

## Information Sheet

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

#### 1.1. Product identifier

Code: HCO--SERIES  
Product name: HCO codes from 600 to 699

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

Intended use: decoration and glazing for home crafts

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

Name: COLOROBBIA S.P.A.  
Full address: Via Gramsci 14  
District and Country: 50056 Montelupo F.no (FI)  
Italia  
Tel. +39 0571 7091  
Fax +39 0571 709.850

e-mail address of the competent person responsible for the Safety Data Sheet: [ambientemsds@colorobbia.it](mailto:ambientemsds@colorobbia.it)

#### 1.4. Emergency telephone number

For urgent inquiries refer to:  
CAV - Ospedale Pediatrico Bambino Gesù - Roma - tel. +39 06 68593726  
Az. Ospedaliera Università Foggia - Foggia - tel. 800183459  
Az. Ospedaliera - A. Cardarelli- Napoli- tel. +39 081 7472870  
CAV - Policlinico Umberto I- Roma - tel. +39 06 49978000  
CAV - Policlinico A. Gemelli - Roma - tel. +39 06 3054343  
Az. Ospedaliera Careggi - U.O. Tossicologia Medica - Firenze - tel. +39 055 7947819  
CAV - Centro Nazionale di Informazione Tossicologica - Pavia - tel. +39 0382 24444  
Ospedale Niguarda Ca' Granda - Milano - tel. +39 02 66101029  
Az. ospedaliera Papa Giovanni XXIII - Bergamo - tel. 800883300

### SECTION 2. Hazards identification

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

The product is not classified as hazardous pursuant to the provisions set forth in EC Regulation 1272/2008 (CLP) (and subsequent amendments and supplements).

Hazard classification and indication: --

#### 2.2. Label elements

Hazard pictograms: --  
Signal words: --  
Hazard statements: --  
Precautionary statements: --

#### 2.3. Other hazards

On the basis of available data, the product does not contain any PBT or vPvB in percentage greater than 0,1%.

### SECTION 3. Composition/information on ingredients

#### 3.1. Substances

**SECTION 3. Composition/information on ingredients ... / >>**

Information not relevant

**3.2. Mixtures**

Contains:

Identification                      **x = Conc. %**                      **Classification 1272/2008 (CLP)**

**Frit group 1**

CAS                      65997-18-4      1 ≤ x < 5

EC                      266-047-6

INDEX

**KAOLIN**

CAS                      1332-58-7      1 ≤ x < 5

EC                      310-194-1

INDEX

**ALUMINIUM OXYDE**

CAS                      1344-28-1      1 ≤ x < 5

EC                      215-691-6

INDEX

Reg. no.                      01-211952948-35-

The full wording of hazard (H) phrases is given in section 16 of the sheet.

**SECTION 4. First aid measures**
**4.1. Description of first aid measures**

Not specifically necessary. Observance of good industrial hygiene is recommended.

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

Specific information on symptoms and effects caused by the product are unknown.

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

Information not available

**SECTION 5. Firefighting measures**
**5.1. Extinguishing media**

SUITABLE EXTINGUISHING EQUIPMENT

Choose the most appropriate extinguishing equipment for the specific case.

UNSUITABLE EXTINGUISHING EQUIPMENT

None in particular.

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

HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE

The product is neither flammable nor combustible.

**5.3. Advice for firefighters**

SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS

Normal fire fighting clothing i.e. fire kit (BS EN 469), gloves (BS EN 659) and boots (HO specification A29 and A30) in combination with self-contained open circuit positive pressure compressed air breathing apparatus (BS EN 137).

**SECTION 6. Accidental release measures**
**6.1. Personal precautions, protective equipment and emergency procedures**

Block the leakage if there is no hazard.

Wear suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing. These indications apply for both processing staff and those involved in emergency procedures.

## SECTION 6. Accidental release measures ... / >>

### 6.2. Environmental precautions

The product must not penetrate into the sewer system or come into contact with surface water or ground water.

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

Collect the leaked product into a suitable container. Evaluate the compatibility of the container to be used, by checking section 10. Absorb the remainder with inert absorbent material.

Make sure the leakage site is well aired. Contaminated material should be disposed of in compliance with the provisions set forth in point 13.

### 6.4. Reference to other sections

Any information on personal protection and disposal is given in sections 8 and 13.

