

Material Safety Data Sheet (glass)

Product and company identification

Product name (brand name)	CM700
Name of company	HOYA CANDEO OPTRONICS Corporation
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Update	-

Hazard identification

The glass has no hazard because of physical and chemical stability.
 But the following hazards are concerned about when the glass is processed.

【Adverse human health hazard】

If swallowed the grinding/polishing liquid or inhaled the fine particles, it may cause accumulating chronic health disorder (ex. cancer-causing etc.).

【Environmental impact】

Be careful to drain concentration of the grinding/polishing liquid. It may cause bad influence to ecological system.

<< GHS Classification (1~115) >>

1) Physical and chemical hazards

Hazards (1~51)	Not classified	(Symbol : N/A	Signal word : N/A)
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2) Health hazards

Acute toxicity (oral)	Class 3	(Symbol : Skull	Signal word : Hazard)
Acute toxicity (transcutaneous)	Not classified	(Symbol : N/A	Signal word : N/A)
Acute toxicity (inhalation-gas)	Not classified	(Symbol : N/A	Signal word : N/A)
Acute toxicity (inhalation-vapor)	Not classified	(Symbol : N/A	Signal word : N/A)
Acute toxicity (inhalation-dust)	Not classified	(Symbol : N/A	Signal word : N/A)
Acute toxicity (mist)	Not classified	(Symbol : N/A	Signal word : N/A)
Skin corrosion, irritation	Class 1	(Symbol : Corrosivity	Signal word : Hazard)
Serious eye damage, eye irritativeness	Class 1	(Symbol : Corrosivity	Signal word : Hazard)
Respiratory sensitization	Not classified	(Symbol : N/A	Signal word : N/A)
Skin sensitization	Not classified	(Symbol : N/A	Signal word : N/A)
Germ cell mutagenicity	Not classified	(Symbol : N/A	Signal word : N/A)
Carcinogenicity	Not classified	(Symbol : N/A	Signal word : N/A)
Reproductive toxicity	Class 2	(Symbol : Health hazard	Signal word : Warning)
Specific target organ systemic toxicity - single exposure	Class 1	(Symbol : Health hazard	Signal word : Hazard)
Specific target organ systemic toxicity - repeated exposure	Class 1	(Symbol : Health hazard	Signal word : Hazard)
Aspiration hazard	Not classified	(Symbol : N/A	Signal word : N/A)

3) Environmental hazards

Acute hazardous to the Aquatic Environment	Not classified	(Symbol : N/A	Signal word : N/A)
Chronic hazardous to the Aquatic Environment	Not classified	(Symbol : N/A	Signal word : N/A)

<< GHS label elements >>

Symbol:



Signal Word: Hazard

Composition / Information on ingredients

Substance / Mixture

Mixture

(Glass in an amorphous material which melted a mixture of some components.)

Chemical ingredient and content

Chemical name	Chemical formula	The Industrial Safety and Health Law		The Pollutant Release and Transfer Registers Law						
		Toxic substance which name should be noticed	Content (Weight %)	Specified chemical substance	Content (Weight %) N.B.1	Attached Table No.	Number	Class I Designated Chemical Substance	Specified Class I Designated Chemical Substance	Class II Designated Chemical Substance
Phosphorus pentoxide	P ₂ O ₅	Phosphoric acid	50 to 60	-	-	-	-	-	-	-
Barium oxide	BaO	Barium and water-soluble compound	0 to 10	-	-	-	-	-	-	-
Aluminum oxide	Al ₂ O ₃	Aluminum oxide	0 to 10	-	-	-	-	-	-	-
Magnesium fluoride	MgF ₂	Fluorine and water-soluble compound	10 to 20	Fluorine and water-soluble compound	5.0	No.1	374	○	-	-
Calcium fluoride	CaF ₂	Fluorine and water-soluble compound	0 to 10	Fluorine and water-soluble compound	5.0	No.1	374	○	-	-
Strontium fluoride	SrF ₂	Fluorine and water-soluble compound	0 to 10	Fluorine and water-soluble compound	5.0	No.1	374	○	-	-
Yttrium oxide	Y ₂ O ₃	Yttrium compound	0 to 10	-	-	-	-	-	-	-
Copper oxide	CuO	Copper compound	0 to 10	Copper water-soluble compound	5.0	No.1	272	○	-	-

N.B.1 : In conformity with Pollutant Release and Transfer Registers Law, each component is described by weight%.

