



SAFETY DATA SHEET

Issuing Date 16-Sep-2014

Revision Date 16-Sep-2014

Revision Number 0

Section 1. Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product Name Tuff Guy/Action Marker HD All colors
Part Number Black (44203), Blue (44179), Green (44177), Red (44819), White (44175), Yellow (44401)
Formula Code W203 (Black), W179 (Blue), W177 (Green), Y819 (Red), W175 (White), Z401 (Yellow)
 Contains Methyl isobutyl ketone, Cyclohexanone

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

Recommended Use Solvent based marker
Uses advised against No information available

1.3. Details of the supplier of the safety data sheet

Importer (5511) 4785.2600	Supplier ITW PRO BRANDS 805 E. Old 56 Highway Olathe, KS 66061 TEL: 1-800-443-9536
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For further information, please contact

E-mail Address cservice@itwprobrands.com

1.4. Emergency telephone number

Emergency Telephone Number 800-535-5053 Infotrac

Europe	112
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Section 2. Hazards identification

2.1. - Classification of the substance or mixture

REGULATION (EC) No 1272/2008

Acute Oral Toxicity	Category 4
Acute Inhalation Toxicity - Vapors	Category 4
Acute Inhalation Toxicity - Dusts and Mists	Category 4
Serious Eye Damage/Eye Irritation	Category 2
Specific Target Organ Systemic Toxicity (Single Exposure)	Category 3

Physical Hazards

Flammable liquids	Category 2
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Classification according to EU Directives 67/548/EEC or 1999/45/EC

For the full text of the R-phrases mentioned in this Section, see Section 16

The preparation is classified as dangerous in accordance with Directive 1999/45/EC.

Symbol(s) F - Highly flammable
Xn - Harmful
R-code(s) F;R11 - Xn;R20 - Xi;R36/37 - R66

2.2. Label Elements**Signal Word****Danger****Hazard Statements**

H302 - Harmful if swallowed

H319 - Causes serious eye irritation

H332 - Harmful if inhaled

H335 - May cause respiratory irritation

H225 - Highly flammable liquid and vapor

EUH066 - Repeated exposure may cause skin dryness or cracking

EUH210 - Safety data sheet available on request

Precautionary Statements - EU (§28, 1272/2008)

P370 + P378 - In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction

Precautionary Statements

P270 - Do not eat, drink or smoke when using this product

P301 + P312 - IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell

P330 - Rinse mouth

P264 - Wash face, hands and any exposed skin thoroughly after handling

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

P337 + P313 - If eye irritation persists: Get medical advice/ attention

P403 + P233 - Store in a well-ventilated place. Keep container tightly closed

P405 - Store locked up

P501 - Dispose of contents/ container to an approved waste disposal plant

P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking

P233 - Keep container tightly closed

P240 - Ground/Bond container and receiving equipment

P241 - Use explosion-proof electrical/ ventilating/ lighting/ equipment

P242 - Use only non-sparking tools

P243 - Take precautionary measures against static discharge

P280 - Wear protective gloves/ protective clothing/ eye protection/ face protection

P403 + P235 - Store in a well-ventilated place. Keep cool

P261 - Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray

P271 - Use only outdoors or in a well-ventilated area

P304 + P340 - IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing

P303 + P361 + P353 - IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower

P320 - Specific treatment is urgent (see supplemental first aid instructions on this label)

2.3. Other information**Section 3. Composition/information on ingredients**

3.1. Substances

Not applicable

3.2. Mixtures

Chemical Name	EC-No	CAS-No	Weight %	Classification	EU - GHS Substance Classification	REACH No.
Methyl isobutyl ketone	203-550-1	108-10-1	40-70	F; R11 Xn; R20 Xi; R36/37 R66	(EUH066) Flam. Liq. 2 (H225) STOT SE 3 (H335) Acute Tox. 4 (H332) Eye Irrit. 2 (H319)	No data available
Cyclohexanone	203-631-1	108-94-1	10-30	R10 Xn; R20	Flam. Liq. 3 (H226) Acute Tox. 4 (H332)	No data available
Titanium dioxide	236-675-5	13463-67-7	1-5	-		No data available
Carbon black	215-609-9 435-640-3	1333-86-4	1-5	-		No data available

For the full text of the R-phrases mentioned in this Section, see Section 16

For the full text of the H-Statements mentioned in this Section, see Section 16

Section 4. First aid measures

4.1. Description of first-aid measures

General Advice	Immediate medical attention is required. Show this safety data sheet to the doctor in attendance. If symptoms persist, call a physician.
Eye Contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If symptoms persist, call a physician. Keep eye wide open while rinsing.
Skin Contact	Wash skin with soap and water. Remove and wash contaminated clothing before re-use. If skin irritation persists, call a physician.
Ingestion	Rinse mouth. Drink plenty of water. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Consult a physician if necessary
Inhalation	Move to fresh air. If breathing is difficult, give oxygen. If symptoms persist, call a physician.
Protection of First-aiders	Remove all sources of ignition. Use personal protective equipment.