## SECTION 7. Handling and storage

### 7.1. Precautions for safe handling

Before handling the product, consult all the other sections of this material safety data sheet. Avoid leakage of the product into the environment. Do not eat, drink or smoke during use.

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

Keep the product in clearly labelled containers. Keep containers away from any incompatible materials, see section 10 for details.

### 7.3. Specific end use(s)

Information not available

## SECTION 8. Exposure controls/personal protection

### 8.1. Control parameters

Regulatory References:

CZE	Česká Republika	Nariadení vlády č. 361/2007 Sb. kterým se stanoví podmínky ochrany zdraví při práci
DEU	Deutschland	MAK-und BAT-Werte-Liste 2012
ESP	España	INSHT - Límites de exposición profesional para agentes químicos en España 2015
FRA	France	JORF n°0109 du 10 mai 2012 page 8773 texte n° 102
GBR	United Kingdom	EH40/2005 Workplace exposure limits
GRC	Ελλάδα	ΕΦΗΜΕΡΙΣ ΤΗΣ ΚΥΒΕΡΝΗΣΕΩΣ - ΤΕΥΧΟΣ ΠΡΩΤΟ Αρ. Φύλλου 19 - 9 Φεβρουαρίου 2012
POL	Polska	ROZPORZĄDZENIE MINISTRA PRACY I POLITYKI SPOŁECZNEJ z dnia 16 grudnia 2011r
	TLV-ACGIH	ACGIH 2018

#### Frit group 1

##### Threshold Limit Value

Type	Country	TWA/8h	STEL/15min
		mg/m3 ppm	mg/m3 ppm
TLV-ACGIH		10	

#### KAOLIN

##### Threshold Limit Value

Type	Country	TWA/8h	STEL/15min
		mg/m3 ppm	mg/m3 ppm
VLA	ESP	2	
WEL	GBR	2	
NDS	POL	10	INHAL
TLV-ACGIH		2	

## SECTION 8. Exposure controls/personal protection ... / >>

### ALUMINIUM OXYDE

#### Threshold Limit Value

Type	Country	TWA/8h		STEL/15min	
		mg/m3	ppm	mg/m3	ppm
TLV	CZE	0,1			
MAK	DEU	4			INHAL
MAK	DEU	0,3			RESP
MAK	DEU	1,5			
VLA	ESP	10			
VLEP	FRA	10			
WEL	GBR	4			
TLV	GRC		10		
NDS	POL	1,2			RESP
NDS	POL	2,5			INHAL
TLV-ACGIH		1	0,9		

#### Health - Derived no-effect level - DNEL / DMEL

Route of exposure	Effects on consumers		Effects on workers		Chronic local	Chronic systemic	Chronic local	Chronic systemic
	Acute local	Acute systemic	Acute local	Acute systemic				
Oral	6,2 mg/kg/d	VND						
Inhalation	15,6 mg/mc	VND						

#### Legend:

(C) = CEILING ; INHAL = Inhalable Fraction ; RESP = Respirable Fraction ; THORA = Thoracic Fraction.  
VND = hazard identified but no DNEL/PNEC available ; NEA = no exposure expected ; NPI = no hazard identified.

### 8.2. Exposure controls

Comply with the safety measures usually applied when handling chemical substances.

#### HAND PROTECTION

None required.

#### SKIN PROTECTION

None required.

#### EYE PROTECTION

None required.

#### RESPIRATORY PROTECTION

If the threshold value (e.g. TLV-TWA) is exceeded for the substance or one of the substances present in the product, use a mask with a type B filter whose class (1, 2 or 3) must be chosen according to the limit of use concentration. (see standard EN 14387). In the presence of gases or vapours of various kinds and/or gases or vapours containing particulate (aerosol sprays, fumes, mists, etc.) combined filters are required.

Respiratory protection devices must be used if the technical measures adopted are not suitable for restricting the worker's exposure to the threshold values considered. The protection provided by masks is in any case limited.

If the substance considered is odourless or its olfactory threshold is higher than the corresponding TLV-TWA and in the case of an emergency, wear open-circuit compressed air breathing apparatus (in compliance with standard EN 137) or external air-intake breathing apparatus (in compliance with standard EN 138). For a correct choice of respiratory protection device, see standard EN 529.

