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 : Glue stick (blue)
- 1.2 Relevant identified uses of the substance or mixture and uses advised against Relevant identified uses : Adhesive for paper Uses advised against : Use for recommended use only
- 1.3 Details of the supplier of the safety data sheet Manufacturer/Supplier : DIXON TICONDEROGA COMPANY Street address/P.O. Box : 2525 N. CASALOMA DR. APPLETON, WI 54913 Telephone number (if possible, indicate telefax) : 1-800- 333-2545

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

This product is not considered a hazardous substance as defined in the OSHA Hazard Communication Standard (29 CFR 1910.1200).

SECTION 4 : FIRST-AID MEASURES

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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
    - Ensure that medical personnel are aware of the material(s) involved and take
    precautions to protect
   themselves.
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SECTION 5 : FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media:

- Use dry sand, dry chemical, alcohol-resistant foam, water spray, regular foam, CO2.
- 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.
- Fire will produce irritating and/or toxic gases.
- If inhaled, may be harmful.

5.3 Advice for firefighters

- 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.

Emergency procedures :

- Stop leak if you can do it without risk.
- Eliminate all ignition sources.
- Ventilate the area.
- Do not touch or walk through spilled material.
- Prevent dust cloud.

For emergency responders

- Stop leak if you can do it without risk.
- Eliminate all ignition sources.
- Ventilate the area.
- Do not touch or walk through spilled material.
- Prevent dust cloud.
- 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

- Small Spill; Flush area with flooding quantities of water. And take up with sand or other non-

combustible absorbent material and place into containers for later disposal.

- With clean shovel place material into clean, dry container and cover loosely; move containers from spill area.

For cleaning up :

- Small Spill; Flush area with flooding quantities of water. And take up with sand or other non-

- combustible absorbent material and place into containers for later disposal.
- Large Spill; Dike far ahead of liquid spill for later disposal.
- 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 :
- Please note that materials and conditions to avoid.
- Please work with reference to engineering controls and personal protective equipment.
- Be careful to high temperature.
- Measures to prevent fire :
- Be careful to high temperature.
- Measures to prevent aerosol and dust generation : Not available
- 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 :
 - Store in a closed container.
 - Store in cool and dry place.
 - 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

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: Wash thoroughly after handling.
- 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 : Blue **Odor :** Characteristic Odor threshold : Not available **pH**: 10.0~ 11.0(10% Aqueous Solution) Melting point/freezing point : 60 °C,1 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 applicable Vapor pressure : Not available Solubility (ies) : Dilutable Vapor density : Not available Relative density: 1.06 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 :
- Fire may produce irritating and/or toxic gases.
- **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	 POLY VINYL PYRROLIDONE : Rabbit LD₅₀ = 1,040 mg/kg GLYCERINE : Rat LD₅₀ = 27,200 mg/kg (female) PROPYLENE GLYCOL : Rat LD₅₀ = 22,000 mg/kg SODIUM STEARATE/SODIUM PALMITATE : Rat LD₅₀ > 5,000 mg/kg (OECD TG 401, GLP)
Dermal	- GLYCERINE : Guinea pig LD ₅₀ = 56,750 mg/kg

	- PROPYLENE GLYCOL : Rabbit LD ₅₀ > 2,000 mg/kg
Inhalation	- GLYCERINE : Rat $LC_{50} > 2.75 \text{ mg/L/4hr}$ (male) - PROPYLENE GLYCOL : Rabbit $LC_{50} > 158.5 \text{ mg/m}^3/4\text{hr}$ ($LC_{50} > 317042 \text{ mg/m}^3 \text{ air/2h}$)
(b) Skin Corrosion/ Irritation;	 GLYCERINE : In test on skin irritation with rabbits, skin irritations were not observed. PROPYLENE GLYCOL : In skin irritation test with rabbits, skin irritations were not observed(OECD TG 404). SODIUM STEARATE/SODIUM PALMITATE : In test on skin irritation with rabbits, skin irritations were not observed.(OECD TG 404, GLP)
(c) Serious Eye Damage/ Irritation;	 GLYCERINE : In test on eyes irritation with rabbits, eyes irritations were not observed. PROPYLENE GLYCOL : In eyes irritation test with rabbits, eyes irritations were not observed(OECD TG 405). SODIUM STEARATE/SODIUM PALMITATE : In eyes irritation test with rabbits, irritations were not observed.(OECD TG 405,GLP)
(d) Respiratory sensitization;	Not available
(e) Skin Sensitization;	 PROPYLENE GLYCOL : In skin sensitisation test with guinea pigs, skin sensitisations were not observed(OECD TG 406). SODIUM STEARATE/SODIUM PALMITATE : In guinea pig maximisation test, skin sensitisation was not observed.(OECD TG 406)
(f) Carcinogenicity;	 IARC : POLY VINYL PYRROLIDONE : Group 3 KOREA-ISH, ACGIH, NTP, OSHA, EC Directive 1272/2008, US EPA: Not listed
(g) Mutagenicity;	 POLY VINYL PYRROLIDONE : Nagative reaction were observed in AMES test with ALMONELLA TYPHIMURIUM. 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)). PROPYLENE GLYCOL : Negative reactions were observed in both in vitro-Mammalian Chromosome Aberration Test(OECD TG 473), bacterial reverse mutation assay and in vivo-mammalian bone marrow chromosome aberration test. SODIUM STEARATE/SODIUM PALMITATE : Negative reactions were observed in both in vitro (Bacterial gene mutation test (OECD TG 473, GLP), Mammalian Chromosome Aberration Test (OECD TG 473, GLP), Mammalian Cell Gene Mutation Test(OECD TG 476)).
(h) 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) PROPYLENE GLYCOL : In reproductive/developmental toxicity study with mice, no test material-related adverse effects were observed(OECD TG 414, GLP). SODIUM STEARATE/SODIUM PALMITATE : In developmental(OECD TG 414, GLP) toxicity studies with rats, there were no significant adverse effects on reproductive parameters and no evidence of malformations at any doses.
(i) Specific target organ toxicity (single	- GLYCERINE : In acute oral toxicity test with rats, Muscle spasms and clonic convulsions were observed.

