SAFETY DATA SHEET

Date Printed : 01 Dec. 2014

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Version : Rev. 05

Regulation : In accordance with Regulation (EU) 2015/830 (REACH), Annex II

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

Name of product : Dry Highlighter

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

Relevant identified uses : For the purpose to draw on the paper

Uses advised against : Use for recommended use only

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier : A.W.FABER-CASTELL S.A.

Street address/P.O. Box : Rua Cel. José Augusto de Oliveira Salles, 1876

Country ID/Postcode/Place : São Carlos/SP

Telephone number (if possible, indicate telefax) : +55 16 2106 1000

Web site : www.faber-castell.com.br

Contact person : Nelson Rodrigo Costa

Telephone : +55 (16) 9812 67313

e-mail address of competent person responsible for the SDS :nelson.costa@faber-castell.com.br

Responsible Department : A.W. Faber-Castell S.A., São Carlos/SP

Department R&D

1.4 Emergency Telephone

Emergency Telephone number : +55 16 2106 1218

Opening hours : Not available

Other comments (e.g. language(s) of the phone service) : Not available

SECTION 2 : HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

2.1.1 Classification according to Regulation (EC) No. 1272/2008 [CLP] : Not classified

2.1.2 Additional information: Not available

2.2 Label elements

Hazard pictograms : Not applicable

Signal word : Not applicable

Hazard statement :

Not applicable

Additional precautionary statements :

Not applicable

2.3 Other hazards

No information available

SECTION 3 : COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Mixture

Description of the mixture :

CAS No.	EC No.	REACH Registration No.	%[weight]	Name	Common Name (Synonyms)	Classification according to Regulation(EC) No 1278/2008(CLP)
7732-18-5	231-791-2	Not available	30.0~40.0	Water	WATER	See section 15
56-81-5	200-289-5	Not available	30.0~40.0	1,2,3-Propanetriol	GLYCERINE	See section 15
9067-32-7	-	Not available	0.5~1.0	SODIUM HYALURONATE	SODIUM HYALURONATE	See section 15
629-25-4	211-082-4	Not available	2.0~3.0	SODIUM LAURATE	SODIUM LAURATE	See section 15
408-35-5	206-988-1	Not available	3.0~4.0	Hexadecanoic acid, sodium salt	SODIUM PALMITATE	See section 15
822-16-2	212-490-5	Not available	12.0~15.0	Octadecanoic acid, sodium salt	SODIUM STEARATE	See section 15
822-12-8	212-487-9	Not available	10.0~12.0	Sodium myristate	SODIUM MYRISTATE	See section 15
Not available	Not available	Not available	0.2~1.0	Dyestuff	COLORANT	See section 15
123-03-5	204-593-9	Not available	0.05~0.08	Cetylpyridinium Chloride	Not available	See section 15
26402-26-6	247-668-1	Not available	0.2~0.3	Glyceryl Caprylate	Not available	See section 15
57-50-1	200-334-9	Not available	4.0~5.0	Sucrose	SUGAR	See section 15

SECTION 4 : FIRST-AID MEASURES

4.1 Description of first aid measures

General notes : Not available

Following inhalation

- Not applicable

Following skin contact

- Wash effected areas with soap and water.
- Get medical attention if irritation develops or persists.

Following eye contact

- Immediately flush eyes with plenty of water for at least 15 minutes, lifting the upper and lower eyelids.
- If irritation persists, get medical attention.

Following ingestion

- Rinse mouth with water. Get medical attention.

Self-protection of the first aider : Not available

4.2 Most important symptoms and effects, both acute and delayed

Acute effects : None known

Delayed effects : None known

4.3 Indication of immediate medical attention and special treatment needed

- Exposures require specialized first aid with contact and medical follow-up.
- Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.

SECTION 5 : FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media:

- Use dry sand, dry chemical, alcohol-resistant foam, water spray, regular foam, CO_2.

Unsuitable extinguishing media: High pressure water streams

5.2 Special hazards arising from the substance or mixture

- May be ignited by heat, sparks or flames.
- Containers may explode when heated.
- Some of these materials may burn, but none ignite readily.
- Non-combustible, substance itself does not burn but may decompose upon heating, then produce corrosive and/or toxic fumes.

