

SAFETY DATA SHEET

Crafters Choice™ Polysorbate 20

Review : 01

1. IDENTIFICATION OF SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product	Crafters Choice™ Polysorbate 20
Internal identification code	
Relevant recommended uses	Industrial Use
Company	Crafter's Choice Brands, LLC
Address	7820 E. Pleasant Valley Road Independence, Ohio 44131 Phone: 1-800-908-7028 www.Crafters-Choice.com
Emergency Phone Number	(800) 255-3924 ChemTel (MIS3548100) Domestic USA, Canada, Puerto Rico, and USVI + (813) 248-0585 International

2. HAZARDS IDENTIFICATION

Classification
Label Elements No classification is assigned according to OSHA HCS 2012.

- **Hazard Pictograms** Not applicable.
- **Signal Word** Not applicable.
- **Hazard Statements** Not applicable.
- **Precautionary Statements** Not applicable.

3. COMPOSITION AND INFORMATION ON INGREDIENTS

Brand or Generic Chemical Name	Sorbitan Monolaurate 20 EO
Product Type	Substance.
Synonyms	Sorbitan, monododecanoate, poly(oxy-1,2-ethanediyl) derivs.; Polyoxyethylene sorbitan monolaurate; POLYSORBATE 20 (INCI Name).
CAS Number	9005-64-5.
Impurities which contribute to the classification of the substance	There are no impurities which contribute to the classification of the substance.

4. FIRST-AID MEASURES

Procedure in Case of:

- **Ingestion** Seek prompt medical attention.
Do not induce vomiting.
Vomiting should only be induced by medical personnel.
If vomiting occurs, keep the head lower than chest to avoid aspiration into the lungs.
Never give anything by mouth to an unconscious or convulsing person.
- **Inhalation** Seek prompt medical attention.
Remove victim to fresh air.
If breathing is difficult, give oxygen.
If not breathing, give artificial respiration.
- **Skin contact** Remove contaminated clothing and shoes. Wash affected areas with plenty of running water, preferably under a shower.
Seek prompt medical attention.
- **Eye contact** Immediately flush with plenty of running water for at least 15 minutes keeping eyelids open.
Remove contact lenses if easy to do.
Seek prompt medical attention.

Most important symptoms/effects, acute and delayed

• TLV-TWA (ACGIH)	1,4-Dioxane: 20 ppm; 72 mg/m ³ [Skin][A3]. Ethylene oxide: 1 ppm; 1.8 mg/m ³ [A2]. Skin - Danger of cutaneous absorption. A2 - Suspected Human Carcinogen A3 - Confirmed animal carcinogen with unknown relevance to humans.
• PEL-TWA (OSHA)	1,4-Dioxane: 100 ppm; 360 mg/m ³ [Skin]. Ethylene oxide: 1 ppm. Skin - Danger of cutaneous absorption.
• TLV-STEL (ACGIH)	Not established.
• LT(NR15)	Ethylene oxide: 39 ppm; 70 mg/m ³ .
• Odor Threshold	Not available
• IDLH	1,4-Dioxane: 500 ppm. Ethylene oxide: 800 ppm.
• Biological Exposure Indices (ACGIH)	Not established.
Engineering Control Measures	In closed environments, this product should be handled keeping proper exhaust (general diluter or local exhaust).
Individual Protection Measures	
• Eye Protection	Side shields or wide vision safety goggles.
• Skin Protection	PVC apron. It is recommended to adopt safety boots/shoes.
• Hand Protection	Gloves made of: Rubber. PVC (Polyvinyl chloride).
• Breathing equipment	In case of emergency or contact with high concentrations of the product, wear an air supplied mask or self contained breathing apparatus. It is recommended to wear face mask with organic vapors cartridge in case of exposure to vapors/aerosols.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Liquid. Yellowish. Viscous.
Odour and Odour threshold	Soft odor.
# pH	5.0 - 7.0 (5% sol. w/w @ 25 °C).
Melting point/Freezing point	Not available.
# Initial Boiling Point and Boiling Range	> 149 °C (300.2 °F) (1.013 hPa).
# Flash point	> 150 °C (302 °F). Open cup (OC).
Evaporation rate	Not available.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	Not available.
Vapour pressure	< 1.3 hPa (25 °C).
Vapour density (air = 1)	Not available.
Relative density (water=1)	1100 kg/m ³ (25 °C).
Apparent density	Not applicable.
Solubility	Soluble in water (20 °C for 1 hour / 0.5% concentration).
Partition Coefficient n-octanol/water	Not available.
Auto-ignition temperature	Not available.