exposure);	 PROPYLENE GLYCOL : In acute oral toxicity study (doses: 15~25 mL/kg gw) with rats, hemorrhagic areas in the small intestine, microscopic changes in kidney and slight congestion of the liver were observed. SODIUM STEARATE/SODIUM PALMITATE : In acute oral toxicity study with rats, 20 minutes after treatment, the symptomes were strongly ruffled fur and slightly decreased activity. This symptoms subsided completely within 24 hours.
(j) 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. PROPYLENE GLYCOL : In subchronic inhalation toxicity study with rats, nasal haemorrhagings were observed. SODIUM STEARATE/SODIUM PALMITATE : In repeated oral toxicity study with rats for 90 days, there were effects in food consumption, water consumption. But no histopathological changes and toxicological significance were observed.(OECD TG 408, GLP)
(k) Aspiration Hazard;	No information available

SECTION 12 : ECOLOGICAL INFORMATION

12.1 Toxicity	
Acute toxicity	Fish : GLYCERINE : 96hr-LC50 (Salmo gairdneri) = 54000 mg/L PROPYLENE GLYCOL : 96hr-LC50 (Oncorhynchus mykiss) = 40613 mg/L SODIUM STEARATE/SODIUM PALMITATE : 96hr-LC50 (Brachydanio rerio) = 46 mg/L (OECD TG 203, GLP) THYMOLPHTHALEIN : 96hr-LC50 = 12.395 mg/L (Ecosar class ; Aldehydes) Invertebrates : GLYCERINE : 48hr-EC50 (Daphnia magna) = 1955 mg/L PROPYLENE GLYCOL : 48hr-LC50 (Ceriodaphnia dubia) = 18340 mg/L ,7d-NOEC(Ceriodaphnia sp) = 13020 mg/L SODIUM STEARATE/SODIUM PALMITATE : 24hr-EC50 (Daphnia magna) = 40 mg/L THYMOLPHTHALEIN : 48hr-LC50 = 21.598 mg/L (Ecosar class ; Aldehydes) Algae : PROPYLENE GLYCOL : 72hr-EC50 (Skeletonema costatum) = 19300 mg/L (OECD TG 201, GLP) SODIUM STEARATE/SODIUM PALMITATE : 96hr-EC50 (Scenedesmus subspicatus) = 120 mg/L (GLP) THYMOLPHTHALEIN : 96hr-EC50 = 31.828 mg/L (Ecosar class ; Aldehydes)
Chronic toxicity	No information available
12.2 Persistence and Degradability	Persistence : - GLYCERINE : Low persistency (log Kow is less than 4 estimated.) (Log Kow = -1.75) (25 °C)(OECD TG 107) - PROPYLENE GLYCOL : Low persistency (log Kow is less

	than 4 estimated.) (Log Kow = -1.07) (EU Method A.8, GLP) - SODIUM STEARATE/SODIUM PALMITATE : Low persistency (log Kow is less than 4 estimated.) (Log Kow = 3.3) (OECD TG 107) - THYMOLPHTHALEIN : Low persistency (log Kow is less than 4 estimated.) (Log Kow = 1.85) (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) PROPYLENE GLYCOL : Bioaccumulation is expected to be low according to the BCF < 500 (BCF = 0.09) THYMOLPHTHALEIN : Bioaccumulation is expected to be low according to the BCF < 500 (BCF = 5.527) Biodegradation : GLYCERINE : As well-biodegraded, it is expected to have low accumulation potential in living organisms (60% biodegradation was observed after 2 hr) PROPYLENE GLYCOL : As well-biodegraded, it is expected to have low accumulation potential in living organisms (106.8% biodegradation was observed after 28 day) (OECD TG 301F, GLP) SODIUM STEARATE/SODIUM PALMITATE : As well-biodegraded, it is expected to have low accumulation potential in living organisms (86% biodegradation was observed after 28 day) (OECD TG 301E, GLP)
12.4 Mobility in soil	 GLYCERINE : Low potency of mobility to soil. (Koc = 0.1345) (estimated) PROPYLENE GLYCOL : Low potency of mobility to soil. (Koc = 2.9) THYMOLPHTHALEIN : Low potency of mobility to soil. (Koc = 1.8267) (estimated)
12.5 Results of PBT and vPvB assessment	No information 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 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.

