KHUA®
ZHEJIANG GUANGHUA TECHNOLOGY

SAFETY DATA SHEET

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by Commission Regulation (EU) 2015/830

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

A. **Product Name**:	**GH-2228**
B.**Version（Date）:**	4（September 1, 2020）
C. **Chemical identification**:	SATURATED CARBOXYLATED POLYESTER RESIN
D. **Intended/Recommended Use**:	Powder Coating
E. **Contact Information**:	
■ Company name	ZheJiang GuangHua Technology Co., Ltd
■ Address	No.3 Huanyuan East Road, Yanguan Town, Haining, Zhengjiang, China
■ Telephone	86-573-87771666
■ Fax	86-573-87771222
■ Emergency call	86-573-87771199
F. **Department**:	R & D

2. HAZARD IDENTIFICATION

2.1 Classification of the substance or mixture	
Product Definition	Mixture
Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]	Not classified The product is not classified as hazardous according to Regulation (EC) 1272/2008 as amended.
2.2 Label elements	
Signal Word	No signal word
Hazard Statements	No known significant effects or critical hazards
Supplemental label elements	Safety data sheet available on request.
Precautionary statements	
- Prevention	Not applicable
- Response	Not applicable
- Storage	Not applicable
- Disposal	Not applicable
Hazardous ingredients	
2.3 Other hazards	
Other hazards which do not result in classification	Handling and/or processing of this material may generate a dust which can cause mechanical irritation of the eyes, skin, nose and throat.

3. COMPOSITION/ INFORMATION ON INGREDIENTS

3.1 Substances / 3.2 Mixtures	Mixture

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs or vPvBs or have been assigned a workplace exposure limit and hence require reporting in this section.

4. FIRST AID PROCEDURES

4.1 Description of first aid measures	
Eye contact:	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
Inhalation：	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
Skin contact:	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
Ingestion:	Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

Protection of first-aiders	No action shall be taken involving any personal risk or without suitable training.
4.2 Most important symptoms and effects, both acute and delayed	
Potential acute health effects	
Eye contact:	Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the eyes.
Inhalation:	Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs.
Skin contact:	No known significant effects or critical hazards.
Ingestion:	No known significant effects or critical hazards.
Over-exposure signs/symptoms	
Eye contact:	Adverse symptoms may include the following: irritation redness
Inhalation:	Adverse symptoms may include the following: respiratory tract irritation coughing
Skin contact:	No specific data.
Ingestion:	No specific data.
4.3 Indication of any immediate medical attention and special treatment needed	
Notes to physician	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments	No specific treatment.
5. FIRE FIGHTING PROCEDURES	
5.1 Extinguishing media	
Suitable	Use dry chemical powder or CO_2 .
Not suitable	None known.
5.2 Special hazards arising from the substance or mixture	
Hazards from the substance or mixture	No specific fire or explosion hazard.
Hazardous combustion products	In case of fire, may produce hazardous decomposition products such as carbon monoxide, carbon dioxide, (dense) black smoke, aldehydes, organic acids, phosphorous oxides, hydrogen bromide, bromine, bromine compounds.
5.3 Advice for firefighters	
Special protective actions for fire-fighters	Fight fire from protected location or maximum possible distance. Keep the area surrounding the fire cool.
Special protective equipment for fire-fighters	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for firefighters (including helmets, protective boots and gloves) conforming to European standard EN469 will provide a basic level of protection for chemical incidents.
Additional information	Fine dust clouds may form explosive mixtures with air.
6. ACCIDENTAL RELEASE PROCEDURES	
6.1 Personal precautions, protective equipment and emergency procedures	
For non-emergency personnel	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing dust. Put on appropriate personal protective equipment.
For emergency responders	If specialised clothing is required to deal with the spillage, take note of any information in Section8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
6.2 Environmental precautions	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

