

Hercules Brush-on Block HCC Holdings, Inc. an Oatey Affiliate

Version No: 1.5

Safety Data Sheet according to OSHA HazCom Standard (2012) requirements

Issue Date: **05/17/2023**Print Date: **05/17/2023**S.GHS.USA.EN

SECTION 1 Identification

Product Identifier

Product name	Hercules Brush-on Block
Synonyms	Not Available
Other means of identification	15703, 15707, 15711, 15716

Recommended use of the chemical and restrictions on use

Relevant identified uses	Pipe thread sealant
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Name, address, and telephone number of the chemical manufacturer, importer, or other responsible party

Registered company name	HCC Holdings, Inc. an Oatey Affiliate		
Address	4700 West 160th Street Cleveland, OH 44135 United States		
Telephone	216-267-7100		
Fax	Not Available		
Website	Not Available		
Email	info@oatey.com		

Emergency phone number

Association / Organisation	Chemtrec
Emergency telephone numbers	1-800-424-9300 (Outside the US 1-703-527-3887)
Other emergency telephone numbers	Emergency First Aid: 1-877-740-5015

SECTION 2 Hazard(s) identification

Classification of the substance or mixture

Classification | Serious Eye Damage/Eye Irritation Category 2A, Flammable Liquids Category 4, Sensitisation (Skin) Category 1

Label elements

Hazard pictogram(s)



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Signal word	Warning			
Hazard statement(s)				
	Causes serious eye irritation.			
	Combustible liquid.			
	May cause an allergic skin reaction.			

Hazard(s) not otherwise classified

Frequent or prolonged contact may defat and dry the skin leading to discomfort and dermatitis. Static accumulating flammable liquid can become electrostatically charged even in bonded and grounded equipment. Sparks may ignite liquid and vapor. May cause flash fire or explosion.

Precautionary statement(s) Prevention

Keep away from flames and hot surfaces. – No smoking.
Avoid breathing mist/vapours/spray.
Wear protective gloves, protective clothing, eye protection and face protection.
Wash all exposed external body areas thoroughly after handling.
Contaminated work clothing must not be allowed out of the workplace.

Precautionary statement(s) Response

In case of fire: Use alcohol resistant foam or normal protein foam to extinguish.
IF ON SKIN: Wash with plenty of water.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If skin irritation or rash occurs: Get medical advice/attention.
If eye irritation persists: Get medical advice/attention.
Wash contaminated clothing before reuse.

Precautionary statement(s) Storage

Store in a well-ventilated place. Keep cool.

Precautionary statement(s) Disposal

Dispose of contents/container to authorised hazardous or special waste collection point in accordance with any local regulation.

SECTION 3 Composition / information on ingredients

Substances

See section below for composition of Mixtures

Mixtures

CAS No	%[weight]	Name
67-63-0	10-20	isopropanol
112945-52-5	1-5	silica amorphous
Not Available	15-25	Rosin
13463-67-7*	5-15	<u>Titanium dioxide</u>
12001-26-2*	5-15	<u>Mica</u>
14808-60-7*	<0.6	silica crystalline - quartz
14807-96-6*	10-15	<u>Talc</u>

The specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

SECTION 4 First-aid measures

Description of first aid measures

Eye Contact

If this product comes in contact with the eyes:

▶ Wash out immediately with fresh running water.

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	 Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids. Seek medical attention without delay; if pain persists or recurs seek medical attention. Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.
Skin Contact	If skin contact occurs: Immediately remove all contaminated clothing, including footwear. Flush skin and hair with running water (and soap if available). Seek medical attention in event of irritation.
Inhalation	 If fumes or combustion products are inhaled remove from contaminated area. Lay patient down. Keep warm and rested. Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures. Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary. Transport to hospital, or doctor, without delay.
Ingestion	 Immediately give a glass of water. First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor. If spontaneous vomiting appears imminent or occurs, hold patient's head down, lower than their hips to help avoid possible aspiration of vomitus.

Most important symptoms and effects, both acute and delayed

See Section 11

Indication of any immediate medical attention and special treatment needed

Any material aspirated during vomiting may produce lung injury. Therefore emesis should not be induced mechanically or pharmacologically. Mechanical means should be used if it is considered necessary to evacuate the stomach contents; these include gastric lavage after endotracheal intubation. If spontaneous vomiting has occurred after ingestion, the patient should be monitored for difficult breathing, as adverse effects of aspiration into the lungs may be delayed up to 48 hours. For acute or short term repeated exposures to isopropanol:

- Rapid onset respiratory depression and hypotension indicates serious ingestions that require careful cardiac and respiratory monitoring together with immediate intravenous access.
- Rapid absorption precludes the usefulness of emesis or lavage 2 hours post-ingestion. Activated charcoal and cathartics are not clinically useful. Ipecac is most useful when given 30 mins. post-ingestion.
- There are no antidotes.
- ▶ Management is supportive. Treat hypotension with fluids followed by vasopressors.
- Watch closely, within the first few hours for respiratory depression; follow arterial blood gases and tidal volumes.
- Ice water lavage and serial haemoglobin levels are indicated for those patients with evidence of gastrointestinal bleeding.

