

SAFETY DATA SHEET



The information in this Safety Data Sheet is required pursuant to Hazardous Product Regulations 2015.

Date of issue/Date of revision : 4 December 2023

Version 14.03

Section 1. Identification

Product name : AMERCOAT 450H BR-1 RED OXIDE RESIN

Product code : AT45H7

Other means of identification : Not available.

Product type : Liquid.

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

Product use : Industrial applications, Used by spraying.

Use of the substance/
mixture : Coating.

Uses advised against : Not applicable.

Supplier : PPG Architectural Coatings Canada, Inc.
1550, rue Ampère, bureau 500
Boucherville (Québec) J4B 7L4
Canada
+1 450-655-3121

PPG Industries, Inc.
One PPG Place
Pittsburgh, PA 15272

Emergency telephone number : (412) 434-4515 (U.S.)
(514) 645-1320 (Canada)
SETIQ Interior de la República: 800-00-214-00 (México)
SETIQ Ciudad de México: (55) 5559-1588 (México)

Technical Phone Number : 888-977-4762

Section 2. Hazard identification

Classification of the substance or mixture : FLAMMABLE LIQUIDS - Category 3
RESPIRATORY SENSITIZATION - Category 1A
SKIN SENSITIZATION - Category 1A
CARCINOGENICITY - Category 1
TOXIC TO REPRODUCTION - Category 2
Health Hazards Not Otherwise Classified - Category 1

GHS label elements

Hazard pictograms :



Section 2. Hazard identification

- Signal word** : Danger
- Hazard statements** : Flammable liquid and vapor.
May cause an allergic skin reaction.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause cancer.
Suspected of damaging fertility or the unborn child.
Prolonged or repeated contact may dry skin and cause irritation.
- Precautionary statements**
- Prevention** : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves, protective clothing and eye or face protection. Wear respiratory protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Avoid breathing vapor. Contaminated work clothing should not be allowed out of the workplace.
- Response** : IF exposed or concerned: Get medical advice or attention. IF INHALED: Remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER or doctor. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice or attention.
- Storage** : Store locked up.
- Disposal** : Dispose of contents and container in accordance with all local, regional, national and international regulations.
- Supplemental label elements** : Moisture-sensitive material. Sanding and grinding dusts may be harmful if inhaled. This product contains crystalline silica which can cause lung cancer or silicosis. The risk of cancer depends on the duration and level of exposure to dust from sanding surfaces or mist from spray applications. Repeated exposure to high vapor concentrations may cause irritation of the respiratory system and permanent brain and nervous system damage. Inhalation of vapor/aerosol concentrations above the recommended exposure limits causes headaches, drowsiness and nausea and may lead to unconsciousness or death. Skin contact to isocyanate monomer may lead to allergic lung reaction. Based on the properties of the isocyanate components and considering toxicological data on similar mixtures, this mixture may cause acute irritation and/or sensitization of the respiratory system, leading to an asthmatic condition, wheezing and tightness of the chest. Sensitized persons may subsequently show asthmatic symptoms when exposed to atmospheric concentrations well below the OEL. Repeated exposure may lead to permanent respiratory disability. Persons with a history of skin sensitization problems or asthma, allergies or chronic or recurrent respiratory disease should not be employed in any process in which this product is used. Avoid contact with skin and clothing. Wash thoroughly after handling. Emits toxic fumes when heated.
Percentage of the mixture consisting of ingredient(s) of unknown acute toxicity: 53.4% (oral), 59.9% (dermal), 43.1% (inhalation)

Section 3. Composition/information on ingredients

- Substance/mixture** : Mixture
- Product name** : AMERCOAT 450H BR-1 RED OXIDE RESIN
- Other means of identification** : Not available.

