'exposition professionnelle – VLEP/ Grenswaarden voor beroepsmatige blootstelling – GWBB |
| Canada - Alberta | 10 mg/m ³ (total) 3 mg/m ³ (respirable) | None established | Occupational Safety and Health Code |
| Canada – British Columbia | 10 mg/m ³ (total dust) 3 mg/m ³ (respirable) | None established | Occupational Health and Safety Regulation, Table of Exposure Limits for Chemical and Biological Substances |
| Canada - Manitoba | 10 mg/m ³ (inhalable) 3 mg/m ³ (respirable) | None established | Workplace Safety and Health Act, Part 36 |
| Canada - Ontario | 10 mg/m ³ (inhalable) 3 mg/m ³ (respirable) | None established | Regulation 883, Control of Exposure to Biological or Chemical Agents |
| Canada - Quebec | 10 mg/m ³ (total dust) | None established | Regulation respecting occupational safety and health |
| China | 3 mg/m ³ (fiberglass reinforced plastic dust) | None established | GBZ 2.1-2007, Occupational exposure limits for hazardous agents in the workplace |
| Ireland | 10 mg/m ³ (inhalable) 4 mg/m ³ (respirable) | None established | Code of Practice for the Safety, Health and Welfare at Work (Chemical Agents) Regulations |
| Malaysia | 10 mg/m ³ (inhalable) 3 mg/m ³ (respirable) | None established | Occupational Safety and Health (Use and Standards of Exposure of Chemicals Hazardous to Health) Regulations |
| New Zealand | 10 mg/m ³ (inhalable) 3 mg/m ³ (respirable) | None established | Workplace Exposure Standards and Biological Exposure Indices |
| Singapore | 10 mg/m ³ (nuisance) | None established | Workplace Safety and Health (General Provisions) Regulations |
| South Korea | 10 mg/m ³ | None established | [Need reference] |
| USA (ACGIH) | 10 mg/m ³ (inhalable) 3 mg/m ³ (respirable) | None established | None |
| USA (OSHA) | 15 mg/m ³ (total dust) 5 mg/m ³ (respirable) | None established | 29 CFR 1910 Subpart Z, Toxic and Hazardous Substances |
| United Kingdom | 10 mg/m ³ (inhalable) 4 mg/m ³ (respirable) | None established | EH40 Workplace exposure limits |

8.2 Exposure controls

Appropriate engineering controls

- Provide adequate general and local exhaust ventilation to control airborne concentrations to below the occupational exposure limit values.
- When sanding, cutting, grinding the cured product, it is recommended that all dust control equipment contain explosion relief vents or an explosion suppression system or an oxygen-deficient environment.

Personal protective equipment

- Eye and face protection
 - Approved safety glasses with side shields (e.g., ANSI Z87, EN166)
- Skin protection
 - Hand protection: Butyl rubber, Nitrile rubber or Neoprene gloves are generally recommended for epoxy resin. Different glove materials, thicknesses, and from different glove manufacturers may provide varying degrees of protection. Temperature and specific use can impact glove effectiveness. Some gloves may be intended to be used only once and then discarded, while others may be used for longer periods of time. The glove supplier should provide the user with information regarding permeability and breakthrough time. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.
 - Other skin protection: Such clothing as to minimize or eliminate the chance of skin contact with the adhesive product.
- Respiratory protection
 - If ventilation is insufficient to keep airborne concentrations below the occupation exposure limit levels, full or half-mask respirator fitted with organic vapor cartridges and/or particulate filters (for sanding, grinding, cutting, etc. cured material). Filter masks may be of limited use in cases of high or unknown exposure.