SECTION 5 Fire-fighting measures

Extinguishing media

- Alcohol stable foam.
- Dry chemical powder.
- BCF (where regulations permit).
- ► Carbon dioxide.
- Water spray or fog Large fires only.

Special hazards arising from the substrate or mixture

Fire Incompatibility

Fire Fighting

 Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result

Special protective equipment and precautions for fire-fighters

When silica dust is dispersed in air, firefighters should wear inhalation protection as hazardous substances from the fire may be adsorbed on the silica particles.

- ▶ When heated to extreme temperatures, (>1700 deg.C) amorphous silica can fuse.
- ▶ Alert Fire Department and tell them location and nature of hazard.
- ▶ Wear full body protective clothing with breathing apparatus.
- Prevent, by any means available, spillage from entering drains or water course.
- ▶ Use water delivered as a fine spray to control fire and cool adjacent area.
- Avoid spraying water onto liquid pools.
- DO NOT approach containers suspected to be hot.
- ▶ Cool fire exposed containers with water spray from a protected location.
- If safe to do so, remove containers from path of fire.

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WARNING: In use may form flammable/ explosive vapour-air mixtures.

- When silica dust is dispersed in air, firefighters should wear inhalation protection as hazardous substances from the fire may be adsorbed on the silica particles.
- ▶ When heated to extreme temperatures, (>1700 deg.C) amorphous silica can fuse.
- Combustible.
- ▶ Slight fire hazard when exposed to heat or flame.
- ▶ Heating may cause expansion or decomposition leading to violent rupture of containers.
- On combustion, may emit toxic fumes of carbon monoxide (CO).
- ▶ May emit acrid smoke.
- Mists containing combustible materials may be explosive.

Combustion products include:

carbon dioxide (CO2)

silicon dioxide (SiO2)

other pyrolysis products typical of burning organic material.

May emit poisonous fumes.

May emit corrosive fumes.

WARNING: Long standing in contact with air and light may result in the formation

of potentially explosive peroxides.

SECTION 6 Accidental release measures

Personal precautions, protective equipment and emergency procedures

See section 8

Environmental precautions

Fire/Explosion Hazard

See section 12

Methods and material for containment and cleaning up

▶ Remove all ignition sources.

- ► Clean up all spills immediately.
- Avoid breathing vapours and contact with skin and eyes.
- ▶ Control personal contact with the substance, by using protective equipment.
- Contain and absorb spill with sand, earth, inert material or vermiculite.
- Wipe up.
- ▶ Place in a suitable, labelled container for waste disposal.

Moderate hazard.

- Clear area of personnel and move upwind.
- Alert Fire Department and tell them location and nature of hazard.
- Wear breathing apparatus plus protective gloves.
- ▶ Prevent, by any means available, spillage from entering drains or water course.
- ▶ No smoking, naked lights or ignition sources.
- **Major Spills**

Minor Spills

- ► Increase ventilation. Stop leak if safe to do so.
- Contain spill with sand, earth or vermiculite.
- ▶ Collect recoverable product into labelled containers for recycling.
- Absorb remaining product with sand, earth or vermiculite.
- · Collect solid residues and seal in labelled drums for disposal.
- Wash area and prevent runoff into drains.
- If contamination of drains or waterways occurs, advise emergency services.

Personal Protective Equipment advice is contained in Section 8 of the SDS.

SECTION 7 Handling and storage

Safe handling

Precautions for safe handling

Avoid all personal contact, including inhalation.

- Wear protective clothing when risk of exposure occurs.
- Use in a well-ventilated area.
- Prevent concentration in hollows and sumps.
- ▶ DO NOT enter confined spaces until atmosphere has been checked.
- Avoid smoking, naked lights or ignition sources.
- Avoid contact with incompatible materials.
- ▶ When handling, **DO NOT** eat, drink or smoke.
- ▶ Keep containers securely sealed when not in use.
- Avoid physical damage to containers.

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	 Always wash hands with soap and water after handling. Work clothes should be laundered separately. Use good occupational work practice. Observe manufacturer's storage and handling recommendations contained within this SDS. Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions. DO NOTallow clothing wet with material to stay in contact with skin
Other information	 Store in original containers. Keep containers securely sealed. No smoking, naked lights or ignition sources. Store in a cool, dry, well-ventilated area. Store away from incompatible materials and foodstuff containers. Protect containers against physical damage and check regularly for leaks. Observe manufacturer's storage and handling recommendations contained within this SDS.

Conditions for safe storage, including any incompatibilities

Suitable container

- ► Metal can or drum
- Packaging as recommended by manufacturer.
- Check all containers are clearly labelled and free from leaks.