5.3 Advice for firefighters

- Rescuers should put on appropriate protective gear.
- Evacuate area and fight fire from a safe distance.
- Substance may be transported in a molten form.
- Dike fire-control water for later disposal; do not scatter the material.
- Move containers from fire area if you can do it without risk.
- Fire involving Tanks; Cool containers with flooding quantities of water until well after fire is out.
- Fire involving Tanks; Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.
- Fire involving Tanks; Always stay away from tanks engulfed in fire.

SECTION 6 : ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Protective equipment :

- Use personal protective equipment, see Section 8.
- Cover with plastic sheet to prevent spreading.
- Please note that there are materials and conditions to avoid.

Emergency procedures :

- Stop leak if you can do it without risk.
- Eliminate all ignition sources.

For emergency responders

- Clean up spills immediately, observing precautions in Protective Equipment section.
- Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.
- Eliminate all ignition sources.
- Stop leak if you can do it without risk.

6.2 Environmental precautions

- Prevent entry into waterways, sewers, basements or confined areas.

6.3 Methods and material for containment and cleaning up

For containment

- Absorb spills with inert material (e.g., dry sand or earth), then place in a chemical waste container.

For cleaning up :

- Absorb spills with inert material (e.g., dry sand or earth), then place in a chemical waste container.
- Absorb the liquid and scrub the area with detergent and water.

Other information: Not available

6.4 Reference to other sections

- See also sections 8 and 13 of the Safety Data Sheet.

SECTION 7 : HANDLING AND STORAGE

7.1 Precautions for safe handling

Protective measures :

- Do not handle until all safety precautions have been read and understood.
- Follow all MSDS/label precautions even after container is emptied because they may retain product residues.
- Use carefully in handling/storage.
- Loosen closure cautiously before opening.
- Avoid breathing vapors from heated material.
- Do not enter storage area unless adequately ventilated.

- Please note that there are materials and conditions to avoid.

Measures to prevent fire : Not available

Measures to prevent aerosol and dust generation

- Avoid breathing vapors from heated material.
- Do not enter storage area unless adequately ventilated.

Measures to protect the environment : Not available

Advice on general occupational hygiene :

- Wash thoroughly after handling

7.2 Conditions for safe storage, including any incompatibilities

Technical measures and storage conditions : Not available

Packaging materials : Not available

Requirements for storage rooms and vessels :

- Empty drums should be completely drained, properly bunged, and promptly returned to a drum reconditioner, or properly disposed of.
- Store locked up.

Further information on storage conditions : Not available

7.3 Specific end use(s)

Recommendations : Not available

Industrial sector specific solutions : Not available

SECTION 8 : EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

Occupational Exposure limits

Name	Korea regulation	ACGIH regulation	Biological exposure index	OSHA regulation	NIOSH regulation	EU regulation
GLYCERINE	TWA = 10 mg/m^3	TWA = 10 mg/m (mist)	Not available	TWA = 15 mg/m3(Total dust), 5 mg/m3(Respirable fraction)	Not available	Not available
SODIUM STEARATE	Not available	TWA = 10 mg/m3 (inhalable particulate matter, listed under Stearates), 3 mg/m3 (respirable particulate matter, listed under Stearates)	Not available	Not available	Not available	Not available
SUGAR	TWA = 10 mg/m^3	TWA = 10 mg/m^3	Not available	TWA = 10 mg/m3(Total dust), 5 mg/m3(Respirable fraction)	TWA = 10 mg/m3 (total), 5 mg/m3 (resp)	Not available

8.2 Exposure controls

8.2.1 Appropriate engineering controls :

Substance/mixture related measures to prevent exposure during identified uses: No information available

Structural measures to prevent exposure: No information available

Organisational measures to prevent exposure: No information available

Technical measures to prevent exposure: No information available

8.2.2 Individual protection measures, such as personal protective equipment :

Eye and face protection : None required

Skin protection

Hand protection : None required
Other skin protection : None required
Respiratory protection : None required

8.2.3 Environmental exposure controls

Substance/mixture related measures to prevent exposure: Not available
Instruction measures to prevent exposure: Not available
Organisational measures to prevent exposure: Not available
Technical measures to prevent exposure: Not available

SECTION 9 : PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance
Description : Semi-Solid
Color : Neon Yellow & others
Odor : Odorless
Odor threshold : Not available
pH : 9～10 (3% Aqueous Solution)
Melting point/freezing point : 65 ℃
Initial boiling point and boiling range : Not available
Flash point : Not applicable
Evaporation rate : Not available
Flammability (solid, gas) : Not applicable
Upper/lower flammability or explosive limits : Not available
Vapor pressure : Not available
Solubility (ies) : Soluble
Vapor density : Not available
Relative density : 1.05~1.20
Partition coefficient: n-octanol/water : Not available
Auto ignition temperature : Not available
Decomposition temperature : Not available
Viscosity : Not available
Explosive properties : Not available
Oxidizing properties : Not available
Molecular weight : Not available

9.2 Other information : No information available

SECTION 10 : STABILITY AND REACTIVITY

10.1 Reactivity :

- Non-combustible, substance itself does not burn but may decompose upon heating, then produce corrosive and/or toxic fumes.