Environmental exposure controls

- Do not flush into surface water or sanitary sewer system.
- Do not place directly onto ground.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

| | |
|--|--|
| - Appearance | Grey thixotropic paste |
| - Odor | Slight, epoxy |
| - Odor threshold | No data available |
| - pH | No data available |
| - Melting point/freezing point | No data available |
| - Initial boiling point and boiling range | No data available |
| - Flash point | > 200°C / > 392°F (Setaflash Closed Cup) |
| - Evaporation rate | No data available |
| - Flammability (solid, gas) | No data available |
| - Upper/lower flammability or explosive limits | No data available |

| | |
|--|--------------------------------------|
| - Vapor pressure | < 1 mmHg @ 20°C / 68°F (epoxy resin) |
| - Vapor density (air = 1) | Heavier than air (epoxy resin) |
| - Relative density | No data available |
| - Solubility(ies) | Negligible in water (epoxy resin) |
| - Partition coefficient: n-octanol/water | No data available |
| - Auto-ignition temperature | No data available |
| - Decomposition temperature | No data available |
| - Viscosity | No data available |
| - Explosive properties | Not explosive (epoxy resin) |
| - Oxidizing properties | Not oxidizing (epoxy resin) |

9.2 Other information

- No data available.

SECTION 10: Stability and reactivity

10.1 Reactivity

- No hazardous decomposition expected if product is stored and used as directed.
- Exothermic reactions, including polymerization, may occur in contact with amines, strong acids, strong bases, alcohols, strong oxidizing agents, and excessive heat.

10.2 Chemical stability

- Product is stable under normal conditions of storage and use.

10.3 Possibility of hazardous reactions

- Exothermic reactions, including polymerization, may occur in contact with amines, strong acids, strong bases, alcohols, strong oxidizing agents, and excessive heat.

10.4 Conditions to avoid

- Excessive heat, flames, and sparks.
- Avoid unintended mixing with amine catalyst.

10.5 Incompatible materials

- Avoid contact with oxidizing materials and unintended mixing with amine catalyst.

10.6 Hazardous decomposition products

- On combustion, may emit toxic fumes of carbon monoxide (CO), carbon dioxide (CO₂), aldehydes, and other products of incomplete combustion; phenolics..

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

- Data for ingredients not listed were not found or not sufficient for classification.

Epoxy phenol novolac resin (CAS No. 028064-14-4)

- | | | | |
|--------------|------|------|---------------|
| - Oral | Rat: | LD50 | > 2000 mg/kg |
| - Inhalation | — | — | No data found |
| - Dermal | Rat | LD50 | > 2000 mg/kg |

Skin corrosion/irritation

Epoxy phenol novolac resin (CAS No. 028064-14-4)

- Rabbit Slightly to moderately irritating

Refractories, fibers, aluminosilicate (CAS No. 0142844-00-6)

- Rabbit Not irritating

Serious eye damage/irritation

- Data for ingredients not listed were not found or not sufficient for classification.

Epoxy phenol novolac resin (CAS No. 028064-14-4)

- Rabbit Slightly irritating

Respiratory or skin sensitization

- Data for ingredients not listed were not found or not sufficient for classification.

Epoxy phenol novolac resin (CAS No. 028064-14-4)

- | | | |
|--------------|------------|-----------------|
| - Inhalation | — | No data found |
| - Skin | Guinea pig | Not sensitizing |

Germ cell mutagenicity

- Data for ingredients were not found or not sufficient for classification.

Carcinogenicity

- Data for ingredients not listed were not found or not sufficient for classification.

Refractories, fibers, aluminosilicate (CAS No. 0142844-00-6)

- When inhaled:
 - IARC: Group 2B (possibly carcinogenic to humans)
 - NTP: reasonably anticipated to be a human carcinogen

Reproductive toxicity

- Data for ingredients were not found or not sufficient for classification.

STOT-single exposures

- Data for ingredients were not found or not sufficient for classification.

STOT-repeated exposures

- Data for ingredients were not found or not sufficient for classification.

Aspiration hazard

- Data for ingredients were not found or not sufficient for classification.
-

SECTION 12: Ecological information

12.1 Toxicity

Acute toxicity

Epoxy phenol novolac resin (CAS No. 028064-14-4)

- | | | | |
|--------------------------|------------------|----------------|-------------|
| - Fish: | Unknown species. | LC50 (96-hour) | > 1-10 mg/L |
| - Crustacea | Unknown species. | EC50 (24-hour) | > 1-10 mg/L |
| - Algae / Aquatic plants | No data found. | | |
| - Bacteria | No data found. | | |

Refractories, fibers, aluminosilicate (CAS No. 0142844-00-6)

- | | |
|--------------------------|----------------|
| - Fish: | No data found. |
| - Crustacea | No data found. |
| - Algae / Aquatic plants | No data found. |
| - Bacteria | No data found. |

Chronic toxicity

- Data for ingredients were not found or not sufficient for classification.