Isopropanol (syn: isopropyl alcohol, IPA):

- forms ketones and unstable peroxides on contact with air or oxygen; the presence of ketones especially methyl ethyl ketone (MEK, 2-butanone) will accelerate the rate of peroxidation
- reacts violently with strong oxidisers, powdered aluminium (exothermic), crotonaldehyde, diethyl aluminium bromide (ignition), dioxygenyl tetrafluoroborate (ignition/ ambient temperature), chromium trioxide (ignition), potassium-tert-butoxide (ignition), nitroform (possible explosion), oleum (pressure increased in closed container), cobalt chloride, aluminium triisopropoxide, hydrogen plus palladium dust (ignition), oxygen gas, phosgene, phosgene plus iron salts (possible explosion), sodium dichromate plus sulfuric acid (exothermic/ incandescence), triisobutyl aluminium
- reacts with phosphorus trichloride forming hydrogen chloride gas
- reacts, possibly violently, with alkaline earth and alkali metals, strong acids, strong caustics, acid anhydrides, halogens, aliphatic amines, aluminium isopropoxide, isocyanates, acetaldehyde, barium perchlorate (forms highly explosive perchloric ester compound), benzoyl peroxide, chromic acid, dialkylzincs, dichlorine oxide, ethylene oxide (possible explosion), hexamethylene diisocyanate (possible explosion), hydrogen peroxide (forms explosive compound), hypochlorous acid, isopropyl chlorocarbonate, lithium aluminium hydride, lithium tetrahydroaluminate, nitric acid, nitrogen dioxide, nitrogen tetraoxide (possible explosion), pentafluoroguanidine, perchloric acid (especially hot), permonosulfuric acid, phosphorus pentasulfide, tangerine oil, triethylaluminium, triisobutylaluminium, trinitromethane
- attacks some plastics, rubber and coatings
- reacts with metallic aluminium at high temperature
- may generate electrostatic charges

- ▶ are incompatible with strong acids, acid chlorides, acid anhydrides, oxidising and reducing agents.
- reacts, possibly violently, with alkaline metals and alkaline earth metals to produce hydrogen
- react with strong acids, strong caustics, aliphatic amines, isocyanates, acetaldehyde, benzoyl peroxide, chromic acid, chromium oxide, dialkylzincs, dichlorine oxide, ethylene oxide, hypochlorous acid, isopropyl chlorocarbonate, lithium tetrahydroaluminate, nitrogen dioxide, pentafluoroguanidine, phosphorus halides, phosphorus pentasulfide, tangerine oil, triethylaluminium, triisobutylaluminium
- ▶ should not be heated above 49 deg. C. when in contact with aluminium equipment

Silicas:

- ▶ react with hydrofluoric acid to produce silicon tetrafluoride gas
- ▶ react with xenon hexafluoride to produce explosive xenon trioxide
- reacts exothermically with oxygen difluoride, and explosively with chlorine trifluoride (these halogenated materials are not commonplace industrial materials) and other fluorine-containing compounds
- may react with fluorine, chlorates
- are incompatible with strong oxidisers, manganese trioxide, chlorine trioxide, strong alkalis, metal oxides, concentrated orthophosphoric acid, vinyl acetate
- may react vigorously when heated with alkali carbonates.
- Avoid strong acids, bases.

SECTION 8 Exposure controls / personal protection

Control parameters

Occupational Exposure Limits (OEL)

INGREDIENT DATA

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
US OSHA Permissible Exposure Limits (PELs) Table Z-1	isopropanol	Isopropyl alcohol	400 ppm / 980 mg/m3	Not Available	Not Available	Not Available