10.2 Chemical stability

- The product is stable under normal conditions**.**

10.3 Possibility of hazardous reactions

- No data available

10.4 Conditions to avoid

- Heat, sparks or flames

10.5 Incompatible materials

- No data available

10.6 Hazardous decomposition products

- No data available

SECTION 11 : TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

(a) Acute toxicity;	
Oral	- GLYCERINE : Rat LD_{50} = 27,200 mg/kg (female)
Dermal	- GLYCERINE : Guinea pig LD_{50} = 56,750 mg/kg
Inhalation	- GLYCERINE : Rat LC_{50} > 2.75 mg/L/4hr (male)
(b) Skin Corrosion/ Irritation;	- GLYCERINE : In test on skin irritation with rabbits, skin irritations were not observed.
(c) Serious Eye Damage/ Irritation;	- GLYCERINE : In test on eyes irritation with rabbits, eyes irritations were not observed. - SODIUM STEARATE : Experimental application of pure granulated white soap to rabbit eyes causes a moderately severe reaction, graded 8 on a scale of 1 to 10 after 24hr. Similarly 5% soln of soap causes transient mild conjuctival hyperemia & optical irregularity of the corneal epithelium if the exposure is brief.
(d) Carcinogenicity;	• ACGIH : - SUGAR : A4 • KOREA-ISH, OSHA, EC Directive 1272/2008, US EPA: Not listed
(e) Mutagenicity;	- GLYCERINE: Negative reactions were observed in in vitro test(Chromosomal aberrations test(OECD TG 473), unscheduled DNA synthesis test(OECD TG 482), Ames test(OECD TG 471, GLP)).
(f) Reproductive toxicity;	- GLYCERINE : In reproductive/developmental oral toxicity study, there were no significant adverse effects on reproductive parameters and no evidence of malformations at any doses.(NOAEL =8000-10000 mg/kg bw)
(g) Specific target organ toxicity (single exposure);	- GLYCERINE : In acute oral toxicity test with rats, Muscle spasms and clonic convulsions were observed.
(h) Specific target organ toxicity (repeat exposure);	- GLYCERINE : In repeated oral toxicity test with rats, In the male rats was an increase in the final liver/body weight ratio and upon microscopic examination generalized cloudy swelling and hypertrophy of the parenchymal cells was observed. The only effect in the female rats on this level was some generalized cloudy selling upon microscopic examination of the liver.

SECTION 12 : ECOLOGICAL INFORMATION

12.1 Toxicity	
Acute toxicity	Fish : - GLYCERINE : 96hr-LC_{50} (*Salmo gairdneri*) = 54000 mg/L - SODIUM PALMITATE : 96hr-LC_{50} (*Oryzias latipes*) = 150 mg/L - SODIUM STEARATE : 96hr-LC_{50} (*Oryzias latipes*) > 100 mg/L - SODIUM MYRISTATE: 96hr-LC_{50} (*Oryzias latipes*) > 21 mg/L Invertebrates : - GLYCERINE : 48hr-EC_{50} (*Daphnia magna*) = 1955 mg/L - SODIUM STEARATE : 48hr-EC_{50} (*Daphnia magna*) = 19 mg/L - SODIUM MYRISTATE : 48hr-EC_{50} (*Daphnia magna*) > 20