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

Most Important Symptoms/Effects No information available.

4.3. Indication of immediate medical attention and special treatment needed

Notes to Physician Treat symptomatically.

Section 5. Fire-fighting measures

5.1. Extinguishing media**Suitable Extinguishing Media**

Dry chemical. Carbon dioxide (CO₂). Foam.

Extinguishing media which must not be used for safety reasons

Water.

5.2. Special hazards arising from the substance or mixture**Special exposure hazards arising from the substance or preparation itself, combustion products, resulting gases**

Flammable. Most vapors are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks).

5.3. Advice for firefighters**Special protective equipment for fire-fighters**

As in any fire, wear self-contained breathing apparatus and full protective gear.

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

Remove all sources of ignition. Evacuate personnel to safe areas. Ensure adequate ventilation. Use personal protective equipment. Stop leak if you can do it without risk.

6.2. Environmental precautions

Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Do not flush into surface water or sanitary sewer system.

6.3. Methods and materials for containment and cleaning up

Small spillage: Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Large spillage: Pump or vacuum transfer spilled product to clean containers for recovery. Absorb unrecoverable product.

6.4. Reference to other sections

See Section 12 for additional information.

Section 7. Handling and storage**7.1. Precautions for Safe Handling****Handling**

Ensure adequate ventilation. Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharges. Use only in an area containing flame proof equipment. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded. Avoid contact with skin, eyes and clothing. Empty containers pose a potential fire and explosion hazard. Do not cut, puncture or weld containers.

Hygiene Measures

When using, do not eat, drink or smoke. Provide regular cleaning of equipment, work area and clothing.

7.2. Conditions for safe storage, including any incompatibilities

Keep away from open flames, hot surfaces and sources of ignition. Keep away from incompatible materials. Keep containers tightly closed in a cool, well-ventilated place. Keep out of the reach of children. Keep container closed when not in use.

7.3. Specific end use(s)**Exposure Scenario**

No information available.

Other Guidelines

No information available.

Section 8. Exposure controls/personal protection**8.1. Control parameters****Exposure Limits**