CAS number/other identifiers

Section 3. Composition/information on ingredients

Ingredient name	Synonyms	% (w/w)	CAS number
n-butyl acetate	Acetic acid, butyl ester; Butyl Acetate; n-Butyl-acetate; Butyl ethanoate; n-Butyl ester of acetic acid; product composed of hydrocarbons (predominantly paraffinic and naphthenic) and n-butyl acetate; 1-butyl acetate; 1-Acetoxybutane; Butyl ester, Acetic acid; normal butyl acetate; Acetic acid, n-butyl ester	10 - 30*	123-86-4
Nepheline syenite	potassium, sodium, oxido-oxo-oxoalumanyloxysilane	7 - 13*	37244-96-5
Wollastonite	Calcium silicate; calcium silicate, naturally occurring as wollastonite; Wollastonite (Ca (SiO ₃)); Fibres-Natural Mineral Fibres, Wollastonite; Aedelforsite; CALCIUM METASILICATES; wollastonite dust; wollastonie; calcium,dioxido(oxo)silane	7 - 13*	13983-17-0
diiron trioxide	Iron oxide (Fe ₂ O ₃); Iron oxide; C.I. Pigment Red 101; Ferric oxide; Iron oxide, anhydrous; Iron oxide, red; Iron sesquioxide; Iron trioxide; iron oxide pigment; Iron oxide dust and fume (as Fe); Rouge	3 - 7*	1309-37-1
2-methoxy-1-methylethyl acetate	2-Propanol, 1-methoxy-, 2-acetate; Propylene glycol monomethyl ether acetate; 2-Propanol, 1-methoxy-, acetate; 1-Methoxy-2-propanol, acetate; 2-Acetoxy-1-methoxypropane; Propylene glycol monoethyl ether acetate; Propylene glycol methyl ether acetate; 1-Methoxypropyl-2-acetate; 1-Methoxy-2-propanol acetate; light stabiliser containing: — branched and linear alkyl esters of 3-(2H-benzotriazolyl)-5-(1,1-dimethylethyl)-4-hydroxybenzenepropanoic acid (CAS RN 127519-17-9), and — 1-methoxy-2-propyl acetate (CAS RN 108-65-6); Acetic acid, 2-methoxy-1-methylethyl ester	3 - 7*	108-65-6
bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate	Decanedioic acid, 1,10-bis (1,2,2,6,6-pentamethyl-4-piperidiny) ester; Decanedioic acid, bis (1,2,2,6,6-pentamethyl-4-piperidiny) ester; bis(1,2,2,6,6-pentamethylpiperidin-4-yl) decanedioate; Bis(1,2,2,6,6-pentamethyl-4-piperidiny) decanedioate; Bis (1,2,2,6,6-pentamethyl-4-piperidyl) decanedioate; Decanedioic acid bis (1,2,2,6,6-pentamethyl-4-piperidiny) ester; DECANEDIOATE, BIS (1,2,2,6,6-PENTAMETHYL-4-PIPERIDINYL) (PICCS); Bis(N-methyl-	0.1 - 1*	41556-26-7

Section 3. Composition/information on ingredients

crystalline silica, respirable powder (<10 microns)	2,2,6,6-tetramethyl-4-piperidinyl) sebacate; Bis(1,2,2,6,6-pentamethyl-4-piperidyl) 1,8-octanedicarboxylate; Bis (1,2,2,6,6-pentamethyl-4-piperidinyl) sebacate; DECANEDIOATE, BIS (1,2,2,6,6-PENTAMETHYL-4-PIPERIDINYL)	0.1 - 1*	14808-60-7
4-isocyanatosulphonyltoluene	alpha-quartz; Silica, crystalline (quartz); Silica, Crystalline Quartz; SILICA, CRYSTALLINE, QUARTZ; Silica-Crystalline, Quartz; Silica - Crystalline Quartz; Silica-Crystalline : Quartz; Silica, crystalline - quartz	0.1 - 1*	4083-64-1
ethylbenzene	tosyl isocyanate; p-toluenesulphonyl isocyanate; Benzenesulfonyl isocyanate, 4-methyl-; p-Toluenesulfonyl isocyanate; 4-Toluenesulphonyl isocyanate; 4-methylbenzenesulfonyl isocyanate; 4-isocyanatosulfonyltoluene; 4-TOLUENE-SULFONYL-ISOCYANATE; TOSYL ISOCYANATE, PARA-; 4-methyl-N-(oxomethylidene)benzenesulfonamide	0.1 - 1*	100-41-4
methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	Benzene, ethyl-; Phenylethane; Ethylbenzol; photosensitive emulsion consisting of cyclized polyisoprene containing: — 55 % or more but not more than 75 % by weight of xylene (CAS RN 1330-20-7) and — 12 % or more but not more than 18 % by weight of ethylbenzene (CAS RN 100-41-4); EB; Mono-(or di-) methyl (ethyl,bromoallyl, bromopropyl,oxycarbonyl orchloropropyl,oxycarbonyl) benzene	0.1 - 1*	82919-37-7
n-butyl methacrylate	Decanedioic acid, 1-methyl 10-(1,2,2,6,6-pentamethyl-4-piperidinyl) ester; Decanedioic acid, methyl 1,2,2,6,6-pentamethyl-4-piperidinyl ester; methyl 1,2,2,6,6-pentamethylpiperidin-4-yl decanedioate; methyl 1,2,2,6,6-pentamethylpiperidin-4-yl sebacate; Decanedioic acid methyl 1,2,2,6,6-pentamethyl-4-piperidinyl ester; Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate; Methyl 1,2,2,6,6-pentamethyl-4-piperidinyl sebacate; DECANEDIOATE, METHYL, 1,2,2,6,6-PENTAMETHYL-4-PIPERIDINYL; Methyl 1,2,2,6,6-pentamethyl-4-piperidyl) sebacate	0.1 - 1*	97-88-1

