MALZEME TEKNİK ÖZELLİKLERİ

TANIMLAMA

Ticari ürün adı: Nanotech Ceramic coating Nano parçacık içerikli Termoset ve Termoplastik Kaplama

Faz: Sıvı

Renk: Şeffaf

Koku: Kendine has

TEKNİK VERİLER

Poliüretan Otomobil boyası

Tüketim: 4 ml/m2

Kontak açısı: 105°

Su kayma açısı: 18 °

Tuzlu su testi: 480 saat %18 hidrofobi, % 13 kaplama kalınlığında azalma

Yıkama testi : 50 çevrim 0.15 kg/cm2 ph nötr deterjan yıkama eşdeğeri ile %30 hidrofobi,%15 kaplama kalınlığında azalma

Rüzgar aşınması: (Yol testi simülasyonu) 240 saat 100 km/h rüzgar tüneli 20000 km kullanım eşdeğeri ile %4 hidrofobide azalma, kaplama kalınlığında ölçülebilir fark yok

UV koruma: 480 saat etkin, hidrofobide bir miktar artış

Sıcaklık dayanımı:150°C dereceye kadar etkin

Kimyasal dayanım asidik: ph>1'de etkin

Kimyasal dayanım bazik: ph<12 'de etkin ph>12'de 10 yıkama sonrası hidrofobi etkisinde %50, kaplama kalınlığında % 24 azalma

MATERIAL SAFETY DATA SHEET

1.IDENTIFICATION

Commercial Product Name: Nanotech Ceramic coating

Product type: Thermoset Thermoplastic Nano Coating Solution

Manufacturer: IFTC Inc.

2.COMPOSITION INFORMATION

IDENTITY	%	CAS NO.	EC NO	EC INDEX NO	HAZARD CLASSIFICATION
- HYDROCARBONS	>65	64742-47-8	265-149-8	649-422-00-2	-
-COMMERCIALLY CONSERVED FORMULA	<35	-	-	-	

3.HAZARDS IDENTIFICATION

HMIS CODES HEALTH: 1 FLAMMABILITY: 1 REACTIVITY: 0

PHYSICAL/CHEMICAL EFFECTS

Material can release vapours that readily form flammable mixtures. Vapour accumulation could flash and/or

explode if ignited. Material can accumulate static charges which may cause an ignition.

HEALTH EFFECTS

Repeated exposure may cause skin dryness or cracking. If swallowed, may be aspirated and cause lung

damage. May be irritating to the eyes, nose, throat, and lungs.

NOTE: This material should not be used for any other purpose than the intended use in Section 1 without expert advice. Health studies have shown that chemical exposure may cause potential human health risks which may vary from person to person.

4.FIRST AID MEASURES

INHALATION

Remove from further exposure. For those providing assistance, avoid exposure to yourself or others. Use adequate respiratory protection. If respiratory irritation, dizziness, nausea, or unconsciousness occurs, seek immediate medical assistance. If breathing has stopped, assist ventilation with a mechanical device or use mouth-to-mouth resuscitation.

SKIN CONTACT

Wash contact areas with soap and water. Remove contaminated clothing. Launder contaminated clothing before reuse.

EYE CONTACT

Flush thoroughly with water. If irritation occurs, get medical assistance.

INGESTION

Seek immediate medical attention. Do not induce vomiting.

NOTE TO PHYSICIAN

If ingested, material may be aspirated into the lungs and cause chemical pneumonitis. Treat appropriately

5.FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA

Appropriate Extinguishing Media: Use water fog, foam, dry chemical or carbon dioxide (CO2) to extinguish flames.Inappropriate Extinguishing Media: Straight streams of water

FIRE FIGHTING

Fire Fighting Instructions: Evacuate area. Prevent run-off from fire control or dilution from entering streams, sewers or drinking water supply. Fire-fighters should use standard protective equipment and in enclosed spaces, self-contained breathing apparatus (SCBA). Use water spray to cool fire exposed surfaces and to protect personnel.

Hazardous Combustion Products: Smoke, Fume, Incomplete combustion products, Oxides of carbon

6.ACCIDENTAL RELEASE MEASURES

NOTIFICATION PROCEDURES

In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

PROTECTIVE MEASURES

Avoid contact with spilled material. See Section 5 for fire fighting information. See the Hazard Identification Section for Significant Hazards. See Section 4 for First Aid Advice. See Section 8 for Personal Protective Equipment.