#### ENVIRONMENTAL EXPOSURE CONTROLS

The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with environmental standards.

## SECTION 9. Physical and chemical properties

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

Appearance	suspension
Colour	Not available
Odour	odourless
Odour threshold	Not available
pH	Not available
Melting point / freezing point	Not available
Initial boiling point	Not available
Boiling range	Not available
Flash point	Not applicable
Evaporation Rate	Not available
Flammability of solids and gases	Not available
Lower inflammability limit	Not applicable
Upper inflammability limit	Not applicable

**SECTION 9. Physical and chemical properties ... / >>**

Lower explosive limit	Not applicable
Upper explosive limit	Not applicable
Vapour pressure	Not available
Vapour density	Not available
Relative density	Not available
Solubility	insoluble solute
Partition coefficient: n-octanol/water	Not available
Auto-ignition temperature	Not applicable
Decomposition temperature	Not available
Viscosity	Not available
Explosive properties	Not available
Oxidising properties	Not available

**9.2. Other information**

VOC (Directive 2010/75/EC) :	0
VOC (volatile carbon) :	0

**SECTION 10. Stability and reactivity**
**10.1. Reactivity**

There are no particular risks of reaction with other substances in normal conditions of use.

**10.2. Chemical stability**

The product is stable in normal conditions of use and storage.

**10.3. Possibility of hazardous reactions**

No hazardous reactions are foreseeable in normal conditions of use and storage.

**10.4. Conditions to avoid**

None in particular. However the usual precautions used for chemical products should be respected.

**10.5. Incompatible materials**

Information not available

**10.6. Hazardous decomposition products**

Information not available

**SECTION 11. Toxicological information**
**11.1. Information on toxicological effects**

Metabolism, toxicokinetics, mechanism of action and other information

Information not available

Information on likely routes of exposure

Information not available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Information not available

Interactive effects

Information not available

ACUTE TOXICITY

LC50 (Inhalation) of the mixture:	Not classified (no significant component)
LD50 (Oral) of the mixture:	Not classified (no significant component)

**SECTION 11. Toxicological information ... / >>**

LD50 (Dermal) of the mixture:

Not classified (no significant component)

SKIN CORROSION / IRRITATION

Does not meet the classification criteria for this hazard class

SERIOUS EYE DAMAGE / IRRITATION

Does not meet the classification criteria for this hazard class

RESPIRATORY OR SKIN SENSITISATION

Does not meet the classification criteria for this hazard class

GERM CELL MUTAGENICITY

Does not meet the classification criteria for this hazard class

CARCINOGENICITY

Does not meet the classification criteria for this hazard class

REPRODUCTIVE TOXICITY

Does not meet the classification criteria for this hazard class

STOT - SINGLE EXPOSURE

Does not meet the classification criteria for this hazard class

STOT - REPEATED EXPOSURE

Does not meet the classification criteria for this hazard class

ASPIRATION HAZARD

Does not meet the classification criteria for this hazard class

**SECTION 12. Ecological information**

Use this product according to good working practices. Avoid littering. Inform the competent authorities, should the product reach waterways or contaminate soil or vegetation.

**12.1. Toxicity**

Information not available

**12.2. Persistence and degradability**

ALUMINIUM OXYDE

Degradability: information not available

**12.3. Bioaccumulative potential**

Information not available

**12.4. Mobility in soil**

Information not available

**12.5. Results of PBT and vPvB assessment**

On the basis of available data, the product does not contain any PBT or vPvB in percentage greater than 0,1%.



**SECTION 15. Regulatory information ... / >>**

Substances subject to the Stockholm Convention:  
None

Healthcare controls  
Information not available

**15.2. Chemical safety assessment**

No chemical safety assessment has been processed for the mixture and the substances it contains.

