

Material Safety data sheet
according to 1907/2006/EC, Article 31

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

1.1 Product identifier

- Trade name: Crystalbond 555
- Article number: 51-1625-0378

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

A low melting point adhesive for moderate stress machining processes. It is transparent in thin cross-sections and is soluble in hot water. 555 has a Flow Point of 54°C.

- Application of the substance / the preparation: Not determined

• 1.3 Details of the supplier of the safety data sheet Supplier:

Oxford Instruments NanoAnalysis
 Halifax Rd, High Wycombe HP12 3SE
 United Kingdom
 Tel: +44 (0) 1494 442255

SECTION 2: Hazards Identification

- 2.1 Classification of the substance or mixture

• Classification according to Regulation (EC) No 1272/2008

Eye Irrit. 2 H319 Causes serious eye irritation. STOT SE 3 H335 May cause respiratory irritation.

- 2.2 Label elements

• Labelling according to Regulation (EC) No 1272/2008

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

- Hazard statements

H319 Causes serious eye irritation. H335 May cause respiratory irritation.

- Precautionary statements

P101 If medical advice is needed, have product container or label at hand.

P102 Keep out of reach of children.

P103 Read carefully and follow all instructions.

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P280 Wear eye protection / face protection.

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.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

SECTION 3: Composition/information on ingredients

3.2 Chemical characterisation: Mixtures

- Description: Mixture of substances listed below with nonhazardous additions.

• Dangerous components: CAS: 7727-43-7 EINECS: 231-784-4 barium sulphate, natural substance with a Community workplace exposure limit 30.0%

- Additional information: For the wording of the listed hazard phrases refer to section 16

SECTION 4: First Aid Measures

4.1 Description of first aid measures

- After inhalation:

Remove from immediate source of exposure and assure that victim is breathing. If not breathing, administer cardio-pulmonary resuscitation (CPR). If breathing is difficult, administer oxygen if available. Seek medical attention

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SECTION 4: First Aid Measures CONTINUED....

After skin contact:

Immediately wipe excess material off skin with a dry cloth then wash with plenty of soap and water for at least 5 minutes. Seek medical attention if irritation develops or persists. Remove contaminated clothing and shoes and clean thoroughly before re-use. Hot Fluid: Immediately cool skin with water and cold packs for at least 15 minutes. Do not put ice directly on skin. Do not attempt to remove solidified wax from the skin as severe tissue damage may result. Get immediate medical attention.

- After eye contact:

Rinse opened eye under running water. If symptoms persist, consult a doctor.

Hold eyelids open and flush with a steady, gentle stream of water for at least 15 minutes. Seek immediate medical attention, preferably with an ophthalmologist. If a physician is not immediately available, eye irrigation should be continued for an additional 15 minutes. Hot fluid product:

Cool burns with plenty of low-pressure water and get immediate medical attention.

- After swallowing:

If swallowed, do not induce vomiting. If victim is conscious and alert, give 1-2 glasses of water to drink. Do not give anything by mouth to an unconscious person. Seek medical attention immediately. Do not leave victim unattended. To prevent aspiration of swallowed product, lay victim on side with head lower than waist. Vomiting may occur spontaneously. If vomiting occurs and the victim is conscious, give water to further dilute the chemical.

- Information for doctor:

Treatment: ND

Medical Conditions generally Aggravated by Exposure: Inhalation of product may aggravate existing chronic respiratory problems such as asthma, emphysema or bronchitis. Skin contact may aggravate existing skin disease.

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

No further relevant information available.

- 4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

SECTION 5: Firefighting Measures

5.1 Extinguishing media

- Suitable extinguishing agents:

Use fire extinguishing methods suitable to surrounding conditions.

Use water spray, dry chemical, foam, or carbon dioxide to extinguish flames. Use water spray to cool fire-exposed containers. Water or foam may cause frothing.

- 5.2 Special hazards arising from the substance or mixture

Unusual Fire and Explosion Hazards: None.