Section 3. Composition/information on ingredients

	BUTYL ESTER; Butyl 2-methacrylate; 2-Methyl butylacrylate; Butyl 2-methyl-2-propenoate; Methacrylic acid-n-butyl ester; Bma; Alkyl(C2-20) methacrylate; 2-Methyl-2-propenoic acid butyl ester		
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*Ranges if listed above for hazardous ingredient(s) are prescribed ranges. The actual concentration(s) or actual concentration range(s) are being withheld as a trade secret.

SUB codes represent substances without registered CAS Numbers.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First-aid measures

If ingestion, irritation, any type of overexposure or symptoms of overexposure occur during or persists after use of this product, contact a POISON CONTROL CENTER, EMERGENCY ROOM OR PHYSICIAN immediately; have Safety Data Sheet information available. Never give anything by mouth to an unconscious or convulsing person.

Description of necessary first aid measures

- Eye contact** : Remove contact lenses, irrigate copiously with clean, fresh water, holding the eyelids apart for at least 10 minutes and seek immediate medical advice.
- Inhalation** : Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.
- Skin contact** : Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners.
- Ingestion** : If swallowed, seek medical advice immediately and show this container or label. Keep person warm and at rest. Do NOT induce vomiting.

Most important symptoms/effects, acute and delayed

Potential acute health effects

- Eye contact** : No known significant effects or critical hazards.
- Inhalation** : May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- Skin contact** : Defatting to the skin. May cause skin dryness and irritation. May cause an allergic skin reaction.
- Ingestion** : No known significant effects or critical hazards.

Over-exposure signs/symptoms

- Eye contact** : No specific data.
- Inhalation** : Adverse symptoms may include the following:
 - wheezing and breathing difficulties
 - asthma
 - reduced fetal weight
 - increase in fetal deaths
 - skeletal malformations

Section 4. First-aid measures

- Skin contact** : Adverse symptoms may include the following:
irritation
redness
dryness
cracking
reduced fetal weight
increase in fetal deaths
skeletal malformations
- Ingestion** : Adverse symptoms may include the following:
reduced fetal weight
increase in fetal deaths
skeletal malformations

Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

- Suitable extinguishing media** : Use dry chemical, CO₂, water spray (fog) or foam.
- Unsuitable extinguishing media** : Do not use water jet.

- Specific hazards arising from the chemical** : Flammable liquid and vapor. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion.
- Hazardous thermal decomposition products** : Decomposition products may include the following materials:
carbon oxides
metal oxide/oxides
- Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

- Small spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.
- Special provisions** : Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Place in a suitable container. The contaminated area should be cleaned immediately with a suitable decontaminant. One possible (flammable) decontaminant comprises (by volume): water (45 parts), ethanol or isopropyl alcohol (50 parts) and concentrated (d: 0,880) ammonia solution (5 parts). A non-flammable alternative is sodium carbonate (5 parts) and water (95 parts). Add the same decontaminant to the remnants and let stand for several days until no further reaction in an unsealed container. Once this stage is reached, close container and dispose of according to local regulations (see section 13). Do not allow to enter drains or watercourses. If the product contaminates lakes, rivers, or sewers, inform the appropriate authorities in accordance with local regulations.