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Source	Ingredient	Material name	TWA	STEL	Peak	Notes
US NIOSH Recommended				1225 mg/m3	Not	Not
Exposure Limits (RELs)	isopropanol	Isopropyl alcohol	400 ppm / 980 mg/m3	/ 500 ppm	Available	Available
US OSHA Permissible Exposure Limits (PELs) Table Z-1	silica amorphous	Particulates Not Otherwise Regulated (PNOR)- Respirable fraction	5 mg/m3	Not Available	Not Available	Not Available
US OSHA Permissible Exposure Limits (PELs) Table Z-1	silica amorphous	Particulates Not Otherwise Regulated (PNOR)- Total dust	15 mg/m3	Not Available	Not Available	Not Available
US OSHA Permissible Exposure Limits (PELs) Table Z-3	silica amorphous	Amorphous, including natural diatomaceous earth	80 (%SiO2) mg/m3 / 20 mppcf	Not Available	Not Available	Not Available
US NIOSH Recommended Exposure Limits (RELs)	silica amorphous	Silica, amorphous	6 mg/m3	Not Available	Not Available	Not Available
US OSHA Permissible Exposure Limits (PELs) Table Z-1	Titanium dioxide	Titanium dioxide - Total dust	15 mg/m3	Not Available	Not Available	Not Available
US OSHA Permissible Exposure Limits (PELs) Table Z-3	Titanium dioxide	Inert or Nuisance Dust: Total Dust	15 mg/m3 / 50 mppcf	Not Available	Not Available	Not Available
US OSHA Permissible Exposure Limits (PELs) Table Z-3	Titanium dioxide	Inert or Nuisance Dust: Respirable fraction	5 mg/m3 / 15 mppcf	Not Available	Not Available	Not Available
US NIOSH Recommended Exposure Limits (RELs)	Titanium dioxide	Titanium dioxide	Not Available	Not Available	Not Available	Ca; See Appendix A
US OSHA Permissible Exposure Limits (PELs) Table Z-1	Mica	Particulates Not Otherwise Regulated (PNOR)- Respirable fraction	5 mg/m3	Not Available	Not Available	Not Available
US OSHA Permissible Exposure Limits (PELs) Table Z-1	Mica	Particulates Not Otherwise Regulated (PNOR)- Total dust	15 mg/m3	Not Available	Not Available	Not Available
US OSHA Permissible Exposure Limits (PELs) Table Z-3	Mica	Inert or Nuisance Dust: Respirable fraction	5 mg/m3 / 15 mppcf	Not Available	Not Available	Not Available
US OSHA Permissible Exposure Limits (PELs) Table Z-3	Mica	Inert or Nuisance Dust: Total Dust	15 mg/m3 / 50 mppcf	Not Available	Not Available	Not Available
US NIOSH Recommended Exposure Limits (RELs)	Mica	Mica (containing less than 1% quartz)	3 mg/m3	Not Available	Not Available	Not Available
US OSHA Permissible Exposure Limits (PELs) Table Z-1	silica crystalline - quartz	Quartz - respirable	0.05 mg/m3	Not Available	Not Available	Not Available
US OSHA Permissible Exposure Limits (PELs) Table Z-3	silica crystalline - quartz	Silica: Crystalline: Quartz (Respirable)	10 (%SiO2+2) mg/m3 / 250 (%SiO2+5) mppcf	Not Available	Not Available	Not Available
US NIOSH Recommended Exposure Limits (RELs)	silica crystalline - quartz	Silica, crystalline (as respirable dust)	0.05 mg/m3	Not Available	Not Available	Ca; See Appendix A
US OSHA Permissible Exposure Limits (PELs) Table Z-1	Talc	Particulates Not Otherwise Regulated (PNOR)- Respirable fraction	5 mg/m3	Not Available	Not Available	Not Available
US OSHA Permissible Exposure Limits (PELs) Table Z-1	Talc	Particulates Not Otherwise Regulated (PNOR)- Total dust	15 mg/m3	Not Available	Not Available	Not Available
US OSHA Permissible Exposure Limits (PELs) Table Z-3	Talc	Silicates (less than 1% crystalline silica): Talc (not containing asbestos)	20 mppcf	Not Available	Not Available	Not Available
US OSHA Permissible Exposure Limits (PELs) Table Z-3	Talc	Silicates (less than 1% crystalline silica): Soapstone	20 mppcf	Not Available	Not Available	Not Available
US NIOSH Recommended Exposure Limits (RELs)	Talc	Talc (containing no asbestos and less than 1% quartz) - respirable	2 mg/m3	Not Available	Not Available	Not Available

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Exposure controls

Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection.

The basic types of engineering controls are:

Process controls which involve changing the way a job activity or process is done to reduce the risk.

Enclosure and/or isolation of emission source which keeps a selected hazard 'physically' away from the worker and ventilation that strategically 'adds' and 'removes' air in the work environment. Ventilation can remove or dilute an air contaminant if designed properly. The design of a ventilation system must match the particular process and chemical or contaminant in use. Employers may need to use multiple types of controls to prevent employee overexposure.

General exhaust is adequate under normal operating conditions. Local exhaust ventilation may be required in special circumstances. If risk of overexposure exists, wear approved respirator. Supplied-air type respirator may be required in special circumstances. Correct fit is essential to ensure adequate protection. Provide adequate ventilation in warehouses and enclosed storage areas. Air contaminants generated in the workplace possess varying 'escape' velocities which, in turn, determine the 'capture velocities' of fresh circulating air required to effectively remove the contaminant.

Appropriate engineering controls

Type of Contaminant:	Air Speed:
solvent, vapours, degreasing etc., evaporating from tank (in still air).	0.25-0.5 m/s (50-100 f/min)
aerosols, fumes from pouring operations, intermittent container filling, low speed conveyer transfers, welding, spray drift, plating acid fumes, pickling (released at low velocity into zone of active generation)	0.5-1 m/s (100-200 f/min.)
direct spray, spray painting in shallow booths, drum filling, conveyer loading, crusher dusts, gas discharge (active generation into zone of rapid air motion)	1-2.5 m/s (200-500 f/min.)
grinding, abrasive blasting, tumbling, high speed wheel generated dusts (released at high initial velocity into zone of very high rapid air motion)	2.5-10 m/s (500-2000 f/min.)