Flash Point: 275 °C

Flammable Limits: NE

Auto-ignition point: ND

Hazardous combustion products: Toxic levels of carbon monoxides, carbon dioxides, irritating aldehydes and ketones may be formed on burning. Heating in air may produce irritating aldehydes, acids and ketones.

DOT Class: None.

- 5.3 Advice for firefighters

Dike area to prevent runoff and contamination of water sources. Dispose of fire control water later.

- Protective equipment:

Firefighters should wear NIOSH/MSHA approved positive pressure breathing apparatus with full face piece and full chemical resistant protective clothing.

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SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
 Wear chemical goggles, body-covering protective clothing, chemical resistant gloves, and rubber boots. Use NIOSH approved respirator where mist occurs. Hot wax can cause burns to eyes and skin. Avoid breathing dust.

- 6.2 Environmental precautions: No special measures required.
- 6.3 Methods and material for containment and cleaning up:
 Dispose contaminated material as waste according to item 13.
 Ensure adequate ventilation.
 Use vacuuming or sweeping compound for cleanup. Do not dry sweep or use methods that increase dusting. Prevent entry into sewers and waterways. Flush area with water to complete cleanup.
- 6.4 Reference to other sections
 See Section 7 for information on safe handling.
 See Section 8 for information on personal protection equipment.
 See Section 13 for disposal information.

SECTION 7: Handling and storage

7.1 Precautions for safe handling
 Ensure good ventilation/exhaustion at the workplace.
 Avoid contact with eyes, skin and clothing. Avoid breathing dust and vapors generated when melted. Keep container closed. Promptly clean residue from closures with cloth dampened with water. Promptly clean up spills.

- Information about fire - and explosion protection: No special measures required.
- 7.2 Conditions for safe storage, including any incompatibilities
- Storage:
 • Requirements to be met by storerooms and receptacles:
 Store in an area that is cool, dry, and well ventilated. Water contamination should be avoided. Store in clean plastic or steel containers.
 Storage temperature: Room temperature.
- Information about storage in one common storage facility: Not required.
- Further information about storage conditions: Keep container tightly sealed

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

- Additional information about design of technical facilities:
 Ventilation required: Use with adequate ventilation. If vapor, mist or dust is generated appropriate personal protection equipment and local ventilation controls must be employed.
- Ingredients with limit values that require monitoring at the workplace:
 7727-43-7 barium sulphate, natural - WEL Long-term value: 10* 4** mg/m³
 *inhalable dust **respirable dust
- Additional information:
 The lists valid during the making were used as basis. Additional clothing and/or equipment: Safety shower and eyewash fountain.
- 8.2 Exposure controls • Personal protective equipment: • General protective and hygienic measures:
 Keep away from foodstuffs, beverages and feed. Remove all soiled and contaminated clothing
 Wash hands before breaks and at the end of work. Avoid contact with the eyes.
 Avoid contact with the eyes and skin.
- Respiratory protection: In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
 Airborne concentrations should be kept to lowest levels possible. If exposure limits are exceeded

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SECTION 8: CONTINUED...

Airborne concentrations should be kept to lowest levels possible. If exposure limits are exceeded and local ventilation is unavailable, a supplied-air respirator or a self contained NIOSH-approved dust and mist respirator is required.

• **Protection of hands:** Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

• **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

• Penetration time of glove material - The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

• **Eye protection:**

Tightly sealed goggles • Vapour pressure: Not applicable.

• Density: Not determined. Relative density Not determined. Vapour density Not applicable.

• Evaporation rate Not applicable

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

• General Information • Appearance: Form: Solid, Colour: Yellow

• Odour: Mild • Odour threshold: Not determined.

• pH-value at 20 °C: 7 • Change in condition

Melting point/freezing point: 58-62 °C

Initial boiling point and boiling range: Undetermined.

• Flash point: 275 °C

• Flammability (solid, gas): Not determined.

• Decomposition temperature: Not determined.

• Auto-ignition temperature: Product is not selfigniting.

• Explosive properties: Product does not present an explosion hazard.

• Explosion limits: Lower: Not determined. Upper: Not determined.