Section 7. Handling and storage

Precautions for safe handling

Section 7. Handling and storage

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems or asthma, allergies or chronic or recurrent respiratory disease should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.
- Special precautions** : Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. Vapors are heavier than air and may spread along floors. If this material is part of a multiple component system, read the Safety Data Sheet(s) for the other component or components before blending as the resulting mixture may have the hazards of all of its parts.
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
- Conditions for safe storage, including any incompatibilities** : Do not store above the following temperature: 50°C (122°F). Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.
Precautions should be taken to minimize exposure to atmospheric humidity or water. CO₂ will be formed, which, in closed containers, could result in pressurization.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
n-butyl acetate	<p>CA Alberta Provincial (Canada, 6/2018). Skin sensitizer.</p> <p>OEL: 950 mg/m³ 15 minutes. OEL: 200 ppm 15 minutes. OEL: 713 mg/m³ 8 hours. OEL: 150 ppm 8 hours.</p> <p>CA Saskatchewan Provincial (Canada, 7/2013).</p> <p>STEL: 200 ppm 15 minutes. TWA: 150 ppm 8 hours.</p> <p>CA Ontario Provincial (Canada, 6/2019).</p>

Section 8. Exposure controls/personal protection

	<p>[butyl acetates, all isomers] STEL: 150 ppm 15 minutes. TWA: 50 ppm 8 hours.</p> <p>CA British Columbia Provincial (Canada, 6/2022). [butyl acetate, all isomers] STEL: 150 ppm 15 minutes. TWA: 50 ppm 8 hours.</p> <p>CA Quebec Provincial (Canada, 6/2022). [butyl acetates (all isomers)] STEV: 150 ppm 15 minutes. TWAEV: 50 ppm 8 hours.</p>
Nepheline syenite	<p>CA Ontario Provincial (Canada, 6/2019). TWA: 10 mg/m³ 8 hours. Form: Total dust</p>
Wollastonite	<p>CA British Columbia Provincial (Canada, 6/2022). TWA: 1 mg/m³ 8 hours. Form: Inhalable</p> <p>CA Ontario Provincial (Canada, 6/2019). TWA: 1 mg/m³ 8 hours. Form: Inhalable particulate matter.</p> <p>CA Quebec Provincial (Canada, 6/2022). [Wollastonite] TWAEV: 5 mg/m³ 8 hours. Form: Respirable dust. TWAEV: 10 mg/m³ 8 hours. Form: Total dust.</p>
diiron trioxide	<p>CA Alberta Provincial (Canada, 6/2018). OEL: 5 mg/m³, (as Fe) 8 hours. Form: Respirable</p> <p>CA Ontario Provincial (Canada, 6/2019). TWA: 5 mg/m³ 8 hours. Form: Respirable particulate matter.</p> <p>CA British Columbia Provincial (Canada, 6/2022). TWA: 10 mg/m³ 8 hours. Form: Total dust</p> <p>CA Quebec Provincial (Canada, 6/2022). TWAEV: 5 mg/m³, (as Fe) 8 hours. Form: dust and fume</p> <p>CA Saskatchewan Provincial (Canada, 7/2013). STEL: 10 mg/m³, (measured as Fe) 15 minutes. Form: dust and fume TWA: 5 mg/m³, (measured as Fe) 8 hours. Form: dust and fume</p>
2-methoxy-1-methylethyl acetate	<p>CA British Columbia Provincial (Canada, 6/2022). STEL: 75 ppm 15 minutes. TWA: 50 ppm 8 hours.</p> <p>CA Ontario Provincial (Canada, 6/2019). TWA: 270 mg/m³ 8 hours. TWA: 50 ppm 8 hours.</p>
bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate crystalline silica, respirable powder (<10 microns)	<p>None.</p> <p>CA British Columbia Provincial (Canada, 6/2022). [Silica, Crystalline - alpha quartz and Cristobalite Respirable]</p>