SPILL MANAGEMENT

Land Spill: Stop leak if you can do so without risk. Absorb or cover with dry earth, sand or other noncombustible material and transfer to containers. Recover by pumping or with suitable absorbent.

Water Spill: Stop leak if you can do so without risk. Warn other shipping. Remove from the surface by skimming or with suitable absorbents. Seek the advice of a specialist before using dispersants. Water spill and land spill recommendations are based on the most likely spill scenario for this material;however, geographic conditions, wind, temperature, (and in the case of a water spill) wave and current direction and speed may greatly influence the appropriate action to be taken. For this reason, local experts should be consulted. Note: Local regulations may prescribe or limit action to be taken.

7.HANDLING AND STORAGE

HANDLING

Avoid contact with skin. Use proper bonding and/or earthing procedures.However, bonding and earthing may not eliminate the hazard from static accumulation. Prevent small spills and leakage to avoid slip hazard. Material can accumulate static charges which may cause an electrical spark (ignition source). When the material is handled in bulk, an electrical spark could ignite any flammable vapors from liquids or residues that may be present (e.g., during switch-loading operations). Use proper bonding and/or earthing procedures.

However, bonding and earthing may not eliminate the hazard from static accumulation. Consult local applicable standards for guidance.

Loading/Unloading Temperature: [Ambient]

Transport Temperature: [Ambient]

Transport Pressure: [Ambient]

Static Accumulator: This material is a static accumulator. A liquid is typically considered a nonconductive, static accumulator if its conductivity is below 100 pS/m (100x10E-12 Siemens per meter) and is considered a semiconductive, static accumulator if its conductivity is below 10,000 pS/m. Whether a liquid is nonconductive or semiconductive, the precautions are the same. A number of factors, for example liquid temperature,

presence of contaminants, anti-static additives and filtration can greatly influence the conductivity of a liquid.

STORAGE

The container choice, for example storage vessel, may effect static accumulation and dissipation. Do not store in open or unlabelled containers. Keep container closed. Handle containers with care. Open slowly in order to control possible pressure release. Store in a cool, well-ventilated area.

Storage Temperature: [Ambient]

Storage Pressure: [Ambient]

Suitable Containers/Packing: Tank Cars; Barges; Drums; Tank Trucks

Suitable Materials and Coatings (Chemical Compatibility): Teflon; Polyethylene; Carbon

Steel; Polypropylene

Unsuitable Materials and Coatings: Polystyrene; Butyl Rubber; Natural Rubber; Ethylene-proplyene-diene monomer (EPDM)

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

ENGINEERING CONTROLS

The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Control measures to consider: Adequate ventilation should be provided so that exposure limits are not exceeded.

PERSONAL PROTECTION

Personal protective equipment selections vary based on potential exposure conditions such as applications, handling practices, concentration and ventilation. Information on the selection of protective equipment for use with this material, as provided below, is based upon intended, normal usage.

Respiratory Protection: If engineering controls do not maintain airborne contaminant concentrations at a level which is adequate to protect worker health, an approved respirator may be appropriate. Respirator selection, use, and maintenance must be in accordance with regulatory requirements, if applicable. Types of respirators to be considered for this material include: Half-face filter respirator

For high airborne concentrations, use an approved supplied-air respirator, operated in positive pressure mode. Supplied air respirators with an escape bottle may be appropriate when oxygen levels are inadequate, gas/vapour warning properties are poor, or if air purifying filter capacity/rating may be exceeded.

Hand Protection: Any specific glove information provided is based on published literature and glove manufacturer data. Glove suitability and breakthrough time will differ depending on the specific use conditions. Contact the glove manufacturer for specific advice on glove selection and breakthrough times for your use conditions. Inspect and replace worn or damaged gloves. The types of gloves to be considered for this material include:

If prolonged or repeated contact is likely, chemical-resistant gloves are recommended. If contact with forearms is likely, wear gauntlet-style gloves.

Eye Protection: If contact is likely, safety glasses with side shields are recommended.

Skin and Body Protection: Any specific clothing information provided is based on published literature or manufacturer data. The types of clothing to be considered for this material include: If prolonged or repeated contact is likely, chemical, and oil resistant clothing is recommended.