	mg/L ,21d-NOEC(Daphnia magna)=0.29 Algae : - SODIUM STEARATE : 72hr-LC_{50} (*Selenastrum capricornutum*) = 150 mg/L , 72hr-NOEC = 31 mg/L - SODIUM MYRISTATE : 72hr-EC_{50} (*Selenastrum capricornutum*) > 44 mg/L ,72-NOEC(Selenastrum capricornutum)=4.1
Chronic toxicity	Not available
12.2 Persistence and Degradability	Persistence : - GLYCERINE : Low persistency (log Kow is less than 4 estimated.) (Log Kow = -1.75) (25 ℃)(OECD TG 107) - SODIUM PALMITATE : Low persistency (log Kow is less than 4 estimated.) (Log Kow = 3.15) (estimated) - SODIUM STEARATE : High persistency (log Kow is more than 4 estimated.) (Log Kow = 4.13) - SODIUM MYRISTATE : Low persistency (log Kow is less than 4 estimated.) (Log Kow = 2.17) (estimated) Degradability : Not available
12.3 Bioaccumulative potential	Bioaccumulation : - GLYCERINE : Bioaccumulation is expected to be low according to the BCF < 500 (BCF = 3.162) (Estimated) - SODIUM PALMITATE : Bioaccumulation is expected to be low according to the BCF < 500 (BCF = 56.23) (estimated) - SODIUM STEARATE : Bioaccumulation is expected to be low according to the BCF < 500 (BCF = 10) - SODIUM MYRISTATE : Bioaccumulation is expected to be low according to the BCF < 500 (BCF = 56.23) (estimated) Biodegradation : - GLYCERINE : As well-biodegraded, it is expected to have low accumulation potential in living organisms (60% biodegradation was observed after 2 hr)
12.4 Mobility in soil	- GLYCERINE: Low potency of mobility to soil. (Koc = 0.1345) (estimated) - SODIUM PALMITATE : Low potency of mobility to soil. (Koc = 5.17) (estimated) - SODIUM STEARATE : Low potency of mobility to soil. (Koc = 275.5) - SODIUM MYRISTATE : Low potency of mobility to soil. (Koc = 2.1254) (estimated)
12.5 Results of PBT and vPvB assessment	Not available
12.6 Other adverse effects	This product does not cause water pollution.
12.7 Hazardous to the ozone layer	Not applicable

SECTION 13 : DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product/Packaging disposal

- Waste and container must be disposed of in accordance with federal, state and local environmental control regulations.

Waste codes / Waste designation according to LoW(2015) : 20 01 28

Waste treatment-relevant information
- Consider the required attentions in accordance with waste treatment management regulation.

Sewage disposal-relevant information: Not available
Other disposal recommendations: Not available

SECTION 14 : TRANSPORT INFORMATION

14.1 UN Number : Not applicable to the criteria for classification.
14.2 UN Proper shipping name : Not applicable to the criteria for classification.
14.3 Transport Hazard class : Not applicable to the criteria for classification.
(This product is not applicable to hazard transport)
14.4 Packing group : Not applicable to the criteria for classification.
14.5 Environmental hazards : Not applicable to the criteria for classification.
14.6 Special precautions for user
in case of fire : Not applicable
in case of leakage : Not applicable
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not applicable

SECTION 15 : REGULATORY INFORMATION

15.1 Safety, health and environmental regulation/legislation specific for the substance or mixture
EU Regulatory Information
EU classification :
EU CLP 2008 :
Classification : Not classified
Hazard statement codes : Not applicable
EU SVHC list : Not regulated
EU Authorisation List : Not regulated
EU Restriction list : Not regulated
Foreign Regulatory Information
External information :
U.S.A management information (OSHA Regulation) : Not regulated
U.S.A management information (CERCLA Regulation) : Not regulated
U.S.A management information (EPCRA 302 Regulation) : Not regulated
U.S.A management information (EPCRA 304 Regulation) : Not regulated
U.S.A management information (EPCRA 313 Regulation) : Not regulated
Korea management information :
A. Industrial Safety and Health Act :
- GLYCERINE : Occupational exposure limits listed
- SUGAR : Occupational exposure limits listed

B. Toxic Chemical Control Act :
- SODIUM PALMITATE : Non phase-in substance

C. Dangerous goods Safety Management Law :
- GLYCERINE : Petroleum class 4-3 (water soluble liquid), 4000ℓ

Substance of Roterdame Protocol : Not regulated
Substance of Stockholme Protocol : Not regulated
Substance of Montreal Protocol : Not regulated

15.2 Chemical safety assessment : In accordance with REACH Article 14, a Chemical Safety Assessment has been carried out for this substance.