Section 8. Exposure controls/personal protection

	<p>TWA: 0.025 mg/m³ 8 hours. Form: Respirable CA Ontario Provincial (Canada, 6/2019). [Silica, Crystalline (Quartz/Tripoli)] TWA: 0.1 mg/m³ 8 hours. Form: Respirable CA Quebec Provincial (Canada, 6/2022). [Silica Crystalline -Quartz] TWAEV: 0.1 mg/m³ 8 hours. Form: Respirable dust. CA Alberta Provincial (Canada, 6/2018). OEL: 0.025 mg/m³ 8 hours. Form: Respirable particulate CA Saskatchewan Provincial (Canada, 7/2013). TWA: 0.05 mg/m³ 8 hours. Form: respirable fraction</p>
4-isocyanatosulphonyltoluene	<p>CA Quebec Provincial (Canada, 6/2022). [Isocyanate oligomers] Skin sensitizer. Inhalation sensitizer.</p>
ethylbenzene	<p>CA Alberta Provincial (Canada, 6/2018). OEL: 543 mg/m³ 15 minutes. OEL: 125 ppm 15 minutes. OEL: 434 mg/m³ 8 hours. OEL: 100 ppm 8 hours. CA British Columbia Provincial (Canada, 6/2022). TWA: 20 ppm 8 hours. CA Ontario Provincial (Canada, 6/2019). TWA: 20 ppm 8 hours. CA Quebec Provincial (Canada, 6/2022). TWAEV: 20 ppm 8 hours. CA Saskatchewan Provincial (Canada, 7/2013). STEL: 125 ppm 15 minutes. TWA: 100 ppm 8 hours.</p>
methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate n-butyl methacrylate	<p>None. CA British Columbia Provincial (Canada, 6/2022). TWA: 50 ppm 8 hours.</p>

Consult local authorities for acceptable exposure limits.

- Recommended monitoring procedures** : Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.
- Appropriate engineering controls** : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Section 8. Exposure controls/personal protection

Individual protection measures

- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Eye/face protection** : Safety glasses with side shields.
- Skin protection**
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
- Gloves** : butyl rubber
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Use an air-fed respirator unless a site-specific assessment determines that an air-fed respirator is not necessary, in which case the results of the risk assessment should be utilized to determine whether respiratory protection is necessary and what type of protection is appropriate. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
- Restrictions on use** : Persons with a history of asthma, allergies or chronic or recurrent respiratory disease should not be employed in any process in which this product is used.

Section 9. Physical and chemical properties

Appearance

- Physical state** : Liquid.
- Color** : Brownish-red.
- Odor** : Characteristic.
- Odor threshold** : Not available.
- pH** : Not applicable.
- Melting point** : Not available.
- Boiling point** : >37.78°C (>100°F)
- Flash point** : Closed cup: 36.11°C (97°F)
- Auto-ignition temperature** : Not available.
- Decomposition temperature** : Not available.
- Flammability** : Not available.

Section 9. Physical and chemical properties

Lower and upper explosive (flammable) limits : Not available.

Evaporation rate : 0.86 (butyl acetate = 1)

Vapor pressure : 1.9 kPa (14.5 mm Hg)

Vapor density : Not available.

Relative density : 1.27

Density (lbs / gal) : 10.6

Media	Result
cold water	Not soluble

Partition coefficient: n-octanol/water : Not applicable.

Viscosity : Kinematic (40°C (104°F)): >21 mm²/s (>21 cSt)

Volatility : 32% (v/v), 22.528% (w/w)

% Solid. (w/w) : 77.472

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : In a fire, hazardous decomposition products may be produced.
Refer to protective measures listed in sections 7 and 8.

Incompatible materials : Keep away from: oxidizing agents, strong alkalis, strong acids, amines, alcohols, water. Uncontrolled exothermic reactions occur with amines and alcohols.

Hazardous decomposition products : Depending on conditions, decomposition products may include the following materials:
carbon oxides metal oxide/oxides

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
n-butyl acetate	LC50 Inhalation Vapor	Rat	>21.1 mg/l	4 hours
	LC50 Inhalation Vapor	Rat	2000 ppm	4 hours
	LD50 Dermal	Rabbit	>17600 mg/kg	-
	LD50 Oral	Rat	10.768 g/kg	-
Nepheline syenite	LC50 Inhalation Dusts and mists	Rat	>5.07 mg/l	4 hours
	LD50 Dermal	Rat	>5000 mg/kg	-
	LD50 Oral	Rat	>5000 mg/kg	-
diiron trioxide	LC50 Inhalation Dusts and mists	Rat	>5 mg/l	4 hours
	LD50 Oral	Rat	10 g/kg	-
2-methoxy-1-methylethyl	LC50 Inhalation Vapor	Rat	30 mg/l	4 hours