Within each range the appropriate value depends on:

Lower end of the range	Upper end of the range
1: Room air currents minimal or favourable to capture	1: Disturbing room air currents
2: Contaminants of low toxicity or of nuisance value only.	2: Contaminants of high toxicity
3: Intermittent, low production.	3: High production, heavy use
4: Large hood or large air mass in motion	4: Small hood-local control only

Simple theory shows that air velocity falls rapidly with distance away from the opening of a simple extraction pipe. Velocity generally decreases with the square of distance from the extraction point (in simple cases). Therefore the air speed at the extraction point should be adjusted, accordingly, after reference to distance from the contaminating source. The air velocity at the extraction fan, for example, should be a minimum of 1-2 m/s (200-400 f/min) for extraction of solvents generated in a tank 2 meters distant from the extraction point. Other mechanical considerations, producing performance deficits within the extraction apparatus, make it essential that theoretical air velocities are multiplied by factors of 10 or more when extraction systems are installed or used.

Individual protection measures, such as personal protective equipment







Eye and face protection

- Safety glasses with side shields.
- Chemical goggles.
- Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59], [AS/NZS 1336 or national equivalent]

Skin protection

See Hand protection below

- ▶ Wear chemical protective gloves, e.g. PVC.
- Wear safety footwear or safety gumboots, e.g. Rubber

Hands/feet protection

NOTE:

- The material may produce skin sensitisation in predisposed individuals. Care must be taken, when removing gloves and other protective equipment, to avoid all possible skin contact.
- Contaminated leather items, such as shoes, belts and watch-bands should be removed and destroyed.

Body protection

See Other protection below

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Other protection

- Overalls.
- ► P.V.C apron.
- ▶ Barrier cream.
- Skin cleansing cream.
- ► Eye wash unit.

Respiratory protection

Type A-P Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

- Cartridge respirators should never be used for emergency ingress or in areas of unknown vapour concentrations or oxygen content.
- The wearer must be warned to leave the contaminated area immediately on detecting any odours through the respirator. The odour may indicate that the mask is not functioning properly, that the vapour concentration is too high, or that the mask is not properly fitted. Because of these limitations, only restricted use of cartridge respirators is considered appropriate.
- Cartridge performance is affected by humidity. Cartridges should be changed after 2 hr of continuous use unless it is determined that the humidity is less than 75%, in which case, cartridges can be used for 4 hr. Used cartridges should be discarded daily, regardless of the length of time used

SECTION 9 Physical and chemical properties

Information on basic physical and chemical properties

Appearance	Blue Liquid Paste		
Physical state	Liquid	Relative density (Water = 1)	1.29
Odour	Alcohol	Partition coefficient n-octanol / water	Not Available
Odour threshold	Not Available	Auto-ignition temperature (°C)	Not Available
pH (as supplied)	Not Available	Decomposition temperature (°C)	Not Available
Melting point / freezing point (°C)	Not Available	Viscosity (cSt)	930.233
Initial boiling point and boiling range (°C)	Not Available	Molecular weight (g/mol)	Not Available
Flash point (°C)	76.7	Taste	Not Available
Evaporation rate	Not Available	Explosive properties	Not Available
Flammability	Combustible.	Oxidising properties	Not Available
Upper Explosive Limit (%)	Not Available	Surface Tension (dyn/cm or mN/m)	Not Available
Lower Explosive Limit (%)	Not Available	Volatile Component (%vol)	Not Available
Vapour pressure (kPa)	4.40	Gas group	Not Available
Solubility in water	Partly miscible	pH as a solution (1%)	Not Available
Vapour density (Air = 1)	2.07	VOC g/L	183

SECTION 10 Stability and reactivity

Reactivity	See section 7
Chemical stability	 Unstable in the presence of incompatible materials. Product is considered stable. Hazardous polymerisation will not occur.
Possibility of hazardous reactions	See section 7
Conditions to avoid	See section 7
Incompatible materials	See section 7

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Hazardous decomposition products

See section 5

SECTION 11 Toxicological information

Information on toxicological effects

Information on toxicolog	ical effects
Inhaled	The material has NOT been classified as 'harmful by inhalation'. This is because of the lack of corroborating animal or human evidence. The odour of isopropanol may give some warning of exposure, but odour fatigue may occur. Inhalation of isopropanol may produce irritation of the nose and throat with sneezing, sore throat and runny nose.
Ingestion	The material has NOT been classified by as 'harmful by ingestion'. This is because of the lack of corroborating animal or human evidence. Overexposure to non-ring alcohols causes nervous system symptoms. These include headache, muscle weakness and inco-ordination, giddiness, confusion, delirium and coma.
Skin Contact	The material is not thought to produce adverse health effects or skin irritation following contact. Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable gloves be used in an occupational setting. Open cuts, abraded or irritated skin should not be exposed to this material Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.
Eye	Causes serious eye irritation.
Chronic	In 1997, IARC (the International Agency for Research on Cancer) concluded that crystalline silica inhaled from occupational sources can cause lung cancer in humans. However in making the overall evaluation, IARC noted that 'carcinogenicity was not detected in all industrial circumstances studied. Carcinogenicity may be dependent on inherent characteristics of the crystalline silica or on external factors affecting its biological activity or distribution of its polymorphs.' (IARC Monographs on the evaluation of the carcinogenic risks of chemicals to humans, Silica, silicates dust and organic fibres, 1997, Vol. 68, IARC, Lyon, France.) Skin contact with the material is more likely to cause a sensitisation reaction in some persons compared to the general population. Toxic: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed. This material can cause serious damage if one is exposed to it for long periods. It can be assumed that it contains a substance which can produce severe defects. Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure. Rosin (colophany) has caused allergic contact dermatitis in solderers using resin flux-cored solders, can be a sensitiser for strings instrument players, and has caused dermatitis after use in adhesive tapes [NIOSHTEC]. It is found in many products that commonly come in contact with the skin, including cosmetics, sunscreens, veterinary medications, adhesives, sealants, polishes, paints and oils. Amorphous silicas generally are less hazardous than crystalline silicas, but the former can be converted to the latter on heating and subsequent cooling. Inhalation of dusts containing crystalline silicas may lead to silicosis, a disabling lung disease that may take years to develop. Long term, or repeated exposure of isopropanol may cause inco-ordination and tiredness. Repeated inhalation exposure to isopropanol may produce sleepiness, inco-o