12.2 Persistence and degradability

- Data for ingredients were not found or not sufficient for classification.

12.3 Bioaccumulative potential

- Data for ingredients were not found or not sufficient for classification.

12.4 Mobility in soil

- Data for ingredients were not found or insufficient for classification.

12.5 Results of PBT and vPvB assessment

- None of the ingredients are listed.

12.6 Other adverse effects

- No additional data is available.
-

SECTION 13: Disposal considerations

13.1 Waste treatment methods

- Must be disposed of in accordance with local regulatory requirements.
 - Land disposal of uncured product is discouraged and illegal in many jurisdictions.
 - Sewer disposal is discouraged.
 - Empty containers may contain hazardous residue and must be disposed accordingly.
-

SECTION 14: Transport information

US Department of Transportation (Road and Rail)

- Not regulated

International Carriage of Dangerous Goods by Road (ADR)

International Carriage of Dangerous Goods by Rail (RID)

International Civil Aviation Organization (ICAO) Technical Instructions

- UN3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Epoxy phenol novolac resin), 9, PG III

International Maritime Dangerous Goods (IMDG) Code

International Carriage of Dangerous Goods by Inland Waterways

- UN3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Epoxy phenol novolac resin), 9, PG III, MARINE POLLUTANT
-

SECTION 15: Regulatory information

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

The regulatory information provided below may not be comprehensive.

Canada

Controlled Products Regulation (CPR)

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

Ingredient Disclosure List (IDL)

- All components of this mixture that are on the IDL above their specified concentration are disclosed in this SDS.

United States

| EPCRA | | | CERCLA | RCRA | CAA | OSHA |
|------------------------------------|------------------------|-------------|------------|-----------|-------------------|---------------------------|
| Section 302 (EHS) TPQ (LB/KG) | Section 304 RQ (LB/KG) | Section 313 | RQ (LB/KG) | P/U Codes | 112(r) TQ (LB/KG) | Highly Hazardous Chemical |
| None of the ingredients are listed | | | | | | |

15.2 Chemical safety assessment

- No chemical safety assessment has been carried out for this mixture by the supplier.

SECTION 16: Other information

Revision history

| Revision Number | Revision Date | Revision Description |
|-----------------|---------------|---|
| 1 | 25-JUL-2013 | Initial SDS creation in conformance with OSHA hazard communication standard (29 CFR 1910.1200) and UN Globally Harmonized System (GHS). |
| 2 | 27-NOV-2013 | Reformatted entire SDS. |
| 3 | 1-AUG-2014 | Reformatted entire SDS and added information in conformance with Regulation (EC) No. 1907/2006 (REACH). |
| 4 | 18-MAY-2015 | Updated Section 14 – Transportation Information |

Legend to abbreviations and acronyms used

- ACGIH American Conference of Governmental Industrial Hygienists
- ANSI American National Standards Institute
- CAA Clean Air Act
- CFR Code of Federal Regulations (US)
- EN European Standard (French: *Européenne Norme*)
- EPCRA Emergency Planning and Community Right-to-Know Act
- IARC International Agency for Research on Cancer
- IBC Code International Bulk Chemical Code
- MARPOL Marine Pollution
- NIOSH National Institute for Occupational Safety and Health
- NTP National Toxicological Program
- OSHA Occupational Safety and Health Administration (US)
- PBT Persistent Bioaccumulative and Toxic
- RCRA Resource Conservation and Recovery Act
- vPvB very Persistent and very Bioaccumulative

Key literature references and sources for data

- ESIS. European chemical Substances Information System. <http://esis.jrc.ec.europa.eu/>.
- IARC. 2002. IARC Monographs on the Evaluation of Carcinogenic Risks to Humans. Man-made Vitreous Fibres. Volume 81. 11 pages.
- NTP. 2011. Report on Carcinogens. U.S. Department of Health and Human Services. Twelfth Edition. 89-90.
- USEPA. 2006. List of Lists, Consolidated List of Chemicals Subject to the Emergency Planning and Community Right-To-Know Act (EPCRA) and Section 112(r) of the Clean Air Act. EPA 550-B-01-003. October 2006.