Section 11. Toxicological information

acetate	LD50 Dermal	Rabbit	>5 g/kg	-
	LD50 Oral	Rat	6190 mg/kg	-
bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate	LD50 Oral	Rat	3.125 g/kg	-
4-isocyanatosulphonyltoluene ethylbenzene	LD50 Oral	Rat	2234 mg/kg	-
	LC50 Inhalation Vapor	Rat	17.8 mg/l	4 hours
	LD50 Dermal	Rabbit	17.8 g/kg	-
	LD50 Oral	Rat	3.5 g/kg	-
methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	LD50 Oral	Rat	3.125 g/kg	-
n-butyl methacrylate	LC50 Inhalation Gas.	Rat	4910 ppm	4 hours
	LC50 Inhalation Vapor	Rat	29000 mg/m ³	4 hours
	LD50 Dermal	Rabbit	10.2 g/kg	-
	LD50 Oral	Rat	16 g/kg	-

Conclusion/Summary : There are no data available on the mixture itself.

Irritation/Corrosion**Conclusion/Summary**

Skin : There are no data available on the mixture itself.

Eyes : There are no data available on the mixture itself.

Respiratory : There are no data available on the mixture itself.

Sensitization

Skin : There are no data available on the mixture itself.

Respiratory : There are no data available on the mixture itself.

Mutagenicity

Conclusion/Summary : There are no data available on the mixture itself.

Carcinogenicity

Conclusion/Summary : There are no data available on the mixture itself.

Classification

Product/ingredient name	OSHA	IARC	NTP
Wollastonite	-	3	-
diiron trioxide	-	3	-
crystalline silica, respirable powder (<10 microns)	+	1	Known to be a human carcinogen.
ethylbenzene	-	2B	-
n-butyl methacrylate	-	2B	-

Carcinogen Classification code:

IARC: 1, 2A, 2B, 3, 4

NTP: Known to be a human carcinogen; Reasonably anticipated to be a human carcinogen

OSHA: +

Not listed/not regulated: -

Reproductive toxicity

Conclusion/Summary : There are no data available on the mixture itself.

Teratogenicity

Conclusion/Summary : There are no data available on the mixture itself.

Specific target organ toxicity (single exposure)

Section 11. Toxicological information

Name	Category	Route of exposure	Target organs
n-butyl acetate	Category 3	-	Narcotic effects
2-methoxy-1-methylethyl acetate	Category 3	-	Narcotic effects
4-isocyanatosulphonyltoluene	Category 3	-	Respiratory tract irritation
n-butyl methacrylate	Category 3	-	Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
crystalline silica, respirable powder (<10 microns)	Category 1	inhalation	-
ethylbenzene	Category 2	-	hearing organs
n-butyl methacrylate	Category 2	-	-

Target organs : Contains material which causes damage to the following organs: brain, central nervous system (CNS).
Contains material which may cause damage to the following organs: kidneys, lungs, upper respiratory tract, skin, eye, lens or cornea.

Aspiration hazard

Name	Result
ethylbenzene	ASPIRATION HAZARD - Category 1

Information on the likely routes of exposure**Potential acute health effects**

Eye contact : No known significant effects or critical hazards.

Inhalation : May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Skin contact : Defatting to the skin. May cause skin dryness and irritation. May cause an allergic skin reaction.

Ingestion : No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact : No specific data.

Inhalation : Adverse symptoms may include the following:
wheezing and breathing difficulties
asthma
reduced fetal weight
increase in fetal deaths
skeletal malformations

Skin contact : Adverse symptoms may include the following:
irritation
redness
dryness
cracking
reduced fetal weight
increase in fetal deaths
skeletal malformations

Section 11. Toxicological information

Ingestion : Adverse symptoms may include the following:
reduced fetal weight
increase in fetal deaths
skeletal malformations

Delayed and immediate effects and also chronic effects from short and long term exposure

Conclusion/Summary : There are no data available on the mixture itself. Skin contact to isocyanate monomer may lead to allergic lung reaction. Based on the properties of the isocyanate components and considering toxicological data on similar mixtures, this mixture may cause acute irritation and/or sensitization of the respiratory system, leading to an asthmatic condition, wheezing and tightness of the chest. Repeated exposure may lead to permanent respiratory disability. This product contains crystalline silica which can cause lung cancer or silicosis. The risk of cancer depends on the duration and level of exposure to dust from sanding surfaces or mist from spray applications. Exposure to component solvent vapor concentrations in excess of the stated occupational exposure limit may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and, in extreme cases, loss of consciousness. Solvents may cause some of the above effects by absorption through the skin. There is some evidence that repeated exposure to organic solvent vapors in combination with constant loud noise can cause greater hearing loss than expected from exposure to noise alone. If splashed in the eyes, the liquid may cause irritation and reversible damage. Ingestion may cause nausea, diarrhea and vomiting. This takes into account, where known, delayed and immediate effects and also chronic effects of components from short-term and long-term exposure by oral, inhalation and dermal routes of exposure and eye contact.