Acute Toxicity	×	Carcinogenicity	×
Skin Irritation/Corrosion	×	Reproductivity	×
Serious Eye Damage/Irritation	~	STOT - Single Exposure	×
Respiratory or Skin sensitisation	~	STOT - Repeated Exposure	×
Mutagenicity	×	Aspiration Hazard	×

Legend:

🗶 – Data either not available or does not fill the criteria for classification

✓ – Data available to make classification

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Toxicity

ercules Brush-on Block	Endpoint	point Test Duration (hr)			Species	Value		Source	
ordande Braen en Breek	Not Available		Not Available		Not Available	Not Avail	able	Not Ava	ilable
	Endpoint	Те	st Duration (hr)	Spe	cies		Value	•	Source
	EC50(ECx)			Alga	e or other aquatic pla	ints	0.011	mg/L	4
	LC50	96h		Fish			>1400	Omg/l	4
isopropanol	EC50	72h		Alga	Algae or other aquatic plants		>1000	Omg/l	1
	EC50	96	ih	Alga	e or other aquatic pla	ınts	>1000mg/l		1
	EC50	48	h	Crus	tacea		7550r	mg/l	4
	Endpoint	Test	Duration (hr)	Specie	s		Value		Source
	EC0(ECx)	24h		Crustad			>=10000r	mg/l	1
	EC50	96h		Algae o	or other aquatic plants	3	217.576m	ng/l	2
silica amorphous	EC50	72h		Algae o	or other aquatic plants	3	14.1mg/l		2
	LC50 96h		Fish			1033.016	mg/l	2	
	EC50	48h		Crustad	Crustacea		>86mg/l 2		2
	Endpoint	Te	Test Duration (hr)		Species		Value		Source
	BCF	10	008h	Fish			<1.1-9.6		7
	LC50	96	 Sh	Fish			1.85-3.00	6mg/l	4
Titanium dioxide	EC50	72	 2h	Algae	or other aquatic plar	nts	3.75-7.58	8mg/l	4
	EC50	48	Bh	Crust	acea		1.9mg/l		2
	EC50 96		Sh	Algae	Algae or other aquatic plants		179.05m	ıg/l	2
	NOEC(ECx)	50)4h	Crust	acea		0.02mg/l		4
	Endpoint		Test Duration (hr)		Species	Value		Source	
Mica	Not Available		Not Available		Not Available	Not Avail	able	Not Ava	ilable
	Endpoint		Test Duration (hr)		Species	Value		Source	
silica crystalline - quartz	Not Available		Not Available		Not Available	Not Avail	able	Not Ava	ilable
	Endpoint	Те	est Duration (hr)	Speci	Species		Value		Source
	LC50	96	96h Fis		Fish		89581.016mg/l		2
Talc	EC50	96	Sh	Algae	Algae or other aquatic plants		7202.7mg	ı/I	2
		720h			Algae or other aquatic plants		918.089mg/l		

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Do NOT allow product to come in contact with surface waters or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment wash-waters.

Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data

Wastes resulting from use of the product must be disposed of on site or at approved waste sites.

DO NOTdischarge into sewer or waterways.

Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
isopropanol	LOW (Half-life = 14 days)	LOW (Half-life = 3 days)
silica amorphous	LOW	LOW
Titanium dioxide	HIGH	HIGH

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Bioaccumulative potential

Ingredient	Bioaccumulation
isopropanol	LOW (LogKOW = 0.05)
silica amorphous	LOW (LogKOW = 0.5294)
Titanium dioxide	LOW (BCF = 10)

Mobility in soil

Ingredient	Mobility
isopropanol	HIGH (KOC = 1.06)
silica amorphous	LOW (KOC = 23.74)
Titanium dioxide	LOW (KOC = 23.74)

SECTION 13 Disposal considerations

Waste treatment methods

Product / Packaging

disposal

- ▶ Containers may still present a chemical hazard/ danger when empty.
- ► Return to supplier for reuse/ recycling if possible.

