

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

#### 1.1. Product identifier

Product name : Hi-Selon C-100  
 Product code : Not available

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

Use of the substance/mixture : Water soluble film

#### 1.3. Details of the supplier of the safety data sheet

The Nippon Synthetic Chemical Industry Co., Ltd  
 Performance Materials Dept. Specialty Materials Segment  
 OSAKA FUKOKU SEIMEI BUILDING  
 2-4, Komatsubara-cho, Kita-ku  
 Osaka, 530-0018 - Japan  
 T +81-6-7711-5426  
[#ngc-msds-film@mail.nichigo.co.jp](mailto:#ngc-msds-film@mail.nichigo.co.jp)

#### 1.4. Emergency telephone number

Emergency number : +81-6-7711-5426

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### GHS-US classification

Combustible dust

#### 2.2. Label elements

##### GHS-US labelling

Signal word (GHS-US) : Warning  
 Hazard statements (GHS-US) : May form combustible dust concentrations in air.

#### 2.3. Other hazards

No additional information available.

#### 2.4. Unknown acute toxicity (GHS US)

80 percent of the mixture consists of ingredient(s) of unknown toxicity.

### SECTION 3: Composition/information on ingredients

#### 3.1. Substance

Not applicable.

#### 3.2. Mixture

Name	Product identifier	%
Starch, oxidized	(CAS No) 65996-62-5	10 - 30
Glycerin	(CAS No) 56-81-5	3 - 7

\* The exact percentage (concentration) of composition has been withheld as a trade secret in accordance with paragraph (i) of §1910.1200.

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

First-aid measures after inhalation : If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention if you feel unwell.  
 First-aid measures after skin contact : If irritation occurs, flush skin with plenty of water. Get medical attention if irritation persists.  
 First-aid measures after eye contact : In case of contact, immediately flush eyes with plenty of water. Remove contact lenses, if worn. If irritation persists, get medical attention.  
 First-aid measures after ingestion : If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical advice/attention if you feel unwell.

#### 4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries after inhalation : Dust may cause respiratory tract irritation.

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- Symptoms/injuries after skin contact : Dust may cause skin irritation. Symptoms may include redness, drying, defatting and cracking of the skin.
- Symptoms/injuries after eye contact : Dust may cause eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with possible redness and swelling.
- Symptoms/injuries after ingestion : May be harmful if swallowed. May cause stomach distress, nausea or vomiting.

### 4.3. Indication of any immediate medical attention and special treatment needed

Symptoms may not appear immediately. In case of accident or if you feel unwell, seek medical advice immediately (show the label or SDS where possible).

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

- Suitable extinguishing media : Water spray. Dry powder.
- Unsuitable extinguishing media : Do not use a heavy water stream.

### 5.2. Special hazards arising from the substance or mixture

- Fire hazard : Combustible dust. Products of combustion may include, and are not limited to: oxides of carbon.

### 5.3. Advice for firefighters

- Protection during firefighting : Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA). If improperly handled, stored and/or exposed to an ignition source, this material may burn. Airborne dust in sufficient concentrations when confined and exposed to a sufficient ignition source can explode.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

- General measures : Use personal protection recommended in Section 8. Keep unnecessary personnel away from the release. Eliminate sources of ignition. Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration. Avoid dispersal of dust in the air (ie, clearing dust surfaces with compressed air).

### 6.2. Methods and material for containment and cleaning up

- For containment : Pick up large pieces, then place in a suitable container. Do not flush to sewer or allow to enter waterways. Use appropriate Personal Protective Equipment (PPE).
- Methods for cleaning up : Vacuum or sweep material and place in a disposal container. Provide ventilation.

### 6.3. Reference to other sections

See section 8 for further information on protective clothing and equipment and section 13 for advice on waste disposal.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

- Precautions for safe handling : Keep away from sources of ignition - No smoking. Avoid contact with skin and eyes. Avoid generating and breathing dust. Good housekeeping is important to prevent accumulation of dust. The use of compressed air for cleaning clothing, equipment, etc, is not recommended. Do not swallow. Handle carefully. When using do not eat, drink or smoke. Prevent getting product wet. Use only in well-ventilated areas.
- Hygiene measures : Launder contaminated clothing before reuse. Wash hands before eating, drinking, or smoking.

### 7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : Keep out of the reach of children. Avoid any dust buildup by frequent cleaning and suitable construction of the storage area. Store in a dry place. Store away from direct sunlight or other heat sources. Store in a well-ventilated place.