SECTION 16 : OTHER INFORMATION

Product safety data sheet for Dry Highlighter prepared in accordance with Regulation (EU) 2015/830 (REACH), Annex II
16.1 Indication of changes
Date Updated : 03 Jan. 2022

Version : Rev. 05

16.2 Abbreviations and acronyms

ACGIH = American Conference of Government Industrial Hygienists
CLP = Classification Labelling Packaging Regulation ; Regulation (EC) No 1272/2008
CAS No. = Chemical Abstracts Service number
DMEL = Derived Minimal Effect Levels
DNEL = Derived No Effect Level
EC Number = EINECS and ELINCS Number (see also EINECS and ELINCS)
EU = European Union
IARC = International Agency for Research on Cancer
ISHL = Industrial Safety & Health Law
NIOSH = National Institute for Occupational Safety & Health
NTP = National Toxicology Program
OSHA = European Agency for Safety and Health at work
PBT = Persistent, Bioaccumulative and Toxic substance
PNEC(s) = Predicted No Effect Concentration(s)
REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 2015/830
STP = Sewage Treatment Plant
SVHC = Substances of Very High Concern
vPvB = Very Persistent and Very Bioaccumulative
UN = United Nations
MARPOL = International Convention for the Prevention of Pollution from Ships (IMO)
IBC = Intermediate Bulk Container
CERCLA = Comprehensive Environmental Response, Compensation & Liability Act (US)
EPCRA = Emergency Planning and Community Right-to-Know Act (US)
EINECS = European Inventory of Existing Commercial chemical Substances
ELINCS = European List of Notified Chemical Substances

16.3 Key literature reference and sources for data :

U.S. National library of Medicine (NLM) Hazardous Substances Data Bank (HSDB)
Korea Occupational Health & Safety Agency: http://www.kosha.net
IUCLID: http://ecb.jrc.ec.europa.eu/IUCLID-DataSheets/7631905.pdf
CHRIP(Chemical Risk Information Platform)
EPISUITE v4.0: http://www.epa.gov/opt/exposure/pubs/episuitedl.htm
The Chemical Database (ARKON): http://ull.chemistry.uakron.edu/erd/
ECOTOX: http://cfpub.epa.gov/ecotox/
International Chemical Safety Cards (ICSC): http://www.nihs.go.jp/ICSC/
Waste Control Act enforcement regulation attached [1]
National Chemical Information System (http://ncis.nier.go.kr)
Korea Dangerous Material Inventory Management System (http://hazmat.nema.go.kr)
REACH information on registered substances; https://echa.europa.eu/information-on-chemicals/registered-substances
EU CLP; https://echa.europa.eu/information-on-chemicals/cl-inventory-database
NIOSH Pocket Guide; http://www.cdc.gov/niosh/npg/npgdcas.html
IARC Monographs on the Evaluation of Carcinogenic Risks to Humans; http://monographs.iarc.fr
National Toxicology Program; http://ntp.niehs.nih.gov/results/dbsearch/
TOMES-LOLI® ; http://www.rightanswerknowledge.com/loginRA.asp
American Conference of Governmental Industrial Hygienists TLVs and BEIs.

16.4 Classification and procedure used to derive the classification for mixtures according to Regulation(EC) 1272/2008(CLP):

Classification according to Regulation (EC) 1272/2008	Classification procedure

16.5 Relevant R-phrases and/or H-statements (number and full text) : Not available

16.6 Training advice :

- Do not handle until all safety precautions have been read and understood.

16.7 Further information :

• This safety data sheet (SDS) is authored by translating and revising the MSDS which is authored by AMOS CORPORATION. The content is based on the latest information and knowledge that we currently possess and some of these referred to KOSHA information.

- This SDS was authored to aid buyer, processor or any other third person who handles the chemical of subject in the SDS; additionally, it does not warrant suitability of the chemical for special purposes or the commercial use of statements that approves the use of it in combination with other chemicals as well as technical or legal liabilities.
- The content of the SDS may vary depending on the country or the region and may not coincide with the actual regulations. Therefore, the buyer or the processor of the chemical is responsible for observing responsible government's or the region's regulations.
- This safety data sheet (SDS) is based on the legal provisions of the REACH Regulation, as amended. Its contents are intended as a guide to the appropriate precautionary handling of the material. It is the responsibility of recipients of this SDS to ensure that the information contained therein is properly read and understood by all people who may use, handle, dispose or in any way come in contact with the product. Information and instructions provided in this SDS are based on the current state of scientific and technical knowledge at the date of issue indicated. It should not be construed as any guarantee of technical performance, suitability for particular applications, and does not establish a legally valid contractual relationship. This version of the SDS supersedes all previous versions.