Otherwise:

- If container can not be cleaned sufficiently well to ensure that residuals do not remain or if the container cannot be used to store the same product, then puncture containers, to prevent re-use, and bury at an authorised landfill.
- ▶ Where possible retain label warnings and SDS and observe all notices pertaining to the product.

Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area. In some areas, certain wastes must be tracked.

A Hierarchy of Controls seems to be common - the user should investigate:

- ▶ Reduction
- ► Reuse
- ► Recycling
- ► Disposal (if all else fails)

This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use. If it has been contaminated, it may be possible to reclaim the product by filtration, distillation or some other means. Shelf life considerations should also be applied in making decisions of this type. Note that properties of a material may change in use, and recycling or reuse may not always be appropriate.

- $\mbox{\ensuremath{\,^{\triangleright}}}$ DO NOT allow wash water from cleaning or process equipment to enter drains.
- It may be necessary to collect all wash water for treatment before disposal.
- In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first.
- ▶ Where in doubt contact the responsible authority.
- ▶ Recycle wherever possible or consult manufacturer for recycling options.
- Consult State Land Waste Authority for disposal.
- ▶ Bury or incinerate residue at an approved site.
- Recycle containers if possible, or dispose of in an authorised landfill.

SECTION 14 Transport information

Labels Required

Marine Pollutant NO

Land transport (DOT): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Not regulated as dangerous goods except when shipped in bulk. This material is not regulated if in a container of 119 gallons (450L) capacity or less.

Air transport (ICAO-IATA / DGR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Sea transport (IMDG-Code / GGVSee): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Transport in bulk according to Annex II of MARPOL and the IBC code

Not Applicable

Transport in bulk in accordance with MARPOL Annex V and the IMSBC Code

Product name	Group

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Product name	Group
isopropanol	Not Available
silica amorphous	Not Available
Rosin	Not Available
Titanium dioxide	Not Available
Mica	Not Available
silica crystalline - quartz	Not Available
Talc	Not Available

Transport in bulk in accordance with the IGC Code

Product name	Ship Type
isopropanol	Not Available
silica amorphous	Not Available
Rosin	Not Available
Titanium dioxide	Not Available
Mica	Not Available
silica crystalline - quartz	Not Available
Talc	Not Available

SECTION 15 Regulatory information

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

isopropanol is found on the following regulatory lists

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs - Not Classified as Carcinogenic

US - Massachusetts - Right To Know Listed Chemicals

US DOE Temporary Emergency Exposure Limits (TEELs)

US EPCRA Section 313 Chemical List

US NIOSH Recommended Exposure Limits (RELs)

US OSHA Permissible Exposure Limits (PELs) Table Z-1

US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

US TSCA Section 4/12 (b) - Sunset Dates/Status

silica amorphous is found on the following regulatory lists

Chemical Footprint Project - Chemicals of High Concern List International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs - Not Classified as Carcinogenic

International WHO List of Proposed Occupational Exposure Limit (OEL) Values for Manufactured Nanomaterials (MNMS)

US - Alaska Air Quality Control - Concentrations Triggering an Air Quality Episode for Air Pollutants Other Than PM-2.5

US - California - Biomonitoring - Priority Chemicals

US - California Proposition 65 - Carcinogens

US - California Safe Drinking Water and Toxic Enforcement Act of 1986 - Proposition 65 List

US - Massachusetts - Right To Know Listed Chemicals

US DOE Temporary Emergency Exposure Limits (TEELs)

US NIOSH Carcinogen List

US NIOSH Recommended Exposure Limits (RELs)

US OSHA Carcinogens Listing

US OSHA Permissible Exposure Limits (PELs) Table Z-1

US OSHA Permissible Exposure Limits (PELs) Table Z-3

US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

Titanium dioxide is found on the following regulatory lists

Chemical Footprint Project - Chemicals of High Concern List International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs - Group 2B: Possibly carcinogenic to humans International WHO List of Proposed Occupational Exposure Limit (OEL) Values for Manufactured Nanomaterials (MNMS)

US - Alaska Air Quality Control - Concentrations Triggering an Air Quality Episode for Air Pollutants Other Than PM-2.5

US - California Proposition 65 - Carcinogens

US - California Safe Drinking Water and Toxic Enforcement Act of 1986 - Proposition 65 List

US - Massachusetts - Right To Know Listed Chemicals

US DOE Temporary Emergency Exposure Limits (TEELs)

US NIOSH Carcinogen List

US NIOSH Recommended Exposure Limits (RELs)

US OSHA Permissible Exposure Limits (PELs) Table Z-1

US OSHA Permissible Exposure Limits (PELs) Table Z-3

US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

Mica is found on the following regulatory lists

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International WHO List of Proposed Occupational Exposure Limit (OEL) Values for Manufactured Nanomaterials (MNMS)

US - Alaska Air Quality Control - Concentrations Triggering an Air Quality Episode for Air Pollutants Other Than PM-2.5