### 7.3. Specific end use(s)

Not available.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

Starch, oxidized (65996-62-5)	
ACGIH	Not applicable
OSHA	Not applicable
Glycerin (56-81-5)	
ACGIH	Not applicable

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### Glycerin (56-81-5)

OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	15 mg/m <sup>3</sup> TWA (mist, total particulate) 5 mg/m <sup>3</sup> TWA (mist, respirable fraction)
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### 8.2. Exposure controls

Appropriate engineering controls	: Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, etc.) below recommended exposure limits. It is recommended that all dust control equipment such as local exhaust ventilation and material transport systems involved in handling of this product contain explosion relief vents or an explosion suppression system or an oxygen-deficient environment. Ensure that dust-handling systems (such as exhaust ducts, dust collectors, vessels, and processing equipment) are designed in a manner to prevent the escape of dust into the work area (i.e., there is not leakage from the equipment).
Personal protective equipment	: Avoid all unnecessary exposure.
Hand protection	: None necessary under normal conditions of use. Wear gloves if handling large quantities.
Eye protection	: Safety glasses or goggles are recommended when using product.
Skin and body protection	: None necessary under normal conditions of use.
Respiratory protection	: None necessary under normal conditions of use.
Environmental exposure controls	: Maintain levels below Community environmental protection thresholds.
Other information	: Do not eat, smoke or drink where material is handled, processed or stored. Wash hands carefully before eating or smoking. Handle according to established industrial hygiene and safety practices.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state	: Solid
Appearance	: Film
Colour	: Colourless translucent, slightly yellow
Odour	: Slight acetic acid
Odour threshold	: No data available
pH	: ≤ 7
Melting point	: 160 - 190 °C (320 – 374 °F)
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Flammability (solid, gas)	: Combustible dust
Explosive limits	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Vapour pressure	: No data available
Relative density	: 1.25 (Water = 1) @ 20 °C / 68 °F
Relative vapour density at 20 °C	: No data available
Solubility	: Soluble in water
Partition coefficient: n-octanol/water	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available

### 9.2. Other information

No additional information available.

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No dangerous reaction known under conditions of normal use.

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### 10.2. Chemical stability

Stable under normal storage conditions. Hygroscopic in the presence of moisture. Keep dry in storage. Combustible dust.

### 10.3. Possibility of hazardous reactions

No dangerous reaction known under conditions of normal use.

### 10.4. Conditions to avoid

Heat. Incompatible materials. Moisture. Sources of ignition.

### 10.5. Incompatible materials

Nothing particular.

### 10.6. Hazardous decomposition products

Nothing particular.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Not classified.

Hi-Selon C-100	
LD50 oral rat	> 2000 mg/kg
LD50 dermal rabbit	> 2000 mg/kg
LC50 inhalation rat	No data available

Glycerin (56-81-5)	
LD50 oral rat	12600 mg/kg
LD50 dermal rabbit	> 10 g/kg
LC50 inhalation rat	> 570 mg/m <sup>3</sup> /1h

Skin corrosion/irritation	: Based on available data, the classification criteria are not met.
Serious eye damage/irritation	: Based on available data, the classification criteria are not met.
Respiratory or skin sensitization	: Based on available data, the classification criteria are not met.
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.
Specific target organ toxicity (single exposure)	: Based on available data, the classification criteria are not met.
Specific target organ toxicity (repeated exposure)	: Based on available data, the classification criteria are not met.
Aspiration hazard	: Based on available data, the classification criteria are not met.
Symptoms/injuries after inhalation	: Dust may cause respiratory tract irritation.
Symptoms/injuries after skin contact	: Dust may cause skin irritation. Symptoms may include redness, drying, defatting and cracking of the skin.
Symptoms/injuries after eye contact	: Dust may cause eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with possible redness and swelling.
Symptoms/injuries after ingestion	: May be harmful if swallowed. May cause stomach distress, nausea or vomiting.

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - general : Not considered to be harmful to aquatic life. May be harmful to the environment if released in large quantities.

### 12.2. Persistence and degradability

Hi-Selon C-100	
Persistence and degradability	Not established.

### 12.3. Bioaccumulative potential

Hi-Selon C-100	
Bioaccumulative potential	Not established.

### 12.4. Mobility in soil

No additional information available.

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### 12.5. Other adverse effects

Effect on the global warming : No known ecological damage caused by this product.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Waste disposal recommendations : This material must be disposed of in accordance with all local, state, provincial, and federal regulations.

## SECTION 14: Transport information

### Department of Transportation (DOT)

In accordance with DOT  
Not regulated for transport

### Additional information

Other information : No supplementary information available.  
Special transport precautions : Do not handle until all safety precautions have been read and understood.

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory.

#### Glycerin (56-81-5)

EPA TSCA Regulatory Flag	Y2 - Y2 - indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.
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### 15.2. US State regulations

#### Hi-Selon C-100

State or local regulations	This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.
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## SECTION 16: Other information

Date of issue : 08/11/2015  
Revision date : 08/11/2015  
Other information : None

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