Decomposition temperature Not available.
Viscosity ca. 400 mPa.s (25 °C).

10. STABILITY AND REACTIVITY

Chemical stability Stable under normal conditions of use and storage.
Reactivity No hazardous reactivity is expected.
Possibility of Hazardous Reactions Not polymerize.
Conditions to avoid High temperatures, ignition sources and prolonged exposure to the air.
Incompatible materials Avoid contact with:
Oxidizing materials.
Hazardous decomposition products In case of combustion it may generate carbon monoxide, besides CO₂.
Considerations on the use of the product Gelling may occur at temperatures lower than 20°C

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

• Oral LD50, rat: 37000 mg/kg.
• Inhalation LC50, rat: > 5.1 mg/L.
• Dermal LD50, guinea pig: > 3000 mg/kg.
Skin corrosion/irritation No irritating effect.
The erytema score was 0.89 out of a possible 4, completely reversible in 7 days.
The edema score was 0 out of a possible 4.
Serious eye damage/eye irritation No irritating effect.
Draize eye irritation score was an 5.3 out of a possible 110.
Respiratory or skin sensitization Not a skin sensitizer in guinea-pigs.
Germ cell mutagenicity Negative to:
In vitro: Ames test, mammalian chromosomal aberration test (human peripheral blood lymphocytes),
mammalian gene mutation assay (mouse lymphoma cells).
Carcinogenicity Oral studies showed no evidence for carcinogenicity by this route.
Reproductive toxicity The maternal LOAEL in rats was 5000 mg/kg/day (based upon a 14% decrease in weight gain) and
the maternal NOAEL was 500 mg/kg/day.
The developmental NOAEL was greater than 5000 mg/kg/day.
Specific target organ toxicity - Single exposure Not available.
Specific target organ toxicity - Repeated exposure LOAEL, rat: 25000 mg/kg/day (based on systemics effects).
Aspiration hazard Not expected to be an aspiration hazard.

12. ECOLOGICAL INFORMATION

Ecotoxicity The aquatic toxicity is not known. Based on similar products, it is not considered toxic to aquatic life.
Persistence and Degradability Readily biodegradable.
62.5% after 28 days.
Bioaccumulative Potential It is not expected to bioaccumulate in the environment.
BCF = 7.07 (QSAR).
Mobility in soil It is expected to have high mobility in soil.
Log K_{oc} = 1.7308 (QSAR).
Other Adverse Effects Water hazard class 1: Slightly hazardous to water.

13. DISPOSAL CONSIDERATIONS

Recommended methods of disposal

- **Product** The preferred options for disposal include reuse, recycling, co-processing, finding a use for a by-product, incineration or other thermal destruction process at licensed facilities. All procedures must follow specific operation standards in order to reduce health, safety and environmental risks. Perform co-processing, incineration or other thermal destruction process at facilities capable of minimizing or reducing air pollution emissions. The disposal must comply with federal, state, and local laws and regulations in accordance with the environmental agencies.
- **Product Remains** Same method as indicated for product.
- **Packaging** Do not cut or pierce the packaging, nor do hot work near them. Do not remove labels until the product has been fully removed and the packaging cleaned. The preferred options for disposal include reuse, recycling or reclamation at licensed facilities. All procedures must follow specific operation standards in order to reduce health, safety and environmental risks. The disposal must comply with local legislation and in accordance with standards from local environmental agencies.