• Vapour pressure: Not applicable. • Density at 20 °C: 1.08 g/cm³

• Relative density Not determined. • Vapour density at 20 °C >1 air

• Evaporation rate Not applicable • Solubility in / Miscibility with water: Soluble.

• Partition coefficient: n-octanol/water: Not determined.

• Viscosity: Dynamic: Not applicable. Kinematic: Not applicable.

• 9.2 Other information No further relevant information available.

SECTION 10: Stability and reactivity

• 10.1 Reactivity No further relevant information available.

• 10.2 Chemical stability This material is stable under all conditions of use and storage.

• Thermal decomposition / conditions to be avoided:

Hazardous Decomposition Products: Toxic levels of carbon monoxides, carbon dioxides, irritating aldehydes and ketones may be formed on burning. Heating in air may produce irritating aldehydes, acids and ketones.

• 10.3 Possibility of hazardous reactions Hazardous Polymerization: Will not occur.

• 10.4 Conditions to avoid No further relevant information available.

• 10.5 Incompatible materials: No further relevant information available.

10.6 Hazardous decomposition products:

Toxic levels of carbon monoxides, carbon dioxides, irritating aldehydes and ketones may be formed on burning.

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SECTION 11: Toxicological information

- 11.1 Information on toxicological effects
- Acute toxicity Based on available data, the classification criteria are not met.
- LD/LC50 values relevant for classification:
 Oral LD50 5,000 mg/kg (rat)
 Dermal LD50 2,000 mg/kg (rabbit)
- Specific symptoms in biological assay:
- Skin corrosion/irritation Based on available data, the classification criteria are not met.
- Serious eye damage/irritation **Causes serious eye irritation.**
- Respiratory or skin sensitisation ND • Other information (about experimental toxicology):
 Skin (rabbit) Draize: > 0.50-3.00/8, slightly irritating.
 Eye (rabbit) Draize: > 15.00-25.00/110, slightly irritating.
 Human experience: ND • Additional toxicological information:
 This product does not contain any compounds listed by NTP or IARC or regulated by OSHA as a carcinogen. This product may contain residual (less than 100 PPM) concentration of ethylene oxide. Ethylene oxide causes tumors in laboratory animals.
- CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)
- Germ cell mutagenicity Based on available data, the classification criteria are not met.
- Carcinogenicity Based on available data, the classification criteria are not met.
- Reproductive toxicity Based on available data, the classification criteria are not met.
- STOT-single exposure
 May cause respiratory irritation.
- STOT-repeated exposure Based on available data, the classification criteria are not met.
- Aspiration hazard Based on available data, the classification criteria are not met

SECTION 12: Ecological information

- 12.1 Toxicity
- Aquatic toxicity: No further relevant information available.
- 12.2 Persistence and degradability No further relevant information available.
- 12.3 Bioaccumulative potential No further relevant information available.
- 12.4 Mobility in soil No further relevant information available.
- Additional ecological information:
- General notes: Not hazardous for water.
- 12.5 Results of PBT and vPvB assessment • PBT: Not applicable.
 • vPvB: Not applicable. • 12.6 Other adverse effects No further relevant information available.

SECTION 13: Disposal Considerations

- 13.1 Waste treatment methods
- Recommendation
 Must not be disposed together with household garbage. Do not allow product to reach sewage system. Ensure proper disposal compliance with proper authorities before disposal.
- Recommendation: Disposal must be made according to official regulations.
- Recommended cleansing agents: Water, if necessary together with cleansing agents

SECTION 14: Transport Information

- 14.1 UN-Number Not regulated
- 14.2 UN proper shipping name Not regulated
- 14.3 Transport hazard class(es) Not regulated
- 14.4 Packing group Not regulated
- 14.5 Environmental hazards:
- Marine pollutant: No
- 14.6 Special precautions for user Not applicable.
- 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code Not applicable.

SECTION 15: Ecological information

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture • Directive 2012/18/EU
- Named dangerous substances - ANNEX I None of the ingredients is listed.
- 15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.