Chemical Name	EU	The United Kingdom	France	Spain	Germany
Methyl isobutyl ketone 108-10-1	TWA 20 ppm TWA 83 mg/m ³ STEL 50 ppm STEL 208 mg/m ³	STEL: 100 ppm STEL: 416 mg/m ³ TWA: 50 ppm TWA: 208 mg/m ³ Skin	TWA: 20 ppm TWA: 83 mg/m ³ STEL: 50 ppm STEL: 208 mg/m ³	STEL: 50 ppm STEL: 208 mg/m ³ TWA: 20 ppm TWA: 83 mg/m ³	TWA: 20 ppm TWA: 83 mg/m ³ Ceiling / Peak: 40 ppm Ceiling / Peak: 166 mg/m ³ Skin
Cyclohexanone 108-94-1	S* TWA 10 ppm TWA 40.8 mg/m ³ STEL 20 ppm STEL 81.6 mg/m ³	STEL: 20 ppm STEL: 82 mg/m ³ TWA: 10 ppm TWA: 41 mg/m ³ Skin	VME: 10 ppm VME: 40.8 mg/m ³ VLCT: 20 ppm VLCT: 81.6 mg/m ³	S* VLA-EC: 20 ppm VLA-EC: 82 mg/m ³ VLA-ED: 10 ppm VLA-ED: 41 mg/m ³	Skin TWA: 20 ppm TWA: 80 mg/m ³
Titanium dioxide 13463-67-7		STEL: 30 mg/m ³ STEL: 12 mg/m ³ TWA: 10 mg/m ³ TWA: 4 mg/m ³	VME: 10 mg/m ³	VLA-ED: 10 mg/m ³	
Carbon black 1333-86-4		STEL: 7 mg/m ³ TWA: 3.5 mg/m ³	VME: 3.5 mg/m ³	VLA-ED: 3.5 mg/m ³	
Component	Italy	Portugal	The Netherlands	Finland	Denmark
Methyl isobutyl ketone 108-10-1 (40-70)	TWA: 20 ppm TWA: 83 mg/m ³ STEL: 50 ppm STEL: 208 mg/m ³	STEL: 75 ppm TWA: 50 ppm	STEL: 208 mg/m ³ TWA: 104 mg/m ³	TWA: 20 ppm TWA: 80 mg/m ³ STEL: 50 ppm STEL: 210 mg/m ³	TWA: 20 ppm TWA: 83 mg/m ³ Skin
Cyclohexanone 108-94-1 (10-30)	TWA: 10 ppm TWA: 40.8 mg/m ³ STEL: 20 ppm STEL: 81.6 mg/m ³ Skin	STEL: 50 ppm TWA: 20 ppm	Skin STEL: 50 mg/m ³	TWA: 10 ppm TWA: 41 mg/m ³ STEL: 20 ppm STEL: 82 mg/m ³ Skin	TWA: 10 ppm TWA: 40 mg/m ³ Skin
Titanium dioxide 13463-67-7 (1-5)		TWA: 10 mg/m ³			TWA: 6 mg/m ³
Carbon black 1333-86-4 (1-5)		TWA: 3.5 mg/m ³		TWA: 3.5 mg/m ³ STEL: 7 mg/m ³	TWA: 3.5 mg/m ³
Chemical Name	Austria	Switzerland	Poland	Norway	Ireland
Methyl isobutyl ketone 108-10-1	Skin STEL 50 ppm STEL 208 mg/m ³ TWA: 20 ppm TWA: 83 mg/m ³	Skin STEL: 40 ppm STEL: 164 mg/m ³ TWA: 20 ppm TWA: 82 mg/m ³	STEL: 200 mg/m ³ TWA: 83 mg/m ³	TWA: 25 ppm TWA: 105 mg/m ³ Skin STEL: 37.5 ppm STEL: 131.25 mg/m ³	TWA: 20 ppm TWA: 83 mg/m ³ STEL: 50 ppm STEL: 208 mg/m ³ Skin
Cyclohexanone 108-94-1	Skin STEL 20 ppm STEL 80 mg/m ³ MAK: 5 ppm MAK: 20 mg/m ³	Skin STEL: 50 ppm STEL: 200 mg/m ³ MAK: 25 ppm MAK: 100 mg/m ³	NDSch: 80 mg/m ³ NDS: 40 mg/m ³ Skin	TWA: 20 ppm TWA: 80 mg/m ³ Skin STEL: 30 ppm STEL: 120 mg/m ³	TWA: 10 ppm TWA: 40.8 mg/m ³ STEL: 20 ppm STEL: 81.6 mg/m ³ Skin
Titanium dioxide 13463-67-7	STEL 10 mg/m ³ MAK: 5 mg/m ³	MAK: 3 mg/m ³	NDSch: 30 mg/m ³ NDS: 10.0 mg/m ³	TWA: 5 mg/m ³ STEL: 10 mg/m ³	TWA: 10 mg/m ³ TWA: 4 mg/m ³
Carbon black 1333-86-4			NDS: 4.0 mg/m ³	TWA: 3.5 mg/m ³ STEL: 7 mg/m ³	TWA: 3.5 mg/m ³ STEL: 7 mg/m ³

Chemical Name	European Union	United Kingdom	France	Spain	Germany
Methyl isobutyl ketone 108-10-1			2 mg/L urine end of shift Methylisobutylketone	3.5 mg/L urine end of shift Methyl isobutyl ketone 2	3.5 mg/L urine end of shift 4-Methylpentan-2-one
Cyclohexanone 108-94-1				80 mg/L urine end of workweek 1,2-Ciclohexanodiol (with hydrolysis) 1,9,I,S 8 mg/L urine end of shift Ciclohexanol (with hydrolysis) 2,9,I,S	
Component	Italy	Portugal	Netherlands	Finland	Denmark
Methyl isobutyl ketone 108-10-1 (40-70)	(ACGIH:) 1 mg/L urine end of shift MIBK				

Cyclohexanone 108-94-1 (10-30)	(ACGIH:) 80 mg/L urine end of shift at end of workweek 1,2-Cyclohexanediol (with hydrolysis) Nonspecific, semi-quantitative (ACGIH:) 8 mg/L urine end of shift Cyclohexanol (with hydrolysis) Nonspecific, semi-quantitative				
Chemical Name	Austria	Switzerland	Poland	Norway	Ireland
Methyl isobutyl ketone 108-10-1		2 mg/L urine end of shift 4-Methylpentan-2-one			
Cyclohexanone 108-94-1		100 mg/L urine end of shift, and after several shifts (for long-term exposures) total-1,2-Cyclohexandi ol 12 mg/L urine end of shift, and after several shifts (for long-term exposures) total-Cyclohexanol			
Component	Romania	Slovakia	Latvia	Bulgaria	
Methyl isobutyl ketone 108-10-1 (40-70)		3.5 mg/L urine end of exposure or work shift 4-Methyl-2-pentanone Hexone			

Derived No Effect Level No information available
Predicted No Effect Concentration (PNEC) No information available.