**SECTION 16. Other information****LEGEND:**

- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- CAS NUMBER: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)
- CE NUMBER: Identifier in ESIS (European archive of existing substances)
- CLP: EC Regulation 1272/2008
- DNEL: Derived No Effect Level
- EmS: Emergency Schedule
- GHS: Globally Harmonized System of classification and labeling of chemicals
- IATA DGR: International Air Transport Association Dangerous Goods Regulation
- IC50: Immobilization Concentration 50%
- IMDG: International Maritime Code for dangerous goods
- IMO: International Maritime Organization
- INDEX NUMBER: Identifier in Annex VI of CLP
- LC50: Lethal Concentration 50%
- LD50: Lethal dose 50%
- OEL: Occupational Exposure Level
- PBT: Persistent bioaccumulative and toxic as REACH Regulation
- PEC: Predicted environmental Concentration
- PEL: Predicted exposure level
- PNEC: Predicted no effect concentration
- REACH: EC Regulation 1907/2006
- RID: Regulation concerning the international transport of dangerous goods by train
- TLV: Threshold Limit Value
- TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure.
- TWA STEL: Short-term exposure limit
- TWA: Time-weighted average exposure limit
- VOC: Volatile organic Compounds
- vPvB: Very Persistent and very Bioaccumulative as for REACH Regulation
- WGK: Water hazard classes (German).

**GENERAL BIBLIOGRAPHY**

1. Regulation (EC) 1907/2006 (REACH) of the European Parliament
  2. Regulation (EC) 1272/2008 (CLP) of the European Parliament
  3. Regulation (EU) 790/2009 (I Atp. CLP) of the European Parliament
  4. Regulation (EU) 2015/830 of the European Parliament
  5. Regulation (EU) 286/2011 (II Atp. CLP) of the European Parliament
  6. Regulation (EU) 618/2012 (III Atp. CLP) of the European Parliament
  7. Regulation (EU) 487/2013 (IV Atp. CLP) of the European Parliament
  8. Regulation (EU) 944/2013 (V Atp. CLP) of the European Parliament
  9. Regulation (EU) 605/2014 (VI Atp. CLP) of the European Parliament
  10. Regulation (EU) 2015/1221 (VII Atp. CLP) of the European Parliament
  11. Regulation (EU) 2016/918 (VIII Atp. CLP) of the European Parliament
  12. Regulation (EU) 2016/1179 (IX Atp. CLP)
  13. Regulation (EU) 2017/776 (X Atp. CLP)
- The Merck Index. - 10th Edition
  - Handling Chemical Safety
  - INRS - Fiche Toxicologique (toxicological sheet)
  - Patty - Industrial Hygiene and Toxicology
  - N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition
  - IFA GESTIS website
  - ECHA website
  - Database of SDS models for chemicals - Ministry of Health and ISS (Istituto Superiore di Sanità) - Italy



### SECTION 16. Other information ... / >>

Note for users: The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the suitability and thoroughness of provided information according to each specific use of the product.  
This document must not be regarded as a guarantee on any specific product property.  
The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses.  
Provide appointed staff with adequate training on how to use chemical products.

Frits belonging to various groups:

Group 1: Ceramic frits containing general elements that are not included in Annex I of Directive 67/548/EEC and Annex VI of 1272/2008 Regulation, without Pb, Ba, Zn and Cd.

Group 2: Ceramic frits containing general elements that are not included in Annex I of Directive 67/548/EEC and Annex VI of 1272/2008 Regulation, with Zn and without Pb, Ba or Cd.

Group 3: Ceramic frits containing general elements that are not included in Annex I of Directive 67/548/EEC and Annex VI of 1272/2008 Regulation, with Ba and without Pb, Zn or Cd.

Group 4: Ceramic frits containing general elements that are not included in Annex I of Directive 67/548/EEC and Annex VI of 1272/2008 Regulation, with Zn and Ba and without Pb or Cd.

Group 5: Ceramic frits containing general elements that are not included in Annex I of Directive 67/548/EEC and Annex VI of 1272/2008 Regulation, with Pb and without Cd.

Group 5.1 Lead Bisilicates ( $0\% < \text{PbO} \leq 69\%$ ;  $\text{SiO}_2 \geq 30\%$ ;  $\text{Al}_2\text{O}_3 \geq 1\%$ ).