Specific Hygiene Measures: Always observe good personal hygiene measures, such as washing after

handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective

equipment to remove contaminants. Discard contaminated clothing and footwear that cannot be cleaned.

Practise good housekeeping.

9.PHYSICAL DATA

Form: Liquid

Colour: Colourless

Odor: Characteristic

Boiling Point: 175° @ 4mm Freezing Point: -25°C

Specific Gravity: 0.88 Vapor Pressure, 10 mm Hg @20°C

Vapor Density (air=1): >2.52 Solubility in water: nonmiscible

% volatiles: %100 Evaporation rate: 1.4

Autoignition temperature: 275°C Flash Point: 68 °C

Explosion limits: Lower: 0.9%v/v Upper: 12%v/v

10.STABILITY AND REACTIVITY

Stability: Stable in sealed containers stored.

Conditions to avoid: Combustible; avoid contact with heat, sparks or open flame.

Incompatibility (materials to avoid): Reacts with water and moisture in air liberating methanol.

Avoid contact with peroxides, oxidizing agents, alcohols, acids.

Hazardous decomposition products: Organic amine vapors.

11. TOXICOLOGICAL INFORMATION

Basis for Assessment : Information given is based on product testing, and/or similar

products, and/or components.

Acute Oral Toxicity : Expected to be of low toxicity: LD50 >2000 mg/kg , Rat

Aspiration into the lungs when swallowed or vomited may cause chemical pneumonitis which can be fatal.

Acute Dermal Toxicity : Expected to be of low toxicity: LD50 >2000 mg/kg , Rat

Acute Inhalation Toxicity : Low toxicity: LC50 greater than near-saturated vapour

concentration. / 4 hours, Rat

Skin Irritation : May cause moderate skin irritation (but insufficient to classify).

Prolonged/repeated contact may cause defatting of the skin

which can lead to dermatitis.

Eye Irritation : Essentially non-irritating to eyes.

Respiratory Irritation : Not expected to be a respiratory irritant.

Sensitisation : Not expected to be a skin sensitiser.

Repeated Dose Toxicity : Kidney: caused kidney effects in male rats which are not

considered relevant to humans

Mutagenicity : Not expected to be mutagenic.

Carcinogenicity : Repeated exposure causes skin tumour promotion in

experimental animals.

Reproductive and Developmental Toxicity : Not expected to be a developmental toxicant.

Not expected to impair fertility.

12. ECOLOGICAL INFORMATION

Acute Toxicity

Ingestion: Toxicity: LD50 > 9600 mg/kg

Skin: Toxicity: LD50 > 2300 mg/kg

Fish : Low toxicity: LC/EC/IC50 > 980 mg/l

Aquatic Invertebrates : Low toxicity: LC/EC/IC50 > 980 mg/l

Algae : Low toxicity: LC/EC/IC50 > 9800 mg/l

Mobility : Floats on water.

Adsorbs to soil and has low mobility.

Persistence/degradability : Expected to be readily biodegradable.

Oxidises rapidly by photo-chemical reactions in air.

Bioaccumulation : Has the potential to bioaccumulate.

13. DISPOSAL CONSIDERATIONS

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

14. TRANSPORT INFORMATION

LAND (TDG): Not Regulated for Land Transport

LAND (DOT): Not Regulated for Land Transport

SEA (IMDG): Not Regulated for Sea Transport according to IMDG-Code

AIR (IATA): Not Regulated for Air Transport.

15. REGULATORY INFORMATION

WHMIS Classification: Not controlled

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the (M)SDS contains all the information required by the Controlled Products Regulations.

CEPA: All components of this material are either on the Canadian Domestic Substances List (DSL), exempt, or have

been notified under CEPA.

NATIONAL CHEMICAL INVENTORY LISTING: AICS, IECSC, DSL, EINECS, ENCS, KECI, PICCS, TSCA

The Following Ingredients are Cited on the Lists Below: None.

--REGULATORY LISTS SEARCHED--

1 = TSCA 4 3 = TSCA 5e 5 = TSCA 12b

2 = TSCA 5a2 4 = TSCA 6 6 = NPRI

16. OTHER INFORMATION

Issue Date Nanotech Ceramic coating: 01/06/2013

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