8.2. Exposure controls

Engineering Measures Ensure adequate ventilation, especially in confined areas.
Personal protective equipment
Eye Protection Safety glasses with side-shields. If splashes are likely to occur, wear: Chemical splash goggles.
Skin and Body Protection Risk of contact: Boots. Apron.
Hand Protection Chemical resistant gloves
Respiratory Protection No special protective equipment required. If exposure limits are exceeded or irritation is experienced, approved respiratory protection should be worn.

Environmental Exposure Controls Do not allow material to contaminate ground water system.

Section 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical State Liquid. **Appearance** Thin viscosity, Varies.
Odor Mild, Pungent.

<u>Property</u>	<u>Values</u>	<u>Remarks/ - Method</u>
pH	No data available	None known
Melting Point/Range	No data available	None known
Boiling Point/Boiling Range	117.22 °C / 243 °F	None known
Flash Point	15.56 °C / 60 °F	Tag closed cup
Evaporation rate	1.6 (BuAc = 1)	None known

Flammability (solid, gas)	No data available	None known
Vapor Pressure	No data available	None known
Vapor Density	> 1 (air = 1)	None known
Relative Density	< 1 @ 70°F	None known
Water Solubility	Moderate	None known
Solubility in other solvents	No data available	None known
Partition coefficient: n-octanol/water	No data available	None known
Autoignition Temperature	No data available	None known
Decomposition Temperature	No data available	None known
Viscosity	No data available	None known
Flammable Properties	HIGHLY FLAMMABLE: Will be easily ignited by heat, sparks or flames.	
Explosive Properties	No information available	
Oxidizing Properties	No information available	

9.2. Other information

VOC Content (%)	W203 Black: 85.99% W178 Blue: 87.24% W177 Green: 86.51% Y819 Red: 88.77% W175 White: 86.1% Z401 Yellow: 89.03%
VOC (g/l)	W203 Black: 757 g/L W178 Blue: 762 g/L W177 Green: 761 g/L Y819 Red: 796 g/L W175 White: 757 g/L Z401 Yellow: 778 g/L
Flammability Limits in Air	
Upper	8
Lower	1.2

Section 10. Stability and reactivity

10.1. Reactivity

No data available.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

None under normal processing.

10.4. Conditions to avoid

Heat, flames and sparks. Incompatible products.

10.5. Incompatible materials

Strong oxidizing agents. Strong reducing agents. Strong alkalis. Strong acids.

10.6. Hazardous decomposition products

Carbon oxides. Soot. Smoke

Section 11. Toxicological information

11.1.**Acute Toxicity****Product Information****Inhalation**

Harmful if inhaled. May cause irritation of respiratory tract.

Eye Contact

Irritating to eyes. Causes serious eye irritation.

Skin Contact

May be harmful in contact with skin.

Ingestion Harmful if swallowed.

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Methyl isobutyl ketone	= 2080 mg/kg (Rat)	> 16000 mg/kg (Rabbit)	= 8.2 mg/L (Rat) 4 h
Cyclohexanone	= 800 mg/kg (Rat)	= 948 mg/kg (Rabbit)	= 10.7 mg/L (Rat) 4 h = 8000 ppm (Rat) 4 h
Titanium dioxide	> 10000 mg/kg (Rat)		
Carbon black	> 15400 mg/kg (Rat)	> 3 g/kg (Rabbit)	

Sensitization No information available.
Mutagenic Effects No information available.
Carcinogenic Effects No information available.

Reproductive Toxicity No information available.
Developmental Toxicity No information available.
STOT - single exposure No information available.
STOT - repeated exposure No information available.
Target Organ Effects Central nervous system (CNS). Eyes. Kidney. Liver. Lungs. Lymphatic system. Respiratory system. Skin.

Aspiration Hazard No information available.

Section 12. Ecological information

12.1. Toxicity

Ecotoxicity Effects

Contains no substances known to be hazardous to the environment or that are not degradable in waste water treatment plants.