First aid measures

- Eye contact : In case of the grinding/polishing liquid, Wash the affected areas under running water. If necessary, get medical treatment.
In case of fine particles, get medical treatment.
- Ingestion : Give the victim to water. In case of swallow, make him vomit. If necessary, get medical treatment.

Fire-fighting measures

Optical glass is noncombustible and any extinguishing equipment can be used.
When glass is exposed to high temperatures due to a fire, fluoride gas may be generated. Therefore, move the glass concerned to a safe position promptly in case of a fire. When the fluoride gas is generated, do not stand in the direction of dust spill and wear a dust mask so as not to inhale the fluoride gas. Refer to medical attention when inhaling the gas.

Accidental release measures

- Grinding and polishing liquid spills : Stop spills with sandbags or the like, to prevent it from spreading into soil and flowing into drainage systems. Collect the waste fluid spilled in an empty container.
- Dust spill : Prevent it from spreading into soil and flowing into drainage systems. Collect the dust spilled in an empty container. Do not stand in the direction of dust spill and wear a dust mask.

Cautions of handling and storage

Optical glass is physically and chemically stable so that no special cares are required when handling and storing.
 When grinding, polishing and dry cutting
 * Care should be taken not to scatter the grinding/polishing liquid, grinding/polishing waste and dust from dry cutting.
 * After finishing the work, gargle and wash hands.

Exposure control and personal protection

Optical glass is physically and chemically stable, however, exposure may occur when mist and dust scatter during wet and dry cuttings, respectively.

Wet cutting: Use a protective cover for a processing machine to prevent the scattering of mist.
 Dry cutting: Install a local exhaust system to prevent the scattering of dust.
 Wear a dust mask for the protective equipment.
 Also, wear protective glasses if required.

Standard control concentration of chemical substance

Chemical substance name	Dust
Standard control	$E=3.0/(1.19Q+1)$ mg/Nm ³

Q: Free silica content

Physical and chemical properties

Physical condition : Solid
 Color : Light yellow transparent
 Odor : Odorless
 PH : Not applicable
 Physical condition changing temperature (yield point) : 474 °C
 Specific gravity : 3.07
 Solubility : Hardly soluble

Stability and reactivity

Stability : This product is stable.
 Reactivity : Usually no reactivity
 Decomposition : Usually none

Toxicological information

Optical glass is physically and chemically stable and has neither acute toxicity nor a local effect.
 Grinding and polishing liquid, grinding/polish waste and dust have the following properties.
 Acute toxicity: Not known
 Carcinogenic: Not known
 Chronic toxicity: Cumulative chronic toxicity is affected by inhalation and skin contact.

Ecological information

Optical glass is physically and chemically stable and has no influence on ecology.
 When the grinding/polish drainage concentration exceeds the reference value of Water Pollution Control Law as shown below, the chronic toxicity of environmental accumulation is present.

Control subject substance	Fluorine content	Copper	Phosphorus content
Drainage standard or occupational exposure limits	8mg/L (Excluding the sea area)	3mg/L	16mg/L

Disposal consideration

Conform to Wastes Disposal and Public Cleaning Law and contact an authorized disposal trader.

Transport information

No applicable information was found

Regulation information

Industrial Safety and Health Law, its enforcement ordinance and regulations,
Pneumoconiosis Law and its enforcement regulations,
Ordinance on Prevention of Hazards Due to Dust,
Ordinance on Prevention of Hazards due to Specified Chemical Substance,

Working Environment Measurement Law, its enforcement ordinance, enforcement regulations, standard and work environment evaluation standards,
Prefecture ministerial ordinance and notification stipulating Water Pollution Control Law, its enforcement ordinance, enforcement regulations and drainage standards,

PRTR (The Pollutant Release and Transfer Registers Law)

Wastes Disposal and Public Cleaning Law, its enforcement ordinance and enforcement regulations,

- Be sure to check if these law apply to your works scale, facility's capacity.
 - Be sure to check about local law etc.
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Other information

Consult us separately when remelting the glass for recycling.
