Material Safety Data Sheet

HIFIFAST YELLOW HF4G

1. IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY

Product Name	HIFIFAST YELLOW HF4G
Chemical Characterization	Benzimidazolone C.I. Pigment Yellow 151 C. I. No.:13980
Company	ANSHAN HIFICHEM Co., Ltd. Address: No.8, 1st Bao An Road, Teng Ao Industrial Park, Anshan 114225, P. R. China
Emergency Health/Environmental Phone	86 21 3100 7988

2. HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Classification according CLP regulation (Regulation (EC) No. 1272/2008, as amended)

The product is not classified as dangerous according to Regulation (EC) No. 1272/2008.
Not a hazardous substance or mixture.

Classification according EC Directive (67/548/EEC or 1999/45/EC, as amended)

The product is not classified as dangerous according to EC directives/the relevant national laws.

2.2. Label elements

Labelling according CLP regulation (Regulation (EC) No. 1272/2008, as amended)

Not a hazardous substance or mixture., The product does not require classification and labelling as hazardous according to CLP/GHS.

2.3. Other hazards

According to the present state of knowledge provided this product is handled correctly,there is no danger to humans or the environment
Potential dust explosion hazard.

3. COMPOSITION / INFORMATION ON INGREDIENTS

3.1. Substances

Chemical characterization
C.I.PIGMENT YELLOW 151

4. FIRST AID MEASURES

4.1. Description of first aid measures

General information	Get medical advice/ attention if you feel unwell.
After inhalation	If inhaled, remove to fresh air.
After contact with skin	In case of contact, immediately flush skin with plenty of water.
After contact with eyes	Rinse the affected eye with plenty of water, at the same time keep the unaffected eye well protected.
After ingestion	If swallowed do not induce vomiting,seek medical advice and show safety datasheet or label

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

Symptoms	No symptoms known currently.
Hazards	No hazards known at this time.

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

Treatment	Treat symptomatically.

5. FIREFIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media	water spray jet foam
Extinguishing media that must not be used for safety reasons	High volume water jet Carbon dioxide (CO2) Dry powder

5.2. Special hazards arising from the substance or mixture

In case of fires, hazardous combustion gases are formed: Carbon monoxide (CO)
Carbon dioxide (CO2)
Nitrogen oxides (NOx)

5.3. Advice for firefighters

Special protective equipment for firefighting	Use self-contained breathing apparatus

6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Wear suitable personal protective equipment.
Avoid dust formation.
Keep away sources of ignition.

6.2. Environmental precautions

The product should not be allowed to enter drains, water courses or the soil.

6.3. Methods and material for containment and cleaning up

Take up mechanically
Avoid dust formation.
Take measures to prevent the build up of electrostatic charge.
Risk of dust explosion.
Treat recovered material as described in the section "Disposal consideration

6.4. Reference to other sections

Additional information

Keep away sources of ignition, stop running engines, no smoking.
Take up in the dry state without forming dust. Consider Recycling
Information regarding Safe handling, see chapter 7.
Information regarding Waste Disposal, see chapter 13.

7. HANDLING AND STORAGE

7.1. Precautions for safe handling

Advice on safe handling

When used and handled appropriately no special measures are needed
Avoid dust formation.

Hygiene measures

Wash hands before breaks and at the end of workday.
Use protective skin cream before handling the product.
Take off immediately all contaminated clothing and wash it before reuse.

Advice on protection against fire and explosion
Take precautionary measures against build-up of electrostatic charges, e.g earthing during loading and off-loading operations.
Keep away sources of ignition.
Dust can form an explosive mixture in air.
Observe the general rules of industrial fire protection

Dust explosion class : ST1 Capable of dust explosion

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers

Keep only in the original container.
Keep container tightly closed.

Advice on storage compatibility

When used and handled as intended, none.

Do not store or transport together with foodstuffs

Further information on storage conditions

Keep container dry

Storage stability

If correctly stored: storage life > 12 months

7.3. Specific end use(s)

No further recommendations.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1. Control parameters

Exposure limit values

Exposure limit values are not available.

DNEL/DMEL values

DNEL/DMEL values are not available.

PNEC values

PNEC values are not available.

8.2. Exposure controls

General protective measures

Observe the usual precautions for handling chemicals.

