

## MATERIAL SAFETY DATA SHEET

### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**Company name** : HAKKO CORPORATION  
**Address** : 4-5, Shiokusa 2-chome, Naniwa-ku, Osaka, 556-0024 Japan  
**Section in charge** : Research & Development Center  
**Person in charge** : Makoto Onda  
**Emergency telephone number** : International Sales Division: +81-6-6561-3225  
**PRODUCT NAME** : Anti-oxidant for 485  
**MODEL** : No.485-026B

### 2. COMPOSITION/INFORMATION ON INGREDIENTS

<b>Single-ingredient product or mixture</b>	: Mixture	
<b>Chemical name</b>	Paraffin wax	Microcrystalline wax
<b>Ingredient and its content</b>	75 to 85%	15 to 25%
<b>Reference No. Published in the Official Gazette</b>	8-414	8-414
<b>CAS No.</b>	8002-74-2	63231-60-7
<b>EINECS No.</b>	232-315-6	264-038-1
<b>PRTR No.</b>	Not applicable	Not applicable

### 3. HAZARDS IDENTIFICATION

**Taxonomic group name** : N/A

**EMERGENCY OVERVIEW** : Flammable. (Fire Defense Law : Specified combustible material, Flammable solids)

**Potential health effects** : ACGIH regulates fume and vapor in melted condition.

**Environmental effects** : Good biodegradability

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#### 4. FIRST-AID MEASURES

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No specific procedure required for handling the solid state product, but exercise attention for handling the melted product which may cause burn, etc.

##### Melted:

- If in eyes** : Hot melted can cause thermal burns, so flush and cool eyes with a lot of clean water immediately and seek medical attention.
- If on skin** : If hot melted product is on the skin, cool with a lot of water on burn area immediately and have treatment for burn. Do not try to remove the product from the skin and seek medical attention.
- If inhaled** : If fume and vapor from the hot melted product irritates to throat, or causes sick or headache, immediately move the sufferer to fresh air and make him/her rest. Rapidly seek medical attention.  
If cloth of the sufferer is polluted, remove as soon as possible.
- If ingested** : Do not induce vomiting. Seek medical attention immediately. However, if breathing difficulty is caused by choke, immediately induce vomit and seek medical attention.

##### Solid:

- If in eyes** : Similarly to dust in eyes, do not rub and flush eyes with a lot of clean water and seek medical attention if necessary.
- If on skin** : No specific procedure required.  
If a worker with skin allergy recognizes any skin problem, call a doctor.
- If ingested** : Same procedure as in melted.

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#### 5. FIRE FIGHTING MEASURES

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- Extinguishing procedures** :
- Isolate from combustion source.
  - Powder and carbon dioxide extinguishing media are effective for incipient fire.
  - Air shutoff with foam extinguishing media is effective for large scale fire.
  - Water injection may expand fire.
  - Spray water to cool ambient facilities.
  - Extinguish fire from up wind and wear protective gears not to inhale generated gas or burning solvent.
  - Isolate fired area and keep unauthorized person off.
- Extinguishing media** : Soil, sand, dry chemical, carbon dioxide
- Extinguishing media to avoid** : Continuous flow of water

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## 6. ACCIDENTAL RELEASE MEASURES

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- Melted** :
- Remove all sources of ignition away from release immediately and stop leakage.
  - Use only for antioxidant application.
  - Prepare extinguishing instruments and wear protective gears during handling.
  - Collect leakage in empty containers after cool and harden with water, soil, sand and so on. Then, wipe with cloth and the like.
  - In the case of effusion into sewage, river, ocean, etc., collect it in empty container after cool and harden.
  - In the case of effusion in the room, open window and door to completely ventilate.

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## 7. HANDLING AND STOCK

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- Handling** :
- Inflammable
  - Use only for antioxidant application.
  - Do not mix with other chemicals.
  - Do not allow skin or eyes to contact the product, or inhale vapor.
  - Wear appropriate protective gear during handling. (Dust mask, air-supplied respirator, compressed air open-circuit SCBA, protective glasses, impermeability glove, boot, and apron.)
  - When handling in the room, ventilate air sufficiently, if necessary, provide local exhaust system.
  - Use containers without break, corrosion, crack, etc. Do not fall in vain or impose force. Handle carefully.
  - When putting in/ taking out the product to/from containers, avoid spills. Seal containers every time handling it.
  - Do not eat or smoke during handling. After handling, wash hands and face completely.