Chemical Name	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Daphnia Magna (Water Flea)
Methyl isobutyl ketone	EC50 96 h: = 400 mg/L (Pseudokirchneriella subcapitata)	LC50 96 h: 496 - 514 mg/L flow-through (Pimephales promelas)	EC50 = 79.6 mg/L 5 min	EC50 48 h: = 170 mg/L (Daphnia magna)
Cyclohexanone	EC50 96 h: = 20 mg/L (Chlorella vulgaris)	LC50 96 h: 481-578 mg/L flow-through (Pimephales promelas) LC50 96 h: = 8.9 mg/L (Pimephales promelas)	EC50 = 18.5 mg/L 5 min EC50 = 21.3 mg/L 10 min EC50 = 25 mg/L 5 min	EC50 24 h: = 800 mg/L (Daphnia magna)
Carbon black				EC50 24 h: > 5600 mg/L (Daphnia magna)

12.2. Persistence and degradability

No information available.

12.3. Bioaccumulative potential.

Chemical Name	Log Pow
Methyl isobutyl ketone	1.19
Cyclohexanone	0.86

12.4. Mobility in soil

Adsorbs on soil.

12.5. Results of PBT and vPvB assessment

No information available.

12.6. Other adverse effects

This product does not contain any known or suspected endocrine disruptors.

Section 13. Disposal considerations

13.1. Waste treatment methods

Waste from Residues / Unused Products	Dispose of in accordance with local regulations.
Contaminated Packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal.
Other Information	According to the European Waste Catalogue, Waste Codes are not product specific, but application specific. Waste codes should be assigned by the user based on the application for which the product was used.

Section 14. Transport information

IMDG/IMO

14.1. UN-Number	UN1263
14.2. Proper Shipping Name	Paint
14.3. Hazard Class	3
14.4. Packing Group	II
Description	UN1263, Paint, 3, II, (15.56°C c.c.)
14.5. Marine Pollutant	None.
14.6. Special Provisions	None.
EmS No.	F-E, S-E
14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	No information available.

RID

14.1. UN-Number	UN1263
14.2. Proper Shipping Name	Paint
14.3. Hazard Class	3
14.4. Packing Group	II
Description	UN1263, Paint, 3, II
14.5. Environmental hazard	None.
14.6. Special Provisions	None.
Classification Code	F1

ADR

14.1. UN-Number	UN1263
14.2. Proper Shipping Name	Paint
14.3. Hazard Class	3
14.4. Packing Group	II
Description	UN1263, Paint, 3, II, (D/E)
14.5. Environmental hazard	None.
14.6. Special Provisions	None.
Classification Code	F1
Tunnel Restriction Code	(D/E)

ICAO

14.1. UN-Number	UN1263
14.2. Proper shipping name	Paint
14.3. Hazard Class	3
14.4. Packing Group	II

Description	UN1263, Paint, 3, II
14.5. Environmental hazard	None.
14.6. Special Provisions	None.

IATA

14.1. UN-Number	UN1263
14.2. Proper Shipping Name	Paint
14.3. Hazard Class	3
14.4. Packing Group	II
Description	UN1263, Paint, 3, II
14.5. Environmental hazard	None.
14.6. Special Provisions	None.
ERG Code	3L

Section 15. Regulatory information

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

International Inventories

TSCA	-
EINECS/ELINCS	-
DSL/NDSL	-
PICCS	-
ENCS	-
IECSC	-
AICS	-
KECL	-

Legend

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
PICCS - Philippines Inventory of Chemicals and Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
AICS - Australian Inventory of Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances

15.2. Chemical Safety Assessment

No information available

Section 16. Other information

Full text of R-phrases referred to under Sections 2 and 3

R11 - Highly flammable
R66 - Repeated exposure may cause skin dryness or cracking
R20 - Harmful by inhalation
R10 - Flammable

R36/37 - Irritating to eyes and respiratory system

Full text of H-Statements referred to under sections 2 and 3

H302 - Harmful if swallowed
H225 - Highly flammable liquid and vapor
H335 - May cause respiratory irritation
H332 - Harmful if inhaled
H319 - Causes serious eye irritation
H226 - Flammable liquid and vapor
EUH066 - Repeated exposure may cause skin dryness or cracking
EUH210 - Safety data sheet available on request

Key literature references and sources for data

www.ChemADVISOR.com/

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Revision Note Initial Release.

This safety data sheet complies with the requirements of Commission Regulation (EU) No 453/2010 of 20 May 2010 amending Regulation (EC) No. 1907/2006

General Disclaimer

The information provided on this SDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of Safety Data Sheet