Respiratory protection :	in case of dust, use dust-mask. mask, comb.gas/particle filter
Hand protection :	Nitrile rubber gloves. Minimum breakthrough time (glove): not determined Minimum thickness (glove): not determined Take note of the information given by the producer concerning permeability and break through times, and of special workplace conditions (mechanical strain, duration of contact).
Eye protection :	safety glasses
Body protection :	working clothes

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical state :	solid (20 °C ; 1.013 hPa)
Form :	powder
Particle size :	4 µm
Colour :	yellow
Odour :	not specified
Odour threshold :	cannot be determined
pH value :	5,5 - 8,5
Melting point :	Method : DTA Decomposes before melting.
Boiling point :	not applicable
Sublimation point :	not applicable
Flash point :	Not applicable
Evaporation rate :	Not applicable
Flammability :	The product is not flammable. Combustibility test (Corresponding to EC Directive)
Lower explosion limit :	not tested.
Upper explosive limit :	not tested.
Combustion number :	BZ3 Local combustion without spreading (20 °C)

Minimum ignition energy :	6 - 13 mJ with inductive electrical resistance
Minimum ignition energy :	13 - 30 mJ
	without inductive electrical resistance
Vapour pressure :	not available
Vapour density relative to air :	not available
Relative Density:	not tested.
Solubility in water :	17,8 µg/l (25 °C) Method : ETAD method
Miscibility with water :	practically insoluble
Solubility/qualitative :	not tested.
Octanol/water partition	1,07 (25 °C) Method : other (calculated)
coefficient (log Pow) :	
Ignition temperature :	not applicable
Self-ignition temperature :	from 320 °C
	Method : VDI 2263 (Grewer)
Thermal decomposition :	> 330 °C (Heating rate : 3 K/min)
	Method : DTA
	closed cup
	Exothermic reaction
Viscosity (dynamic) :	Not applicable
Viscosity (kinematic) :	Not applicable
Oxidizing properties :	Type of oxidizing effect : The substance or mixture is not classified as oxidizing. There are no chemical groups associated with oxidising properties present in the molecule. not oxidizing

9.2. Other information

Density :	1,55 g/cm3
Bulk density :	230 kg/m3 (20 °C)
Surface tension :	Based on chemical structure, no surface activity is expected or can be predicted.
Impact sensitivity :	Not impact sensitive.

10. STABILITY AND REACTIVITY

10.1. Reactivity

See section 10.3. "Possibility of hazardous reactions"

10.2. Chemical stability

Stable.

10.3. Possibility of hazardous reactions

Risk of dust explosions.

Stable.

10.4. Conditions to avoid

ignition
Keep away from heat.
Keep away from open flames, hot surfaces and sources of ignition.

10.5. Incompatible materials

not known

10.6. Hazardous decomposition products

When handled and stored appropriately, no dangerous decomposition products are known
Nitrogen oxides (NOx)

11. TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects Information related to the product itself:

Information related to the product itself:

Acute oral toxicity :	LD50 > 15.000 mg/kg (rat) Method : OECD Test Guideline 401
Acute dermal toxicity :	not required
Acute inhalation toxicity :	LC50 > 709 mg/l (4 h, rat) Method : Other
Irritant effect on skin :	No skin irritation (24 h, rabbit) Method : Other
Irritant effect on eyes :	No eye irritation (72 h, rabbit eye) Method : OECD Test Guideline 405