US - Massachusetts - Right To Know Listed Chemicals

US DOE Temporary Emergency Exposure Limits (TEELs)

silica crystalline - quartz is found on the following regulatory lists

Chemical Footprint Project - Chemicals of High Concern List International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs - Group 1: Carcinogenic to humans

US - California Proposition 65 - Carcinogens

US - California Safe Drinking Water and Toxic Enforcement Act of 1986 - Proposition 65 List

US - Massachusetts - Right To Know Listed Chemicals

US DOE Temporary Emergency Exposure Limits (TEELs)

US National Toxicology Program (NTP) 15th Report Part A Known to be Human Carcinogens

US NIOSH Carcinogen List

US NIOSH Recommended Exposure Limits (RELs)

US NIOSH Recommended Exposure Limits (RELs)

US OSHA Permissible Exposure Limits (PELs) Table Z-1

US OSHA Permissible Exposure Limits (PELs) Table Z-3

US OSHA Carcinogens Listing

US OSHA Permissible Exposure Limits (PELs) Table Z-1

US OSHA Permissible Exposure Limits (PELs) Table Z-3

US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

Talc is found on the following regulatory lists

Chemical Footprint Project - Chemicals of High Concern List International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs - Group 2B: Possibly carcinogenic to humans

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs - Not Classified as Carcinogenic

International WHO List of Proposed Occupational Exposure Limit (OEL) Values for Manufactured Nanomaterials (MNMS)

US - Alaska Air Quality Control - Concentrations Triggering an Air Quality Episode for Air Pollutants Other Than PM-2.5

US - Massachusetts - Right To Know Listed Chemicals

US NIOSH Carcinogen List

US NIOSH Recommended Exposure Limits (RELs)

US OSHA Permissible Exposure Limits (PELs) Table Z-1

US OSHA Permissible Exposure Limits (PELs) Table Z-3

US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

Federal Regulations

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Section 311/312 hazard categories

Flammable (Gases, Aerosols, Liquids, or Solids)	Yes	
Gas under pressure	No	
Explosive	No	
Self-heating	No	
Pyrophoric (Liquid or Solid)	No	
Pyrophoric Gas	No	
Corrosive to metal	No	
Oxidizer (Liquid, Solid or Gas)	No	
Organic Peroxide	No	
Self-reactive	No	
In contact with water emits flammable gas	No	
Combustible Dust	No	
Carcinogenicity	No	
Acute toxicity (any route of exposure)	No	
Reproductive toxicity	No	
Skin Corrosion or Irritation	No	
Respiratory or Skin Sensitization	Yes	
Serious eye damage or eye irritation	Yes	
Specific target organ toxicity (single or repeated exposure)		
Aspiration Hazard		
Germ cell mutagenicity		
Simple Asphyxiant		

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Hazards Not Otherwise Classified Yes

US. EPA CERCLA Hazardous Substances and Reportable Quantities (40 CFR 302.4)

None Reported

State Regulations

US. California Proposition 65



MARNING:This product can expose you to chemicals including Titanium dioxidewhich are known to the State of California to cause cancer. For more information, go to www.P65Warnings.ca.gov.

National Inventory Status

National Inventory	Status
USA - TSCA	Yes
Legend:	Yes = All CAS declared ingredients are on the inventory No = One or more of the CAS listed ingredients are not on the inventory. These ingredients may be exempt or will require registration.

SECTION 16 Other information

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Other information

The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

Definitions and abbreviations

PC-TWA: Permissible Concentration-Time Weighted Average

PC-STEL: Permissible Concentration-Short Term Exposure Limit

IARC: International Agency for Research on Cancer

ACGIH: American Conference of Governmental Industrial Hygienists

STEL: Short Term Exposure Limit

TEEL: Temporary Emergency Exposure Limit。

IDLH: Immediately Dangerous to Life or Health Concentrations

ES: Exposure Standard OSF: Odour Safety Factor

NOAEL :No Observed Adverse Effect Level LOAEL: Lowest Observed Adverse Effect Level

TLV: Threshold Limit Value LOD: Limit Of Detection OTV: Odour Threshold Value **BCF**: BioConcentration Factors

BEI: Biological Exposure Index

AIIC: Australian Inventory of Industrial Chemicals

DSL: Domestic Substances List NDSL: Non-Domestic Substances List

IECSC: Inventory of Existing Chemical Substance in China

EINECS: European INventory of Existing Commercial chemical Substances

ELINCS: European List of Notified Chemical Substances

NLP: No-Longer Polymers

ENCS: Existing and New Chemical Substances Inventory

KECI: Korea Existing Chemicals Inventory NZIoC: New Zealand Inventory of Chemicals

PICCS: Philippine Inventory of Chemicals and Chemical Substances

TSCA: Toxic Substances Control Act TCSI: Taiwan Chemical Substance Inventory

INSO: Inventario Nacional de Sustancias Químicas

NCI: National Chemical Inventory

FBEPH: Russian Register of Potentially Hazardous Chemical and Biological Substances