14. TRANSPORT INFORMATION

Land Transport ANTT	Product not classified as hazardous in accordance with Resolution 420/2004 - Transport Ministry.
• UN number	N/A
• Proper Shipping Name	Not classified.
• Hazard Class	Not classified
• Hazard Number	Not classified.
• Packaging Group	Not classified.
Maritime Transport IMDG	Product not classified as hazardous in accordance with IMDG Code - 2012 Edition - IMO (International Maritime Organization).
• UN number	N/A
• Proper Shipping Name	Not classified.
• IMDG Class	Not classified.
• Packaging Group	Not classified.
• EmS	Not classified.
Air Transport ICAO-TI and IATA-DGR	Product not classified as hazardous in accordance with Dangerous Goods Regulations - 55th Edition - IATA (International Air Transport Association).
• UN number	N/A
• Proper Shipping Name	Not classified.
• ICAO/IATA Class	Not classified.
• Label	Not classified.
• Packaging Group	Not classified.
Land Transportation ADR/RID (cross-border)	Product not classified as hazardous in accordance with Dangerous Goods by Road - Applicable from 1st January 2011 - UNECO (United Nations Economic Commisison for Europe)
• UN number	N/A
• Proper Shipping Name	Not classified.
• ADR/RID class	Not classified.
• Packaging Group	Not classified.
• Danger code (Kemler)	Not classified.
• Restriction Code	Not classified.
Land Transportation U.S DOT	Product not classified as hazardous in accordance with U.S. DOT (United States Department of Transportation) - 49 CFR 172.101.
Packaging Type	Bulk and Non-bulk

Proper Shipping Name	Not classified
Hazard Class or Division	Not classified.
ID Number	Not classified.
Packaging Group	Not classified.
Remarks	Not classified.

15. REGULATORY INFORMATION

Applicable standards	Resolution 420 / 2004 – Transport Ministry. IMDG Code - 2012 Edition - IMO (International Maritime Organization). Dangerous Goods Regulations - 55th Edition - IATA (International Air Transport Association). Dangerous Goods by Road (ADR) – Available from January 1st, 2011 – Unece (United Nations Economic Commission for Europe). U.S.A Department of Transportation – DOT – 49 CFR 172.101.
OSHA Hazard Communication Standard	This product is not a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
SARA Title III - Sections 311 / 312 (40 CFR 370 Subparts B and C)	Immediate (Acute) Health Hazard: No. Delayed (Chronic) Health Hazard: No. Fire Hazard: No. Sudden Release of Pressure Hazard: No. Reactive Hazard: No.
SARA Title III - Section 313 (40 CFR 372.65)	This product does not contain a chemical which is listed in Section 313 at or above de minimis concentrations.
SARA Title III - Section 302 (40 CFR 355 Appendix A)	Ethylene oxide (CAS 75-21-8): 1 ppm. TPQ: 1000 lbs.
CERCLA (40 CFR 302.4) / SARA 304	1,4-Dioxane (CAS 123-91-1): 10 ppm. RQ: 100 lbs Ethylene oxide (CAS 75-21-8): 1 ppm. RQ: 10 lbs. Reportable Quantity (RQ) of this product is 10000000 pounds based upon 1,4-Dioxane / Ethylene oxide which yielded the lowest resultant RQ according to the following formula: CERCLA ingredient RQ/ % of that ingredient in the product.
New Jersey Hazardous Substance List	1,4-Dioxane: Substance# 0789 (Special Health Hazard Code: CA – Carcinogen; F3 – Flammable 3rd degree). Ethylene oxide: Substance# 0882 (Special Health Hazard Code: CA – Carcinogen; MU – Mutagen; TE – Teratogen; F4 – Flammable 4th degree; R3 – Reactive 3rd degree).
California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act)	WARNING! This product contains a chemical known to the State of California to cause cancer. - 1,4-Dioxane. - Ethylene oxide. WARNING! This product contains a chemical known to the State of California to cause birth defects or other reproductive harm. - Ethylene oxide.
Pennsylvania Hazardous Substance List	1,4-Dioxane (CAS 123-91-1) and Ethylene oxide (CAS 75-21-8): Listed also as an environmental hazard and as a special hazardous substance.
Inventory Status	United States & Puerto Rico – Toxic Substances Control Act (TSCA) Inventory: Yes Canada – Domestic Substances List (DSL): Yes Canada – Domestic Substances List (DSL): No Europe – European Inventory of Existing Commercial Chemical Substances (EINECS): No Europe – European List of Notified Chemical Substances (ELINCS): No Australia – Australian Inventory of Chemical Substances (AICS): Yes Philippines – Philippine Inventory of Chemicals and Chemical Substances (PICCS): Yes Japan – Inventory of Existing and New Chemical Substances (ENCS): Yes Korea – Existing Chemicals List (ECL): Yes China – Inventory of Existing Chemical Substances in China (IECSC): Yes New Zealand – New Zealand Inventory: Yes *A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s).