Sensitization :	non-sensitizing Method : OECD Test Guideline 429
Repeated dose toxicity:	Subacute oral toxicity Route of application: oral (gavage) NOAEL: 1.000 mg/kg (Exposure time : 40 - 49 d, Frequency of treatment: once daily, Dose: 100 - 300 - 1000 mg/kg, rat, male and female) Method : OECD Test Guideline 422 By analogy with a product of similar composition Repeated Dose Toxicity (subchronic study) Route of application: Oral The study is not necessary from a scientific perspective. Repeated Dose Toxicity (subchronic study) Route of application: Inhalation The study is not necessary from a scientific perspective.
Genetic toxicity in vivo :	Micronucleus test mouse (NMRI, male and female) oral (gavage) 30 h 50 - 500 - 5000 mg/kg Bone marrow cells Method : OECD Test Guideline 474 other TS negative
Genetic toxicity in vitro :	Test type : PRIVAL Modification of AMES Test For Azo Dyes Test system : Salmonella typhimurium Concentration : 3 - 5000 Metabolic activation : with and without Result : Negative with and without metabolic activation Method : OECD Test Guideline 471 Test type : PRIVAL Modification of AMES Test For Azo Dyes Test system : Escherichia coli Concentration : 3 - 5000 Metabolic activation : with and without Result : Negative with and without metabolic activation Method : OECD Test Guideline 471
Assessment of mutagenicity :	It is concluded that the product is not mutagenic based on evaluation of several mutagenicity tests.
Assessment of carcinogenicity :	No information available.
Developmental toxicity/teratogenicity :	Route of application: oral (gavage) NOAEL: 1.000 mg/kg (Exposure time : 4 w (male), 7 w (female), Frequency of treatment: once daily, Dose: 100 - 300 - 1000 mg/kg, rat, male and female) NOAEL (maternal): 1.000 mg/kg (Exposure time : 4 w (male), 7 w (female), Frequency of treatment: once daily, Dose: 100 - 300 - 1000 mg/kg, rat, male and female) Method : Other By analogy with a product of similar composition

Toxicity to reproduction/fertility :	One generation study NOAEL parent: 1.000 mg/kg (Exposure time : 4 w (male), 7 w (female), Frequency of treatment: once daily, Pre-mating exposure period, male: 14 d, Pre-mating exposure period, female: 14 d, Dose: 100 - 300 - 1000 mg/kg, rat, male and female) NOAEL F1: 1.000 mg/kg (Exposure time : 4 w (male), 7 w (female), Frequency of treatment: once daily, Pre-mating exposure period, male: 14 d, Pre-mating exposure period, female: 14 d, Dose: 100 - 300 - 1000 mg/kg, rat, male and female) Method : OECD 421 By analogy with a product of similar composition Two generation study The study is not necessary from a scientific perspective.
Assessment of toxicity to reproduction :	No reproductive toxicity to be expected.
Assessment of teratogenicity :	No teratogenic effects to be expected.
Specific target organ toxicity (STOT) - single exposure :	Assessment : The substance or mixture is not classified as specific target organ toxicant, single exposure.
Specific target organ toxicity (STOT) - repeated exposure :	Assessment : The substance or mixture is not classified as specific target organ toxicant, repeated exposure.
Aspiration hazard :	no data available

12. ECOLOGICAL INFORMATION

12.1. Toxicity

Information related to the product itself:

Fish toxicity :	EC0 1 mg/l (96 h, Danio rerio (zebra fish)) Method : OECD Test Guideline 203 By analogy with a product of similar composition The details of the toxic effect relate to the nominal concentration. LC50 > 1 mg/l (96 h, Danio rerio (zebra fish)) Method : OECD Test Guideline 203 By analogy with a product of similar composition The details of the toxic effect relate to the nominal concentration.
Fish toxicity (chronic) :	not required
Daphnia toxicity :	NOEC > 100 mg/l (48 h, Daphnia magna (Water flea)) Method : OECD Test Guideline 202 The product was tested above its maximum solubility. No observable toxic effect in saturated solution.

Daphnia toxicity (chronic) :	NOEC 1 mg/l (21 d, Daphnia magna (Water flea)) Analytical monitoring : yes Method : OECD Test Guideline 211 By analogy with a product of similar composition The details of the toxic effect relate to the nominal concentration.
Algae toxicity :	EC50 (Growth rate) > 1 mg/l (72 h, Desmodesmus subspicatus (Scenedesmus subspicatus)) Method : OECD Test Guideline 201 By analogy with a product of similar composition The details of the toxic effect relate to the nominal concentration. NOEC (Growth rate) 1 mg/l (72 h, Desmodesmus subspicatus (Scenedesmus subspicatus)) Method : OECD Test Guideline 201 By analogy with a product of similar composition The details of the toxic effect relate to the nominal concentration. EC50 (Biomass) > 1 mg/l (72 h, Desmodesmus subspicatus (Scenedesmus subspicatus)) Method : OECD Test Guideline 201 By analogy with a product of similar composition The details of the toxic effect relate to the nominal concentration. NOEC (Biomass) 1 mg/l (72 h, Desmodesmus subspicatus (Scenedesmus subspicatus)) Method : OECD Test Guideline 201 By analogy with a product of similar composition The details of the toxic effect relate to the nominal concentration.
Bacteria toxicity :	EC50 > 1.000 mg/l (3 h, activated sludge, domestic) Method : OECD Test Guideline 209 By analogy with a product of similar composition The details of the toxic effect relate to the nominal concentration.
Toxicity to soil-dwelling organisms :	NOEC 1.000 mg/kg (56 d, Eisenia fetida (earthworms)) Method : OECD Test Guideline 222 By analogy with a product of similar composition LOEC > 1.000 mg/kg (56 d, Eisenia fetida (earthworms)) Method : OECD Test Guideline 222 By analogy with a product of similar composition (other soil dwelling arthropod) The study is not necessary from a scientific perspective.