Short term exposure

Potential immediate effects : There are no data available on the mixture itself.

Potential delayed effects : There are no data available on the mixture itself.

Long term exposure

Potential immediate effects : There are no data available on the mixture itself.

Potential delayed effects : There are no data available on the mixture itself.

Potential chronic health effects

General : Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

Carcinogenicity : May cause cancer. Risk of cancer depends on duration and level of exposure.

Mutagenicity : No known significant effects or critical hazards.

Reproductive toxicity : Suspected of damaging fertility or the unborn child.

Numerical measures of toxicity

Acute toxicity estimates

Section 11. Toxicological information

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
n-butyl acetate	10768	N/A	N/A	N/A	N/A
diiron trioxide	10000	N/A	N/A	N/A	N/A
2-methoxy-1-methylethyl acetate	6190	N/A	N/A	30	N/A
bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate	3125	N/A	N/A	N/A	N/A
4-isocyanatosulphonyltoluene	2234	N/A	N/A	N/A	N/A
ethylbenzene	3500	17800	N/A	17.8	1.5
methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	3125	N/A	N/A	N/A	N/A
n-butyl methacrylate	16000	10200	4910	29	N/A

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
n-butyl acetate	Acute LC50 18 mg/l	Fish	96 hours
diiron trioxide	Acute EC50 >100 mg/l	Daphnia	48 hours
2-methoxy-1-methylethyl acetate	Acute LC50 134 mg/l Fresh water	Fish - <i>Oncorhynchus mykiss</i>	96 hours
ethylbenzene	Acute EC50 1.8 mg/l Fresh water Chronic NOEC 1 mg/l Fresh water	Daphnia Daphnia - <i>Ceriodaphnia dubia</i>	48 hours -

Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
n-butyl acetate	TEPA and OECD 301D	83 % - Readily - 28 days	-	-
2-methoxy-1-methylethyl acetate	-	83 % - Readily - 28 days	-	-
ethylbenzene	-	79 % - Readily - 10 days	-	-

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
n-butyl acetate	-	-	Readily
2-methoxy-1-methylethyl acetate	-	-	Readily
ethylbenzene	-	-	Readily

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
n-butyl acetate	2.3	-	Low
2-methoxy-1-methylethyl acetate	1.2	-	Low
ethylbenzene	3.6	79.43	Low
n-butyl methacrylate	2.99	-	Low

Mobility in soil

Section 12. Ecological information

Soil/water partition coefficient (K_{oc}) : Not available.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees. Section 6. Accidental release measures

Section 14. Transport information

	TDG	IMDG	IATA
UN number	UN1263	UN1263	UN1263
UN proper shipping name	PAINT	PAINT	PAINT
Transport hazard class (es)	3	3	3
Packing group	III	III	III
Environmental hazards	No.	No.	No.
Marine pollutant substances	Not applicable.	Not applicable.	Not applicable.

Additional information

TDG : None identified.
IMDG : None identified.
IATA : None identified.

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Section 14. Transport information

Transport in bulk according to IMO instruments : Not applicable.

Proof of classification statement : Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.18-2.19 (Class 3).

Section 15. Regulatory information

National Inventory List

Canada inventory (DSL) : All components are listed or exempted.

Section 16. Other information

Hazardous Material Information System (U.S.A.)

Health : 2 * **Flammability** : 3 **Physical hazards** : 0

(*) - Chronic effects

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings and the associated label are not required on MSDSs or products leaving a facility under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered trademark and service mark of the American Coatings Association, Inc.

The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.

National Fire Protection Association (U.S.A.)

Health : 2 **Flammability** : 3 **Instability** : 0

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Organization that prepared the SDS : EHS

Key to abbreviations

: ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
N/A = Not available
SGG = Segregation Group
UN = United Nations

✔ Indicates information that has changed from previously issued version.

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