16. OTHER INFORMATION

Remarks	Not applicable.
# Sources	2013 TLVs and BEIs – Based on the Documentation of the Threshold Limit Values for Chemical Substances and Physical Agents & Biological Exposure Indices – ACGIH 2013 Guide to Occupational Exposure Values – ACGIH. LOLI - ChemADVISOR's Regulatory Database. eChemPortal - The Global Portal to Information on Chemical Substances. European Chemicals Agency - http://echa.europa.eu/ . HSDB - Hazardous Substances Data Bank. NTP - National Toxicity Program, National Institute of Environmental Health (EUA).

Abbreviations and acronyms

ACGIH: American Conference of Governmental Industrial Hygienists (USA).
ADR: European agreement concerning the international carriage of dangerous goods by road.
CAS: Chemical Abstracts Service (American Chemical Society - EUA).
EC50: Average concentration for 50% of maximum response.
LC: Lethal Concentration - substance concentration in the environment that leads to death after a certain period of exposure.
LC50: Lethal concentration for 50% of the test animals.
BOD: Biochemical Oxygen Demand
LD50: Lethal Dose for 50% of the test animals.
LDLo: Lethal Dose Low - minimal amount of a chemical lethal to animals in testing.
EINECS: European Inventory of Existing Commercial Chemical Substances.
GHS: Globally Harmonized System of Classification and Labelling of Chemicals.
IARC: International Agency for Research on Cancer.
IATA: International Air Transport Association.
IATA-DGR: Dangerous Goods by Regulations by the IATA
ICAO: International Civil Aviation Organization
ICAO-TI: Technical Instructions by the ICAO.
IMDG: International Maritime Code for Dangerous Goods.
IDLH - Immediately Dangerous To Life or Health Concentrations.
Kow: Octanol/water partition coefficient.
LT (NR 15): Exposure limits of the standard number 15 - Unhealthy Operations and Activities from the Ministry of Labour and Employment of Brazil.
LOAEL: Lowest Adverse Effect Level
LOLI - List Of Lists™ - ChemADVISOR's Regulatory Database
NLP: No Longer Polymers.
NIOSH: National Institute for Occupational Safety and Health.
NOAEL: No Observed Adverse Effect Level
NTP: National Toxicology Program.
OSHA: Occupational Safety and Health Administration (EUA).
PEL-TWA: Exposure Limit Allowed – time-weighted average.
RID: Regulations concerning the international transport of dangerous goods by rail.
TLV-STEL: Tolerance Limit - short period of time (15 minutes, maximum).
TLV-TWA: Tolerance Limit – time weighted average.
WGK: Wassergefährdungsklasse (Germany) - Water Hazard Class.

This Safety Data Sheet was authored according to our current knowledge and experience, however cannot imply guarantee of any nature. Considering the variety of factors that can affect their process or application, the information on this sheet does not exempt the processors from the responsibility of executing their own tests and experiments.

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