Toxicity to terrestrial plants :	NOEC 1.000 mg/kg (21 d, Brassica napus) Method : OECD Guide-line 208 By analogy with a product of similar composition NOEC 1.000 mg/kg (21 d, Avena sativa (oats)) Method : OECD Guide-line 208 By analogy with a product of similar composition NOEC 1.000 mg/kg (21 d, Dicotyledonae: Glycine max (soybean)) Method : OECD Guide-line 208 By analogy with a product of similar composition
Sediment toxicity :	not tested.

12.2. Persistence and degradability

Information related to the product itself:

Physico-chemical eliminability :	Not readily biodegradable.
Biodegradability :	10 % (28 d, BOD in % of theoretical OD) Not readily biodegradable. Method : OECD 302 C By analogy with a product of similar composition

12.3. Bioaccumulative potential

Information related to the product itself:

Bioaccumulation:	Low potential for bioaccumulation (log Pow < 3).

12.4. Mobility in soil

Information related to the product itself:

Transport and distribution between environmental compartments :	adsorption (water - soil) Not expected to adsorb on soil.
Behaviour in environmental compartments	not available

12.5. Results of PBT and vPvB assessment Information related to the product itself:

After consideration of all available toxicity and ecotoxicity data it is concluded that the substance does not fulfil the PBT or vPvB criteria.

12.6. Other adverse effects

Information related to the product itself:

Additional ecotoxicological remarks

The product should not be allowed to enter drains, water courses or the soil.

13. DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Product

Product should be be taken to a suitable and authorized waste disposal site in accordance with relevant regulations and if necessary after consultation with the waste disposal operator and/or the competent Authorities

Uncleaned packaging

Packaging that cannot be cleaned should be disposed of as product waste

14. TRANSPORT INFORMATION

Section 14.1. to 14.5.

ADR	not restricted
ADN	not restricted
RID	not restricted
IATA	not restricted
IMDG	not restricted

14.6. Special precautions for user

See sections 6 to 8 of this Safety Data Sheet.

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

(International Bulk Chemicals Code)

No transport as bulk according IBC - Code.

15. REGULATORY INFORMATION

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

15.2. Chemical safety assessment

Chemical Safety Assessments have been carried out for these substances.

16. OTHER INFORMATION

Observe national and local legal requirements

Legend

ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
AOX	Adsorbable organic bound halogens
CAS	Chemical Abstracts Service
DMEL	Derived Minimal Effect Level (genotoxic substances)
DNEL	Derived No Effect Level
EC50	Half maximal effective concentration
GHS	Globally Harmonized System
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Lethal Concentration 50%
LD50	Lethal Dose 50%
MARPOL	International Convention for the Prevention of Pollution From Ships
NOAEC	No Observed Adverse Effect Concentration
NOAEL	No Observed Adverse Effect Level
NOEC	Non Observed Effect Concentration
OEL	Occupational Exposure Limit
PBT	Persistent, Bioaccumulative, Toxic
PEC	Predicted Environmental Concentration
PNEC	Predicted No Effect Concentration
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	International Rule for Transport of Dangerous Substances by Railway
SVHC	Substances of Very High Concern
vPvB	very Persistent and very Bioaccumulative

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Change to the last edition	3rd edition of the MSDS for this product (25th July, 2014)