**Safety handling note:** Be sure to wear protective gears.

- Stock** :
- Prevent leakage
  - Avoid direct sunlight and keep away from high temperature matters.
  - Separate from strong oxidizer for storing.
  - Avoid foreign matter infusion.
  - Display necessary sign such as "NO UNAUTHORIZED ENTRY" at a visible place.
  - Refrigerate with being sealed.

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## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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<b>Standard control concentration</b>	:	Not established. Notice No. 26 of the Ministry of Labor, Work environment assessment standard
<b>Threshold limit value</b>	:	Not established. Japan Assoc. of Industrial Health, 1999
<b>Engineering controls</b>	:	Provide ventilation, safety shower, basin, etc. in the handling place.
<b>Personal protective equipment</b>	:	
<b>Respirator</b>	:	Anti-dust mask or fresh air hose breathing apparatus.
<b>Safety goggles</b>	:	Glasses with side walls, goggle type protective glasses.
<b>Protective glove</b>	:	Impermeability glove.
<b>Protective cloth</b>	:	Protective boot, protective apron, etc.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

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<b>Appearance</b>	:	White or buff yellow opacity semisolid material.
<b>Odor</b>	:	Some.
<b>Viscosity</b>	:	Not known.
<b>Boiling point</b>	:	Not applicable.
<b>Vapor pressure</b>	:	Not known.
<b>Vapor density</b>	:	Not known.
<b>Melting point</b>	:	70°C
<b>Flash point</b>	:	270°C or more
<b>Ignition point</b>	:	No data available.
<b>Explosive range</b>	:	Not known.
<b>Solubility</b>	:	Water insoluble.

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## 10. STABILITY AND REACTIVITY

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<b>Stability</b>	:	Stable in general storage and handling.
<b>Ignitability</b>	:	No
<b>Flammability</b>	:	Yes
<b>Autoreactivity</b>	:	None.
<b>Other information</b>	:	

Materials to avoid to mix or conditions to avoid: Strong oxidizer

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## 11. TOXICOLOGICAL INFORMATION (Including symptom of human and epidemical information)

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<b>Skin causticity</b>	:	None.
<b>Acridity (Skin, eyes)</b>	:	Generally none. (Some people feel irritation on skin in rare cases.)
<b>Sensibilization</b>	:	Not known.
<b>Acute toxicity (LD50)</b>	:	Not known.
<b>Subacute toxicity</b>	:	Not known.
<b>Chronic toxicity</b>	:	Not known.
<b>Carcinogenecity</b>	:	None.
<b>Mutagenicity</b>	:	Not known.
<b>Reproductive toxicity</b>	:	Not known.
<b>Teratogenicity</b>	:	Not known.

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## 12. ECOLOGICAL INFORMATION

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<b>Degradation</b>	:	Degradable by micro-organisms.
<b>Bioaccumulation</b>	:	Not known.
<b>Toxicity for fish</b>	:	Not known.

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## 13. DISPOSAL CONSIDERATIONS

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When disposing, entrust waste disposer with permission from the governor of prefecture.

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## 14. TRANSPORTATION INFORMATION

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Make sure of no leakage of containers, load properly not to fall, drop, or damage, and securely prevent load collapse.

When delivering by vehicle, it is desirable to give advisory of delivery to transporter.

See description of HANDLING AND STOCK.

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## 15. REGULATORY INFORMATION

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Fire Defense Law (fire prevention ordinance) : Specified combustible material

Fire Defense Law: Orders for Hazardous material regulation, Appendix No. 4, Specified inflammable (Flammable solids)

Industrial Safety and Health Law: Notifiable substance

Clean Water Law: Oil effluent control (5 mg/1 TLV)

Marine Pollution Prevention Law: Oil effluent control (Basically banned)

Waste Disposal and Public Cleansing Law: Factory waste control (diffusion, effusion are banned)

PRTR Law: Not to be covered.

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**16. OTHER INFORMATION**

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Reference: MSDS issued by the manufacturer.

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This document has been prepared based on the information and data that are available as of this date. Therefore, it may be revised when new information or data has been obtained.

The information and data contained herein are subject to the normal use. The evaluation of dangerousness and toxicity is, therefore, not always applicable. For this reason, the safety precautions suitable for your purpose and method must be taken prior to the use.