6.3 Methods and material for containment and cleaning up	
Small spill	Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Vacuum or sweep up material and place in a designated, labelled waste container. Dispose of via a licensed waste disposal contractor.
Large spill	Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Vacuum or sweep up material and place in a designated, labelled waste container. Avoid creating dusty conditions and prevent wind dispersal. Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section13 for waste disposal.
6.4 Reference to other sections	See Section 1 for emergency contact information. See Section 8 for information on appropriate personal protective equipment. See Section 13 for additional waste treatment information.
7. STORAGE AND HANDLING	
The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).	
7.1 Precautions for safe handling	
Protective measures	Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. Persons with a history of skin sensitisation problems or asthma, allergies or chronic or recurrent respiratory disease should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing dust. Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame). Prevent dust accumulation. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Electrical equipment and lighting should be protected to appropriate standards to prevent dust coming into contact with hot surfaces, sparks or other ignition sources. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by earthing and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container
Advice on general occupational hygiene	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
7.2 Conditions for safe storage, including any incompatibilities	Do not store above the following temperature: 30°C (86°F). Store in accordance with local regulations. Store in a segregated and approved area. Store in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10). Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. Store in original container, protected from direct sunlight. Keep away from heat and direct sunlight.
7.3 Specific end use(s)	
Recommendations	Not available.
Industrial sector specific solutions	Not available.
Remarks	Prevent formation of dust clouds. Earth connection against static electricity.
8. EXPOSURE CONTROL/INDIVIDUAL PROTECTION	
The information in this section contains generic advice and guidance. Information is provided based on typical anticipated uses of the product. Additional measures might be required for bulk handling or other uses that could significantly increase worker exposure or environmental releases.	
8.1 Control parameters	

Occupational exposure limits	
Product/ingredient name	**Exposure limit values**
No exposure limit value known.	
Recommended monitoring procedures	If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689(Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.
DNELs/DMELs	
No DNELs/DMELs available.	
PNECs	
No PNECs available	
8.2 Exposure controls	
Appropriate engineering controls	Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapour or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.
Individual protection measures	
Hygiene measures	Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
Eye/face protection	Safety glasses with side shields.
Hand protection	Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
Skin and body	Working clothes.
Respiratory protection	Wear dust protection mask P2.
Environmental exposure controls	Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.
Remarks	All chemical protective gloves are suitable to prevent contact with the skin. The choice of gloves should be aimed at physical protection of the hands.
Advice on personal protection is applicable for high exposure levels. Select proper personal protection based on a risk assessment of the actual exposure situation.	

9. PHYSICAL AND CHEMICAL PROPERTIES

A. Color	pale	**K. Saturation In Air(% by Vol.)**	Not available
B. Appearance	flakes	**L. Evaporation Rate**	Not available
C. Odor	odorless	**M. Solubility In Water**	Not available
D. Boiling Point	Not available	**N. Volatile Organic Content**	< 1 %
E. Melting Point	Not applicable	**O. Flash Point**	> 200 °C(Cleveland Open Cup)
F. Vapor Pressure	Not applicable	**P. Flammable Limits(% by Vol)**	Not available
G. Specific Gravity/Density	1.2g/cm3 @ 20°C	**Q. Auto-ignition temperature**	> 300 °C(VDI Guideline 2263)
H. Vapour density	Not available	**R. Decomposition Temperature**	Not available