Group 5.2 Lead Borosilicates ( $0-69\% \text{ PbO}$ ,  $\text{SiO}_2 \geq 30\%$ ,  $\text{Al}_2\text{O}_3 \geq 0,5\%$ ,  $\text{B}_2\text{O}_3 > 0\%$ )

Group 6: Ceramic frits containing general elements that are not included in Annex I of Directive 67/548/EEC and Annex VI of 1272/2008 Regulation, with Pb and Zn and/or Ba ( $0 < \text{PbO} \leq 69$ ;  $\text{SiO}_2 \geq 30$ ;  $\text{Al}_2\text{O}_3 \geq 1$ )

Group 7: Ceramic frits containing general elements that are not included in Annex I of Directive 67/548/EEC and with Cd and some of the elements Zn, Ba, and Pb ( $0 < \text{PbO} < 69$ ;  $0 < \text{CdO} \leq 5$ ;  $\text{SiO}_2 \geq 30$ ;  $\text{Al}_2\text{O}_3 \geq 1$ )

Group 8 – frits containing lead expressed in % PbO and/or Cd expressed in % CdO, containing general elements that are not included in annex 1 of Directive 67/548/EEC and Annex VI of 1272/2008 Regulation (Zr, Si, Al, Mg, Ca, K, Na, etc.), that are not included in the other groups definition.

8.1 : lead monosilicates frits ( $0,05\% < \text{PbO} < 80\%$ ;  $\text{SiO}_2 < 30\%$ ;  $\text{Al}_2\text{O}_3 < 1\%$ )

8.2 : lead borosilicates frits ( $0,05\% < \text{PbO} < 80\%$ ;  $\text{SiO}_2 < 30\%$ ;  $\text{Al}_2\text{O}_3 < 0,5\%$ ;  $\text{B}_2\text{O}_3 > 0\%$ )

8.3 : lead and cadmium frits ( $0,05\% < \text{PbO} < 80\%$ ;  $0\% < \text{Cd} < 5\%$ ;  $\text{SiO}_2 < 30\%$  o  $0,05\% \text{ PbO} < 80\%$ ;  $5\% < \text{CdO} < 24\%$ )

Group 9 – coloured frits generally containing elements which are not listed in annex 1 of Directive 67/548/EEC and Annex VI of 1272/2008 Regulation (Zr, Si, Al, Mg, Ca, K, Na, etc.), and same metallic oxides listed in annex 1 of Directive 67/548/EEC and Annex VI of 1272/2008 Regulation :

9.1 : frits Ni ( $0\% < \text{NiO} \leq 3,8\%$ )

9.2 : frits Ni ( $3,8\% < \text{NiO} \leq 15\%$ )

9.3 : frits V ( $0\% < \text{V}_2\text{O}_5 \leq 15,5\%$ )

9.4 : frits Cd ( $5\% < \text{CdO} < 28\%$ )

Group 10 and subgroups - frits that contain B, Se, Sb and Co.

10.0 :  $\text{SiO}_2 \geq 30\%$ ;  $\text{Al}_2\text{O}_3 \geq 0,5$ ;  $0\% < \text{B}_2\text{O}_3 \leq 34$ ;

10.1 :  $\text{SiO}_2 \geq 30\%$ ;  $\text{Al}_2\text{O}_3 \geq 1\%$ ;  $\text{B}_2\text{O}_3 = 0$ ;  $0 < \text{Se} \leq 1,5\%$ ; o  $\text{SiO}_2 \geq 30$ ;  $\text{Al}_2\text{O}_3 \geq 0,5$ ;  $0 < \text{B}_2\text{O}_3 \leq 34\%$ ;  $0 < \text{Se} \leq 1,5\%$

10.2 :  $\text{SiO}_2 \geq 30\%$ ;  $\text{Al}_2\text{O}_3 \geq 1$ ;  $\text{B}_2\text{O}_3 = 0$ ;  $0 < \text{Sb}_2\text{O}_3 \leq 2$ ; o  $\text{SiO}_2 \geq 30\%$ ;  $\text{Al}_2\text{O}_3 \geq 0,5$ ;  $0 < \text{B}_2\text{O}_3 \leq 34$ ;  $0 < \text{Sb}_2\text{O}_3 \leq 2$ ;

10.3 :  $\text{SiO}_2 \geq 30\%$ ;  $\text{Al}_2\text{O}_3 \geq 1$ ;  $\text{B}_2\text{O}_3 = 0$ ;  $0 < \text{Co}_3\text{O}_4 \leq 2$  o  $\text{SiO}_2 \geq 30\%$ ;  $\text{Al}_2\text{O}_3 \geq 0,5$ ;  $0 < \text{B}_2\text{O}_3 \leq 34$ ;  $0 < \text{Co}_3\text{O}_4 \leq 2$ ;

Changes to previous review:

The following sections were modified:

01 / 04 / 08 / 11.