Item Numbers: 23943-1301, 23943-1401, 23943-1501

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 Australia management information : Inventory of Chemical Substances (AICS): - 2-Pyrrolidinone, 1-ethenyl-, homopolymer : Present - Natural polymer : Present

- 1,2,3-Propanetriol : Present
- 1,2-Propanediol : Present
- Fatty acids, (C=16-18), sodium salts : Present
- Water: Present
- 3,3-bis(4-hydroxy-5-isopropyl-o-tolyl)phthalide : Present
- Carbamic acid, butyl-3-iodo-2- propynyl ester : Present
- China management information : Inventory of Existing Chemical Substances (IECSC):
- 2-Pyrrolidinone, 1-ethenyl-, homopolymer : Present [21730]
- Natural polymer : Present [26037]
- 1,2,3-Propanetriol : Present [13479]
- 1,2-Propanediol : Present [03186]
- Fatty acids, (C=16-18), sodium salts : Present [41779]
- Water: Present [32224]
- 3,3-bis(4-hydroxy-5-isopropyl-o-tolyl)phthalide : Present [01405]
- Carbamic acid, butyl-3-iodo-2- propynyl ester : Present [05843]

Philippines management information : Inventory of Chemicals and Chemical Substances (PICCS):

- 2-Pyrrolidinone, 1-ethenyl-, homopolymer : Present
- Natural polymer : Present
- 1,2,3-Propanetriol : Present
- 1,2-Propanediol : Present
- Water: Present
- 3,3-bis(4-hydroxy-5-isopropyl-o-tolyl)phthalide : Present
- Carbamic acid, butyl-3-iodo-2- propynyl ester : Present

Korea management information :

A. Industrial Safety and Health Act :

- GLYCERINE : Occupational exposure limits listed

B. Dangerous goods Safety Management Law :

- GLYČERINE : Petroleum class 4-3 (water soluble liquid), 4000ℓ

- PROPYLENE GLYCOL : 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 : No chemical safety assessment has been carried out for this product by the supplier.

SECTION 16 : OTHER INFORMATION

6.1 Indication of changes	
Date Updated : 9 Jan 2019)
Version : Rev. 05	
6.2 Abbreviations and acro	
	erence of Government Industrial Hygienists
	lling Packaging Regulation ; Regulation (EC) No 1272/2008
CAS No. = Chemical Abst	racts Service number
DMEL = Derived Minima	l Effect Levels
DNEL = Derived No Effect	et Level
EC Number = EINECS ar	nd ELINCS Number (see also EINECS and ELINCS)
EU = European Union	
IARC = International Age	ncy for Research on Cancer
ISHL = Industrial Safety δ	ż Health Law
NIOSH = National Institut	e for Occupational Safety & Health
NTP = National Toxicolog	v Program
OSHA = European Agency	y for Safety and Health at work
	mulative and Toxic substance
PNEC(s) = Predicted No E	
	valuation, Authorisation and Restriction of Chemicals Regulation (EC) No
2015/830	
STP = Sewage Treatment	Plant
SVHC = Substances of Ve	
$\mathbf{vPvB} = \mathbf{Very} \mathbf{Persistent}$ and	
$\mathbf{UN} = \mathbf{United Nations}$	I very bloaceuminative
	Convention for the Prevention of Pollution from Ships (IMO)
IBC = Intermediate Bulk C	
	ve Environmental Response, Compensation & Liability Act (US)
1	nning and Community Right-to-Know Act (US)
2,	ntory of Existing Commercial chemical Substances
	of Notified Chemical Substances
6.3 Key literature reference	
e e e e e e e e e e e e e e e e e e e	edicine (NLM) Hazardous Substances Data Bank (HSDB)
5	a & Safety Agency: http://www.kosha.net
1	puropa.eu/IUCLID-DataSheets/7631905.pdf
CHRIP(Chemical Risk Info	1 1
1	w.epa.gov/opt/exposure/pubs/episuitedl.htm
	RKON): http://ull.chemistry.uakron.edu/erd/
ECOTOX: http://cfpub.epa	6
	ety Cards (ICSC): http://www.nihs.go.jp/ICSC/
	ment regulation attached [1]
	ation System (http://ncis.nier.go.kr)
	Inventory Management System (http://hazmat.nema.go.kr)
	gistered substances; https://echa.europa.eu/information-on-chemicals/registere
substances	
EU CLP; https://echa.euroj	pa.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 applicable **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.