I. Percent Volatile(% by wt.)	Not available	**S. Partition coefficient**	Not available
J. PH	Not available		

10. STABILITY AND REACTIVITY	
10.1 Reactivity	No specific test data related to reactivity available for this product or its ingredients.
10.2 Chemical stability	The product is stable. Stable under recommended storage and handling conditions (see Section 7).
10.3 Possibility of hazardous reactions	Under normal conditions of storage and use, hazardous reactions will not occur.
10.4 Conditions to avoid	Keep away from moisture.
10.5 Incompatible materials	No specific data.
10.6 Hazardous decomposition products	No specific data.
11. TOXICOLOGICAL INFORMATION	
11.1 Information on toxicological effects	
Acute toxicity	.
Conclusion/Summary	Not available.
Acute toxicity estimates	
Route	ATE value
Oral	177777.1 mg/kg
Irritation/Corrosion	
Conclusion/Summary	
Eyes	Not available.
Skin	Not available.
Respiratory	Not available.
Sensitisation	
Conclusion/Summary	
Skin	Not available.
Respiratory	Not available.
Mutagenicity	
Conclusion/Summary	Not available.
Carcinogenicity	
Conclusion/Summary	Not available.
Reproductive toxicity	
Conclusion/Summary	Not available.
Teratogenicity	
Conclusion/Summary	Not available
Specific target organ toxicity (single exposure)	
Specific target organ toxicity (repeated exposure)	Not available.
Aspiration hazard	Not available.
Potential acute health effects	
Eye contact	Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the eyes.
Inhalation	Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs.
Skin contact	No known significant effects or critical hazards.
Ingestion	No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics				
Eye contact		Adverse symptoms may include the following: irritation redness		
Inhalation		Adverse symptoms may include the following: respiratory tract irritation Coughing		
Skin contact		No specific data.		
Ingestion		No specific data.		
Potential chronic health effects				
Product/ingredient name	Result	Species	Dose	Exposure
Not available				
Conclusion/Summary		Not available.		
General		Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation.		
Carcinogenicity		No known significant effects or critical hazards.		
Mutagenicity		No known significant effects or critical hazards.		
Teratogenicity		No known significant effects or critical hazards.		
Developmental effects		No known significant effects or critical hazards.		
Fertility effects		No known significant effects or critical hazards.		
Classification				
12. ECOLOGICAL INFORMATION				
12.1 Toxicity				
Conclusion/Summary		Not available.		
12.2 Persistence and degradability				
Conclusion/Summary		Not available.		
12.3 Bioaccumulative potential				
12.4 Mobility in soil				
Soil/water partition coefficient (KOC)		Not available.		
Mobility		Not available.		
12.5 Results of PBT and vPvB assessment				
PBT		Not applicable.		
vPvB		Not applicable.		
12.6 Other adverse effects		No known significant effects or critical hazards.		
13. DISPOSAL CONSIDERATIONS				
The information in this section contains generic advice and guidance. Reference number: 2008/98/EC.				
13.1 Waste treatment methods				
Product				
Methods of disposal		The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.		
Hazardous waste		Within the present knowledge of the supplier, this product is not regarded as hazardous waste, as defined by EU Directive 2008/98/EC.		
Packaging				
Methods of disposal		The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.		
Special precautions		This material and its container must be disposed of in a safe way.		

	Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

14. TRANSPORT REGULATIONS

	ADR/RID	ADN	IMDG	IATA
14.1 UN number	Not regulated.	Not regulated.	Not regulated.	Not regulated.
14.2 UN proper shipping name	-	-	-	-
14.3 Transport hazard class(es)	-	-	-	-
14.4 Packing group	-	-	-	-
14.5 Environmental hazards	No	No	No	No

14.6 Special precautions for user	Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.
14.7 Transport in bulk according to Annex II of Marpol and the IBC Code	Not available.

15. REGULATIORY INFORMATION

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

EU Regulation (EC) No. 1907/2006 (REACH)		
Annex XIV - List of substances subject to authorisation		
Annex XIV		
None of the components are listed.		
Substances of very high concern		
None of the components are listed.		
Annex XVII – Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles.	Not applicable.	
Ozone depleting substances (1005/2009/EU)	Not listed.	
Prior Informed Consent (PIC) (649/2012/EU)	Not listed.	
National regulations		
International regulations		
Chemical Weapon Convention List Schedules I, II & III Chemicals		
Ingredient name	**List name**	**Status**
Not listed.		
Montreal Protocol (Annexes A, B, C, E)		
Ingredient name		**Status**
Not listed.		
Stockholm Convention on Persistent Organic Pollutants		
Ingredient name	**List name**	**Status**
Not listed.		
Rotterdam Convention on Prior Informed Consent (PIC)		
Ingredient name	**List name**	**Status**
Not listed.		
UNECE Aarhus Protocol on POPs and Heavy Metals		
Ingredient name	**List name**	**Status**
Not listed.		
15.2 Chemical safety assessment	No Chemical Safety Assessment has been carried out.	

Remarks	Note: see section 8 for personal protective equipment and section 13 for waste disposal.
16. OTHER INFORMATION	
Full text of abbreviated H statements	
Not applicable	
Full text of classifications [CLP/GHS]	
Not applicable	
Abbreviations and acronyms	ATE = Acute Toxicity Estimate CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008] DMEL = Derived Minimal Effect Level DNEL = Derived No Effect Level EUH statement = CLP-specific Hazard statement PBT = Persistent, Bioaccumulative and Toxic PNEC = Predicted No Effect Concentration RRN = REACH Registration Number vPvB = Very Persistent and Very Bioaccumulative
Notice to reader	The information contained in the Safety Data Sheet is based on our data available on the date of publication. The information is intended to aid the user in controlling the handling risks; it is not to be construed as a warranty or specification of the product quality. The information may not be or may not altogether be applicable to combinations of the product with other substances or to particular applications. The user is responsible for ensuring that appropriate precautions are taken and for satisfying themselves that the data are suitable and sufficient for the product's intended purpose. In case of any unclarity we advise consulting the supplier or an expert.